

Energy and Environment Cabinet
Department for Environmental Protection
Division of Water
Wastewater Inspection Report

AI ID: 44397

AI Type: RESIDENCE- Subdivision (nec)

AI Name: Darlington Creek HOA Subd

AI Address: US 27 S & KY 154

City: Alexandria, **State:** Kentucky **Zip:** 41001

County: Campbell

Regional Office: Florence Regional Office

Latitude: 38.853333 **Longitude:** -84.386667

Site Contact: Zachary Wilson

Title: WWTP Operator

Inspection Type: WW CEI-Minor Non-Mun

Activity #: CIN20220002

Inspection Start Date: Dec. 8, 2022 **Time:** 12:40 PM **End Date:** Dec. 8, 2022 **Time:** 02:50 PM

Site/Permit ID: KY0105325

Lead DEP Investigator: Jeff Malsi

Persons Interviewed: Zachary Wilson

General Comments: Treatment facility consists of two treatment plants. The combined flow of the treatment plants then flows to a common Chlorine Contact Tank. Treatment plants were being properly operated and maintained. The overall rating of this inspection is Out of Compliance - Violations Documented. This was due to permit limit exceedances and failure to include all test data on DMRs.

Overall Compliance Status: Out of Compliance- Violations documented

Investigation Results

SI: AIOO44397

SI Description:

Inspector Comment:

Requirement: Does the facility hold the proper KPDES permit?. [401 KAR 5:055 Section 2]

Compliance Status: C-No Violations observed

Comment: Facility holds a permit that became effective on July 1, 2019. The permit will expire June 30, 2024.

Requirement: Have all required permits been obtained from the Division of Water prior to the construction or modification of the facility? [401 KAR 5:005 Section 1]

Compliance Status: C-No Violations observed

Comment: No construction or modification of the treatment plant has occurred.

Requirement: Is the facility being operated under the supervision of a properly certified operator? [401 KAR 5:010 Section 1]

Compliance Status: C-No Violations observed

Comment: Facility is operated under the supervision of Zachary Wilson, a properly certified operator.

Requirement: Is the collection system under the primary responsibility of an individual who holds an active collection system certification at the level appropriate for the size of the treatment facility receiving the waste? [401 KAR 5:010 Section 2]

Compliance Status: C-No Violations observed

Comment: Collection system in under the primary responsibility of Kathy Carey who holds an active collection system certification at the appropriate level.

Requirement: Does the permittee retain records of all monitoring information including: the date, exact place, and time of sampling or measurements; the name of the individual who performed the sampling or measurements; the dates and times analyses were performed; the name of the individual who performed the analyses; the analytical techniques or methods used; the results of the analyses; 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 the period required by the cabinet and at a minimum of at least three (3) years from the date of the sample, measurement, report, or application? [401 KAR 5:065 Section 2(1)]

Compliance Status: C-No Violations observed

Comment: Records are stored electronically. Permittee sent requested records to inspector.

Requirement: Is the facility required to prepare and implement a groundwater protection plan (GPP) as specified in regulation 401 KAR 5:037? If yes, does the facility have a GPP?. [401 KAR 5:037]

Compliance Status: C-No Violations observed

Comment: Waste water treatment plants are required to have a GPP. Facility has a GPP.

Requirement: Is the permittee reporting monitoring results to the cabinet at the intervals specified in the permit? [401 KAR 5:065 Section 2(1)]

Compliance Status: C-No Violations observed

Comment: Discharge Monitoring Reports (DMRs) for the first through third quarters 2022 were reviewed as part of this inspection.

The DMRs were submitted at the proper intervals.

Requirement: Are the monitoring results reported to the cabinet on a Discharge Monitoring Report (DMR)? [401 KAR 5:065 Section 2(1)]

Compliance Status: C-No Violations observed

Comment: The facility has migrated to the federal EPA's Net DMR data base for the submission of DMRs.

Requirement: If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136 or as specified in the permit, are the results of this monitoring included in the calculation and reporting of the data submitted in the DMR? [401 KAR 5:065 Section 2(1)]

Compliance Status: D-Out of Compliance-Violations Documented

Comment: The facility has failed to include results of all monitoring completed in addition to the requirements specified in the permit for the second quarter 2022 DMR.

Facility's records indicate that during the second quarter 2022 multiple sampling was conducted during June having the following results:

-TSS lab results of 100 and 1.6.

The DMR only reported 1.6.

-CBOD lab results of 61 and No Detect.

The DMR only reported 2.0

-Ammonia as N lab results of 1.95 and 0.35.

The DMR only reported 0.35.

-E.coli had three samples taken during June with lab results of; >2420, 219 and 36.

The DMR reported 190.0.

This parameter requires a geometric mean calculation. A geometric mean of the three lab values would be 267.

Requirement: Are the calculations for all limitations which require averaging of measurements utilizing an arithmetic mean unless otherwise specified by the Cabinet in the permit? [401 KAR 5:065 Section 2(1)]

Compliance Status: D-Out of Compliance-Violations Documented

Comment: The facility has failed to utilize the arithmetic mean for TSS, BOD and Ammonia during second quarter 2022. The facility failed to perform proper Geometric mean on E. coli during second quarter 2022..

Requirement: Is the permittee in compliance for the reporting of spills, bypasses, and non-compliance according to 401 KAR 5:065 Section 2(1). [401 KAR 5:065 Section 2(1)]. [401 KAR 5:065 Section 2(1)]

Compliance Status: C-No Violations observed

Comment: No spills, bypasses or any other non-compliance are known to have occurred since last inspection.

Requirement: Is the permittee in compliance with immediate reporting requirements for emergency or accidental releases to the environment according to 401 KAR 5:065 Section 3(5)? [401 KAR 5:065 Section 3(5)]

Compliance Status: C-No Violations observed

Comment: No emergency or accidental releases to the environment are known to have occurred since last inspection.

Requirement: Is the facility being properly operated and maintained as specified in regulation 5:065? This includes: (a) proper operation and maintenance of all facilities, systems of treatment and control, and related appurtenances which are installed or used by the permittee to achieve compliance with permit conditions; (b) proper operation and maintenance also includes adequate laboratory controls, and appropriate quality assurance procedures; (c) this provision also requires the operation of back-up 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. [401 KAR 5:065 Section 2(1)]

Compliance Status: C-No Violations observed

Comment: Facility was being properly operated and maintained.

Requirement: Are the disinfection unit(s) maintained and operated properly to allow for compliance with permit conditions? [401 KAR 5:005 Section 11]

Compliance Status: C-No Violations observed

Comment: Disinfection unit was being properly operated and maintained.

Requirement: Does the flow measuring device measure all flow received at the WWTP? For large wastewater facilities (average daily design capacity >50,000 gpd), is flow measured by an indicating, recording, and totalizing flow measuring device? [401 KAR 5:005 Section 12]

Compliance Status: N-Not Applicable

Comment: The average daily design capacity of this treatment facility is 0.0495 MGD. This places the facility in the intermediate class. The facility is not required to have an indicating, recording and totalizing flow measuring device.

Requirement: Is a source of water provided for cleanup? If potable water is used, is a backflow preventor installed to protect the water supply? [401 KAR 5:005 Section 10(6)]

Compliance Status: C-No Violations observed

Comment: A frost proof yard hydrant exists at the plant on its own water meter. Backflow prevention is provided by the backflow preventor in the meter setter box.

Requirement: Has fencing with a lockable gate been installed around the wastewater treatment plant? [401 KAR 5:005 Section 10(7)]

Compliance Status: C-No Violations observed

Comment: Facility is surrounded by a fence with a lockable gate.

Requirement: Has an all-weather access road been installed to allow access to the wastewater treatment plant? Is the road adequately maintained to allow access to the facility for operation and maintenance activity? [401 KAR 5:005 Section 10(8)]

Compliance Status: C-No Violations observed

Comment: An all-weather access road is in place.

Requirement: Sewage sludge. Did the facility meet the requirements governing the disposal of sewage sludge from publicly owned treatment works, in accordance with 40 CFR Part 503? [401 KAR 5:065 Section 2(4)]

Compliance Status: C-No Violations observed

Comment: When needed, a sewage pump truck is used to remove solids.

Requirement: Is the effluent in compliance with KPDES permit limitations? Do the Discharge Monitoring Reports indicate KPDES permit violations? [401 KAR 5:065 Section 2(1)]. [401 KAR 5:065 Section 2(1)]

Compliance Status: D-Out of Compliance-Violations Documented

Comment: The facility has failed to comply with the effluent limitations contained in the permit.

Discharge Monitoring Reports (DMRs) for the first through third quarters 2022 were reviewed as part of this inspection.

Second quarter 2022 DMR reported permit violations for TRC and E. coli.

Third quarter 2022 DMR reported permit violations for E. coli

Requirement: Are samples taken in compliance with the monitoring requirements and taken at the following location(s): nearest accessible point after final treatment, but prior to actual discharge or mixing with receiving waters? Are the samples representative of plant flow? Are flow proportioned samples obtained when required by the KPDES permit? Are grab samples collected according to the KPDES permit requirements? Are composite samples collected and analyzed according to the KPDES permit conditions? Are samples collected according to KPDES permit requirements? [401 KAR 5:065 Section 2(1)]

Compliance Status: I-No Violations obs-but impending viol trends obs

Comment: Operator reports that lab is taking composite samples from a trough in an unused piece of equipment. The trough was observed to be stagnant. This location does not appear to be representative of plant flow.

Requirement: Are the facility sample collection procedures adequate? Are the samples collected in proper containers, preserved, and refrigerated properly? Are all samples analyzed within the allowed holding times? [401 KAR 5:065 Section 2(1)]

Compliance Status: E-Not Evaluated

Comment: Inspector was not present during sampling.

Requirement: Have samples been analyzed by a lab that has been certified according to 401 KAR 5:320? Are all field parameters collected by a lab or individual that holds a Field Only certification according to 401 KAR 5:320?. [401 KAR 5:320]

Compliance Status: C-No Violations observed

Comment: Samples have been collected and analyzed by Pace Analytical a properly certified lab with field testing certification.

Requirement: Have pollutants entered the waters of the Commonwealth? [KRS 224.70-110]

Compliance Status: C-No Violations observed

Comment: No pollutants were observed entering the waters of the Commonwealth.

Requirement: Have surface waters been aesthetically or otherwise degraded? [401 KAR 10:031 Section 2]

Compliance Status: C-No Violations observed

Comment: No surface waters were observed being visibly degraded.

