

**AUTHORIZATION TO DISCHARGE WASTEWATER UNDER
THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM AND
THE ARKANSAS WATER AND AIR POLLUTION CONTROL ACT**

In accordance with the provisions of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. § 1251 et seq.),

Pulaski County Property Owners' Multipurpose Improvement District No. 2021-2
Paradise Valley Subdivision WWTP

is authorized to discharge treated domestic wastewater from a facility located as follows: Roland Cutoff, Roland, AR 72135, in Pulaski County. From Highway 300 in Roland, AR, take Roland Cutoff Road, then travel east for approximately 1.62 miles. The facility will be located on the north side of the road.

Facility Coordinates: Latitude: 34° 53' 58.4" N; Longitude: 92° 31' 28.1" W

The facility discharges to receiving waters named:

an unnamed tributary of Mill Bayou, thence to Mill Bayou, thence to the Arkansas River in Segment 3C of the Arkansas River Basin.

The outfall is located at the following coordinates:

Outfall 001: Latitude: 34° 54' 07.5" N; Longitude: 92° 31' 24.8" W

Discharge shall be in accordance with effluent limitations, monitoring requirements, and other conditions set forth in this permit. Per Part III.D.10, the permittee must re-apply 180 days prior to the expiration date below for permit coverage to continue beyond the expiration date.

Effective Date: August 1, 2023

Expiration Date: July 31, 2028

Alan J. York
Associate Director, Office of Water Quality
Arkansas Department of Energy and Environment
Division of Environmental Quality

06/16/2023

Issue Date

PART I
PERMIT REQUIREMENTS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - treated domestic wastewater.

During the period beginning on the effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below as well as Parts II and III. See Part IV for all definitions.

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	Mass (lbs/day, else specified)		Concentration (mg/l, else specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.		
Flow	N/A	N/A	Report, MGD	Report, MGD	twice/week	totalizing meter
Percentage Flow ¹	N/A	N/A	Report, percentage	Report, percentage	twice/week	calculated
Overflows	Monthly Total SSOs (occurrences/month)				see comments ⁴	
Overflow Volume	Monthly Total Volume of SSOs (gallons/month)				see comments ⁴	
Carbonaceous Biochemical Oxygen Demand (CBOD ₅)						
(May – October)	6.3	9.6	15	23	once/month	grab
(November – April)	8.3	12.5	20	30	once/month	grab
Total Suspended Solids (TSS)	8.3	12.5	20.0	30.0	once/month	grab
Ammonia Nitrogen (NH ₃ -N)						
(April)	2.3	2.3	5.6	5.6	once/month	grab
(May – October)	2.1	3.1	5.0	7.5	once/month	grab
(November – March)	4.2	6.3	10.0	15.0	once/month	grab
Dissolved Oxygen (DO)						
(May – October)	N/A	N/A	3.0 (Inst. Min.)		once/month	grab
(November – April)	N/A	N/A	2.0 (Inst. Min.)		once/month	grab
Fecal Coliform Bacteria (FCB)	N/A	N/A	(colonies/100ml)		once/month	grab
			1000	2000 (7-Day Avg)		
Total Residual Chlorine (TRC) ²	N/A	N/A	0.011 (Inst. Max.) ³		once/month	grab
pH	N/A	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	once/month	grab

¹ Defined as the percentage of the discharge flow relative to the facility's design flow. The design flow for this facility is 0.05 MGD. See Part II.6 (Percentage Flow condition) for additional information.

² TRC must be measured using any approved test method established in 40 C.F.R. Part 136 capable of meeting a minimum quantification level (MQL) of 0.033 mg/l or lower. If TRC is not reportable at the required MQL (i.e., lab result is "ND"), report "0" on the Discharge Monitoring Report (DMR). Report the concentration if TRC is quantifiable and measured in the sample at or above this or an alternatively approved MQL. See Part II.7 for more information.

³ The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling.

⁴ See Condition No. 12 of Part II (SSO Condition). If there are no overflows during the entire month, report "zero" (0).

Oil, grease, or petrochemical substances shall not be present in receiving waters to the extent that they produce globules or other residue or any visible, colored film on the surface or coat the banks and/or bottoms of the waterbody or adversely affect any of the associated biota. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after final treatment, prior to the receiving stream.

SECTION B. PERMIT COMPLIANCE SCHEDULE

None.

PART II OTHER CONDITIONS

1. The operator of this wastewater treatment facility shall be licensed as at least Class III by the State of Arkansas in accordance with APC&EC Rule 3.
2. In accordance with 40 C.F.R. §§ 122.62(a)(2) and 124.5, this permit may be reopened for modification or revocation and/or reissuance to require additional monitoring and/or effluent limitations when new information is received that actual or potential exceedance of State water quality criteria and/or narrative criteria are determined to be the result of the permittee's discharge(s) to a relevant water body or a Total Maximum Daily Load (TMDL) is established or revised for the water body that was not available at the time of the permit issuance that would have justified the application of different permit conditions at the time of permit issuance.

3. Other Specified Monitoring Requirements

The permittee may use alternative appropriate monitoring methods and analytical instruments other than as specified in Part I.A of the permit without a major permit modification under the following conditions:

- The monitoring and analytical instruments are consistent with accepted scientific practices.
- The requests shall be submitted in writing to the Permits Branch of the Office of Water Quality of the DEQ for use of the alternate method or instrument.
- The method and/or instrument is in compliance with 40 C.F.R. Part 136 or approved in accordance with 40 C.F.R. § 136.5.
- All associated devices are installed, calibrated, and maintained to ensure the accuracy of the measurements and are consistent with the accepted capability of that type of device. The calibration and maintenance shall be performed as part of the permittee's laboratory Quality Assurance/Quality Control (QA/QC) program.

Upon written approval of the alternative monitoring method and/or analytical instruments, these methods or instruments must be consistently utilized throughout the monitoring period. DEQ must be notified in writing and the permittee must receive written approval from DEQ if the permittee decides to return to the original permit monitoring requirements.

4. Best Management Practices (BMPs), as defined in Part IV.7, must be implemented for the facility along with the collection system to prevent or reduce the pollution of waters of the State from stormwater runoff, spills or leaks, sludge or waste disposal, or drainage from raw sewage. The permittee must amend the BMPs whenever there is a change in the facility or a change in the operation of the facility.
5. The permittee shall comply with all applicable financial assurance fee requirements including payment of required trust fund contribution fees specified by Arkansas Code Annotated § 8-4-

203(b). Failure to promptly remit all financial assurance fees as required shall be grounds for the Director to initiate action to terminate this permit under the provisions in 40 C.F.R. §§ 122.64 and 124.5(d), as adopted in APC&EC Rule 6 and the provisions in APC&EC Rule 9.301(D).

6. Percentage Flow

A. The permittee must calculate and report the percentage flow. Percentage flow is the percentage of discharge flow relative to the design flow of the facility. Since the design flow of the facility is 0.05 MGD, the following equation shall be used to calculate the percentage flow:

$$\text{Percentage Flow} = \frac{\text{Discharge Flow (in MGD)}}{0.05 \text{ MGD}} \times 100$$

B. The critical percentage flow is defined as monthly average flow in excess of 80% of design flow. The critical percentage flow is reached at Outfall 001 when monthly average flow exceeds 0.04 MGD (40,000 gallons per day). Within 180 days of an exceedance of the critical percentage flow, the permittee shall provide an evaluation of the facility that includes a review of:

- i. Number of current connections to the treatment system,
- ii. Anticipated growth in treatment service area,
- iii. Average flow per household,
- iv. Evaluation of historical hydraulic trends of the plant influent,
- v. Monthly average flow of influent, and
- vi. Timeline for submission of the necessary permit applications for expanded treatment capacity.

The period of record for the evaluation should include a minimum of 24-months immediately prior to the exceedance date. The required evaluation is only required for the first event of flow in excess of 80% of design flow; however the evaluation shall be updated within 30-days following any DEQ request for an update; minimally, the updated evaluation shall be included with the subsequent renewal application.

C. All reports must be submitted to the Division at the following address:

Enforcement Branch
Office of Water Quality
Division of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

Information can also be submitted electronically via email at water-enforcement-report@adeq.state.ar.us.

7. The permittee shall not add more than 300 connections to the complete treatment system. Connections outside of the described service area, or connections that cause an exceedance of the treatment works' design flow are prohibited without written approval from the DEQ and the Arkansas Department of Health (ADH).
8. The permittee may use any EPA approved method based on 40 C.F.R. Part 136 provided the minimum quantification level (MQL) for the chosen method is equal to or less than what has been specified in chart below:

Pollutant	MQL (mg/l)
TRC	0.033

The permittee may develop a matrix specific method detection limit (MDL) in accordance with Appendix B of 40 C.F.R. Part 136. For any pollutant for which the permittee determines a site specific MDL, the permittee shall send to DEQ, NPDES Permits Branch, a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that a site specific MDL was correctly calculated. A site-specific MQL shall be determined in accordance with the following calculation:

$$\text{MQL} = 3.3 \times \text{MDL}$$

Upon written approval by Permits Branch, the site specific MQL may be utilized by the permittee for all future DMR calculations and reporting requirements.

9. Before commencement of construction activity on the site of the wastewater treatment plant, the permittee shall provide a completed Phase I Cultural Resources Study for the proposed areas of disturbance necessary to construct the facility. The study shall be provided to both the Arkansas Historic Preservation Program and the DEQ – Office of Water Quality. The study must be reviewed and approved by both agencies before ground-disturbing construction activities may begin. The permittee shall address any comments from either agency and shall be responsible for any plan adjustments deemed necessary to accommodate cultural preservation measures during construction or operation of the facility.
10. The following conditions must be met to verify successful initial startup of the treatment plant:
 - a. Notify DEQ of the date of initial startup. Notice may be emailed to water-permit-application@adeq.state.ar.us. Notice shall be provided within one (1) business day following the date of initial start-up.
 - b. Following startup, the permittee and the engineer of record must test, verify, or observe that all equipment is in proper working condition. Any necessary repairs shall be completed by the 30th day following the date of initial start-up. If repairs are delayed additional time may be granted with supporting and justified cause.
 - c. The O&M manual must include a dedicated section for operation of the wastewater treatment plant during periods when flows are less than 25% of the design flow.

- d. On or before the 45th day following the date of initial start-up, the permittee shall provide a report certified by the engineer of record, a professional engineer licensed in Arkansas. This report shall transmit the documentation of any needed repairs that were required in the first 30-days, transmit the most recently updated O&M manual, and certify that the treatment facility is installed and operating according to manufacturer specifications and in accordance with best operational practices. This report shall be submitted for review and approval of the Office of Water Quality.
11. For publicly owned treatment works, the 30-day average percent removal for Biochemical Oxygen Demand (BOD₅) or Carbonaceous Biochemical Oxygen Demand (CBOD₅) and Total Suspended Solids (TSS) shall not be less than 85 percent unless otherwise authorized by the permitting authority in accordance with 40 C.F.R. § 133.102.

12. Sanitary Sewer Overflow (SSO) Reporting Requirements:

- A. A sanitary sewer overflow is any spill, release or diversion of wastewater from a sanitary sewer collection system including:
1. Any overflow, whether it discharges to the waters of the state or not.
 2. An overflow of wastewater, including a wastewater backup into a building (other than a backup caused solely by a blockage or other malfunction in a privately owned sewer or building lateral), even if that overflow does not reach waters of the state.

B. 24-Hour Reporting:

When an SSO is detected – no matter how small – it must be reported within 24 hours of its discovery to DEQ’s Water Quality Enforcement by using the online form in paragraph C below (the preferred method), by phone at (501) 682-0638, or by email at ssoadeq@adeq.state.ar.us.

This initial 24-hour report should include the following information:

1. Permit Number
2. Location of overflow (manhole number or street address)
3. The receiving water (if applicable)
4. Cause of overflow (if known)
5. Estimated volume of overflow so far
6. Total duration of the overflow

C. 5-Day Follow-Up Written Web Reporting:

A written report of overflows shall be provided to DEQ within 5 days of the 24-hour oral report. A follow-up written report (5-day report) can be filled-in and submitted on the DEQ Office of Water Quality/Enforcement Branch Web page at:

<https://www.adeq.state.ar.us/water/enforcement/sso/submit.aspx?type=s>

D. 24-Hour and 5-Day Reporting:

If the 24-hour report submitted includes all of the information requested in the 5-day report described in Paragraph C above, then a follow-up 5-day report is not required.

E. Reporting for All SSOs on DMR:

At the end of the month, total the daily occurrences and volumes from all locations on your system and report this number on the DMR. For counting occurrences, each location on the sanitary sewer system where there is an overflow, spill, release, or diversion of wastewater on a given day is counted as one occurrence. For example, if on a given day overflows occur from a manhole at one location and from a damaged pipe at another location then you should record two occurrences for that day.

PART III STANDARD CONDITIONS

SECTION A – GENERAL CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Water Act and the Arkansas Water and Air Pollution Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; and/or for denial of a permit renewal application. **Any values reported in the required Discharge Monitoring Report (DMR) which are in excess of an effluent limitation specified in Part I shall constitute evidence of violation of such effluent limitation and of this permit.**

2. Penalties for Violations of Permit Conditions

The Arkansas Water and Air Pollution Control Act provides that any person who violates any provisions of a permit issued under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year, or a fine of not more than twenty-five thousand dollars (\$25,000) or by both such fine and imprisonment for each day of such violation. Any person who violates any provision of a permit issued under the Act may also be subject to civil penalty in such amount as the court shall find appropriate, not to exceed ten thousand dollars (\$10,000) for each day of such violation. The fact that any such violation may constitute a misdemeanor shall not be a bar to the maintenance of such civil action.

3. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to the following:

- A. Violation of any terms or conditions of this permit.
- B. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts.
- C. A change in any conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- D. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.
- E. Failure of the permittee to comply with the provisions of APC&EC Rule 9 (Permit fees) as required by Part III.A.11 herein.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

4. **Toxic Pollutants**

Notwithstanding Part III.A.3, if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under APC&EC Rule 2, as amended, or Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitations on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standards or prohibition and the permittee so notified.

The permittee shall comply with effluent standards, narrative criteria, or prohibitions established under APC&EC Rule 2, as amended, or Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. **Civil and Criminal Liability**

Except as provided in permit conditions for “Bypass of Treatment Facilities” (Part III.B.4), and “Upset” (Part III.B.5), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of this permit or applicable state and federal statutes or regulations which defeats the regulatory purposes of the permit may subject the permittee to criminal enforcement pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.).

6. **Oil and Hazardous Substance Liability**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Clean Water Act.

7. **State Laws**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

8. **Property Rights**

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

9. **Severability**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provisions of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. **Applicable Federal, State or Local Requirements**

Permittees are responsible for compliance with all applicable terms and conditions of this permit. Receipt of this permit does not relieve any operator of the responsibility to comply with any other applicable federal regulations such as endangered species, state or local statute, ordinance or regulation.