Documentation

- | | |
|--|--|
| <input type="checkbox"/> Photos taken | <input type="checkbox"/> Record of visual determination of opacity |
| <input type="checkbox"/> Documents obtained from facility | <input type="checkbox"/> Samples taken by DEP |
| <input type="checkbox"/> Samples taken by outside source | <input type="checkbox"/> Regional office instrument readings taken |
| <input type="checkbox"/> Request for Submission of Documents | <input type="checkbox"/> Other documentation |

Inspector:

1/3/2023
X *Jeffrey P. Malsi*

Signed by: Jeffrey Malsi

Date: 1/3/2023

Delivery Method: Email



Andy Beshear
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

300 Sower Boulevard
Frankfort, Kentucky 40601
Phone: (502) 564-2150
Fax: 502-564-4245

Rebecca W. Goodman
SECRETARY

Anthony R. Hatton
COMMISSIONER

January 3, 2023

Mr. Joe Stoops
Midwest Water Operations

RE: Darlington Creek WWTP -- 44397
Permit No.: KY0105325
Campbell County, Kentucky
Activity ID: CIN20220002

Mr. Stoops:

Attached for your information and records is a copy of the report for the inspection performed at Darlington Creek WWTP on December 8, 2022.

This cover letter and a copy of the report are being sent to you by Email. Please respond back by Email that you have received and read the report.

If you have any questions or comments concerning this inspection, please contact the Florence Regional Office at: (859) 525-4923.

Sincerely,

A handwritten signature in black ink, reading "Jeffrey R. Mulcahy".

Energy and Environment Cabinet
Department for Environmental Protection
Division of Water
Wastewater Inspection Report

AI ID: 3955 **AI Type:** SANI-Wastewater Treatment & Collection (2213)
AI Name: Persimmon Ridge Subd & WWTP
AI Address: 72 Persimmon Ridge Dr

City: Louisville, **State:** Kentucky **Zip:** 40245
County: Shelby **Regional Office:** Louisville Regional Office
Latitude: 38.297778 **Longitude:** -85.439722
Site Contact: Kathy Carey
Title: Operator **Phone #:** (502) 650-5124
Inspection Type: WW CSI-Minor Non-Mun **Activity #:** CIN20210001

Inspection Start Date: September 8, 2021 **Time:** 09:00 AM **End Date:** September 8, 2021 **Time:** 02:00 PM
Site/Permit ID: KY0090956

Lead DEP Investigator: Todd Giles

Overall Compliance Status: No Violations Observed

Investigation Results

SI: AIOO3955

SI Description:

Inspector Comment:

Requirement: Does the facility hold the proper KPDES permit?. [401 KAR 5:055 Section 2]

Compliance Status: C-No Violations observed

Comment: The facility is operating under KPDES KY0090956, which is set to expire 09/30/2023.

Requirement: Have all required permits been obtained from the Division of Water prior to the construction or modification of the facility?. [401 KAR 5:005 Section 1]

Compliance Status: C-No Violations observed

Comment: The facility is operating under KPDES KY0090956, which is set to expire 09/30/2023.

Requirement: Is the facility being operated under the supervision of a properly certified operator?. [401 KAR 5:010 Section 1]

Compliance Status: C-No Violations observed

Comment: The system continues to be operated by Kathy Carey. Her certification is under AI 31963, Cert. 31228

Requirement: Does the permittee retain records of all monitoring information including: the date, exact place, and time of sampling or measurements; the name of the individual who performed the sampling or measurements; the dates and times analyses were performed; the name of the individual who performed the analyses; the analytical techniques or methods used; the results of the analyses; 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 the period required by the cabinet and at a minimum of at least three (3) years from the date of the sample, measurement, report, or application?. [401 KAR 5:065 Section 2(1)]

Compliance Status: C-No Violations observed

Comment: The system maintains all necessary records at a central location, and are not maintained on site.

Requirement: Is the permittee reporting monitoring results to the cabinet at the intervals specified in the permit?. [401 KAR 5:065 Section 2(1)]

Compliance Status: C-No Violations observed

Comment: The facility submits the necessary sampling results through NetDMR.
Requirement: Are the monitoring results reported to the cabinet on a Discharge Monitoring Report (DMR)?. [401 KAR 5:065 Section 2(1)]
Compliance Status: C-No Violations observed
Comment: The facility submits the necessary sampling results through NetDMR.
Requirement: Are the calculations for all limitations which require averaging of measurements utilizing an arithmetic mean unless otherwise specified by the Cabinet in the permit?. [401 KAR 5:065 Section 2(1)]
Compliance Status: C-No Violations observed
Comment:
Requirement: Is the permittee in compliance for the reporting of spills, bypasses, and non-compliance according 401 KAR 5:065 Section 2(1)?. [401 KAR 5:065 Section 2(1)]
Compliance Status: C-No Violations observed
Comment: The facility is aware of its responsibility to report spills and bypasses.
Requirement: Is the permittee in compliance with immediate reporting requirements for emergency or accidental releases to the environment according to 401 KAR 5:065 Section 3(5)?. [401 KAR 5:065 Section 3(5)]
Compliance Status: C-No Violations observed
Comment: The facility is aware of its responsibility to report spills and bypasses.
Requirement: Is the facility being properly operated and maintained as specified in regulation 5:065? This includes: (a) proper operation and maintenance of all facilities, systems of treatment and control, and related appurtenances which are installed or used by the permittee to achieve compliance with permit conditions; (b) proper operation and maintenance also includes adequate laboratory controls, and appropriate quality assurance procedures; (c) this provision also requires the operation of back-up 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?. [401 KAR 5:065 Section 2(1)]
Compliance Status: C-No Violations observed
Comment: The facility is a lagoon system and is being operated in a manner that will allow for compliance with its KPDES permit.
Requirement: Are the disinfection unit(s) maintained and operated properly to allow for compliance with permit conditions?. [401 KAR 5:005 Section 11]
Compliance Status: C-No Violations observed
Comment: Liquid chlorine is being utilized to allow for disinfection of the treated effluent.
Requirement: Is a source of water provided for cleanup? If potable water is used, is a backflow preventor installed to protect the water supply?. [401 KAR 5:005 Section 10(6)]
Compliance Status: C-No Violations observed
Comment:
Requirement: Has fencing with a lockable gate been installed around the wastewater treatment plant?. [401 KAR 5:005 Section 10(7)]
Compliance Status: C-No Violations observed
Comment:
Requirement: Has an all-weather access road been installed to allow access to the wastewater treatment plant? Is the road adequately maintained to allow access to the facility for operation and maintenance activity?. [401 KAR 5:005 Section 10(8)]
Compliance Status: C-No Violations observed
Comment:
Requirement: Is the effluent in compliance with KPDES permit limitations? Do the Discharge Monitoring Reports indicate KPDES permit violations?. [401 KAR 5:065 Section 2(1)]
Compliance Status: C-No Violations observed
Comment: At the time of this inspection, the effluent appeared to be compliance with its KPDES permit. Sample readings at the time of this inspection were: Temp - 26.1C, DO - 7.47, pH - 7.71, Cond. - 385.7
Requirement: Are the samples representative of plant flow? Are flow proportioned samples obtained when required by the KPDES permit? Are grab samples collected according to the KPDES permit requirements? Are composite samples collected and analyzed according to the KPDES permit conditions? Are samples collected according to KPDES permit requirements?. [401 KAR 5:065 Section 2(1)]
Compliance Status: C-No Violations observed

Comment: All sample collection/analysis is being performed by BeckMar Environmental.

Requirement: Are the facility sample collection procedures adequate? Are the samples collected in proper containers, preserved, and refrigerated properly? Are all samples analyzed within the allowed holding times?. [401 KAR 5:065 Section 2(1)]

Compliance Status: C-No Violations observed

Comment: All sample collection/analysis is being performed by BeckMar Environmental.

Requirement: Are samples taken in compliance with the monitoring requirements and taken at the following location(s): nearest accessible point after final treatment, but prior to actual discharge or mixing with receiving waters?. [401 KAR 5:065 Section 2(1)]

Compliance Status: C-No Violations observed

Comment: All sample collection/analysis is being performed by BeckMar Environmental

Requirement: Have samples been analyzed by a lab that has been certified according to 401 KAR 5:320? Are all field parameters collected by a lab or individual that holds a Field Only certification according to 401 KAR 5:320?. [401 KAR 5:320]

Compliance Status: C-No Violations observed

Comment: All sample collection/analysis is being performed by BeckMar Environmental

Requirement: Is the facility sampling in accordance with sampling requirements specified for biomonitoring in the KPDES permit conditions?. [401 KAR 5:065 Section 2(1)]

Compliance Status: C-No Violations observed

Comment: The facility has failed to comply with biomonitoring requirements as specified in the permit.

Requirement: Have pollutants entered the waters of the Commonwealth?. [KRS 224.70-110]

Compliance Status: C-No Violations observed

Comment: It did not appear that surface waters have been degraded or that pollutants have entered the waters of the Commonwealth.

Requirement: Have surface waters been aesthetically or otherwise degraded?. [401 KAR 10:031 Section 2]

Compliance Status: C-No Violations observed

Comment: It did not appear that surface waters have been degraded or that pollutants have entered the waters of the Commonwealth.

Requirement: Is the permittee in compliance with all permit conditions?. [401 KAR 5:065 Section 2]

Compliance Status: C-No Violations observed

Comment: The facility appears to operating within compliance with its KPDES permit.

Documentation

- | | |
|--|--|
| <input type="checkbox"/> Photos taken | <input type="checkbox"/> Record of visual determination of opacity |
| <input type="checkbox"/> Documents obtained from facility | <input type="checkbox"/> Samples taken by DEP |
| <input type="checkbox"/> Samples taken by outside source | <input type="checkbox"/> Regional office instrument readings taken |
| <input type="checkbox"/> Request for Submission of Documents | <input type="checkbox"/> Other documentation |

Inspector:

T. P. Giles



ANDY BESHEAR
GOVERNOR

REBECCA W. GOODMAN
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

ANTHONY R. HATTON
COMMISSIONER

DIVISION OF WATER
9116 LEESGATE RD
LOUISVILLE, KY, 40222

September 29, 2021

Bluegrass Water Utility Operating Company LLC
Persimmon Ridge Subd & WWTP
500 NW Plaza Drive, Suite 500
St. Ann, MO 63074

RE: Persimmon Ridge Subd & WWTP -- 3955
Permit No.: KY0090956
Shelby County, Kentucky
Activity ID: CIN20210001

Dear Ms. Carey:

Attached for your information and records is a copy of the inspection performed at Persimmon Ridge Subd & WWTP on September 8, 2021.

If you have any questions or comments concerning this inspection, please contact the Louisville Regional Office at: (502) 429-7122.

Sincerely,

A handwritten signature in black ink that reads "Todd P. Giles".

DEP WORKSITE HAZARD ASSESSMENT

<p>PART A</p> <p>Site Name: Delaplain Disposal Co. AI #: 3901</p>	<p>Incident #:</p>
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This form must be started before a site visit and considered during the site visit, as worksite conditions change or as new conditions are discovered, but remain incomplete and unsigned until after the site visit is concluded. This will help ensure your safety and health.

Description of Activities: Inspection of permitted wwtp facility and collections system

PART B

Check the hazard(s) located at the site being assessed sufficient to require Personal Protection Equipment (PPE).