11. **Permit Fees**

The permittee shall comply with all applicable permit fee requirements (i.e., including annual permit fees following the initial permit fee that will be invoiced every year the permit is active) for wastewater discharge permits as described in APC&EC Rule 9 (Rule for the Fee System for Environmental Permits). Failure to promptly remit all required fees shall be grounds for the Director to initiate action to terminate this permit under the provisions of 40 C.F.R. §§ 122.64 and 124.5(d), as adopted in APC&EC Rule 6 and the provisions of APC&EC Rule 8.

SECTION B – OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. **Proper Operation and Maintenance**

- A. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- B. The permittee shall provide an adequate operating staff which is duly qualified to carryout operation, maintenance, and testing functions required to ensure compliance with the conditions of this permit.

2. **Need to Halt or Reduce not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or discharges or both until the facility is restored or an alternative method of treatment is provided.

This requirement applies, for example, when the primary source of power for the treatment facility is reduced, is lost, or alternate power supply fails.

3. **Duty to Mitigate**

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment or the water receiving the discharge.

4. **Bypass of Treatment Facilities**

“Bypass” means the intentional diversion of waste streams from any portion of a treatment facility, as defined at 40 C.F.R. § 122.41(m)(1)(i).

A. Bypass not exceeding limitation

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts III.B.4.B and 4.C.

B. Notice

1. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
2. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part III.D.6 (24-hour notice).

C. Prohibition of bypass

1. Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:
 - (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (c) The permittee submitted notices as required by Part III.B.4.B.
2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Part III.B.4.C(1).

5. Upset Conditions

- A. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Part III.B.5.B of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- B. Conditions necessary for demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
1. An upset occurred and that the permittee can identify the specific cause(s) of the upset.
 2. The permitted facility was at the time being properly operated.
 3. The permittee submitted notice of the upset as required by Part III.D.6.
 4. The permittee complied with any remedial measures required by Part III.B.3.
- C. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. Removed Substances

- A. Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State. The Permittee must comply with all applicable state and Federal regulations governing the disposal of sludge, including but not limited to 40 C.F.R. Parts 257, 258, and 503.
- B. Any changes to the permittee's disposal practices described in the Statement of Basis, as derived from the permit application, will require at least 180 days prior notice to the Director to allow time for additional permitting. Please note that the 180 day notification requirement may be waived if additional permitting is not required for the change.

7. Power Failure

The permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failure either by means of alternate power sources, standby generators, or retention of inadequately treated effluent.

SECTION C – MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before

the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director. Intermittent discharge shall be monitored.

2. **Flow Measurement**

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than +/- 10% from true discharge rates throughout the range of expected discharge volumes and shall be installed at the monitoring point of the discharge.

Calculated Flow Measurement

For calculated flow measurements that are performed in accordance with either the permit requirements or a Division approved method (i.e., as allowed in the *Other Specified Monitoring Requirements* condition under Part II), the +/- 10% accuracy requirement described above is waived. This waiver is only applicable when the method used for calculation of the flow has been reviewed and approved by the Division.

3. **Monitoring Procedures**

Monitoring must be conducted according to test procedures approved under 40 C.F.R. Part 136, unless other test procedures have been specified in this permit. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals frequent enough to ensure accuracy of measurements and shall ensure that both calibration and maintenance activities will be conducted. An adequate analytical quality control program, including the analysis of sufficient standards, spikes, and duplicate samples to ensure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory. At a minimum, spikes and duplicate samples are to be analyzed on 10% of the samples.

4. **Penalties for Tampering**

The Arkansas Water and Air Pollution Control Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year or a fine of not more than ten thousand dollars (\$10,000) or by both such fine and imprisonment.

5. **Reporting of Monitoring Results**

40 C.F.R. § 127.11(a)(1) and 40 C.F.R. § 127.16(a) require that monitoring reports must be reported on a Discharge Monitoring Reports (DMR) and filed electronically. Signatory

Authorities must initially request access for a NetDMR account. Once a NetDMR account is established, access to electronic filing should use the following link <https://cdx.epa.gov>. Permittees who are unable to file electronically may request a waiver from the Director in accordance with 40 C.F.R. § 127.15. Monitoring results obtained during the previous monitoring period shall be summarized and reported on a DMR dated and submitted no later than the 25th day of the month, following the completed reporting period beginning on the effective date of the permit.

6. **Additional Monitoring by the Permittee**

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 C.F.R. Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated on the DMR.

7. **Retention of Records**

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

8. **Record Contents**

Records and monitoring information shall include:

- A. The date, exact place, time, and methods of sampling or measurements, and preservatives used, if any.
- B. The individual(s) who performed the sampling or measurements.
- C. The date(s) and time analyses were performed.
- D. The individual(s) who performed the analyses.
- E. The analytical techniques or methods used.
- F. The measurements and results of such analyses.

9. **Inspection and Entry**

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.
- B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.

- C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
- D. Sample, inspect, or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

SECTION D – REPORTING REQUIREMENTS

1. Planned Changes

The Permittee shall give notice to the Director as soon as possible but no later than 180 days prior to any planned physical alterations or additions to the permitted facility [40 C.F.R. § 122.41(l)]. Notice is required only when:

- A. The alteration or addition to a permitted facility may meet one of the criteria for new sources at 40 C.F.R. § 122.29(b).
- B. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants subject to effluent limitations in the permit, or to the notification requirements under 40 C.F.R. § 122.42(b).

2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

The permit is nontransferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

4. Monitoring Reports

Monitoring results shall be reported at the intervals and in the form specified in Part III.C.5. **Discharge Monitoring Reports must be submitted even when no discharge occurs during the reporting period.**

5. Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

6. **Twenty-four Hour Report**

Please be aware that the notifications can be sent by email to water-enforcement-report@adeq.state.ar.us or at 501-682-0624 for immediate reporting:

- A. The permittee shall report any noncompliance which may endanger health or the environment within 24 hours from the time the permittee becomes aware of the circumstances to the Enforcement Branch of the Office of Water Quality of DEQ. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain the following information:
1. A description of the noncompliance and its cause.
 2. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue.
 3. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- B. The following must be reported within 24 hours:
1. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 2. Any upset which exceeds any effluent limitation in the permit.
 3. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part I of the permit.
- C. The Director may waive the written report on a case-by-case basis if the notification has been received within 24 hours to the Enforcement Branch of the Office of Water Quality of the DEQ.

7. **Other Noncompliance**

The permittee shall report all instances of noncompliance not reported under Parts III.D.4, 5, and 6, at the time monitoring reports are submitted. The reports shall contain the information listed at Part III.D.6.

8. **Changes in Discharge of Toxic Substances for Industrial Dischargers including Existing Manufacturing, Commercial, Mining, and Silvicultural Dischargers**

The permittee shall notify the Director as soon as he/she knows or has reason to believe:

- A. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic pollutant including those listed in 40 CFR 401.15 which is not limited in the permit, if that discharge will exceed the highest of the “notification levels” described in 40 C.F.R. § 122.42(a)(1).
- B. That any activity has occurred or will occur which would result in any discharge on a non-routine or infrequent basis of a toxic pollutant including those listed in 40 CFR 401.15

which is not limited in the permit, if that discharge will exceed the highest of the “notification levels” described in 40 C.F.R. § 122.42(a)(2).

9. **Duty to Provide Information**

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit. Information shall be submitted in the form, manner and time frame requested by the Director.

10. **Duty to Reapply**

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The complete application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be implemented through procedures outlined by APC&EC Rule 6.

11. **Signatory Requirements**

All applications, reports, or information submitted to the Director shall be signed and certified as follows:

A. All **permit applications** shall be signed as follows:

1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation.
 - (b) The manager of one or more manufacturing, production, or operation facilities, provided: the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
2. For a partnership or sole proprietorship: by a general partner or proprietor, respectively.

3. For a municipality, State, Federal, or other public agency, by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(a) The chief executive officer of the agency.

(b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

B. All **reports** required by the permit and **other information** requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above.

2. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

3. The written authorization is submitted to the Director.

C. Certification. Any person signing a document under this section shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

12. **Availability of Reports**

Except for data determined to be confidential under 40 C.F.R. Part 2 and APC&EC Rule 6, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Environmental Quality. As required by the Rules, the name and address of any permit applicant or permittee, permit applications, permits, and effluent data shall not be considered confidential.

13. **Penalties for Falsification of Reports**

The Arkansas Air and Water Pollution Control Act provides that any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this permit shall be subject to

civil penalties specified in Part III.A.2 and/or criminal penalties under the authority of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.).

14. **Other Information**

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

PART IV DEFINITIONS

All definitions contained in Section 502 of the Clean Water Act and 40 C.F.R. § 122.2 shall apply to this permit and are incorporated herein by reference. Additional definitions of words or phrases used in this permit are as follows:

1. **“7-day average” (“average weekly”)** the highest allowable average of “daily discharges” over a calendar week, calculated as the sum of all “daily discharges” measured during a calendar week divided by the number of “daily discharges” measured during that week
2. **“Act”** the Clean Water Act, Public Law 95-217 (33.U.S.C. 1251 et seq.) as amended
3. **“Administrator”** the Administrator of the U.S. Environmental Protection Agency
4. **“APC&EC”** the Arkansas Pollution Control and Ecology Commission
5. **“Applicable effluent standards and limitations”** all State and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards
6. **“Applicable water quality standards”** all water quality standards to which a discharge is subject under the federal Clean Water Act and which has been (a) approved or permitted to remain in effect by the Administrator following submission to the Administrator pursuant to Section 303(a) of the Act, or (b) promulgated by the Director pursuant to Section 303(b) or 303(c) of the Act, and standards promulgated under (APC&EC) Rule 2, as amended
7. **“Best Management Practices (BMPs)”** activities, practices, maintenance procedures, and other management practices designed to prevent or reduce the pollution of waters of the State; includes treatment technologies, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw sewage; may include structural devices or nonstructural practices
8. **“Bypass”** the intentional diversion of waste streams from any portion of a treatment facility, as defined at 40 C.F.R. § 122.41(m)(1)(i)
9. **“Composite sample”** a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing a minimum of 4 effluent portions collected at equal time intervals (but not closer than one hour apart) during operational hours, within the 24-hour period, and combined proportional to flow or a sample collected at more frequent intervals proportional to flow over the 24-hour period
10. **“Daily Discharge”** the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling
 - A. **Mass Calculations:** for pollutants with limitations expressed in terms of mass, the “daily discharge” is calculated as the total mass of pollutant discharged over the sampling day
 - B. **Concentration Calculations:** for pollutants with limitations expressed in other units of measurement, the “daily discharge” is calculated as the average measurement of the pollutant over the day
11. **“Daily Maximum”** the highest allowable “daily discharge” during the calendar month
12. **“Director”** the Director of the Division of Environmental Quality

13. **“Dissolved oxygen limit”** shall be defined as follows:
 - A. when limited in the permit as a minimum monthly average, shall mean the lowest acceptable monthly average value, determined by averaging all samples taken during the calendar month.
 - B. when limited in the permit as an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value
14. **“Division”** the Division of Environmental Quality (**DEQ**)
15. **“E. coli”** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads; for *E. coli*, report the 7-Day Average as the geometric mean of all “daily discharges” within a calendar week and the Monthly Average as the geometric mean of all “daily discharges” within a calendar month, in colonies per 100 ml
16. **“Fecal Coliform Bacteria (FCB)”** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads; for FCB, report the 7-Day Average as the geometric mean of all “daily discharges” within a calendar week and the Monthly Average as the geometric mean of all “daily discharges” within a calendar month, in colonies per 100 ml
17. **“Grab sample”** an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement
18. **“Industrial User”** a nondomestic discharger, as identified in 40 C.F.R. Part 403, introducing pollutants to a publicly owned treatment works (POTW)
19. **“Instantaneous flow measurement”** the flow measured during the minimum time required for the flow-measuring device or method to produce a result in that instance; to the extent practical, instantaneous flow measurements coincide with the collection of any grab samples required for the same sampling period so that together the samples and flow are representative of the discharge during that sampling period
20. **“Instantaneous Maximum”** no value measured during the reporting period may fall above the stated value
21. **“Instantaneous Minimum”** no value measured during the reporting period may fall below the stated value
22. **“Monitoring and Reporting”** when a permit becomes effective, monitoring requirements are of the immediate period of the permit effective date; for monitoring requirements for an effluent characteristic of monthly or more frequently, the Discharge Monitoring Report (DMR) shall be submitted by the 25th of the month following the sampling; for monitoring requirements for an effluent characteristic of Quarterly, Semi-Annual, Annual, or Yearly, the DMR shall be submitted by the 25th of the month following the monitoring period end date
 - A. **MONTHLY** a calendar month or any portion of a calendar month for monitoring requirement frequency of once/month or more frequently.
 - B. **BI-MONTHLY** two (2) calendar months or any portion of 2 calendar months for monitoring requirement frequency of once/2 months or more frequently
 - C. **QUARTERLY:**
 1. a **fixed calendar quarter** or any part of the fixed calendar quarter for a non-seasonal effluent characteristic with a measurement frequency of once/quarter; fixed calendar quarters are January through March, April through June, July through September, and October through December
 2. a **fixed three month period** (or any part of the fixed three month period) of or dependent upon the seasons specified in the permit for a seasonal effluent characteristic with a monitoring requirement frequency of once/quarter that does not coincide with

- the fixed calendar quarter; seasonal calendar quarters are May through July, August through October, November through January, and February through April
- D. **SEMI-ANNUAL** the fixed time periods January through June, and July through December (or any portion thereof) for an effluent characteristic with a measurement frequency of once/6 months or twice/year
- E. **ANNUAL or YEARLY** a fixed calendar year (January through December) or any portion of the fixed calendar year for an effluent characteristic or parameter with a measurement frequency of once/year
23. **“Monthly Average”** the highest allowable average of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month; for Fecal Coliform Bacteria (FCB) or *E. coli*, report the Monthly Average as the geometric mean of all “daily discharges” within a calendar month (see Part IV.15 and IV.16 above)
24. **“National Pollutant Discharge Elimination System”** the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements under Sections 307, 402, 318, and 405 of the Clean Water Act
25. **“POTW”** Publicly Owned Treatment Works; a treatment works (see Part IV.29 below) which is owned by a state or municipality
26. **“Reduction of CBOD₅/BOD₅ and TSS Formula”** $[(\text{Influent} - \text{Effluent}) / \text{Influent}] \times 100$
27. **“Severe property damage”** substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass; does not include economic loss caused by delays in products
28. **“Sewage sludge”** the solids, residues, and precipitate separated from or created in sewage by the unit processes at a POTW; any wastes, including wastes from humans, households, commercial establishments, industries, and stormwater runoff that are discharged to or otherwise enter a POTW
29. **“Treatment works”** any devices and systems used in storage, treatment, recycling, and reclamation of municipal sewage and industrial wastes, of a liquid nature to implement section 201 of the Act, or necessary to recycle reuse water at the most economic cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities, and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment
30. **Units of Measure:**
- “cfs”** cubic feet per second
 - “µg/l”** micrograms per liter or parts per billion (ppb)
 - “mg/l”** milligrams per liter or parts per million (ppm)
 - “MGD”** million gallons per day
 - “ppm”** parts per million
 - “s.u.”** standard units
31. **“Upset”** an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee; does not include noncompliance to the extent caused by operational

error, improperly designed treatment facilities, lack of preventive maintenance, or careless or improper operations

32. **“Visible sheen”** the presence of a film or sheen upon or a discoloration of the surface of the discharge; a sheen can also be from a thin glistening layer of oil on the surface of the discharge
33. **“Weekday”** Monday – Friday.