<p>I. TORSO/WHOLE BODY</p> <p>LIKELY INJURY/HAZARD</p> <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Cut/Abrasion/Puncture 2. <input checked="" type="checkbox"/> Electrical 3. <input checked="" type="checkbox"/> Chemical 4. <input checked="" type="checkbox"/> Biological 5. <input type="checkbox"/> Temperature 6. <input checked="" type="checkbox"/> Struck By/Against 7. <input type="checkbox"/> Body Fluids 8. <input type="checkbox"/> Strain 9. <input type="checkbox"/> Cumulative 10. <input checked="" type="checkbox"/> Slip/Trip/Fall 11. <input checked="" type="checkbox"/> Same Level Fall (A) 12. <input checked="" type="checkbox"/> Different Level Fall (B) 13. <input type="checkbox"/> Entrapment 14. <input checked="" type="checkbox"/> Immersion, Submersion, Water 15. <input type="checkbox"/> Permit Required Confined Space 16. <input type="checkbox"/> 	<p>I. 29 CFR 1910. MISC. STANDARDS - TORSO/WHOLE BODY</p> <ol style="list-style-type: none"> 1. Adequate clothing 2. NO GO or maintain safe distance 3. Review MSDS and determine proper PPE 4. Proper clothing/barrier, cream/repellant 5. Cold-insulated jacket/coat, heat-appropriate clothing, work/rest intervals 6. Protective clothing, warning devices, guards 7. Protective apron/coveralls review BBP Plan 8. Proper work habit, assistance, appropriate tools 9. Body mechanics, proper tools, workstations 10. Proper footwear, harness/tether/lifeline, assistance 11. Same as # 10 (A) 12. Same as # 10 (B) 13. NO GO - Do not enter 14. Personal flotation device, tether/lifeline 15. NO GO 16. Call supervisor/branch manager/and/or ERT
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<p>II. HEAD</p> <p>LIKELY INJURY/HAZARD</p> <p>1. <input checked="" type="checkbox"/> Struck By 2. <input checked="" type="checkbox"/> Struck Against 3. <input checked="" type="checkbox"/> Electrical 4. <input type="checkbox"/> Temperature 5. <input type="checkbox"/></p>	<p>II. 29 CFR 1910.135 HEAD PPE</p> <p>1. Hard hat 2. Hard hat 3. NO GO – Maintain distance 4. Hard hat with winter liner or sweat band, cooling device as required 5. Call supervisor, branch manager and/or ERT</p>
<p>III. EYES/FACE</p> <p>LIKELY INJURY/HAZARD</p> <p>1. <input type="checkbox"/> Airborne 2. <input type="checkbox"/> Chemical 3. <input type="checkbox"/> Flash/Light/UV 4. <input type="checkbox"/></p>	<p>III. 29 CFR 1910.133 EYES/FACE PPE</p> <p>1. Safety goggles with side shields, goggles or full face shield for hazard 2. Review MSDS and determine appropriate eyewear and beware of any respiratory hazard 3. Non-vented goggles or full face shield filter or tinted lens and sunscreen for sun exposure 4. Call supervisor, branch manager and/or ERT</p>
<p>IV. RESPIRATORY</p> <p>LIKELY INJURY/HAZARD</p> <p>1. <input type="checkbox"/> Oxygen Deficiency 2. <input type="checkbox"/> Airborne Particles 3. <input type="checkbox"/> Dusts 4. <input type="checkbox"/> Fumes 5. <input type="checkbox"/> Mists 6. <input type="checkbox"/> Airborne Contaminants 7. <input type="checkbox"/> Gases 8. <input type="checkbox"/> Vapors 9. <input type="checkbox"/> Combinations 10. <input type="checkbox"/> Temperature 11. <input type="checkbox"/></p>	<p>IV. 29 CFR 1910.134 RESPIRATORY PPE</p> <p>1. NO GO 2. NO GO unless in DEP Respiratory Protection Program (RPP) OR unless respiratory hazard can be avoided (explain) 3. Same as #2 4. Same as #2 5. Same as #2 6. Same as #2 7. Same as #2 8. Same as #2 9. Same as #2 10. Cold temps - cover mouth/nose, Hot temps - SCBA or supplied air (tempered) 11. Call supervisor/branch manager and/or ERT NOTE: If in the RPP follow proper respirator selection protocols and procedures for any item checked above.</p>

<p>V. HAND/ARM</p> <p>LIKELY INJURY/HAZARD</p> <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Cut/Abrasion/Puncture 2. <input checked="" type="checkbox"/> Electrical 3. <input checked="" type="checkbox"/> Chemical 4. <input checked="" type="checkbox"/> Biological 5. <input checked="" type="checkbox"/> Temperature 6. <input checked="" type="checkbox"/> Sunburn 7. <input type="checkbox"/> Body Fluids 8. <input type="checkbox"/> Cumulative 9. <input type="checkbox"/> Strain 10. <input type="checkbox"/> 	<p>V. 29 CFR 1910.138 HAND/ARM PPE</p> <ol style="list-style-type: none"> 1. Gloves - canvas, leather, mesh, Kevlar 2. NO GO or maintain safe distance 3. Review MSDS and determine appropriate gloves/sleeves or coveralls 4. Clothing/gloves/coveralls/barrier cream repellent 5. Gloves/clothing 6. Wear long sleeves, gloves or sunscreen 7. Latex/nitrile gloves (review Bloodborne Pathogen Plan - BBP) 8. Gloves/restraints 9. Adequate tools/assistance from others 10. Call supervisor/branch manager and/or ERT
<p>VI. FOOT/LEG</p> <p>LIKELY INJURY/HAZARD</p> <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Cut/Abrasion/Puncture 2. <input checked="" type="checkbox"/> Electrical 3. <input checked="" type="checkbox"/> Chemical 4. <input checked="" type="checkbox"/> Biological 5. <input type="checkbox"/> Temperature 6. <input checked="" type="checkbox"/> Struck By/Against 7. <input type="checkbox"/> Strain 8. <input type="checkbox"/> 	<p>VI. 29 CFR 1910.136 FOOT/LEG PPE</p> <ol style="list-style-type: none"> 1. Approved safety shoe, proper clothing 2. NO GO or maintain safe distance 3. Review MSDS and determine proper PPE 4. Coverall/barrier cream/repellent 5. Insulated footwear, clothing adequate for hazard 6. Safety shoes, adequate clothing, proper techniques 7. Adequate tools, assistance from others 8. Call supervisor/branch manager and/or ERT
<p>VII. AUDITORY</p> <p>NOISE LEVEL</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Ambient Level above 85 dBA 2. <input type="checkbox"/> Impact Level above 85 dBA 3. <input type="checkbox"/> <p>NOTE: Noise level rule of thumb: If you are within 2-3 feet of someone and you have to yell to communicate you are above 85 dBA.</p>	<p>VII.29 CFR 1910.95 HEARING PROTECTION</p> <ol style="list-style-type: none"> 1. Appropriate NRR ear plugs or muffs 2. Appropriate NRR ear plugs or muffs 3. Call supervisor/ branch manager and/or ERT

PART C

GO:

NO GO:

I WILL FOLLOW THE RECOMMENDATION FOUND IN THE RIGHT COLUMN ABOVE FOR EACH HAZARD CHECKED IN THE LEFT COLUMN ABOVE. IF EXCEPTIONS, CONTACT YOUR SUPERVISOR.

COMMENTS:

PART D

NOTE: Any NO GO situation witnessed should prompt immediate notification to your supervisor, branch manager, and/or the DEP's Emergency Response Center, (800) 928-2380, for further assessment and possible emergency declaration/contracting.

(Optional)SUPERVISOR: I have reviewed this document with the employee to discuss responsible safety measures, equipment and techniques.

(Optional) Supervisor Name

Date

EMPLOYEE CERTIFICATION: I certify this WORKSITE HAZARD ASSESSMENT was conducted, reviewed and/or updated. Appropriate Personal Protective Equipment was utilized per hazards noted or anticipated.



DEP WORKSITE HAZARD ASSESSMENT

<p>PART A</p> <p>Site Name: Darlington Creek HOA Subd AI #: 44397</p>	<p>Incident #:</p>
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This form must be started before a site visit and considered during the site visit, as worksite conditions change or as new conditions are discovered, but remain incomplete and unsigned until after the site visit is concluded. This will help ensure your safety and health.

Description of Activities: Inspection

PART B

Check the hazard(s) located at the site being assessed sufficient to require Personal Protection Equipment (PPE).

<p>I. TORSO/WHOLE BODY</p> <p>LIKELY INJURY/HAZARD</p> <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Cut/Abrasion/Puncture 2. <input type="checkbox"/> Electrical 3. <input type="checkbox"/> Chemical 4. <input type="checkbox"/> Biological 5. <input type="checkbox"/> Temperature 6. <input type="checkbox"/> Struck By/Against 7. <input type="checkbox"/> Body Fluids 8. <input type="checkbox"/> Strain 9. <input type="checkbox"/> Cumulative 10. <input type="checkbox"/> Slip/Trip/Fall 11. <input type="checkbox"/> Same Level Fall (A) 12. <input type="checkbox"/> Different Level Fall (B) 13. <input type="checkbox"/> Entrapment 14. <input type="checkbox"/> Immersion, Submersion, Water 15. <input type="checkbox"/> Permit Required Confined Space 16. <input type="checkbox"/> 	<p>I. 29 CFR 1910. MISC. STANDARDS - TORSO/WHOLE BODY</p> <ol style="list-style-type: none"> 1. Adequate clothing 2. NO GO or maintain safe distance 3. Review MSDS and determine proper PPE 4. Proper clothing/barrier, cream/repellent 5. Cold-insulated jacket/coat, heat-appropriate clothing, work/rest intervals 6. Protective clothing, warning devices, guards 7. Protective apron/coveralls review BBP Plan 8. Proper work habit, assistance, appropriate tools 9. Body mechanics, proper tools, workstations 10. Proper footwear, harness/tether/lifeline, assistance 11. Same as # 10 (A) 12. Same as # 10 (B) 13. NO GO - Do not enter 14. Personal flotation device, tether/lifeline 15. NO GO 16. Call supervisor/branch manager/and/or ERT
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<p>II. HEAD</p> <p>LIKELY INJURY/HAZARD</p> <p>1. <input checked="" type="checkbox"/> Struck By 2. <input type="checkbox"/> Struck Against 3. <input type="checkbox"/> Electrical 4. <input type="checkbox"/> Temperature 5. <input type="checkbox"/></p>	<p>II. 29 CFR 1910.135 HEAD PPE</p> <p>1. Hard hat 2. Hard hat 3. NO GO – Maintain distance 4. Hard hat with winter liner or sweat band, cooling device as required 5. Call supervisor, branch manager and/or ERT</p>
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<p>IV. RESPIRATORY</p> <p>LIKELY INJURY/HAZARD</p> <p>1. <input type="checkbox"/> Oxygen Deficiency 2. <input checked="" type="checkbox"/> Airborne Particles 3. <input type="checkbox"/> Dusts 4. <input type="checkbox"/> Fumes 5. <input type="checkbox"/> Mists 6. <input type="checkbox"/> Airborne Contaminants 7. <input type="checkbox"/> Gases 8. <input type="checkbox"/> Vapors 9. <input type="checkbox"/> Combinations 10. <input type="checkbox"/> Temperature 11. <input type="checkbox"/></p>	<p>IV. 29 CFR 1910.134 RESPIRATORY PPE</p> <p>1. NO GO 2. NO GO unless in DEP Respiratory Protection Program (RPP) OR unless respiratory hazard can be avoided (explain) 3. Same as #2 4. Same as #2 5. Same as #2 6. Same as #2 7. Same as #2 8. Same as #2 9. Same as #2 10. Cold temps - cover mouth/nose, Hot temps - SCBA or supplied air (tempered) 11. Call supervisor/branch manager and/or ERT NOTE: If in the RPP follow proper respirator selection protocols and procedures for any item checked above.</p>

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PART C

GO:

NO GO:

I WILL FOLLOW THE RECOMMENDATION FOUND IN THE RIGHT COLUMN ABOVE FOR EACH HAZARD CHECKED IN THE LEFT COLUMN ABOVE. IF EXCEPTIONS, CONTACT YOUR SUPERVISOR.