Final Statement of Basis

This revised Statement of Basis is for information and justification of the permit requirements only. Please note that it is not enforceable. This permitting decision is for issuance of the discharge Permit Number AR0053210 with Arkansas Department of Energy and Environment - Division of Environmental Quality (DEQ) Arkansas Facility Identification Number (AFIN) 60-05010 to discharge to Waters of the State.

1. PERMITTING AUTHORITY

The issuing office is:

Division of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

2. APPLICANT

The applicant's mailing address is:

Pulaski County Property Owners' Multipurpose Improvement District No. 2021-2
Paradise Valley Subdivision WWTP
P.O. Box 23670
Little Rock, AR 72221

The facility address is:

Pulaski County Property Owners' Multipurpose Improvement District No. 2021-2
Paradise Valley Subdivision WWTP
Roland Cutoff
Roland, AR 72135

3. PREPARED BY

The permit was prepared by:

Loretta Carstens, P.E.
Staff Engineer
NPDES Discharge Permits Section
Office of Water Quality
(501) 682-0670
Email: loretta.carstens@adeq.state.ar.us

Carrie McWilliams, P.E.
Engineer Supervisor
NPDES Discharge Permits Section
Office of Water Quality
(501) 682-0915
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4. PERMIT ACTIVITY

The permittee submitted an application on September 2, 2020, with initial additional information for administrative completeness received by September 21, 2020, for a state construction permit and an individual NPDES permit. The permittee is proposing to install a

WWTP for a residential subdivision. The state construction permit for the project, AR0053210C, was issued on June 22, 2021, with Arkansas Department of Health (ADH) approval issued on December 17, 2021.

See Sections 17 and 18 of this Statement of Basis for information regarding the re-publishing of the public notice for this draft permit. The new discharge permit is being issued for a 5-year term in accordance with regulations promulgated at 40 C.F.R. § 122.46(a).

Although this facility is an improvement district, pretreatment requirements have not been included in the permit. The facility will only be permitted to discharge domestic wastewater in accordance with the plat and other information submitted with the Non-municipal Domestic Sewage Treatment Works form unless written permission has been received from the DEQ.

DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

APC&EC - Arkansas Pollution Control and Ecology Commission
BAT - best available technology economically achievable
BCT - best conventional pollutant control technology
BMP - best management practice
BOD₅ - five-day biochemical oxygen demand
BPJ - best professional judgment
BPT - best practicable control technology currently available
CBOD₅ - carbonaceous biochemical oxygen demand
CD - critical dilution
C.F.R. - Code of Federal Regulations
cfs - cubic feet per second
COD - chemical oxygen demand
COE - United States Corp of Engineers
CPP - continuing planning process
CWA - Clean Water Act
DMR - discharge monitoring report
DO - dissolved oxygen
ELG - effluent limitation guidelines
EPA - United States Environmental Protection Agency
ESA - Endangered Species Act
FCB - fecal coliform bacteria
gpm - gallons per minute
MGD - million gallons per day
MQL - minimum quantification level
NAICS - North American Industry Classification System
NH₃-N - ammonia nitrogen
NO₃ + NO₂-N - nitrate + nitrite nitrogen
NPDES - National Pollutant Discharge Elimination System
O&G - oil and grease

Rule 2 - APC&EC Rule 2
Rule 6 - APC&EC Rule 6
Rule 8 - APC&EC Rule 8
Rule 9 - APC&EC Rule 9
RP - reasonable potential
SIC - standard industrial classification
TDS - total dissolved solids
TMDL - total maximum daily load
TP - total phosphorus
TRC - total residual chlorine
TSS - total suspended solids
UAA - use attainability analysis
USF&WS - United States Fish and Wildlife Service
USGS - United States Geological Survey
WET - whole effluent toxicity
WQMP - water quality management plan
WQS - Water Quality standards
WWTP - wastewater treatment plant

5. **FINANCIAL ASSURANCE**

The permittee shall comply with all applicable financial assurance fee requirements including the trust fund contribution fee, as required by Arkansas Code Annotated § 8-4-203(b). Failure to promptly remit all financial assurance fees as required shall be grounds for the Director to initiate action to terminate this permit under the provisions in 40 C.F.R. §§ 122.64 and 124.5(d), as adopted in APC&EC Rule 6 and the provisions in APC&EC Rule 8.

6. **SIGNIFICANT CHANGES FROM THE PREVIOUSLY ISSUED PERMIT**

This is the first permit for a new facility. Therefore, this section is not applicable at this time.

7. **RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION**

The outfall is located at the following coordinates based on Google Earth using WGS84:

Latitude: 34° 54' 07.5" N; Longitude: 92° 31' 24.8" W

The receiving waters named:

an unnamed tributary of Mill Bayou, thence to Mill Bayou, thence to the Arkansas River in Segment 3C of the Arkansas River Basin. The receiving stream with assessment unit (AU) AR_11110207_013¹ is a Water of the State classified for secondary contact recreation; a raw water source for domestic (public and private), industrial, and agricultural water supplies; the propagation of desirable species of fish and other aquatic life; and other compatible uses.

¹ This is the closest downstream AU 3-digit code, which is assigned to the Arkansas River.

8. 303(d) LIST, TOTAL MAXIMUM DAILY LOADS, ENDANGERED SPECIES, AND ANTI-DEGRADATION CONSIDERATIONS

A. 303(d) List

The receiving stream is not listed in Arkansas's 2018 List of Impaired Waterbodies (303(d) List). Therefore, no permit action is needed.

B. Applicable Total Maximum Daily Load (TMDL) Reports

There are no applicable TMDLs to this facility.

C. Endangered Species

No comments on the application were received from the USF&WS. The draft permit and Statement of Basis were sent to the USF&WS for their review.

D. Anti-Degradation

The limitations and requirements set forth in this permit for discharge into waters of the State are consistent with the Anti-degradation Policy and all other applicable water quality standards found in APC&EC Rule 2.

9. OUTFALL, TREATMENT PROCESS DESCRIPTION, AND FACILITY CONSTRUCTION

The following is a description of the facility described in the application:

A. Design Flow: 0.05 MGD

B. Type of Treatment: bar screen, grit removal, flow equalization chamber, extended aeration activated sludge/aeration chamber, two (2) clarifiers, sludge holding chamber, filtration, chlorine disinfection, dechlorination.

C. Discharge Description: treated domestic wastewater

D. Facility Status: This facility was evaluated using the NPDES Permit Rating Worksheet (MRAT) to determine the correct permitting status. Since the facility's MRAT score of 15 is less than 80, this facility is classified as a minor industrial.

E. Facility Construction: This permit does not authorize or approve the construction or modification of any part of the treatment system or facilities. Approval for such construction must be by permit issued under Rule 6.202.

10. ACTIVITY

Under the Standard Industrial Classification (SIC) code of 4952 or North American Industry Classification System (NAICS) code of 221320, the applicant's activities are the operation of a wastewater treatment plant for a subdivision.

11. SEWAGE SLUDGE PRACTICES

Sludge generated at the facility will be hauled off to a permitted landfill. Sludge must be removed as necessary to maintain proper operation and maintenance at the treatment facility. Sludge disposal, if different than described above, will require prior authorization from the Division. Any change to the sludge disposal method shall be in accordance with Part III.B.6 of the permit.

12. DEVELOPMENT AND BASIS FOR PERMIT CONDITIONS

The Division of Environmental Quality has determined to issue a permit for the discharge described in the application. Permit requirements are based on federal regulations (40 C.F.R. Parts 122, 124, and Subchapter N), and regulations promulgated pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. 8-4-101 et seq.). All of the information contained in the application, including all of the submitted effluent testing data, was reviewed to determine the need for effluent limits and other permit requirements.

The following is an explanation of the derivation of the conditions of the permit and the reasons for them or, in the case of notices of intent to deny or terminate, reasons suggesting the decisions as required under 40 C.F.R. § 124.7.

Technology-Based Versus Water Quality-Based Effluent Limitations and Conditions

Following regulations promulgated at 40 C.F.R. § 122.44, the permit limits are based on either technology-based effluent limits pursuant to 40 C.F.R. § 122.44(a) or on State water quality standards and requirements pursuant to 40 C.F.R. § 122.44(d), whichever are more stringent as follows:

Parameter	Water Quality-Based		Technology-Based		Final Permit	
	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l
CBOD ₅						
(May – October)	15	23	N/A	N/A	15	23
(November – April)	20	30	N/A	N/A	20	30
TSS	20.0	30.0	N/A	N/A	20.0	30.0

Parameter	Water Quality-Based		Technology-Based		Final Permit	
	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l
NH ₃ -N						
(April)	5.6	5.6	N/A	N/A	5.6	5.6
(May – October)	5.0	7.5	N/A	N/A	5.0	7.5
(November – March)	10.0	15.0	N/A	N/A	10.0	15.0
DO						
(May – October)	3.0 (Inst. Min.)		N/A		3.0 (Inst. Min.)	
(November – April)	2.0 (Inst. Min.)		N/A		2.0 (Inst. Min.)	
FCB (col/100ml)	1000	2000 (7-Day Avg.)	N/A	N/A	1000	2000 (7-Day Avg.)
TRC	0.011 (Inst. Max.)		Report (Inst. Max.)		0.011 (Inst. Max.)	
pH	6.0-9.0 s.u.		N/A		6.0-9.0 s.u.	

A. Justification for Limitations and Conditions of the Permit

Parameter	Water Quality or Technology	Justification
CBOD ₅	Water Quality	Water Quality Model dated March 9, 2021
TSS	Water Quality	Water Quality Model dated March 9, 2021
NH ₃ -N	Water Quality	Rule 2.512, Water Quality Model dated March 9, 2021
DO	Water Quality	Rule 2.505, Water Quality Model dated March 9, 2021
FCB	Water Quality	Rule 2.507
TRC	Water Quality	Rule 2.409
pH	Water Quality	Rule 2.504

Percentage Flow:

Percentage flow is defined as the percentage of the discharge flow relative to the design flow of the facility. The critical percentage flow is defined as monthly average flow greater than 80% of the facility's design flow. Requirements to calculate and report percentage flow, as well as additional requirements when the facility exceeds the critical percentage flow, were added in Parts I.A and II.6 of the permit. These requirements were included to help ensure the facility is appropriately designed to treat the wastewater it receives, and that necessary modifications to the treatment system are made to accommodate any changes in the treatment service area or the hydraulic conditions the plant is operating in.

Carbonaceous Biochemical Oxygen Demand (CBOD₅):

Domestic wastewater is considered to be oxygen demanding due to the presence of sanitary waste, which contains organic material that consumes oxygen. In order to protect the level of dissolved oxygen present in the receiving stream, effluent limitations are included for Carbonaceous Biochemical Oxygen Demand (CBOD₅), a method defined test that measures the depletion of dissolved oxygen by biological organisms. CBOD₅ limits were derived from the modeling analysis dated March 9, 2021.

Total Suspended Solids (TSS):

Domestic wastewater can contain high levels of suspended solids that can contribute to turbidity or cloudiness in the receiving stream. High turbidity levels can affect the ability of fish gills to absorb dissolved oxygen, and TSS can also create an oxygen demand in the water column due to the sediment (sediment oxygen demand). Therefore, in order to protect the water quality and designated uses of the receiving stream, effluent limitations are included for TSS to control the discharge of suspended solids. TSS limits are included in the permit and are indirectly modeled by input of an SOD rate which corresponds to the TSS effluent value in the modeling analysis dated March 9, 2021.

Ammonia Nitrogen (NH₃-N):

Ammonia is known to have adverse effects to aquatic life and human health when discharged in toxic amounts. If discharged without any reduction, ammonia will also exert an unacceptable oxygen demand on the receiving stream. In order to protect the water quality and designated uses of the receiving stream, effluent limitations are included for ammonia nitrogen (NH₃-N), which measures the amount of ammonia in the wastewater discharge. These limitations are based on the toxicity standards provided in APC&EC Rule 2.512 and the modeling analysis dated March 9, 2021.

Dissolved Oxygen (DO):

As stated previously, domestic wastewater contains pollutants that are oxygen-demanding. These pollutants may have adverse effects on the existing level of DO and the propagation of desirable species of fish and other aquatic life in the receiving stream. Therefore, effluent limitations for DO, expressed as an instantaneous minimum, were derived from a modeling analysis dated March 9, 2021 to ensure protection of water quality and the designated uses of the receiving stream. An instantaneous minimum required DO effluent level has been included in the permit to ensure that the dissolved oxygen water quality standards are met in accordance with APC&EC Rule 2.505.

Fecal Coliform Bacteria (FCB):

Domestic wastewater can contain high levels of coliform bacteria due to the presence of sanitary waste. Effluent limitations for the concentration of FCB must be included for the purpose of maintaining the designated uses of secondary contact recreation seasons in the receiving stream. The limitations will also ensure that the disinfection process at the

treatment facility is properly operated. Since the watershed of the receiving stream is less than 10 mi², the stream is classified for secondary contact recreation. For this classification, APC&EC Rule 2.507 specifies that the effluent limitations for FCB shall be a Monthly Average Limit of 1000 col/100 ml and a Daily Maximum (7-Day Average) Limit of 2000 col/100 ml, both year-round.

Total Residual Chlorine (TRC):

The facility's treatment system consists of chlorine disinfection and dechlorination. EPA considers TRC concentrations at the edge of the mixing zone higher than 0.011 mg/l (Chronic Criteria) to be toxic to aquatic organisms. In accordance with APC&EC Rule 2.409, which forbids the discharge of toxic pollutants in amounts which are toxic, a TRC limit based on meeting the EPA criteria in the receiving stream has been included in the permit. Since the receiving stream has a 7Q10 of 0 cfs, the EPA criteria must be included as an end-of-pipe limit.

The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling. To demonstrate compliance with the TRC limit, the permittee must determine the effluent concentration by using any EPA approved test method established in 40 C.F.R. Part 136 capable of meeting a detection level of 0.033 mg/l or lower. If TRC is not detected at the required detection level (i.e., lab result is "ND"), the permittee may report a value of "0" on the Discharge Monitoring Report (DMR), thereby demonstrating compliance with the limit of 0.011 mg/l. Please note that if the required detection level is not met, TRC must be reported at the detection level achieved.

pH:

Requirements for pH have been included in the permit to verify that the discharge from the permittee is not affecting the water quality standards of the receiving stream in accordance with APC&EC Rule 2.504. This will help protect all designated uses of the receiving stream.

Cultural Resources:

During development of the permit it was determined that potential significant cultural resources may exist in or near the area of the facility. Permit Part II, Condition 9 was included to address this potential.

B. Anti-backsliding

Since this is a new permit, the anti-backsliding provisions of the Clean Water Act (CWA), Section 402(o) [40 C.F.R. § 122.44(1)] will be taken into consideration at the time of the next permit issuance.

C. Limits Calculations

1. Mass Limits:

In accordance with 40 C.F.R. § 122.45(f)(1), all pollutants limited in permits shall have limitations expressed in terms of mass if feasible. 40 C.F.R. § 122.45(f)(2) allows for pollutants which are limited in terms of mass to also be limited in terms of other units of measurement.

The calculation of the mass loadings uses a design flow of 0.05 MGD and the following equation:

$$\text{Mass (lbs/day)} = \text{Concentration (mg/l)} \times \text{Flow (MGD)} \times 8.34$$

2. Daily Maximum Limits:

The daily maximum limits for CBOD₅, TSS, and NH₃-N (May–March), are based on Section 5.4.2 of the Technical Support Document for Water Quality-based Toxics Control:

$$\text{daily maximum limits} = \text{monthly average limits} \times 1.5$$

The daily maximum NH₃-N limit for the month of April is based on the requirements of Rule 2.512.

The daily maximum (7-Day Average) limit for FCB is based on Rule 2.507.

D. 208 Plan (Water Quality Management Plan)

The 208 Plan, developed by the DEQ under provisions of Section 208 of the federal Clean Water Act, is a comprehensive program to work toward achieving federal water goals in Arkansas. The initial 208 Plan, adopted in 1979, provides for annual updates, but can be revised more often if necessary. The 208 Plan is being updated to add this new facility with the following water quality limitations:

May–October:	CBOD ₅ /TSS/NH ₃ -N/DO/TRC = 15/20.0/5.0/3.0/0.011 mg/l
November–March:	CBOD ₅ /TSS/NH ₃ -N/DO/TRC = 20/20.0/10.0/2.0/0.011 mg/l
April:	CBOD ₅ /TSS/NH ₃ -N/DO/TRC = 20/20.0/5.6/2.0/0.011 mg/l
Design flow (Q):	0.05 MGD

13. SAMPLE TYPE AND FREQUENCY

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity [40 C.F.R. § 122.48(b)] and to ensure compliance with permit limitations [40 C.F.R. § 122.44(i)(1)].

Requirements for sample type and sampling frequency were based on best engineering judgment for a new facility with a design flow of 0.05 MGD.

Parameter	Final Permit	
	Frequency of Sample	Sample Type
Flow	twice/week	totalizer
Percentage Flow	twice/week	calculated
CBOD ₅	once/month	grab
TSS	once/month	grab
NH ₃ -N	once/month	grab
DO	once/month	grab
FCB	once/month	grab
TRC	once/month	grab
pH	once/month	grab

14. PERMIT COMPLIANCE SCHEDULE

A Schedule of Compliance has not been included in this permit. Compliance with all permit requirements is required on the effective date of the permit.

15. MONITORING AND REPORTING

The applicant is at all times required to monitor the discharge on a regular basis and report the results monthly. The monitoring results will be available to the public.

16. SOURCES

The following sources were used to draft the permit:

- A. [Application No. AR0053210 received September 2, 2020, with initial additional information received by September 21, 2020.](#)
- B. [Arkansas Water Quality Management Plan \(WQMP\).](#)
- C. [APC&EC Rule 2.](#)
- D. [APC&EC Rule 3.](#)
- E. [APC&EC Rule 6, which incorporates by reference certain federal regulations included in Title 40 of the Code of Federal Regulations at Rule 6.104.](#)
- F. [40 C.F.R. Parts 122 and 125.](#)
- G. [“2018 Integrated Water Quality Monitoring and Assessment Report,” DEQ.](#)

- H. [“2018 List of Impaired Waterbodies \(303\(d\) List\),” DEQ, May 2020.](#)
- I. [USGS StreamStats web-based program.](#)
- J. [Continuing Planning Process \(CPP\).](#)
- K. [Technical Support Document for Water Quality-based Toxics Control.](#)
- L. [Preliminary Limits Response Letter dated March 4, 2020.](#)
- M. [Revised Application Information dated February 3, 2021.](#)
- N. [Planning Review Memo dated February 3, 2021.](#)
- O. [Technical Information Email dated February 19, 2021.](#)
- P. [NPDES Permit Rating Spreadsheet \(MRAT\) dated March 4, 2021.](#)
- Q. [Operator License Class Spreadsheet dated March 4, 2021.](#)
- R. [Water Quality Model dated March 9, 2021.](#)
- S. [Toxicity-Based TRC Calculations dated March 16, 2021.](#)
- T. [Estimated Cost of Construction Letter dated March 19, 2021.](#)
- U. [Number of Connections Email dated May 18, 2021.](#)
- V. [Permit Transfer Form dated May 18, 2021.](#)
- W. [Original Draft Permit Public Notice dated July 11, 2021.](#)
- X. [Original Draft Permit Public Notice Proof of Publication and Payment dated August 4, 2021.](#)
- Y. [Arkansas Department of Health \(ADH\) Letter dated September 2, 2021.](#)
- Z. [DEQ Letter to Pinnacle Mountain Community Coalition dated October 8, 2021.](#)
- AA. [NDSTW Trust Fund Requirements received November 2, 2021.](#)
- BB. [Permit Transfer Form received November 29, 2021.](#)
- CC. [State Construction Permit AR0053210C issued on June 22, 2021, with ADH approval granted on December 17, 2021.](#)
- DD. [ADH Approval Letter dated December 17, 2021.](#)
- EE. [DEQ Letter to Mr. Rick Ferguson dated January 6, 2022.](#)
- FF. [Response Letter to DEQ and Additional Information dated January 18, 2022.](#)
- GG. [Revised Cost Estimate and Disclosure Statement dated October 17, 2022.](#)
- HH. [List of Commenters.](#)

17. PUBLIC NOTICE

The public notice for the original draft permit was previously published on July 11, 2021, and the public comment period ended on August 11, 2021. The second draft permit was public noticed on March 6, 2022. Numerous comments and requests for a public hearing were received before the public comment period ended on April 4, 2022. A public hearing was public noticed on April 17, 2022, and subsequently held on May 18, 2022. Based on the revised information submitted by the consultant, the draft permit was public noticed on November 13, 2022. Numerous comments and requests for a public hearing were received before the public comment period ended on December 13, 2022. A public hearing was public noticed on February 26, 2023, and subsequently held on April 5, 2023.

Copies of the draft permit and public notice were sent via email to the Corps of Engineers, the Regional Director of the U.S. Fish and Wildlife Service, the Department of Parks, Heritage, and Tourism, the EPA, and the Arkansas Department of Health.

18. PERMIT FEE

NPDES Permit

In accordance with Rule 9.403(C)(1), the initial and annual fee for the permit (not including the required trust fund contribution) is calculated from the Design Flow (Q, in MGD) as follows:

$$\text{Fee} = \$200 + (5,600 \times Q) = \$200 + (5,600 \times 0.05) = \$480$$

Initial Trust Fund Fee

In accordance with Ark. Code Ann. § 8-4-203(b)(4)(B)(ii)(b), the initial trust fund contribution fee required by the Division for a new nonmunicipal domestic sewage treatment works is ten percent (10%) of the estimated cost of construction of the new nonmunicipal domestic sewage treatment works as certified by the engineer of record.

$$\text{Fee} = 0.1 \times \$390,450 = \$39,045$$

Previously submitted application material included a construction cost estimate of \$250,000 and required payment of an initial fee of \$25,000. Upon evaluation of public comments received during the second public notice period, DEQ determined an update was required resulting in an increase in the construction cost estimate. Revised and certified cost estimates were submitted October 17, 2022. The permittee will be invoiced for the balance initial trust fund contribution fee in the additional amount of \$14,045.

This facility is billed under fee code BT.

19. POINT OF CONTACT

For additional information, contact:

Loretta Carstens, P.E.
Permits Branch, Office of Water Quality
Division of Environmental Quality
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**RESPONSE TO COMMENTS
FINAL PERMITTING DECISION**

Permit No.: AR0053210

Applicant: Pulaski County Property Owners' Multipurpose Improvement District No. 2021-2
Paradise Valley Subdivision WWTP

Prepared by: Loretta Carstens, P.E.

The following are responses to comments received by the Division of Environmental Quality (DEQ) regarding the draft permit number referenced above and are developed in accordance with regulations promulgated at 40 C.F.R. §124.17, Arkansas Pollution Control & Ecology Commission (APC&EC) Rule 8 (Administrative Procedures), and Arkansas Code Annotated (A.C.A.) §8-4-203(e)(2).

Introduction

The public notice for the original draft permit was previously published on July 11, 2021, and the public comment period ended on August 11, 2021. The second draft permit was public noticed on March 6, 2022. Numerous comments and requests for a public hearing were received before the public comment period ended on April 4, 2022. A public hearing was public noticed on April 17, 2022, and subsequently held on May 18, 2022. Based on the revised information submitted by the consultant, the draft permit was public noticed on November 13, 2022. Numerous comments and requests for a public hearing were received before the public comment period ended on December 13, 2022. A public hearing was public noticed on February 26, 2023, and subsequently held on April 5, 2023.

This document contains a summary of the comments that the DEQ received during the public comment period. A summary of the changes to the NPDES Permit can be found on the last page of this document. Where several similar issues were raised throughout the comments, those comments were grouped together, with a single response from the DEQ. The comments have been sorted into 18 different topics.

A list of the people or organizations who sent comments to the DEQ during the public notice and public hearing comment periods may be found using the following link:

https://www.adeg.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0053210_List_of_Commenters_20230601.pdf

Comment 1: Cultural Resources Study, Corps of Engineers Permit, and Waiver Requests

- a. The permittee has stated that they have applied for a USACE NationWide Permit for the WWTP. A commenter stated that this wasn't applied for until 2022.
- b. Several Commenters, including Osage Nation, requested that the applicant conduct a Cultural Resources Study.
- c. The permittee has not requested any waivers from DEQ or ADH.

Response 1

- a. The Division acknowledges this comment.
- b. The permittee has stated that a Cultural Resources Study has been conducted and no evidence was found.
- c. The Division acknowledges this comment.

Comment 2: Bad Actor Considerations

Several commenters stated that the developer is a documented “bad actor” due to issues at the WWTP and other permits for Waterview Estates. The issues stated by the commenters include code violations and operation of the WWTP at unacceptable levels. Commenters stated that the “failed sewage facility” at Waterview Estates and the developer’s history with the existing permit must be taken into account since there will be destruction in Mill Bayou when the developer fails to maintain standards as they have done at Waterview Estates.

There are currently approximately forty (40) homes in Waterview Estates. Commenters inquired as to how the developer will manage a system for a subdivision with over one hundred fifty (150) homes.

Response 2

Determination of “History of Non-compliance” is a process specified by A.C.A. § 8-1-106. This process must be completed through the formal permit decision-making processes reviewed and issued by the Director of DEQ. A determination that a permit applicant demonstrates a “History of Non-compliance” is also known as a “bad actor”. Consideration of “History of Non-compliance” is a component of permit application review for all NPDES and other permit decisions made by DEQ. Neither of the applicants discussed in this response nor Mr. Ferguson individually has ever been determined to exhibit “History of Non-compliance” under the permitting and statutory provisions.

Compliance problems can occur at all types of permitted facilities and can result from operational mismanagement, overlooked maintenance, design problems, influent waste changes, operational upsets, or unseasonal weather events, each of which can be addressed through improved facility management, operational adjustments, maintenance, or repairs. Occasionally engineers are tasked to develop corrective action plans which may specify redesigned system components or alternative operating plans. DEQ has the authority to compel compliance with permits and require facility updates when there is cause for action to improve permit compliance.

The permittees for construction stormwater permit ARR150142 (Waterview Estates/PH II) and ARR157007 (Waterview Meadows, LLC) as well as NPDES Permit No. AR0050393 (Waterview Estates/PH II) have responded to the DEQ’s requests for information and inspection reports.

Comment 3: Downstream Effects on Mill Bayou

- a. Mill Bayou is stagnant with no flowing water. Only “clearly defined streams” should be used. Mill Bayou is a protected Water of the United States and a source of life giving water for animals and people within the watershed. Due to being a stagnant stream, the water would remain in the area for long periods, making the water toxic and contaminating the ground, aquifers, and surrounding wetlands. This will pose a danger to pets, livestock, and children. The quality of the land will be affected.
- b. Pools can promote algae blooms and cause the water to become toxic. Lethal levels of nitrogen and phosphorus can result and deplete the DO levels in the water.
- c. The process of a sewage treatment facility, including use of chemicals, would also contribute organic matter, chlorine, suspended solids, and fecal coliform bacteria to the waterway multiplying the health risk; could also lead to harmful and unpleasant gasses resulting from decaying matter and anerobic bacteria (hydrogen sulfide and methane).
- d. Human health as well as that of pets and wildlife could be harmed by this discharge. Also, many times the people that live downstream of a sewage discharge live at or below the federal poverty level so relocation isn’t possible and their access to healthcare is limited when they become ill. DEQ will be liable for damages since they have been warned about the harm this facility may cause.
- e. Concerns about dissolved oxygen depletion and oil & grease in water bodies caused by the wastewater effluent: Concerns that dissolved oxygen is critical for marine life to thrive, and as it becomes depleted, it can be life-threatening for fish. Concerns that wastewater also contains oil and grease that are harder to break down and can settle on the surface of the water. Concerns that this blocks that light the photosynthetic aquatic plants need. Concerns that this can also suffocate fish and get caught in birds’ feathers.
- f. Instead of considering each permit in isolation, ADEQ should examine the cumulative impact of each development on its watershed. Each change must be carefully studied for its impact on the environment since once nature is disturbed, it takes a long time to recover, if it even can.
- g. Wastewater is often treated and repurposed for use in irrigation. As if that wasn’t bad enough on its own, water treatment processes are not completely effective. Chemicals that are harmful to crops may find their way to the soil when the wastewater isn’t properly treated. These chemicals will cause the soil to yield 2 fewer crops at a slower rate. Consider also the fact that these crops will eventually be eaten, which can also harm humans.” As stated earlier, many people in Roland have livestock and personal gardens that back up to Mills Bayou. The release of any chemicals into a water source that so many households back up to is not appropriate.