COMMENTS:

PART D

NOTE: Any NO GO situation witnessed should prompt immediate notification to your supervisor, branch manager, and/or the DEP's Emergency Response Center, (800) 928-2380, for further assessment and possible emergency declaration/contracting.

(Optional)SUPERVISOR: I have reviewed this document with the employee to discuss responsible safety measures, equipment and techniques.

(Optional) Supervisor Name

Date

EMPLOYEE CERTIFICATION: I certify this WORKSITE HAZARD ASSESSMENT was conducted, reviewed and/or updated. Appropriate Personal Protective Equipment was utilized per hazards noted or anticipated.

Jeffrey R. Malici

DEP WORKSITE HAZARD ASSESSMENT

<p>PART A</p> <p>Site Name: Persimmon Ridge Subd & WWTP AI #: 3955</p>	<p>Incident #:</p>
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This form must be started before a site visit and considered during the site visit, as worksite conditions change or as new conditions are discovered, but remain incomplete and unsigned until after the site visit is concluded. This will help ensure your safety and health.

Description of Activities:

PART B

Check the hazard(s) located at the site being assessed sufficient to require Personal Protection Equipment (PPE).

<p>I. TORSO/WHOLE BODY</p> <p>LIKELY INJURY/HAZARD</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Cut/Abrasion/Puncture 2. <input type="checkbox"/> Electrical 3. <input type="checkbox"/> Chemical 4. <input type="checkbox"/> Biological 5. <input type="checkbox"/> Temperature 6. <input type="checkbox"/> Struck By/Against 7. <input type="checkbox"/> Body Fluids 8. <input type="checkbox"/> Strain 9. <input type="checkbox"/> Cumulative 10. <input type="checkbox"/> Slip/Trip/Fall 11. <input type="checkbox"/> Same Level Fall (A) 12. <input type="checkbox"/> Different Level Fall (B) 13. <input type="checkbox"/> Entrapment 14. <input type="checkbox"/> Immersion, Submersion, Water 15. <input type="checkbox"/> Permit Required Confined Space 16. <input type="checkbox"/> 	<p>I. 29 CFR 1910. MISC. STANDARDS - TORSO/WHOLE BODY</p> <ol style="list-style-type: none"> 1. Adequate clothing 2. NO GO or maintain safe distance 3. Review MSDS and determine proper PPE 4. Proper clothing/barrier, cream/repellent 5. Cold-insulated jacket/coat, heat-appropriate clothing, work/rest intervals 6. Protective clothing, warning devices, guards 7. Protective apron/coveralls review BBP Plan 8. Proper work habit, assistance, appropriate tools 9. Body mechanics, proper tools, workstations 10. Proper footwear, harness/tether/lifeline, assistance 11. Same as # 10 (A) 12. Same as # 10 (B) 13. NO GO - Do not enter 14. Personal flotation device, tether/lifeline 15. NO GO 16. Call supervisor/branch manager/and/or ERT
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COMMENTS:

PART D

NOTE: Any NO GO situation witnessed should prompt immediate notification to your supervisor, branch manager, and/or the DEP's Emergency Response Center, (800) 928-2380, for further assessment and possible emergency declaration/contracting.

(Optional)SUPERVISOR: I have reviewed this document with the employee to discuss responsible safety measures, equipment and techniques.

(Optional) Supervisor Name

Date

EMPLOYEE CERTIFICATION: I certify this WORKSITE HAZARD ASSESSMENT was conducted, reviewed and/or updated. Appropriate Personal Protective Equipment was utilized per hazards noted or anticipated.

T. R. Giles

DEP WORKSITE HAZARD ASSESSMENT

<p>PART A</p> <p>Site Name: Longview Golf Course WWTP AI #: 8083</p>	<p>Incident #:</p>
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This form must be started before a site visit and considered during the site visit, as worksite conditions change or as new conditions are discovered, but remain incomplete and unsigned until after the site visit is concluded. This will help ensure your safety and health.

Description of Activities: Inspection of a minor WWTP facility and outfall area.

PART B

Check the hazard(s) located at the site being assessed sufficient to require Personal Protection Equipment (PPE).

<p>I. TORSO/WHOLE BODY</p> <p>LIKELY INJURY/HAZARD</p> <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Cut/Abrasion/Puncture 2. <input checked="" type="checkbox"/> Electrical 3. <input checked="" type="checkbox"/> Chemical 4. <input checked="" type="checkbox"/> Biological 5. <input type="checkbox"/> Temperature 6. <input checked="" type="checkbox"/> Struck By/Against 7. <input type="checkbox"/> Body Fluids 8. <input type="checkbox"/> Strain 9. <input type="checkbox"/> Cumulative 10. <input checked="" type="checkbox"/> Slip/Trip/Fall 11. <input checked="" type="checkbox"/> Same Level Fall (A) 12. <input checked="" type="checkbox"/> Different Level Fall (B) 13. <input type="checkbox"/> Entrapment 14. <input checked="" type="checkbox"/> Immersion, Submersion, Water 15. <input type="checkbox"/> Permit Required Confined Space 16. <input type="checkbox"/> 	<p>I. 29 CFR 1910. MISC. STANDARDS - TORSO/WHOLE BODY</p> <ol style="list-style-type: none"> 1. Adequate clothing 2. NO GO or maintain safe distance 3. Review MSDS and determine proper PPE 4. Proper clothing/barrier, cream/repellant 5. Cold-insulated jacket/coat, heat-appropriate clothing, work/rest intervals 6. Protective clothing, warning devices, guards 7. Protective apron/coveralls review BBP Plan 8. Proper work habit, assistance, appropriate tools 9. Body mechanics, proper tools, workstations 10. Proper footwear, harness/tether/lifeline, assistance 11. Same as # 10 (A) 12. Same as # 10 (B) 13. NO GO - Do not enter 14. Personal flotation device, tether/lifeline 15. NO GO 16. Call supervisor/branch manager/and/or ERT
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PART D

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(Optional) Supervisor Name

Date

EMPLOYEE CERTIFICATION: I certify this WORKSITE HAZARD ASSESSMENT was conducted, reviewed and/or updated. Appropriate Personal Protective Equipment was utilized per hazards noted or anticipated.



**KENTUCKY POLLUTANT
DISCHARGE ELIMINATION
SYSTEM****FACT SHEET**

KPDES No.: KY0090956
AI No.: 3955
Persimmon Ridge WWTF
72 Persimmon Ridge Drive
Louisville, Shelby County, Kentucky

Date: August 17, 2023

Public Notice Information

Public Notice Start Date: April 19, 2023

Comment Due Date: May 19, 2023

General information concerning the public notice process may be obtained on the Division of Water's Public Notice Webpage at the following address:

<https://eec.ky.gov/Environmental-Protection/Water/Pages/Water-Public-Notices-and-Hearings.aspx>.

Public Notice Comments

Comments must be received by the Division of Water no later than 4:30 PM on the closing date of the comment period. Comments may be submitted by e-mail at: DOWPublicNotice@ky.gov or written comments may be submitted to the Division of Water at 300 Sower Blvd, Frankfort, Kentucky 40601.

Reference Documents

A copy of this proposed fact sheet, proposed permit, the application, other supporting material and the current status of the application may be obtained from the Department for Environmental Protection's Pending Approvals Search Webpage:

<https://dep.gateway.ky.gov/eSearch/Approvals/Pending>

Open Records

Copies of publicly-available documents supporting this fact sheet and proposed permit may also be obtained from the Department for Environmental Protection Central Office. Information regarding these materials may be obtained from the Open Records Coordinator at (502) 782-6849 or by e-mail at EEC.KORA@ky.gov.

THIS KPDES FACT SHEET CONSISTS OF THE FOLLOWING SECTIONS:

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SECTION 1
FACILITY SYNOPSIS

1. FACILITY SYNOPSIS

1.1. Name and Address of Applicant

Bluegrass Water Utility Operating Company LLC
 1630 Des Peres Road, Suite 140
 Des Peres, MO 63131

1.2. Facility Location

Persimmon Ridge WWTF
 72 Persimmon Ridge Drive
 Louisville, Shelby County, Kentucky

1.3. Description of Applicant’s Operation

The applicant operates a domestic wastewater treatment plant serving a subdivision.

1.4. Wastewaters Collected and Treatment

The following table lists the actual average flow reported, the facility’s approved long-term average design treatment capacity, the wastewater types collected, and the treatment type for each outfall:

TABLE 1.				
Outfall No.	Avg. Flow (MGD)	Design Capacity (MGD)	Wastewater Types Collected	Treatment Type
002	0.229	0.142	Domestic Sanitary	Aerated Lagoon Post-Aeration PAA disinfection Discharge to Surface Water

1.5. Permitting Action

This is a reissuance of a minor KPDES permit for an existing domestic wastewater treatment plant [SIC Code 4952].

1.6. Significant Changes from Prior Permit

The significant changes for this permit include: Annual Oil & Grease monitoring and removal of TRC limits since the facility now uses PAA disinfection.

1.7. Significant Changes after Public Notice

This is a placeholder. If there are changes to the permit after the public notice period, a summary of significant changes will appear here in the final Fact Sheet.

SECTION 2
RECEIVING/INTAKE WATERS

2. RECEIVING / INTAKE WATERS

2.1. Receiving Waters

All surface waters of the Commonwealth have been assigned stream use designations consisting of one or more of the following designations: Warmwater Aquatic Habitat (WAH), Primary Contact Recreation (PCR), Secondary Contact Recreation (SCR), Domestic Water Supply (DWS), Coldwater Aquatic Habitat (CAH) or Outstanding State Resource Water (OSRW)[401 KAR 10:026].

All surface waters of the Commonwealth are assigned one of the following antidegradation categories: Outstanding National Resource Water (ONRW), Exceptional Water (EW), Impaired Water (IW) or High Quality Water (HQ)[401 KAR 10:030].

Surface waters categorized as an IW are listed for non-support of uses in Kentucky’s most recently approved *Integrated Report to Congress on the Condition of Water Resources in Kentucky*. The 305 (b) List identifies stream segments that do not support their use designation. However, Outstanding State Resource Waters, Exceptional Waters, and waters found only as mercury or methylmercury impaired for fish consumption shall not be categorized as impaired *for antidegradation purposes*[401 KAR 10:030].