Corrective fluids being added to remedy bad smells present a risk to the bayou, the people, and the plants nearby.

- h. How will the designated uses for Mill Bayou, a pristine area, be protected if wastewater is allowed to be discharged into a dry or almost dry stream then accumulate and concentrate in a flooded wetland? Was DEQ aware of the unique environment and ecology of the area receiving the discharge and was it considered by DEQ before deciding to issue the permit?
- i. Are there calculations on this discharge and its impacts? Have ecological studies been conducted? If so, why aren’t they on the website?
- j. The WWTP should be located elsewhere.

- k. Mill Bayou is not a losing stream.
- l. Mill Bayou should be routinely tested to assure the designated uses of the receiving stream are met.
- m. All WWTPs on Mill Bayou should be banned as was done for the Lake Maumelle watershed.

Response 3

- a. DEQ issues permits in accordance with Federal and State Regulations. The terms and conditions of the permits are protective of the Water Quality of the State of Arkansas and are designed to protect all designated uses of the receiving stream, and all beneficial species of fish and other aquatic life. Issuing a permit which allows a facility to discharge to a stream is not a violation of the Clean Water Act.

The proposed discharge into Mill Bayou was evaluated in accordance with APC&EC Rule 2 Water Quality Standards and in accordance with permitting procedures specified by the Continuous Planning Process (CPP) approved by EPA. The CPP states that discharge effects on receiving streams must be evaluated at worst case scenarios, i.e. critical low-flow conditions, which is the 7Q10 low flow. The 7Q10 for this receiving stream has been set at 0 cubic feet per second (cfs) due to lack of flow or extremely low flows observed during parts of the year. Mill Bayou is a surface water of the state. DEQ, in accordance with Rule 2 and the evaluation completed during the technical review of the draft permit, concludes that the limits set in this final permit decision meet Arkansas's Water Quality Standards and will continue to protect all designated uses of the downstream receiving waters.

- b. The DEQ acknowledges the concerns of the fish and wildlife downstream of the stream. A water quality model was performed for the effluent discharge limits to ensure that the dissolved oxygen standards and ammonia toxicity standards are maintained in the receiving stream.

The effluent limits contained in the permit are protective of water quality standards and the permit is issued in accordance with Rule 2 and the permitting procedures contained in the CPP approved by EPA. The effluent limits for conventional or non-conventional pollutants expected to discharge from treatment plants are included in the NPDES permit if DEQ's review indicates the pollutant exhibits reasonable potential to cause an exceedance from applicable water quality standards.

- c. DEQ issues permits in accordance with Federal and State Regulations. The terms and conditions of the permits are protective of the Water Quality of the State of Arkansas and are designed to protect all beneficial species of fish and other aquatic life. Issuing a permit which allows a facility to discharge to a stream is not a violation of the Clean Water Act.

The permit requires that a minimum DO level in the effluent be maintained to prevent nuisance conditions in the receiving stream. Maintaining proper DO levels in the effluent will help to prevent odors.

- d. The wastewater treatment facility is designed in a way which prevents wildlife access to the treatment system components. The facility will not be open for public visitors. The effluent will be required to meet limits. The permit limits have been developed to be protective of the water quality and the designated uses of the receiving stream.

- e. DEQ issues permits in accordance with Federal and State Regulations. The terms and conditions of the permits are protective of the Water Quality of the State of Arkansas and are designed to protect all designated uses and beneficial species of fish and other aquatic life. Issuing a permit which allows a facility to discharge to a stream is not a violation of the Clean Water Act.

The permit contains limits for oxygen demanding pollutants and a minimum required DO level in the effluent. The permit also restricts discharges of oil and grease in Part I.A. as follows:

“Oil, grease, or petrochemical substances shall not be present in receiving waters to the extent that they produce globules or other residue or any visible, colored film on the surface or coat the banks and/or bottoms of the waterbody or adversely affect any of the associated biota. There shall be no visible sheen as defined in Part IV of this permit.”

- f. DEQ does perform segmented water quality models with other dischargers when necessary. Segmented models are required when a second facility discharges within the segments affected by the first discharger. Based on the water quality model performed by DEQ, the instream dissolved oxygen downstream of Paradise Valley WWTP complies with the water quality standard in the entire modeled length of 0.5 miles, and the projected dissolved oxygen is increasing at the model end. The downstream permitted facility (Waterview Estates) is approximately 2.7 miles downstream of Paradise Valley. Therefore, the downstream facility was not included in this model since the model predicted dissolved oxygen sag curve has fully recovered within 0.5 miles downstream of Paradise Valley.
- g. Chemicals and fluids added during the treatment are reviewed by the agency for ecological risk and taken into account when drafting the permit. Maintaining the required DO level in the wastewater effluent is an effective method of controlling odors and does not require introduction of chemicals or fluids.
- h. The proposed discharge into Mill Bayou was evaluated in accordance with APC&EC Rule 2 Water Quality Standards and in accordance with permitting procedures specified by the Continuous Planning Process (CPP) approved by EPA. The CPP states that discharge effects on receiving streams must be evaluated at worst case scenarios, i.e. critical low-flow conditions, which is the 7Q10 low flow. The 7Q10 low flow is specified by stream data compiled and published by USGS. Mill Bayou is a surface water of the state. DEQ, in accordance with Rule 2 and the evaluation completed during the technical review of the draft permit, concludes that the limits set in this final permit decision meet Arkansas’s Water Quality Standards and will continue to protect all designated uses of the downstream receiving waters.
- i. The Water Quality Management Plan Summary was placed on the DEQ web site in March 2021. This update includes the water quality modeling performed to determine the appropriate limits for this facility. This update is available at the following link:https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0053210_WQMP%20Summary_20210309.pdf
- j. DEQ issues permits in accordance with Federal and State Regulations. In regards to the outfall location and receiving stream, permittees propose the discharge point. The Division then determines what limits are necessary to protect the water quality at and downstream of the proposed discharge location and all designated uses of the receiving stream.
- k. The Division acknowledges this comment.
- l. DEQ issues permits in accordance with Federal and State Regulations. The proposed discharge into Mill Bayou was evaluated in accordance with APC&EC Rule 2 Water Quality Standards

and in accordance with permitting procedures specified by the Continuous Planning Process (CPP) approved by EPA. The permit requires regular testing of the treated effluent. On-going testing of the receiving stream is not required for this NPDES permit. Therefore, no changes to the permit are necessary as a result of these comments.

- m. DEQ is unaware of an Arkansas law or rule that prohibits issuing NPDES permits for facilities that discharge into Mill Bayou. The issue of all WWTPs on Mill Bayou being banned is outside the scope of this NPDES permit. Therefore, no changes to the permit are necessary as a result of these comments.

Comment 4: Wetlands

- a. Federal law, Section 404 of the Clean Water Act, recognizes the importance of wetlands and the consequences of their loss, and requires permits from the US Army Corps of Engineers to impact wetlands through the discharge of dredge or fill materials. Unfortunately, the physical filling of wetlands is not the only way people may negatively impact wetlands. The discharge of nutrients and increased water flows associated with stormwater and wastewater discharge may also negatively impact wetlands.
- b. A study should be conducted on the wetlands in the Mill Bayou watershed as was done for the White Oak Bayou watershed north of the Arkansas River. Testing water quality in Mill Bayou should be done as part of the work to support the 208 Plan. The permit should not be issued until sufficient data has been gathered to show that there will not be significant negative effects on Mill Bayou.
- c. Potential ecological impacts of partially treated wastewater on wetland ecosystems are driven primarily by hydrologic changes, including an increased water flow, changes to the timing of flow, and to water surface elevations; by nutrient enrichment of the wetland system; and other potential impacts related to other pollutants that may be carried into the ecosystem in partially treated wastewater.
- d. Wetland ecosystems are typically structured by *pulsed* flooding events, rather than continuous steady flow (Middleton 2002). As one example of the importance of pulsing rather than continuous flooding, the successful regeneration of baldcypress (*Taxodium distichum*) requires a period where water levels recede, and an exposed wet soil bed allows seeds to germinate and begin to grow. Constant flooding prevents baldcypress reproduction (Souther and Shaffer 2000; Shaffer et al. 2009).
- e. Appropriately designed and engineered constructed treatment wetlands may be created to treat wastewater responsibly and successfully (USEPA 2004). They can be particularly effective as nutrient removal "polishing," and can simultaneously provide wildlife and recreational value. Sewage discharge into such systems designed to receive them is not equivalent to the discharge of partially treated wastes into existing, natural wetlands. Increasingly, wetland scientists endorse the use of constructed wetlands for treating sewage but discourage the use of natural wetlands to receive wastewater.
- f. The frequency, depth, and duration of flooding in wetlands controls wetland plant species survival, distribution, reproduction, and dispersal; the specifics vary by plant species. Even very small differences in water surface elevation (inches or less) can produce differences in the dominant vegetation. Proposed discharges from the WWTP will alter water surface elevations in the Mill Bayou wetlands. These changes will be most evident in dry seasons and dry years when rainfall runoff flows are not present. These have the potential to alter wetland vegetation communities of the site.
- g. Deer, owls, coyotes, and many species of birds live in the wetlands that will be affected by this WWTP. There are sounds which are not heard in the city.
- h. Sediments will accumulate and systematically fill the wetlands over time from treated sewage and out-of-control and unmanaged stormwater required dredging activities in the wetlands and in the receiving waters. This should be forbidden.
- i. Most of the parcel on which the WWTP will be located is wetlands. Is this treated like a surface water?

Response 4

DEQ issues permits in accordance with Federal and State Regulations. The terms and conditions of the permits are protective of the Water Quality of the State of Arkansas and are designed to protect all designated uses of the receiving water and all beneficial species of fish and other aquatic life, including propagation of desirable species and other aquatic life. A copy of the draft permit and public notice was sent to the Corps of Engineers. The Corps of Engineers oversees the impacts to wetlands through the permitting program of Section 404 of the CWA.

Comment 5: Effects on Drinking Water

- a. Several commenters expressed concern on the effects that the discharge from the WWTP could have on the drinking water due to infiltration of the effluent into the groundwater. This will increase the need to treat the water to make it potable. Maumelle Water Corporation and several commenters have asked for an impact study to the aquifer since their primary concern is discharges upstream of the drinking water wells.
- b. CAW doesn't even allow overnight campers.

Response 5

- a. DEQ issues permits in accordance with Federal and State Regulations. The terms and conditions of the permits are protective of the Water Quality of the State of Arkansas and are designed to protect all designated uses of the receiving waters, including use as a raw water source for domestic (public and private) water supplies.

DEQ – Office of Water Quality has been in communication with the Arkansas Department of Health regarding the questions related to the proximity of the discharge under AR0053210 to Maumelle Water Corporation's source wells. As understood, Maumelle Water Corporation's wells are significantly up-gradient from the permitted outfall under NPDES permit AR0053210 and the discharge poses no demonstrable risk to the source wells.

- b. The subject of overnight campers in the watershed under the control of Central Arkansas Water, an area near the receiving stream, is outside the scope of this NPDES permit. Therefore, no change to the permit is necessary.

Comment 6: Licensed Operator

- a. Several commenters expressed concern about the lack of a full time operator for this WWTP and stated that operator neglect is one of the two biggest reasons for failure of a package system. Specifically, the solids will need to be manually raked from the input screen, bagged, and hauled away for proper disposal. What if this is not done for any length of time?
- b. Another commenter expressed concerns about the qualifications of the operator listed in the permit application and stated that he had not performed the required training for his license renewal in June 30, 2021.
- c. Other commenters stated that there is no mention of the required class of licensure and also asked how often the operator would be at the plant, their schedule, and their duties.
- d. The licensed wastewater operator outlined his experience working at various wastewater treatment plants.

Response 6

- a. The permit contains a requirement that states that the permittee must properly operate and maintain the WWTP. The DEQ does not specify for each site what constitutes proper operation and maintenance because each facility is different. Package plants and collection systems are required to have alarms to notify the operators that there is an issue when the operators are off site. The permittee is required to follow their operating and maintenance manual that was required to be developed under the State Construction Permit.
- b. Licensed operators were granted an extension to December 31, 2021, to obtain the required training hours for the period of July 1, 2019, through June 30, 2021, due to the global pandemic. The operator listed in the permit application obtained the required hours by the extended deadline.
- c. Part II, Condition No. 1 of the permit specifically states that the wastewater treatment facility must have at least a Class III municipal licensed operator.
- d. The Division acknowledges this comment.

Comment 7: Pathogens

- a. Commenters expressed concern that the pathogens in the effluent could have harmful effects if ingested, especially those most at risk already.
- b. Commenters expressed concern that the pathogenic sludge would be indiscriminately dumped.
- c. A commenter stated that the Fecal Coliform Bacteria (FCB) limits of 1000/2000 colonies/100 mL (monthly average/7-day average) are not protective of the downstream water uses. The FCB limits should be based on primary contact recreation.
- d. A commenter stated that anti-biotic resistant species of coliform bacteria are a hazard of discharging such effluent and is well documented in literature.

Response 7

- a. The FCB limits in the permit are from Rule 2.507 and have been deemed protective of secondary contact recreation in accordance with the area of the watershed as outlined in the Rule. Secondary contact recreation is an appropriate designation for a watershed size less than 10 square miles at the point of a treated wastewater discharge. The terms and conditions of the permits are protective of the Water Quality of the State of Arkansas and are designed to protect the receiving water as a *raw* water source for domestic water supplies. DEQ does not recommend human consumption of raw surface water. Potable water treatment facilities are responsible for ensuring that the potable water produced has no pathogens.
- b. Part III, Section B.6.A of the permit requires the permittee to comply with all applicable state and Federal regulations governing the disposal of sludge. The permittee is required to have sludge hauled off site by a septic tank hauler licensed by the Arkansas Department of Health. Once the sludge has been removed, the licensed septic tank hauler is responsible for final disposal.
- c. The FCB limits are based on the requirements in Rule 2.507 for streams classified for secondary contact recreation. Per Section 2.1.3 of EPA's *Water Quality Standards Handbook*, "...the primary contact recreation classification protects people from illness due to activities involving the potential for ingestion of, or immersion in, water. Primary contact recreation usually includes swimming, water-skiing, skin-diving, surfing, and other activities likely to result in immersion. The secondary contact recreation is protective when immersion is unlikely. Examples are boating, wading, and rowing." Fishing may also be included as secondary contact recreation.