The following table lists the stream use classifications and antidegradation category associated with this permit.

TABLE 2.				
Receiving Water Name	Use Designation	Antidegradation Category	7Q10 Low Flow (cfs)	Harmonic Mean Flow (cfs)
Floyds Fork	WAH PCR SCR DWS	IW	0.00	1.10
<p>This segment of Floyds Fork (mile point 45.7 to 61.9) is listed for non-support of uses in the 2018/2020 305 (b) Report to Congress. The non-supported uses are Primary Contact Recreation (Non Support), Secondary Contact Recreation (Non Support), and Warm Water Aquatic Habitat (Non Support). The pollutants of concern are <i>Escherichia Coli</i>, Fecal Coliform, Nutrient/Eutrophication Biological Indicators, Organic Enrichment (Sewage) Biological Indicators, and Sedimentation/Siltation The suspected sources are Package Plant or Other Permitted Small Flows Discharges, Municipal Point Source Discharges, Wet Weather Discharges (Non-Point Source), and Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)</p> <p>The CBOD5, and NH3-N limitations for this permit are consistent with “Development of an Ultimate Oxygen Demand (UOD) TMDL for Floyd’s Fork and its Tributaries” approved 9/4/97.</p> <p>The <i>Escherichia Coli</i>. limitations for this permit are consistent with “Total Maximum Daily Load for E. coli and Fecal Coliform 18 Stream Segments within the Floyds Fork Watershed Henry, Oldham, Jefferson, Shelby, Spencer, and Bullitt Counties, Kentucky” approved 9/24/2014.</p> <p>Facility has a waste load allocation in both of the TMDLs listed above. Facility in compliance with KPDES permit limits and requirements will help facilitate an improvement in water quality</p>				

2.2. Intake Waters – Nearest Downstream Intake

TABLE 3.						
Intake Water Name	Public Water Supply Name	Latitude (N) Decimal Degrees	Longitude (W) Decimal Degrees	Miles Downstream	7Q10 Low Flow (cfs)	Harmonic Mean Flow (cfs)
Ohio River	Evansville Water Utility, IN	37.957651°	87.574393°	235	12,900	60,900

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SECTION 3
OUTFALL 002

DRAFT

3. OUTFALL 002

3.1. Outfall Description

The following table lists the outfall type, location, and description:

TABLE 4.				
Outfall Type	Latitude (N)	Longitude (W)	Receiving Water	Description of Outfall
External	38.296989°	85.440433°	Floyds Fork	Domestic Wastewater

3.2. Reported Values

The following table summarizes the reported values for Outfall 002:

TABLE 5.							
Reported Parameters	Units	EFFLUENT					
		Loadings (lb/day)		Concentrations			
		Maximum Monthly Average	Maximum Weekly Average	Minimum	Maximum Monthly Average	Maximum Weekly Average	Maximum
Flow	MGD	0.229	1.670 ¹	N/A	N/A	N/A	N/A
pH	SU	N/A	N/A	6.72	N/A	N/A	8.35
CBOD ₅ ²	mg/l	N/A	N/A	N/A	6.55	71.0	N/A
Total Suspended Solids	mg/l	N/A	N/A	N/A	4.53	32.0	N/A
Nitrogen, Ammonia total [as N]							
May 1 – October 31	mg/l	N/A	N/A	N/A	1.92	17.8 ¹	N/A
November 1 – April 30	mg/l	N/A	N/A	N/A	7.70	28.7 ¹	N/A
Dissolved Oxygen	mg/l	N/A	N/A	6.50	N/A	N/A	N/A
E. coli ³	#/100 ml	N/A	N/A	N/A	14.56 ⁴	44.15 ⁵	N/A
Total Residual Chlorine	mg/l	N/A	N/A	N/A	0.025	1.490 ¹	N/A
Total Phosphorus	mg/l	N/A	N/A	N/A	4.10	9.31 ¹	N/A
Total Nitrogen ⁶	mg/l	N/A	N/A	N/A	8.44	22.2 ¹	N/A
¹ Daily Maximum							
² CBOD ₅ – Carbonaceous Biochemical Oxygen Demand, 5-day							
³ E. coli – <i>Escherichia coli</i> Bacteria							
⁴ Thirty (30) day Geometric Mean							

TABLE 5.

Reported Parameters	Units	EFFLUENT					
		Loadings (lb/day)		Concentrations			
		Maximum Monthly Average	Maximum Weekly Average	Minimum	Maximum Monthly Average	Maximum Weekly Average	Maximum
⁵ Seven (7) day Geometric Mean							
⁶ Total Nitrogen is the summation of the analytical results for Total Nitrites, Total Nitrites, and Total Kjeldahl Nitrogen							

The above values are based upon 5-year DMR averages from 10/31/2018 to 03/31/2023.

3.3. Effluent Limitations and Monitoring Requirements

The following table summarizes the effluent limitations and monitoring requirements for Outfall 002:

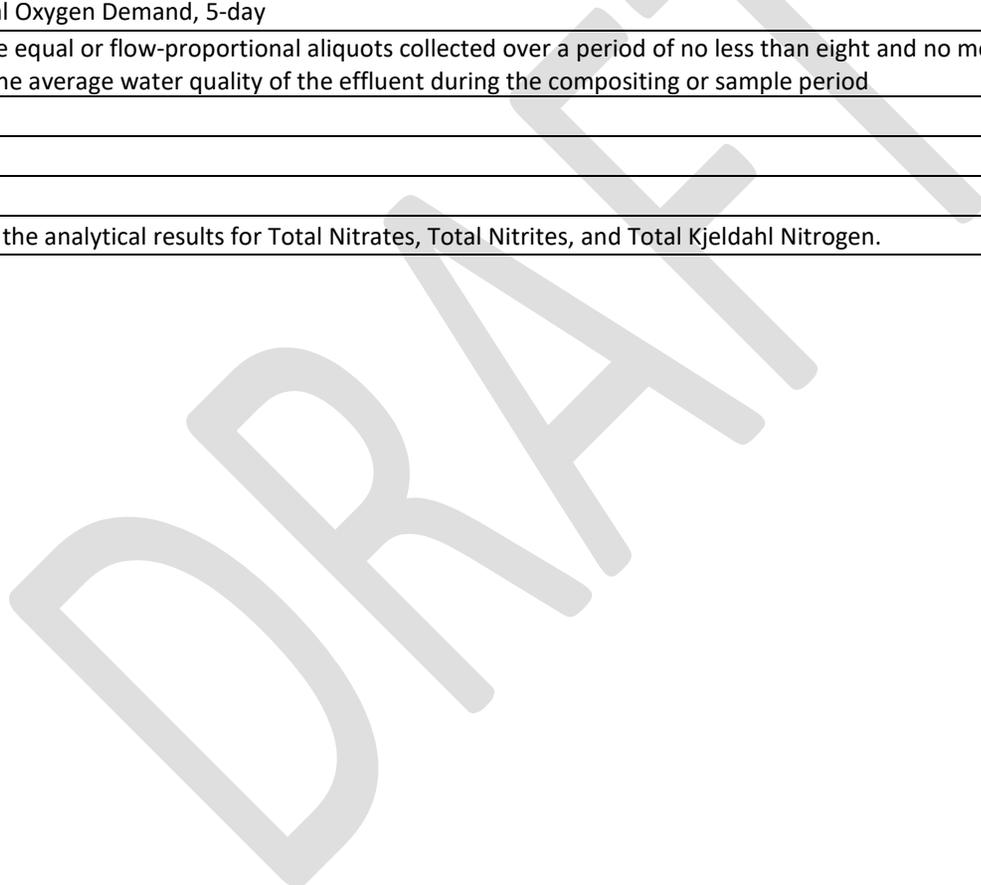
TABLE 6.

EFFLUENT LIMITATIONS								MONITORING REQUIREMENTS	
Effluent Characteristic	Units	Loadings (lb/day)		Concentrations				Frequency	Sample Type
		Maximum Monthly Average	Maximum Weekly Average	Minimum	Maximum Monthly Average	Maximum Weekly Average	Maximum		
Flow	MGD	Report	Report ¹	N/A	N/A	N/A	N/A	2/Month	Instantaneous
pH	SU	N/A	N/A	6.0	N/A	N/A	9.0	2/Month	Grab
CBOD ₅ ²	mg/l	N/A	N/A	N/A	10	15	N/A	2/Month	Composite ³
Total Suspended Solids	mg/l	N/A	N/A	N/A	30	45	N/A	2/Month	Composite ³
Nitrogen, Ammonia total [as N]									
May 1 – October 31	mg/l	N/A	N/A	N/A	2.0	3.0 ¹	N/A	2/Month	Composite ³
November 1 – April 30	mg/l	N/A	N/A	N/A	5.0	7.5 ¹	N/A	2/Month	Composite ³
Dissolved Oxygen	mg/l	N/A	N/A	7.0	N/A	N/A	N/A	2/Month	Grab
E. coli ⁴	#/100 ml	N/A	N/A	N/A	130 ⁵	240 ⁶	N/A	2/Month	Grab
Total Phosphorus	mg/l	5.76	Report ¹	N/A	Report	Report ¹	N/A	2/Month	Composite ³
Total Nitrogen ⁷	mg/l	N/A	N/A	N/A	Report	Report ¹	N/A	2/Month	Composite ³
Oil & Grease	mg/l	N/A	N/A	N/A	Report	Report ¹	N/A	Annually	Grab

¹Daily Maximum

TABLE 6.

EFFLUENT LIMITATIONS								MONITORING REQUIREMENTS	
Effluent Characteristic	Units	Loadings (lb/day)		Concentrations				Frequency	Sample Type
		Maximum Monthly Average	Maximum Weekly Average	Minimum	Maximum Monthly Average	Maximum Weekly Average	Maximum		
² CBOD ₅ – Carbonaceous Biochemical Oxygen Demand, 5-day									
³ A sample composed of four or more equal or flow-proportional aliquots collected over a period of no less than eight and no more than twenty-four hours and aggregated so that the aggregate sample reflects the average water quality of the effluent during the compositing or sample period									
⁴ E. coli – <i>Escherichia coli</i> Bacteria									
⁵ Thirty (30) day Geometric Mean									
⁶ Seven (7) day Geometric Mean									
⁷ Total Nitrogen is the summation of the analytical results for Total Nitrates, Total Nitrites, and Total Kjeldahl Nitrogen.									



3.4. Pertinent Factors

The effluent limitations for this outfall were developed in accordance with DOW’s General Procedures for Limitations Development located on DOW’s webpage at: <https://eec.ky.gov/Environmental-Protection/Forms%20Library/General%20Procedures%20for%20Limitations%20Development.pdf>.

3.4.1. Federally-Listed Threatened or Endangered Aquatic Species

There are no known federally listed threatened or endangered aquatic species that affect the designated use of the receiving water.

3.4.2. Technology-Based Limitations: Secondary Treatment Standards

Discharges of biochemically degradable wastes are subject to technology-based effluent limitations (TBELs) known as the Secondary Treatment Standards. Both state and federal regulations establish the requirements for secondary treatment. Federal regulations for secondary treatment apply only to POTWs. State regulations for secondary treatment only apply to non-POTWs [401 KAR 5:045].

TABLE 7.		
State Defined Secondary Treatment Standards		
Pollutant or Pollutant Characteristic	30-day average	7-day average
BOD ₅ (mg/l)	30	45
TSS (mg/l)	30	45

3.4.3. Water Quality-Based Effluent Limitations and/or Monitoring

The following table lists those pollutants and/or pollutant characteristics of concern that DOW has determined exhibit reasonable potential to cause or contribute to an excursion of a water quality-based criterion, and the basis of DOW’s determination. These determinations are consistent with the DOW’s reasonable potential analysis (RPA) procedures outlined in *Permitting Procedures For Determining “Reasonable Potential”* Kentucky Division of Water May 1, 2000. This table may also include pollutants for which DOW has found the existence of reasonable potential to be indeterminate or for which DOW needs additional study.

TABLE 8.	
Pollutant or Pollutant Characteristic	Basis
CBOD ₅ and Dissolved Oxygen	These parameters are variables in the QUAL2K computer modeling used to protect water quality for instream dissolved oxygen.
Ammonia	This parameter is a variable in the QUAL2K computer modeling used to protect water quality for instream dissolved oxygen and ammonia toxicity.
pH	The DOW has concluded that all facilities discharging pollutants to waters of the Commonwealth have the Reasonable Potential to violate the criteria for pH.
Oil & Grease	All facilities treating non-process wastewater must conduct Oil & Grease analysis to renew a KPDES permit. Oil & Grease is a conventional pollutant. No waiver of analysis is available for conventional pollutants.
E. coli	The DOW has concluded that all facilities treating domestic wastewater have the reasonable potential to exceed criteria.

3.4.4. Comparison of Technology Based Effluent Limitations to Water Quality Standards

The final step in determining a permit’s final limits is to compare the limitations generated from any effluent guidelines and other technology-based limitations to those generated from the water quality standards.

BOD₅ or CBOD₅

There are no effluent guidelines or federal TBELs for domestic wastewater. In order to determine if the BOD₅ or CBOD₅ requirements under the state's Technology Based Effluent Limits (TBELs) are consistent with Kentucky water quality criteria for dissolved oxygen, [401 KAR 10:031, Section 4(1)(e)], EPA's River and Stream Water Quality Model (QUAL 2E/K) was used. The final limits are based upon the KYWQS.

TSS

Based upon review of the proposed discharge and the receiving stream. The Division of Water does not believe the calculated total suspended solids limit will have an adverse effect on the indigenous aquatic community [401 KAR 10:031, Section 4(1)(g)].

3.4.5. Nutrients

The numerical limitations established for this pollutant are consistent with the Development of an Ultimate Oxygen Demand (UOD) TMDL for Floyd's Fork and its Tributaries approved by EPA on 9/4/97 [40 CFR 130.7 and 401 KAR 10:031, Section 1].

3.5. Justification of Requirements

Chapters 5 and 10 of Title 401 of the Kentucky Administrative Regulations (KARs), cited in the following, have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes.

At a minimum, all permits shall contain technology-based effluent limitations (TBELs) [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(a)]. When necessary to achieve water quality standards, all permits shall contain water quality-based effluent limitations (WQBELs) [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(d)]. Any WQBELs included in this permit are based upon the Kentucky Water Quality Standards (KYWQS) [401 KAR 10:031].

3.5.1. Flow

The monitoring requirements for this parameter are consistent with the KPDES permit program requirements for establishing effluent limitations, standards, and permit conditions [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(i)(1)(ii)] and requirements for recording and reporting of monitoring results [401 KAR 5:050, Section 4 – 40 CFR 122.48].

3.5.2. CBOD₅

The limitations for this parameter are consistent with the secondary treatment standards for biochemically degradable wastes as defined in state regulations [401 KAR 5:045, Section 3]. DOW found that it was necessary to impose WQBELs for this parameter in order to achieve water quality standards. [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(d)]. These effluent limitations are also consistent with Kentucky's Water Quality Standards [401 KAR 10:031, Section 4(1)(e) & (i) respectively]. The EPA's River and Stream Water Quality Model (QUAL 2E/K) was used to develop these limitations. The numerical limitations established for this pollutant are consistent with the Development of an Ultimate Oxygen Demand (UOD) TMDL for Floyd's Fork and its Tributaries approved by EPA on 9/4/97 [40 CFR 130.7 and 401 KAR 10:031, Section 1].

3.5.3. Total Suspended Solids

The limitations for this parameter are consistent with the secondary treatment standards for biochemically degradable wastes as defined in state regulations [401 KAR 5:045, Section 3]. These effluent limitations are also consistent with Kentucky's Water Quality Standards [401 KAR 10:031, Section 4(1)(g)].

3.5.4. Ammonia and Dissolved Oxygen

The limitations for these parameters are WQBELs developed using the EPA's River and Stream Water Quality Model (QUAL 2E/K) [401 KAR 10:031, Section 4(1)(e) & (i)]. The numerical limitations established for this pollutant are consistent with the Development of an Ultimate Oxygen Demand (UOD) TMDL for Floyd's Fork and its Tributaries approved by EPA on 9/4/97 [40 CFR 130.7 and 401 KAR 10:031, Section 1].

3.5.5. E. coli

The limitations for this parameter are consistent with Kentucky's Water Quality Standards [401 KAR 10:031, Section 7]. The numerical limitations established for this pollutant are consistent with the Development of an Ultimate Oxygen Demand (UOD) TMDL for E. coli and Fecal Coliform 18 Stream Segments within the Floyd's Fork Watershed Henry, Oldham, Jefferson, Shelby, Spencer, and Bullitt Counties, Kentucky approved by EPA on 9/24/2014 [40 CFR 130.7 and 401 KAR 10:031, Section 1].

3.5.6. pH

The limitations for this parameter are consistent with Kentucky's Water Quality Standards [401 KAR 10:031, Section 4(1)(b) and Section 7].

3.5.7. Oil & Grease Monitoring

The monitoring requirements for this parameter are consistent with the KPDES permit program requirements for establishing effluent limitations, standards, and permit conditions [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(i)(1)(i)] and requirements for recording and reporting of monitoring results [401 KAR 5:050, Section 4 – 40 CFR 122.48].

3.5.8. Total Phosphorus

The monitoring requirements for this parameter are consistent with the KPDES permit program requirements for establishing effluent limitations, standards, and permit conditions [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(i)(1)(i)] and requirements for recording and reporting of monitoring results [401 KAR 5:050, Section 4 – 40 CFR 122.48].

3.5.9. Total Nitrogen

The monitoring requirements for this parameter are consistent with the KPDES permit program requirements for establishing effluent limitations, standards, and permit conditions [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(i)(1)(i)] and requirements for recording and reporting of monitoring results [401 KAR 5:050, Section 4 – 40 CFR 122.48].

SECTION 4
OTHER CONDITIONS

4. OTHER CONDITIONS

4.1. Schedule of Compliance

The permittee is required to comply with all effluent limitations by the effective date of the permit unless a compliance schedule is included with the permit. A schedule of compliance, if included with this permit, is consistent with the regulatory provisions for establishing a schedule of compliance [401 KAR 5:050, Section 3--40 CFR 122.47].

4.2. Antidegradation

The conditions of Kentucky's Antidegradation Policy have been satisfied [401 KAR 10:029, Section 1]. This permitting action is/a reissuance of a KPDES permit that does not authorize an expanded discharge.

4.3. Standard Conditions

The conditions listed in the Standard Conditions Section of the permit are consistent with the conditions applicable to all permits [401 KAR 5:065, Section 2(1) – 40 CFR 122.41].

4.4. Sufficiently Sensitive Analytical Methods

Analytical methods utilized to demonstrate compliance with the effluent limitations established in this permit shall be sufficiently sensitive to detect pollutant levels at or below the required effluent limit [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(i)(1)(iv)].

4.5. Certified Laboratory

All environmental analysis is to be performed by a certified laboratory is consistent with the certified wastewater laboratory requirements [401 KAR 5:320, Section 1].

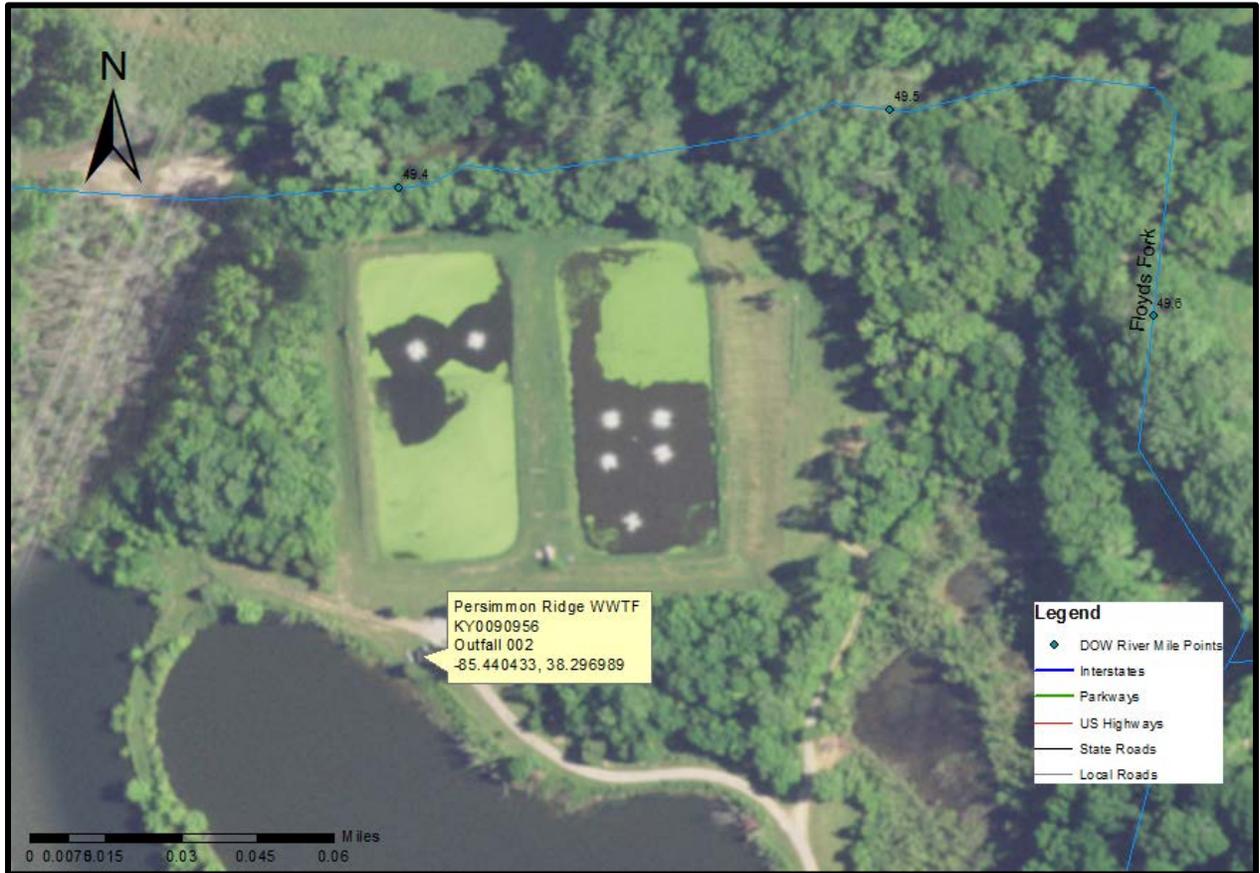
4.6. Connection to Regional Sewer System

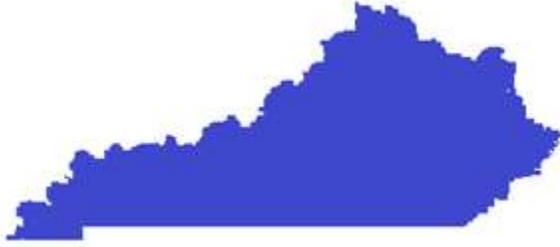
In accordance with 401 KAR 5:005, Section 4 if a sewer system served by a regional facility becomes available, the WWTP shall be abandoned and the influent flow shall be diverted to the regional facility.