Secondary contact recreation is an appropriate designation for a watershed size less than 10 square miles at the point of a treated wastewater discharge. The limits of 1000/2000 col/100 mL were deemed protective of the downstream designated uses of the receiving stream when placed in Rule 2 and approved by the United States EPA.

- d. The terms and conditions of the permits are protective of the Water Quality of the State of Arkansas and are designed to protect the receiving water as a *raw* water source for domestic water supplies. Potable water treatment facilities are responsible for ensuring that the potable water produced has no pathogens. It is important to note that the FCB limits in the permit are from Rule 2.507 and have been deemed protective of secondary contact recreation in accordance with the area of the watershed as outlined in the Rule.

Comment 8: Contaminants of Concern/Effluent Quality

- a. The potential diminishing effluent quality from the WWTP will fall outside the requirements of 10 State Standards. These requirements are not subject to interpretation and have to be maintained under the requirements for AR0053210. What is the applicant's plan to handle these issues? Should this plan be outlined in the application form?
- b. The permit does not contain a Phosphorus limit. Most permits have a limit or require monitoring and reporting for this parameter. AR0050571 also uses multiple package WWTPs and has a Phosphorus limit. Why is there a higher level of protection for Palarm Creek and Lake Conway? Why is Mill Bayou not protected from Phosphorus in the effluent? Dr. Laura Ruhl has conducted testing indicating that the Phosphorus levels in Mill Bayou and its tributaries is already near a level that cannot be increased without expectation of causing significant algae blooms. Additional testing should be done to provide a better basis for understanding how severe the impact of adding high Phosphorus wastewater to the ecosystem will be. Many facilities in Arkansas have a TP limit of 1 mg/l and EPA expects a limit of 0.1 mg/l.
- c. Nutrients (nitrogen and phosphorus) are not removed by the water treatment processes proposed for this project. Nutrient removal requires additional levels of treatment. Additional nutrients entering the streams and wetlands of Mill Bayou from the WWTP will provide additional fertilizer that may increase the growth of algae and cyanobacteria in the system. Excess nutrients lead to increased algae growth; when the algae die, their decomposition uses up oxygen. This may lead to low dissolved oxygen levels. Low dissolved oxygen levels are directly detrimental to fish and other wildlife; they can also drive a process by which even more phosphorus is released from wetland sediments to the overlying water, fueling even more algae growth. This cycle is detrimental to a whole large range of wildlife species. Increased nutrient loading rates also tend to increase soil microbial metabolism, which can reduce soil strength, and lower belowground biomass production (root growth) (Turner 2011).
- d. The WWTP process does not remove many of the pharmaceuticals and personal care products (PPCPs), nutrients, and metals from the wastewater. There are also several emerging contaminants (PFOS and PFOA) which do not break down and are an environmental concern. The PPCPs are "endocrine disruptors" (ED) which can cause harm to wildlife and the receiving stream.
- e. The WWTP does not have any buffering capacity that would be present in a lagoon system to prevent poorly treated wastewater from being discharged before treatment is completed. Since there is insufficient buffering capacity and there is no treatment for nutrients, PPCPs, metals, etc., the proposed WWTP is inappropriate for the environment and ecology in the Mill Bayou area. The permit should be denied due to its inadequacies for properly treating wastewater.
- f. The Ammonia-Nitrogen limits in the permit are above the EPA criteria.
- g. The water quality limitations are nearly impossible to meet when discharging to a low flow stream. This concern extends to protection of designated uses in streams with low flow. There is no indication in the permit application or draft permit that such concerns with intermittent and low flow streams have been addressed with advanced treatment requirements, avoidance through rerouting, or measures to protect immediately downstream neighbors.
- h. If this facility is to be permitted, it should not be permitted as currently proposed in the draft permit. The ecology, threat to human health, and lack of dilution should be enough to raise the discharge standards to a level that will support human contact at the point of discharge. In

other words, this wastewater should be almost drinkable due to the threat it poses to human health.

- i. The permit does not contain a temperature limitation. Rule 2.502 contains a temperature standard for streams in the ecoregion. This standard is absent in the draft.
- j. Page 8 of the Statement of Basis in the draft permit states that the watershed of the receiving stream is less than 10 square miles. The critical season limit for DO in the Arkansas River Valley Ecoregion is 2 mg/l. This critical season limit in the permit is 3 mg/l, higher than the ecoregion standard. It is unclear why the critical season limit is higher than the primary season limits.
- k. Rule 2.511(B) establishes ecoregion reference stream values for chlorides and sulfates in the Arkansas River Valley as 10 mg/l and 13 mg/l, respectively. No reference is found in the draft permit regarding chlorides, sulfates, or TDS. It is unclear how this permit assures compliance with TDS limits.
- l. The Total Residual Chlorine and the disinfection by-products in the effluent will harm the water quality of the receiving stream and thus harm livestock and crops between the outfall and the Arkansas River.
- m. Laws and standards should not be lowered for this type of WWTP, specifically changing the WQMP to allow for chlorine disinfection. UV disinfection should be required instead. The WQMP must be updated to also include phosphorus, zinc, and other pollutants to ensure the water quality of Mill Bayou. The permit must contain limits for ALL pollutants and reflect levels that assure compliance with strengthened WQMP standards for Mill Bayou. Roland is being discriminated against in regards to sewage standards.

Response 8

- a. Proper Operations & Maintenance is required to maintain the WWTP's ability to meet the permit limits. Information concerning the plant design meeting the requirements of 10 State Standards is addressed in the State Construction Permit, not the NPDES discharge permit.
- b. Typically, limits or monitoring and reporting requirements for Total Phosphorus are only included in permits when one of the following instances is applicable:
 1. The discharger is a major municipality;
 2. The discharger is a food processor; or
 3. The receiving stream is a lake, has been deemed impaired due to nutrients, or is located in a nutrient surplus area.

None of the instances above are applicable to this facility. Rule 2.509 does not apply to this facility because the receiving stream is not located in a nutrient surplus area and has not been deemed impaired. Thus, nutrient limits are not warranted at this time. The limits for Preston Community Wastewater System (NPDES Permit No. AR0050571), which discharges directly into Lake Conway are based on an extensive study regarding Total Phosphorus in Lake Conway concluded in 2015. The study determined that TP limits for dischargers to Lake Conway are necessary.

- c. DEQ issues permits in accordance with Federal and State Regulations. The terms and conditions of the permits are protective of the Water Quality of the State of Arkansas and are designed to protect all designated uses of the receiving waters, including propagation of desirable species and other aquatic life and use as a source water for industrial and agricultural purposes.

- d. The permit limits are based on the criteria in Rule 2. Rule 2 does not include specific criteria for PPCPs, PFOS, PFOA, or other specific Endocrine Disruptors. If criteria for these parameters are added to Rule 2, the OWQ will evaluate the need for limits at that time.
- e. DEQ, in accordance with Rule 2 and the evaluation completed during the technical review of the draft permit, concludes that the limits set in this final permit decision meet Arkansas's Water Quality Standards.
- f. The Ammonia-Nitrogen limits are based either on the toxicity criteria in Rule 2.512 or on maintaining the Dissolved Oxygen criteria in Rule 2.505, whichever is more stringent. These criteria in Rule 2 has been approved by EPA Region VI.
- g. DEQ, in accordance with Rule 2 and the evaluation completed during the technical review of the draft permit, concludes that the limits set in this final permit decision meet Arkansas's Water Quality Standards.
- h. The limits in this permit are protective of secondary contact recreation as required by Rule 2.507.
- i. Temperature limits are typically only included in permits when there is reasonable potential for exceedance of the water quality standard. The influent to a wastewater treatment plant for a subdivision like this does not include waste streams which would be high in temperature such as cooling tower or boiler blowdown, non-contact cooling water, etc. Also, the overall treatment time from when wastewater enters the WWTP to when it is discharged will be around twenty-four hours which is sufficient time for its temperature to become equal to the temperature of the water in the receiving stream.
- j. The DO effluent limits in the permit ensure that the dissolved oxygen water quality standards are met in accordance with APC&EC Rule 2.505. The minimum required DO levels are based on a water quality model performed by DEQ staff and is dependent on the levels of CBOD₅, TSS, and NH₃-N in the effluent as well as seasonal flow and temperature. A copy of the WQMP model can be found using the following link: https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0053210_WQMP%20Summary_20210309.pdf
- k. As stated in Rule 2.511(B), the minerals levels listed are ecoregion reference stream minerals values. The values are not intended to be used by the Division to evaluate the attainment of water quality standards for assessment purposes. Therefore, they are not intended to be used to determine permit limits. Minerals limits will not be included in this permit at this time.
- l. The TRC limit in the permit, 0.011 mg/l, is based on the EPA acute and chronic criteria for protection of aquatic life. This level has been determined to be protective of the water quality of the receiving stream.
- m. The laws and standards are not being lowered to allow for this permittee to use chlorine disinfection. The Division does not require permittees to install a certain type of disinfection; however, the Division may add limits to the permit based on the type of disinfection used at a WWTP. The effluent limits contained in the permit are protective of water quality standards and the permit is issued in accordance with Rule 2 and the permitting procedures contained in the CPP approved by EPA. The effluent limits for conventional or non-conventional pollutants expected to discharge from treatment plants are included in the NPDES permit if DEQ's review indicates the pollutant exhibits reasonable potential to cause an exceedance from applicable water quality standards. The methods used to determine permit limits for this facility and the standards on which those limits are based, have not been changed for this permit.

Comment 9: Components and Operation of WWTP

- a. Commenters expressed concerns about the size of the WWTP in relation to the size of the subdivision (450 homes) How many package plants will be allowed on Mill Bayou?
- b. Commenters expressed concerns about money for upkeep and ability to perform due to track record of the owner's other WWTP. Commenters stated that some places outlaw package plants and they aren't allowed in the Maumelle watershed. Commenters stated that noise and odor are concerns. Commenters stated that lack of funds can cause insufficient training and understaffing.
- c. How well will it work when houses are being built and there isn't the optimal amount of sewage to operate properly?
- d. What is the plan once the facility begins to fail and exceed permit limits? Should this plan be outlined in the application form? Another commenter stated that there are no safeguards to prevent untreated wastewater from being discharged.
- e. The small sludge holding tank will need frequent pumping. When and how often?
- f. Is the DEQ and/or the applicant required to submit information regarding the off gassing of the station? If so what parameters are the applicant required to maintain in order to be compliant to State specifications?
- g. How was the generator sized? Is the transfer to the generator automatic or manual? Who is responsible for making sure the station is on backup power? How is it monitored and confirmed that the station is operational? What is the dB rated on the enclosed generator? Does it meet noise attenuation levels established by noise ordinances in Pulaski County?
- h. In the event of equipment failure of transfer pumps or blowers, what is the bypass plan? If the station fails and the system is in bypass mode, will the untreated effluent be pumped into Mill Bayou? Was a bypass plan submitted with the application? Is so, where does the applicant expect to discharge the bypass? Is it acceptable to allow bypasses to discharge into Mill Bayou even if it exceeds permit limits and is into a critical ecosystem that humans interact with downstream?
- i. How will sludge be handled? Where are the daily bar screen solids going to be stored before they are removed from the premises? What is the plan for solids/rags/sludge processing at the facility? Will they be stored before being transported to a Saline County Landfill? If so where? Does the ADEQ need these details for the application? If, yes, have they been provided? For how long? Do they need to be treated? If, yes, to what standard? Who will handle the solids removed by the influent bar screen and when will it be completed?
- j. Package plants are notorious for failure and neglect once a developer leaves oversight to the owners. What if the WWTP breaks down? Operator error or equipment breakdown could result in essentially raw sewage being dumped into the waterway.
- k. Monitoring equipment should be included in the permit so that when there is a failure, wastewater can be diverted into tanks until the necessary repairs have been made. The draft permit should be upgraded to require modern technology to monitor, control, record and report every critical point of the WWTP, including motors, pumps, valves, filters, etc. The permit must require that when a failure occurs, the operator will automatically be notified and a record created for DEQ.
- l. There needs to be a requirement for a tank capable of holding three days of wastewater flow when repairs are needed to the WWTP. There should also be automatic diversion from the discharge point to the storage tanks upon certain failure modes.

- m. DEQ is allowing the applicant to discharge more than the design specifications of the WWTP.
- n. Is information regarding the off gassing of the sludge holding tank required? If so, what are the required parameters the applicant must maintain in order to be compliant to state specifications?
- o. Is the proposed WWTP being constructed by a manufacturer of WWTPs? If so, what are the preventative maintenance schedules to ensure proper operation and effluent output? Does the applicant's submitted operational plans meet or exceed the manufacturer's recommended schedule? Was the WWTP stamped by a P.E. licensed in Arkansas? Who is the P.E. and when was it stamped?
- p. If the WWTP is not purchased from a manufacturer of WWTPs how can the operation and effluent output be legitimized to meet DEQ and ADH standards? Who makes the determination that the unit has been constructed in a way that is compliant to the required parameters? Does the mix match constructed equipment have to be submitted to the state for approval in detail before a permit is granted? Does a WWTP used in Arkansas have to have an ISO 9001 compliance? Does a WWTP used in Arkansas have to be stamped by a design engineer to guarantee functionality before it is put into practical use?
- q. One commenter disagreed with the allowance for the measured flow to be $\pm 10\%$ of actual flow as this would lead to discrepancies and inaccurate reporting.
- r. Commenters questioned the efficacy of the WWTP when it reaches 80% of the design flow. This commenter also stated that 300 houses is too much for a WWTP with a design flow of 0.05 MGD when compared with DEQ and ADH requirements. Inflow and Infiltration have not been considered.
- s. Diligent monitoring and maintenance are necessary to ensure that there are no health risks to humans, animals, or the ecology.
- t. ADH has reviewed and approved the WWTP. The treatment process removes contaminants from wastewater using hydraulic control, aerobic oxygen and anoxic oxygen conditions, clarification, filtration, and disinfection.
- u. RO should be used along with other treatment technologies.

Response 9

- a. The permittee is required to calculate the actual flow as a percentage of the design flow (0.05 MGD) twice per week. When the monthly average flow exceeds 80% of design flow, the permittee is required to evaluate the facility. The requirements of the review are listed in Part II.6.B of the permit and include timeline for submission of the necessary permit applications for expanded treatment capacity. Each expansion will require an update of the water quality model and evaluation of the receiving stream. Also, the permittee will have to receive permission to have more than 300 connections to the wastewater treatment system.
- b. DEQ is unaware of an Arkansas law or rule that prohibits issuing NPDES permits for facilities that discharge into Mill Bayou. The issue of WWTPs being banned in the Maumelle watershed is outside the scope of this NPDES permit. Noise and odor are not regulated through this NPDES permit. Pursuant to Ark. Code Ann. § 8-4-203(b), the permittee submitted the non-municipal domestic sewage treatment works trust fund certification form.
- c. The State Construction Permit requires the permittee to develop an Operations and Maintenance Manual (O&M Manual). The O&M Manual must include how the facility will ensure that permit limits are met while the influent flow is low. Part II.10 of the permit requires

the permittee to dedicate a section of the O&M Manual to operations below 25% of the design capacity.