4.7. Certified Operators

Wastewater treatment plants and wastewater collection systems that accept wastewaters containing domestic sewage are to be operated by a certified operator [401 KAR 5:010].

4.8. Location Map



**KENTUCKY POLLUTANT
DISCHARGE ELIMINATION
SYSTEM****FACT SHEET**

KPDES No.: KY0090956
AI No.: 3955
Persimmon Ridge WWTF
72 Persimmon Ridge Drive
Louisville, Shelby County, Kentucky

Date: April 18, 2023

Public Notice Information

Public Notice Start Date: April 19, 2023

Comment Due Date: May 19, 2023

General information concerning the public notice process may be obtained on the Division of Water's Public Notice Webpage at the following address:

<https://eec.ky.gov/Environmental-Protection/Water/Pages/Water-Public-Notices-and-Hearings.aspx>.

Public Notice Comments

Comments must be received by the Division of Water no later than 4:30 PM on the closing date of the comment period. Comments may be submitted by e-mail at: DOWPublicNotice@ky.gov or written comments may be submitted to the Division of Water at 300 Sower Blvd, Frankfort, Kentucky 40601.

Reference Documents

A copy of this proposed fact sheet, proposed permit, the application, other supporting material and the current status of the application may be obtained from the Department for Environmental Protection's Pending Approvals Search Webpage:

<https://dep.gateway.ky.gov/eSearch/Approvals/Pending>

Open Records

Copies of publicly-available documents supporting this fact sheet and proposed permit may also be obtained from the Department for Environmental Protection Central Office. Information regarding these materials may be obtained from the Open Records Coordinator at (502) 782-6849 or by e-mail at EEC.KORA@ky.gov.

THIS KPDES FACT SHEET CONSISTS OF THE FOLLOWING SECTIONS:

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SECTION 1
FACILITY SYNOPSIS

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1. FACILITY SYNOPSIS

1.1. Name and Address of Applicant

Bluegrass Water Utility Operating Company LLC
 1630 Des Peres Road, Suite 140
 Des Peres, MO 63131

1.2. Facility Location

Persimmon Ridge WWTF
 72 Persimmon Ridge Drive
 Louisville, Shelby County, Kentucky

1.3. Description of Applicant’s Operation

The applicant operates a domestic wastewater treatment plant serving a subdivision.

1.4. Wastewaters Collected and Treatment

The following table lists the actual average flow reported, the facility’s approved long-term average design treatment capacity, the wastewater types collected, and the treatment type for each outfall:

TABLE 1.				
Outfall No.	Avg. Flow (MGD)	Design Capacity (MGD)	Wastewater Types Collected	Treatment Type
002	0.229	0.142	Domestic Sanitary	Aerated Lagoon Post-Aeration PAA disinfection Discharge to Surface Water

1.5. Permitting Action

This is a reissuance of a minor KPDES permit for an existing domestic wastewater treatment plant [SIC Code 4952].

1.6. Significant Changes from Prior Permit

The significant changes for this permit include: Annual Oil & Grease monitoring and removal of TRC limits since the facility now uses PAA disinfection.

1.7. Significant Changes after Public Notice

This is a placeholder. If there are changes to the permit after the public notice period, a summary of significant changes will appear here in the final Fact Sheet.

SECTION 2
RECEIVING/INTAKE WATERS

2. RECEIVING / INTAKE WATERS

2.1. Receiving Waters

All surface waters of the Commonwealth have been assigned stream use designations consisting of one or more of the following designations: Warmwater Aquatic Habitat (WAH), Primary Contact Recreation (PCR), Secondary Contact Recreation (SCR), Domestic Water Supply (DWS), Coldwater Aquatic Habitat (CAH) or Outstanding State Resource Water (OSRW)[401 KAR 10:026].

All surface waters of the Commonwealth are assigned one of the following antidegradation categories: Outstanding National Resource Water (ONRW), Exceptional Water (EW), Impaired Water (IW) or High Quality Water (HQ)[401 KAR 10:030].

Surface waters categorized as an IW are listed for non-support of uses in Kentucky’s most recently approved *Integrated Report to Congress on the Condition of Water Resources in Kentucky*. The 305 (b) List identifies stream segments that do not support their use designation. However, Outstanding State Resource Waters, Exceptional Waters, and waters found only as mercury or methylmercury impaired for fish consumption shall not be categorized as impaired *for antidegradation purposes*[401 KAR 10:030].

The following table lists the stream use classifications and antidegradation category associated with this permit.

TABLE 2.				
Receiving Water Name	Use Designation	Antidegradation Category	7Q10 Low Flow (cfs)	Harmonic Mean Flow (cfs)
Floyds Fork	WAH PCR SCR DWS	IW	0.00	1.10
<p>This segment of Floyds Fork (mile point 45.7 to 61.9) is listed for non-support of uses in the 2018/2020 305 (b) Report to Congress. The non-supported uses are Primary Contact Recreation (Non Support), Secondary Contact Recreation (Non Support), and Warm Water Aquatic Habitat (Non Support). The pollutants of concern are <i>Escherichia Coli</i>, Fecal Coliform, Nutrient/Eutrophication Biological Indicators, Organic Enrichment (Sewage) Biological Indicators, and Sedimentation/Siltation The suspected sources are Package Plant or Other Permitted Small Flows Discharges, Municipal Point Source Discharges, Wet Weather Discharges (Non-Point Source), and Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)</p> <p>The CBOD5, and NH3-N limitations for this permit are consistent with “Development of an Ultimate Oxygen Demand (UOD) TMDL for Floyd’s Fork and its Tributaries” approved 9/4/97.</p> <p>The <i>Escherichia Coli</i>. limitations for this permit are consistent with “Total Maximum Daily Load for E. coli and Fecal Coliform 18 Stream Segments within the Floyds Fork Watershed Henry, Oldham, Jefferson, Shelby, Spencer, and Bullitt Counties, Kentucky” approved 9/24/2014.</p> <p>Facility has a waste load allocation in both of the TMDLs listed above. Facility in compliance with KPDES permit limits and requirements will help facilitate an improvement in water quality</p>				

2.2. Intake Waters – Nearest Downstream Intake

TABLE 3.						
Intake Water Name	Public Water Supply Name	Latitude (N) Decimal Degrees	Longitude (W) Decimal Degrees	Miles Downstream	7Q10 Low Flow (cfs)	Harmonic Mean Flow (cfs)
Ohio River	Evansville Water Utility, IN	37.957651°	87.574393°	235	12,900	60,900

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SECTION 3
OUTFALL 002

DRAFT

3. OUTFALL 002

3.1. Outfall Description

The following table lists the outfall type, location, and description:

TABLE 4.				
Outfall Type	Latitude (N)	Longitude (W)	Receiving Water	Description of Outfall
External	38.296989°	85.440433°	Floyds Fork	Domestic Wastewater

3.2. Reported Values

The following table summarizes the reported values for Outfall 002:

TABLE 5.							
Reported Parameters	Units	EFFLUENT					
		Loadings (lb/day)		Concentrations			
		Maximum Monthly Average	Maximum Weekly Average	Minimum	Maximum Monthly Average	Maximum Weekly Average	Maximum
Flow	MGD	0.229	1.670 ¹	N/A	N/A	N/A	N/A
pH	SU	N/A	N/A	6.72	N/A	N/A	8.35
CBOD ₅ ²	mg/l	N/A	N/A	N/A	6.55	71.0	N/A
Total Suspended Solids	mg/l	N/A	N/A	N/A	4.53	32.0	N/A
Nitrogen, Ammonia total [as N]							
May 1 – October 31	mg/l	N/A	N/A	N/A	1.92	17.8 ¹	N/A
November 1 – April 30	mg/l	N/A	N/A	N/A	7.70	28.7 ¹	N/A
Dissolved Oxygen	mg/l	N/A	N/A	6.50	N/A	N/A	N/A
E. coli ³	#/100 ml	N/A	N/A	N/A	14.56 ⁴	44.15 ⁵	N/A
Total Residual Chlorine	mg/l	N/A	N/A	N/A	0.025	1.490 ¹	N/A
Total Phosphorus	mg/l	N/A	N/A	N/A	4.10	9.31 ¹	N/A
Total Nitrogen ⁶	mg/l	N/A	N/A	N/A	8.44	22.2 ¹	N/A
¹ Daily Maximum							
² CBOD ₅ – Carbonaceous Biochemical Oxygen Demand, 5-day							
³ E. coli – <i>Escherichia coli</i> Bacteria							
⁴ Thirty (30) day Geometric Mean							

TABLE 5.

Reported Parameters	Units	EFFLUENT					
		Loadings (lb/day)		Concentrations			
		Maximum Monthly Average	Maximum Weekly Average	Minimum	Maximum Monthly Average	Maximum Weekly Average	Maximum

⁵Seven (7) day Geometric Mean

⁶Total Nitrogen is the summation of the analytical results for Total Nitrites, Total Nitrites, and Total Kjeldahl Nitrogen

The above values are based upon 5-year DMR averages from 10/31/2018 to 03/31/2023.

3.3. Effluent Limitations and Monitoring Requirements

The following table summarizes the effluent limitations and monitoring requirements for Outfall 002:

TABLE 6.