- d. The permittee is required to have an O&M Manual for the plant. This O&M Manual is required to detail the frequencies for necessary maintenance and what to do if something requires repairs or replacement.
- e. An aerated sludge holding chamber will be provided for solids control. The solids will settle in the chamber and the supernatant will be routed to the aeration chamber. Solids will be removed from the tank as necessary. The timing of solids removal will be different for each facility and will depend on factors such as the influent flow volume, amount of solids in the influent, etc. Specific information for the sludge holding tank at this facility may be found in Section 15 of the specifications submitted with the permit application.
- f. The NPDES permit requires the permittee to properly operate and maintain the wastewater treatment plant. The permittee is required to develop an O&M manual by their State Construction Permit. Any procedures for off gassing will be listed in that manual.
- g. The generator will be tested midday in the middle of the week according to the permittee. The DEQ does not require permittees to justify the size of the generators, to meet specific noise requirements, etc. Part II.B.7 of the permit states “The permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failure either by means of alternate power sources, standby generators, or retention of inadequately treated effluent.”
- h. The permittee’s State Construction Permit requires them to develop and maintain an O&M Manual. Plans for handling issues described in the comment will need to be addressed in that O&M Manual. Part III.B.4.A of the permit allows for any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. Please see Part III.B.4 of the permit for the exact bypass requirements.
- i. See Item e. above for information regarding the sludge holding tank. Sludge will be hauled off site by a licensed septic tank hauler for disposal in a landfill approved to accept such waste. Bar screen solids will be removed manually (raked) and placed in a dumpster or plastic bags for disposal off-site. The grit chamber is part of the flow equalization chamber. Grit will be removed by a septic tank pump truck and disposed of at a municipal treatment plant as part of sludge removal.
- j. Pursuant to Ark. Code Ann. § 8-4-203, the permittee cannot transfer ownership of the WWTP to the subdivision. DEQ will take appropriate actions to address permit violations and to protect the receiving stream and the environment.
- k. The permittee is required by the permit to properly operate and maintain the WWTP. Alarms and notifications which can be sent to the operator while off site are required. Records must be submitted to DEQ as required by the permit.
- l. A tank capable of holding three days of influent is not required by DEQ or by 10 State Standards. If the permittee must shutdown the WWTP to make repairs, temporary holding tanks may be brought on site.
- m. State Construction Permit AR0053210C allows the permittee to construct a WWTP with a design flow of 0.05 MGD. The NPDES discharge permit allows for the operation of a WWTP with a design flow of 0.05 MGD.
- n. Information regarding the off gassing of the sludge holding tank is not required to be submitted for the NPDES permit. This information must be included in the O&M Manual for the WWTP.

- o. State Construction Permit AR0053210C authorizes construction of the WWTP, not the NPDES Permit. Therefore, no change to the NPDES permit is necessary.
- p. State Construction Permit AR0053210C authorizes construction of the WWTP, not the NPDES Permit. Therefore, no change to the NPDES permit is necessary.
- q. The requirement for the flow to be in a range of $\pm 10\%$ is based on Section 6.B (page 122) of the EPA's *NPDES Compliance Inspection Manual*.
- r. The efficacy of the WWTP is not affected when flows reach 80% of the design flow. The reason for the percent flow conditions in the permit is to require permittees to begin planning for expansions of the WWTP before the actual flows become too high for the WWTP to treat properly.

In a letter to the Division dated January 18, 2022, the permittee's consultant stated that the actual flow rate at similar subdivisions is approximately 135 gallons per house per day which equals 40,500 gpd for 300 homes. The design flow for this treatment system is 50,000 gpd. The Division is allowing this number of homes for the flow rate listed because the permittee will be required to begin expansion of the WWTP when actual flows are 80% of the design flow.

Inflow and Infiltration are already taken into account with the per house flow listed above since the flows measured at the WWTP do not differentiate between I/I and water used at the homes.

- s. The Division has included appropriate requirements in the permit to address this comment.
- t. The Division acknowledges this comment.
- u. The Division does not dictate the type of treatment that a facility must use. The Division issues permits with discharge limits that are protective of water quality standards in accordance with Rule 2 and the permitting procedures contained in the CPP approved by EPA.

Comment 10: Trust Fund/Financial Comments

- a. Several commenters expressed concerns over the permittee's ability to financially maintain and operate the WWTP. Commenters also stated that the Trust Fund Certification Form as completed by the permittee was deficient.
- b. One commenter also stated that DEQ should require the developer to place on deposit a cash-bond in an amount adequate to compensate local residents for any damages to the environment he may cause. The commenter stated that once the development is there, the developer must remain on the hook, not dischargeable by bankruptcy, for any future damages.
- c. Another commenter stated that the cost of construction of the WWTP given was too low.
- d. Who is responsible for the clean-up of a potentially derelict WWTP?
- e. The permittee has failed to comply with Ark. Code Ann. § 8-8-203(b)(1)(D). The developer's financial plan does not go beyond the first five years. As the unit ages, maintenance costs will naturally rise.

Response 10

- a. The permittee has submitted an updated Trust Fund Certification Form with an updated cost of construction estimate. The DEQ has determined that the requirements of the form have been fulfilled by the permittee.
- b. The DEQ does not have the authority to require a cash-bond to compensate local residents for damages to the environment or to state that such damages would not be dischargeable by bankruptcy.
- c. The permittee submitted an updated cost of construction after the May 2022 public hearing and prior to the third public notice comment period. The updated cost of construction includes the current value of the WWTP which will be installed.
- d. Pursuant to Ark. Code Ann. § 8-4-203(b), DEQ may access funds from the trust fund and pay for a third party to repair, operate, or maintain a WWTP subject to the requirements in that subsection.
- e. Pulaski County Property Owners Multipurpose Improvement District No. 2021-2 has applied for a permit for the purpose of providing sewer service to a subdivision. The subdivision and the sewer treatment plant have not been constructed. For this reason, the revenue and operational costs are estimated. The plan provides the estimated costs for the facility, the estimated operating cost, and the estimated revenue for the five-year period.

The Improvement District's financial plan states that the Improvement District will collect fees for sewer service to cover the cost of treatment and that the Improvement District will subsidize the difference until revenue exceeds expenses. Ark. Code Ann. § 8-4-203(b)(1)(D) requires that the permittee update the financial plan in its renewal application, which is due in five years.

It is recognized that the maintenance costs, etc. can rise as the WWTP ages. However, a cost estimate for operating and maintaining the WWTP for longer than the five years specified by the Non-municipal Domestic Sewage Treatment Works statutory requirements is not required, and prediction of repair costs beyond a 5-year timeframe likely not reliably calculated.

Comment 11: Archeological Concerns

- a. The WWTP will affect an archeological site near there and an Arkansas treasure. Aside from the optics of this desecration, what of the damage this site will bear as stormwater and additional WWTPs are added? Some comments also request construction to be held off until further research/studies on the area are done. Osage Nation mentions they are not aware of any archaeological surveys done; there is potentially a very sensitive archaeological site within the area; proposed WWTP plant location is situated on a landform with high potential for archaeological resources. Concerns regarding protection of historic and ancestral cultural resources were expressed. Arkansas Historic Preservation Program (AHPP) states there are important archaeological sites that have recently been recorded in the area of potential effect (APE) for the facility—referring not just to the footprint of the facility, but also areas near it that will be affected by the discharge. AHPP is aware of the cultural resources survey that the permit requires, but feels the effects of the increased discharge and its contents could have detrimental impacts to the archaeological site given that the site is very prone to natural flooding.
- b. The permittee's consultant stated that a Cultural Resource Study was conducted and that no evidence was found.
- c. The increased water discharge allotted in the proposed permit has the potential to increase erosion in an unnamed tributary of Mill Bayou. Osage Nation understands calculations were conducted for the increased water but none included potential effects to sacred tribal properties. This project will directly increase water discharges that would erode, destabilize, and ultimately destroy Osage protected sites.
- d. The Osage Nation Historic Preservation Office anticipates formal consultation from DEQ concerning the permit and the increased risk of adverse effects to federally protected sacred properties within the discharging fluvial system. There has been no consultation yet. Restoration of the consultation process would include inquiring with all tribal stakeholders to ensure non historic properties are affected, and proactively avoiding future indirect effects during project permitting.

Response 11

- a. The permittee has submitted an archeological study and submitted the information to the OWQ. The study concluded that no rock cairns, archeological features, or historic properties were identified within the tract on which the WWTP will be located.
- b. The Division acknowledges this comment.
- c. As detailed in Part III.A.10 of the permit, the NPDES permit does not relieve the operator of the requirement to comply with all applicable federal, state, and local laws and regulations.
- d. The Division acknowledges this comment.

Comment 12: Limits Compared to Other Facilities or States

- a. The limits in the permit for Preston Community Wastewater Utility permit (AR0050571) are much lower (especially FCB) than the limits in the proposed permit for Paradise Valley. The commenter requested explanation for these differences.
- b. The draft permit must be changed to match the Texas human contact standards in 30 TAC §210.33(1) for Type 1 Reclaimed Wastewater. There are different types of treated waste including contact recycled wastewater, non-contact recycled wastewater, and standard wastewater. This WWTP is the very low standard of discharging “standard wastewater.” Why? It will come into contact with people and degrade the wetlands. A higher standard of treated waste should be mandatory in this area.
- c. Comparisons to the City of Wrightsville’s WWTP and the compliance and operational issues it is having were made since the full population of the subdivision and the City are close.

Response 12

- a. Permit limits are based on the receiving stream and on the ecoregion in which the discharge occurs. The facility referenced in the comment discharges directly to a lake which is classified for primary contact recreation. Therefore, the limits, such as FCB, are more stringent than they are in a permit with a receiving stream classified for secondary contact recreation based on the requirements in Rule 2.507. The DO standards in Rule 2.505 also vary depending on if the size of the watershed at the point of discharge or if the receiving water is a lake or reservoir. The DO standards for NPDES Permit No. AR0050571 are more stringent than the DO standards for this facility. This facility does not discharge to a lake or reservoir while the facility permitted under AR0050571 does discharge to a lake.
- b. The rules and regulations which are applicable to discharges of sanitary wastewater in the State of Arkansas have been appropriately applied in the draft permit for this facility and are protective of the water quality of the receiving stream. Texas regulations are not applicable to this facility.
- c. The compliance and operational issues that the City of Wrightsville is having with their WWTP are outside the scope of this NPDES permit.

Comment 13: Anti-degradation

- a. DEQ does not perform antidegradation review before issuing permits, as it has no implementation policy to determine what tiered status streams fall into. The Statement of Basis attached to the permit contains a generic statement that “the limitations and requirements set forth in this permit for discharge into waters of the State are consistent with the Anti-degradation Policy and all other applicable water quality standards found in APC&EC Rule 2.” This is the same boilerplate language DEQ includes in every permit, a practice it has engaged in for a decade, likely more, to avoid meaningful antidegradation analysis. 40 C.F.R. § 131.12 requires delegated state authorities, such as DEQ, to adopt rules and policies necessary to determine the tiered status of receiving streams. While DEQ has promulgated an Antidegradation Policy at APC&EC Rule 2, Chapter 2, it has never implemented that policy. Thus, it makes no determination regarding the tiered status of the waterway before issuing a permit, and makes no analysis of the cumulative impacts of discharges to waterways. DEQ cannot continue to ignore 1/3 of water quality standards when issuing permits.
- b. How much will the receiving waters degrade in the first six months of operation of the WWTP?

Response 13

- a. APC&EC Rule 2, Chapter 2 is consistent with 40 C.F.R. § 131.12. DEQ issues NPDES permits with effluent limits necessary to meet Arkansas Water Quality Standards and consistent with APC&EC Rule 2, Chapter 2 and 40 C.F.R. § 131.12.
- b. The 208 Plan, also known as the Water Quality Management Plan, summary was placed on the DEQ web site in March 2021. This update includes the water quality modeling performed to determine the appropriate limits for this facility. This update is available at the following link:
https://www.adeg.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0053210_WQMP%20Summary_20210309.pdf

Comment 14: Flooding and Stormwater Runoff/Erosion

- a. Several commenters expressed concerns regarding flooding and erosion. Commenters stated that when Mill Bayou floods, sewage will back up on their land.
- b. The WWTP will not be able to handle excess stormwater that often is sent to the facility. This results in untreated wastewater being discharged. Pathogens from the plant can then spread diseases with seepage affecting surface and ground water, affecting crops and possibly potable water.
- c. Often facilities have a safety factor based on 50-year and 100-year events. With climate change, these numbers will be occurring or exceeded much more frequently. Thus, the plant will inevitably run beyond capacity with anachronistic guidelines.
- d. Comments regarding stormwater runoff issues under Waterview Estates' coverage under the general permit for stormwater runoff associated with construction activity were submitted. Commenters stated that flooding downstream has been increased due to the rerouting of stormwater allowed under that permit and that the protective provisions of the Maumelle Drainage basin are not being applied to Mill Bayou. Commenters stated that DEQ should not wait until after the MS4 stormwater permit provisions will apply to the area to regulate the stormwater problems in Mill Bayou.
- e. A commenter expressed concern over the lack of construction BMPs allowing for tons of sediment to leave the property and Mill Bayou. They expressed concern for the runoff/flooding potential due to the increased impervious surfaces associated with the proposed subdivision and stated that this is a major hydrologic modification altering the current use of the land.
- f. The Clean Water Act protects wetland areas, and the Rivers and Harbors Act prohibits placing anything in proximity to navigable streams which, through flooding, may obstruct that stream. The maps and information submitted during this comment period show the facility is in the 100-year flood plain. Placing wastewater plants in flood plains is not recommended by the 10-state standard referenced by both DEQ and ADH.
- g. The flood plain map used is over 39 years old. The commenter asked that DEQ join the community in asking the county for a FEMA map re-study of this area and to require the applicant to divert the Waterview Estates diversion ditch and Paradise Valley stormwater to the river and not through the community as part of a flood damage reduction project that should be financed by the applicant.
- h. Heavy rains will cause treated sewage to overflow and the creek to become an open sewer containing suspended solids, nutrients, and fecal coliform bacteria. The smell would be horrible all of the time.
- i. Flooding causes the internet to go out. If there were more water from Paradise Valley, the quality of the internet would be worse.
- j. Stormwater runoff will increase due to the increase in impervious cover from roads, driveways, roofs, etc.
- k. Foundations issues have risen since Waterview Estates was developed. Severe flooding and foundation issues weren't experienced prior to Waterview Estates diverting stormwater.
- l. The developer should be required to build proper stormwater retention facilities for Waterview Estates and Paradise Valley.
- m. Flooding has occurred for over 30 years.
- n. The developer cleared the land for Paradise Valley without legal approval.

Response 14

- a. Flooding and erosion concerns are outside the scope of the NPDES permit for discharge of treated sanitary wastewater.
- b. APC&EC Rule 6 forbids the use of combined sewer systems for stormwater and sanitary wastewater.
- c. APC&EC Rule 6 forbids the use of combined sewer systems for stormwater and sanitary wastewater.
- d. Stormwater runoff issues under the general permit coverage for Waterview Estates are outside the scope of this NPDES permit.
- e. Construction Stormwater BMPs are outside the scope of this NPDES Permit.
- f. This comment is outside the scope of this NPDES Permit; however, Paragraph 51.2 of the 10 State Standards states that “The treatment plan structures, electrical, and mechanical equipment shall be protected from physical damage by the one hundred (100) year flood.” The site evaluation criteria in Paragraph 11.28.d.6 of the 10 State Standards states “Flood considerations, including the 25 and 100-year flood levels, impact on floodplain and floodway, and compliance with applicable regulations regarding construction in flood-prone areas, shall be evaluated. Paragraph 51.2 of the 10 State Standards contains requirements for protection from flooding.”
- g. This comment is outside the scope of the NPDES permit. The purpose of submitting a flood plain map with an NPDES permit renewal application is to verify that the WWTP is either above the 100-year flood plain or that the necessary precautions have been taken to ensure that the WWTP is protected as required by 10 State Standards.
- h. The limits in the permit are set to protect the water quality of the receiving stream when the receiving stream flow is at critical flow conditions as defined in Rule 2. The 7Q10 of Mill Bayou is 0 cfs (critical flow condition). Therefore, the limits are also protective of the water quality of the receiving stream and its designated uses when the flows are higher.
- i. This comment is outside the scope of the NPDES permit.
- j. This comment is outside the scope of the NPDES permit.
- k. This comment is outside the scope of the NPDES permit.
- l. This comment is outside the scope of the NPDES permit.
- m. This comment is outside the scope of the NPDES permit.
- n. This comment is outside the scope of the NPDES permit.

Comment 15: Inspections

- a. Has the ADH conducted a site inspection as part of their review process?
- b. Who from any approving authority has visited the WWTP location? A commenter stated that their yard is already flooding due to the clear cutting for the subdivision.

Response 15

- a. The applicant was required to submit plans, specifications, and design calculations to the ADH. In accordance with APC&EC Rule 6.202, the applicant must receive a letter of approval from ADH before construction can commence. ADH issued their approval in a letter dated December 17, 2021.
- b. DEQ personnel have been to the site of the WWTP. A copy of the site visit report may be found using the following link:
https://www.adeg.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0053210_Site%20Visit%20Report_20220718.pdf

Comment 16: Miscellaneous

- a. Several commenters requested that DEQ deny the permit for various reasons including infrastructure concerns and zoning issues.
- b. A public hearing was requested.
- c. This project should also be subject to Section 106 review, as it likely affects Waters of the United States (WOTUS) and therefore should involve the United States Corps of Engineers.
- d. The developer did not notify local residents of the development beforehand so they were not given time or voice to protest the plant.
- e. Concerns regarding the requested permit transfer from Southwest Equity Investment to Pulaski County Property Owners Multipurpose Improvement District No. 2021-2.4 were raised. Commenters also stated that the POID has not authorized the permit application since the transfer was submitted before a permit existed and that the Pulaski County Property Owners Multipurpose Improvement District No. 2021-2 has not authorized its permit application due to failure to comply with FOIA.
- f. Expansions are inevitable as long as the population continues to grow. If developers follow the applicable rules and regulations, the development should be allowed to progress. It is up to DEQ to perform the necessary due diligence.
- g. Proposed monitoring of once per month is insufficient. The violations will have occurred on more days than what was caught.
- h. Concerns regarding the Disclosure Statement were raised by one commenter.
- i. DEQ had to send the applicant two reminders to renew his permit for Waterview Estates. If he can't remember his obligation to renew his permit, how are we to trust that he will do the proper obligation to his sewage treatment facility?
- j. There are alternative options that the project could adopt to avoid discharging the effluent into Mill Bayou. Money should be spent to run a sewer lines from the city. Also, the developer should be made to go with the original plan to pump the wastewater to the WWTP at Waterview Estates.
- k. The WWTP for the subdivision is not located on the subdivision property. Having a privately owned WWTP that is not owned by the subdivision that it serves presents problems regarding access and responsibility for operation and maintenance. Those problems will affect the subdivision as well as adjacent property owners. The permit should be denied because of lack of common ownership and control. The system for an individual home would be required to be on the same property. Would this need to be the same for a subdivision? Do the properties need to be replatted?

The preliminary plat approved by the planning board on February 23, 2021, shows that "Tract B" was originally designated as a recreational area. Recent documents approved by ADH shows this tract is now designated as a stormwater detention/sedimentation basin. This should be sent back to the planning board for approval.

- l. The water quality model was not presented for review with the permit.
- m. Rick Ferguson cannot be an Improvement District Commissioner and benefit from the Improvement District's decisions.
- n. General concerns raised that waste management for such a development is troubling.
- o. There must be no deviations from the 2014 Watershed Rules.

- p. Wildlife and other animals could drink that contaminated water. Would you want your pet drinking that? What if a child had a toy roll into that water?
- q. Will there be public access to the video of the public hearing?
- r. The surrounding neighborhood is not a safe place to raise young children. The neighborhood's viability depends on DEQ reassessing this plan.
- s. Privately run WWTP have terrible compliance records. Thus, it is a matter of time before those living nearby suffer health and environmental consequences. The facility cannot be complied with the permit, is destined to fail, and will be an on-going problem for everyone. Only the lawyers will benefit.
- t. Please help protect the National Parks and recreation in this area, not to mention the beauty and solitude of this area.
- u. No information has been submitted which would prevent DEQ from issuing this permit.
- v. DEQ must do their job to protect the environment and conduct technical studies and analyses as required to enforce the regulations. Alternative methods of handling the sewage runoff water must be reviewed. No independent studies have been conducted.
- w. Concerns about where the wildlife will live now that they've been displaced by clearing the land for the subdivision were expressed.
- x. DEQ is requested to require responsible development of this area and this must be approved by the landowners who are responsible for this area.
- y. Mill Bayou is not the pure bayou the coalition tries to make it out to be.
- z. A complete application has not been submitted so how can the application be approved?
- aa. Commenters asked how this will affect them.
- bb. Kids will be drinking water from the ground.
- cc. Sign by bridge over bayou says it is a protected drinking water source.
- dd. The wastewater should be sent to the WWTP at Waterview Estates as originally planned.
- ee. The proposed WWTP is scrap metal.

Response 16

- a. Infrastructure concerns and zoning issues are outside the scope of the NPDES permit.
- b. Public hearings were held on May 18, 2022, and on April 5, 2023.
- c. Only federal facilities are required to conduct a Section 106 review. As this facility is not federal, a Section 106 review is not required.
- d. Public notice was provided as required under Arkansas law.
- e. Pulaski County Property Owners Multipurpose Improvement District No. 2021-2 has provided DEQ with the information required for DEQ to consider the Improvement District as the applicant for this permit, including submitting its disclosure statement to DEQ.

The applicant's compliance with FOIA is out of the scope of the NPDES permit.

- f. DEQ issues permits in accordance with Federal and State Regulations.
- g. The monitoring frequencies listed in the draft permit are more stringent than the recommendations in the OWQ's memo titled "Recommended Monitoring Frequencies and Sample Types for NPDES Permits."
- h. An updated Disclosure Statement for this permittee was submitted August 22, 2022. The document has been reviewed and determined to be complete.

- i. DEQ sends every permittee multiple reminders of when their renewal application is due. The reminders are a courtesy for the permittees and are not a reflection of the permittee's ability to comply with the permit requirements.
- j. DEQ reviews the applications submitted by applicants.
- k. This comment is outside the scope of this NPDES permit.
- l. The Water Quality Management Plan (208 Plan) Summary was placed on the DEQ web site in March 2021. This report includes the water quality modeling performed to determine the appropriate limits for this facility. The 208 Plan update to add this facility and limits to the 208 Plan was public noticed with the draft permit. This report is available at the following link: https://www.adeg.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0053210_WQMP%20Summary_20210309.pdf
- m. This comment is outside the scope of this NPDES permit; however, DEQ's issuance of a permit to the Improvement District does not validate, or invalidate, any action taken by the Improvement District or their Commissioners.
- n. The permittee is required to dispose of solids and sludge removed from the wastewater in accordance with applicable rules and regulations.
- o. This comment is outside the scope of this NPDES permit.
- p. DEQ issues permits in accordance with Federal and State Regulations. The terms and conditions of the permits are protective of the Water Quality of the State of Arkansas and are designed to protect all designated uses of the receiving waters, including propagation of desirable species and other aquatic life and use as a source water for industrial and agricultural purposes.
- q. The public hearings were broadcast on the Arkansas Citizens Access Network.
- r. This comment is outside the scope of the NPDES permit.
- s. This comment is outside the scope of the NPDES permit, however, DEQ will take appropriate actions to address permit violations.
- t. DEQ issues permits in accordance with Federal and State Regulations. The terms and conditions of the permits are protective of the Water Quality of the State of Arkansas and are designed to protect all designated uses of the receiving waters, including propagation of desirable species and other aquatic life and use as a source water for industrial and agricultural purposes.
- u. DEQ issues permits in accordance with Federal and State Regulations.
- v. DEQ issues permits in accordance with Federal and State Regulations.
- w. This comment is outside the scope of this NPDES permit.
- x. This comment is outside the scope of the NPDES permit
- y. DEQ issues permits in accordance with Federal and State Regulations.
- z. DEQ issues permits in accordance with Federal and State Regulations.
- aa. DEQ issues permits in accordance with Federal and State Regulations.
- bb. This comment is outside the scope of this NPDES permit; however, DEQ issues permits in accordance with Federal and State Regulations.
- cc. DEQ issues permits in accordance with Federal and State Regulations.
- dd. DEQ issues permits in accordance with Federal and State Regulations.
- ee. DEQ issues permits in accordance with Federal and State Regulations.

Comment 17: Comments in Support of the Issuance of the Draft NPDES Permit

Several commenters wrote that they supported the issuance of this permit, the developer has met all of DEQ's requirements, and commented on the integrity of the developer. One commenter also stated this type of treatment is used in similar communities in Arkansas and other states.

The applicant respectfully objected to the Division's decision to hold a second public hearing and a fourth public comment period and requested that the Division promptly issue the permit without any substantive changes from the November 13, 2022, draft.

Response 17

DEQ issues permits in accordance with Federal and State Regulations.

Comment 18: Comments Outside the Scope of the Draft NPDES Permit

Comments concerning the following were received:

- a. Concerns regarding various aspects of private property rights, the ability to supply potable water and other infrastructure (including traffic, roads, and bike paths) to the residents of the proposed subdivision, overcrowding, quality of home construction, flooding and other stormwater impacts, air pollution, and the potential noise from the generators were expressed. Concerns regarding illegal dumping in the area increasing due to the development and Waterview Estates were also raised. Concerns about who will pay for the necessary improvements were submitted.
- b. Commenters stated that permitting WWTPs is bad public policy, this is irresponsible development, one developer is monopolizing development in the area, and questioned the developer's motivation for this project. Commenters stated that the developer is seeking profit over protection of the land, water, and wildlife resources. Commenters also stated that this development is not in the best interests of the community in many ways and is an attempt to suburbanize the rural communities of Roland.
- c. The Construction Permit for this development, AR0053210C, failed to include a stream segment in #11. There is both a resequent and an obsequent stream to be added to the description.
- d. Concerns over contamination of Nowlin Creek were expressed.
- e. How will the housing development deal with predators like bears and coyotes in the area?
- f. There is currently a lawsuit involving this facility and the Pulaski County Planning Commission. Also, the developers are avoiding the cost of correct city planning. Therefore, at a minimum, a final permit should not be issued until the lawsuit has been resolved.
- g. The proposed development is out of character with the rural portion of Pulaski County and will limit residents' enjoyment of this part of the county.
- h. The planning of this development was done in secret with no notification to the surrounding residents.
- i. Concerns about the fumes from the Waterview WWTP were submitted.
- j. This project will create a public nuisance.
- k. The removal of vegetation from the site of the proposed subdivision with no stormwater retention has worsened the flooding issues.
- l. A commenter stated that the surrounding property owners only care about their personal gain and have gone overboard in opposing this project even though the permittee has fully complied with all applicable laws, rules, and regulations.
- m. DEQ will be liable for damages since they have been warned about what will happen if this permit is issued.
- n. Commenters stated there has been no study published by the developer or ADEQ or any agency regarding results of any complete environmental study regarding the future impact nor for handling the expansion the developer wants.
- o. The addition of homes of a reasonable size and price appropriate for the market area can be added to the community and increase the opportunity for home ownership in this area.
- p. A commenter stated that they moved to Roland to get away from the suburban lifestyle and because of the natural environment, wildlife, and clear streams. They stated that therefore they are opposed to the construction of the WWTP.

- q. Several years ago a commenter was involved with a group opposing the installation of a WWTP in the area. They researched and became aware of how these WWTPs fail.
- r. This is far too many homes for the area in which they are to be put. The reason people move to this area is to have the space and surrounding natural environment.
- s. The community should not have limited accessibility and be where only development for the very wealthy is encouraged.
- t. The homes should be on larger lots so that they could have septic systems. The population density will therefore be lower.
- u. The homes will be built by a company with a terrible reputation for inferior materials and construction methods. This will increase the risk to firefighters. Also, the homes being so close together create exposure problems where fires can easily spread.
- v. If the group against the development is so concerned about Mill Bayou, why didn't they do anything earlier? There has always been sewage entering the bayou from leaking septic tanks. Treated wastewater entering the bayou is a lot better than raw sewage flowing into the water.
- w. A commenter against the development stated that the developer needs this project to happen or it will cause him money issues.
- x. Other states with stricter rules would not allow this.
- y. Development like this should only occur where there is a real sewage treatment plant.
- z. Comparisons to incidences in other areas of the country were submitted.
- aa. One commenter stated that they have had to replace their septic tank due to ground saturation and that there are cracks in their foundation on the side sloping towards the WWTP.
- bb. Septic tanks are unregulated and drain in the area where Roland's drinking water wells are located. Perhaps the septic tanks need to be checked to make sure that they aren't harming the water.

Response 18

These comments are outside the scope of this NPDES Permit.

DEQ Comment

Requirements for reporting Sanitary Sewer Overflows and for percent removal of CBOD₅ and TSS have been added to the permit since the facility is an improvement district.