EFFLUENT LIMITATIONS								MONITORING REQUIREMENTS	
Effluent Characteristic	Units	Loadings (lb/day)		Concentrations				Frequency	Sample Type
		Maximum Monthly Average	Maximum Weekly Average	Minimum	Maximum Monthly Average	Maximum Weekly Average	Maximum		
Flow	MGD	Report	Report ¹	N/A	N/A	N/A	N/A	2/Month	Instantaneous
pH	SU	N/A	N/A	6.0	N/A	N/A	9.0	2/Month	Grab
CBOD ₅ ²	mg/l	N/A	N/A	N/A	10	15	N/A	2/Month	Composite ³
Total Suspended Solids	mg/l	N/A	N/A	N/A	30	45	N/A	2/Month	Composite ³
Nitrogen, Ammonia total [as N]									
May 1 – October 31	mg/l	N/A	N/A	N/A	2.0	3.0 ¹	N/A	2/Month	Composite ³
November 1 – April 30	mg/l	N/A	N/A	N/A	5.0	7.5 ¹	N/A	2/Month	Composite ³
Dissolved Oxygen	mg/l	N/A	N/A	7.0	N/A	N/A	N/A	2/Month	Grab
E. coli ⁴	#/100 ml	N/A	N/A	N/A	130 ⁵	240 ⁶	N/A	2/Month	Grab
Total Phosphorus	mg/l	5.76	Report ¹	N/A	Report	Report ¹	N/A	2/Month	Composite ³
Total Nitrogen ⁷	mg/l	N/A	N/A	N/A	Report	Report ¹	N/A	2/Month	Composite ³
Oil & Grease	mg/l	N/A	N/A	N/A	Report	Report ¹	N/A	Annually	Grab

¹Daily Maximum

TABLE 6.

EFFLUENT LIMITATIONS								MONITORING REQUIREMENTS	
Effluent Characteristic	Units	Loadings (lb/day)		Concentrations				Frequency	Sample Type
		Maximum Monthly Average	Maximum Weekly Average	Minimum	Maximum Monthly Average	Maximum Weekly Average	Maximum		
² CBOD ₅ – Carbonaceous Biochemical Oxygen Demand, 5-day									
³ A sample composed of four or more equal or flow-proportional aliquots collected over a period of no less than eight and no more than twenty-four hours and aggregated so that the aggregate sample reflects the average water quality of the effluent during the compositing or sample period									
⁴ E. coli – <i>Escherichia coli</i> Bacteria									
⁵ Thirty (30) day Geometric Mean									
⁶ Seven (7) day Geometric Mean									
⁷ Total Nitrogen is the summation of the analytical results for Total Nitrates, Total Nitrites, and Total Kjeldahl Nitrogen.									

DRAFT

3.4. Pertinent Factors

The effluent limitations for this outfall were developed in accordance with DOW’s General Procedures for Limitations Development located on DOW’s webpage at: <https://eec.ky.gov/Environmental-Protection/Forms%20Library/General%20Procedures%20for%20Limitations%20Development.pdf>.

3.4.1. Federally-Listed Threatened or Endangered Aquatic Species

There are no known federally listed threatened or endangered aquatic species that affect the designated use of the receiving water.

3.4.2. Technology-Based Limitations: Secondary Treatment Standards

Discharges of biochemically degradable wastes are subject to technology-based effluent limitations (TBELs) known as the Secondary Treatment Standards. Both state and federal regulations establish the requirements for secondary treatment. Federal regulations for secondary treatment apply only to POTWs. State regulations for secondary treatment only apply to non-POTWs [401 KAR 5:045].

TABLE 7.		
State Defined Secondary Treatment Standards		
Pollutant or Pollutant Characteristic	30-day average	7-day average
BOD ₅ (mg/l)	30	45
TSS (mg/l)	30	45

3.4.3. Water Quality-Based Effluent Limitations and/or Monitoring

The following table lists those pollutants and/or pollutant characteristics of concern that DOW has determined exhibit reasonable potential to cause or contribute to an excursion of a water quality-based criterion, and the basis of DOW’s determination. These determinations are consistent with the DOW’s reasonable potential analysis (RPA) procedures outlined in *Permitting Procedures For Determining “Reasonable Potential”* Kentucky Division of Water May 1, 2000. This table may also include pollutants for which DOW has found the existence of reasonable potential to be indeterminate or for which DOW needs additional study.

TABLE 8.	
Pollutant or Pollutant Characteristic	Basis
CBOD ₅ and Dissolved Oxygen	These parameters are variables in the QUAL2K computer modeling used to protect water quality for instream dissolved oxygen.
Ammonia	This parameter is a variable in the QUAL2K computer modeling used to protect water quality for instream dissolved oxygen and ammonia toxicity.
pH	The DOW has concluded that all facilities discharging pollutants to waters of the Commonwealth have the Reasonable Potential to violate the criteria for pH.
Oil & Grease	All facilities treating non-process wastewater must conduct Oil & Grease analysis to renew a KPDES permit. Oil & Grease is a conventional pollutant. No waiver of analysis is available for conventional pollutants.
E. coli	The DOW has concluded that all facilities treating domestic wastewater have the reasonable potential to exceed criteria.

3.4.4. Comparison of Technology Based Effluent Limitations to Water Quality Standards

The final step in determining a permit’s final limits is to compare the limitations generated from any effluent guidelines and other technology-based limitations to those generated from the water quality standards.

BOD₅ or CBOD₅

There are no effluent guidelines or federal TBELs for domestic wastewater. In order to determine if the BOD₅ or CBOD₅ requirements under the state's Technology Based Effluent Limits (TBELs) are consistent with Kentucky water quality criteria for dissolved oxygen, [401 KAR 10:031, Section 4(1)(e)], EPA's River and Stream Water Quality Model (QUAL 2E/K) was used. The final limits are based upon the KYWQS.

TSS

Based upon review of the proposed discharge and the receiving stream. The Division of Water does not believe the calculated total suspended solids limit will have an adverse effect on the indigenous aquatic community [401 KAR 10:031, Section 4(1)(g)].

3.4.5. Nutrients

The numerical limitations established for this pollutant are consistent with the Development of an Ultimate Oxygen Demand (UOD) TMDL for Floyd's Fork and its Tributaries approved by EPA on 9/4/97 [40 CFR 130.7 and 401 KAR 10:031, Section 1].

3.5. Justification of Requirements

Chapters 5 and 10 of Title 401 of the Kentucky Administrative Regulations (KARs), cited in the following, have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes.

At a minimum, all permits shall contain technology-based effluent limitations (TBELs) [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(a)]. When necessary to achieve water quality standards, all permits shall contain water quality-based effluent limitations (WQBELs) [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(d)]. Any WQBELs included in this permit are based upon the Kentucky Water Quality Standards (KYWQS) [401 KAR 10:031].

3.5.1. Flow

The monitoring requirements for this parameter are consistent with the KPDES permit program requirements for establishing effluent limitations, standards, and permit conditions [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(i)(1)(ii)] and requirements for recording and reporting of monitoring results [401 KAR 5:050, Section 4 – 40 CFR 122.48].

3.5.2. CBOD₅

The limitations for this parameter are consistent with the secondary treatment standards for biochemically degradable wastes as defined in state regulations [401 KAR 5:045, Section 3]. DOW found that it was necessary to impose WQBELs for this parameter in order to achieve water quality standards. [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(d)]. These effluent limitations are also consistent with Kentucky's Water Quality Standards [401 KAR 10:031, Section 4(1)(e) & (i) respectively]. The EPA's River and Stream Water Quality Model (QUAL 2E/K) was used to develop these limitations. The numerical limitations established for this pollutant are consistent with the Development of an Ultimate Oxygen Demand (UOD) TMDL for Floyd's Fork and its Tributaries approved by EPA on 9/4/97 [40 CFR 130.7 and 401 KAR 10:031, Section 1].

3.5.3. Total Suspended Solids

The limitations for this parameter are consistent with the secondary treatment standards for biochemically degradable wastes as defined in state regulations [401 KAR 5:045, Section 3]. These effluent limitations are also consistent with Kentucky's Water Quality Standards [401 KAR 10:031, Section 4(1)(g)].

3.5.4. Ammonia and Dissolved Oxygen

The limitations for these parameters are WQBELs developed using the EPA's River and Stream Water Quality Model (QUAL 2E/K) [401 KAR 10:031, Section 4(1)(e) & (i)]. The numerical limitations established for this pollutant are consistent with the Development of an Ultimate Oxygen Demand (UOD) TMDL for Floyd's Fork and its Tributaries approved by EPA on 9/4/97 [40 CFR 130.7 and 401 KAR 10:031, Section 1].

3.5.5. E. coli

The limitations for this parameter are consistent with Kentucky's Water Quality Standards [401 KAR 10:031, Section 7]. The numerical limitations established for this pollutant are consistent with the Development of an Ultimate Oxygen Demand (UOD) TMDL for E. coli and Fecal Coliform 18 Stream Segments within the Floyd's Fork Watershed Henry, Oldham, Jefferson, Shelby, Spencer, and Bullitt Counties, Kentucky approved by EPA on 9/24/2014 [40 CFR 130.7 and 401 KAR 10:031, Section 1].

3.5.6. pH

The limitations for this parameter are consistent with Kentucky's Water Quality Standards [401 KAR 10:031, Section 4(1)(b) and Section 7].

3.5.7. Oil & Grease Monitoring

The monitoring requirements for this parameter are consistent with the KPDES permit program requirements for establishing effluent limitations, standards, and permit conditions [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(i)(1)(i)] and requirements for recording and reporting of monitoring results [401 KAR 5:050, Section 4 – 40 CFR 122.48].

3.5.8. Total Phosphorus

The monitoring requirements for this parameter are consistent with the KPDES permit program requirements for establishing effluent limitations, standards, and permit conditions [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(i)(1)(i)] and requirements for recording and reporting of monitoring results [401 KAR 5:050, Section 4 – 40 CFR 122.48].

3.5.9. Total Nitrogen

The monitoring requirements for this parameter are consistent with the KPDES permit program requirements for establishing effluent limitations, standards, and permit conditions [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(i)(1)(i)] and requirements for recording and reporting of monitoring results [401 KAR 5:050, Section 4 – 40 CFR 122.48].

SECTION 4
OTHER CONDITIONS

4. OTHER CONDITIONS

4.1. Schedule of Compliance

The permittee is required to comply with all effluent limitations by the effective date of the permit unless a compliance schedule is included with the permit. A schedule of compliance, if included with this permit, is consistent with the regulatory provisions for establishing a schedule of compliance [401 KAR 5:050, Section 3--40 CFR 122.47].

4.2. Antidegradation

The conditions of Kentucky's Antidegradation Policy have been satisfied [401 KAR 10:029, Section 1]. This permitting action is/a reissuance of a KPDES permit that does not authorize an expanded discharge.

4.3. Standard Conditions

The conditions listed in the Standard Conditions Section of the permit are consistent with the conditions applicable to all permits [401 KAR 5:065, Section 2(1) – 40 CFR 122.41].

4.4. Sufficiently Sensitive Analytical Methods

Analytical methods utilized to demonstrate compliance with the effluent limitations established in this permit shall be sufficiently sensitive to detect pollutant levels at or below the required effluent limit [401 KAR 5:065, Section 2(4) – 40 CFR 122.44(i)(1)(iv)].

4.5. Certified Laboratory

All environmental analysis is to be performed by a certified laboratory is consistent with the certified wastewater laboratory requirements [401 KAR 5:320, Section 1].

4.6. Connection to Regional Sewer System

In accordance with 401 KAR 5:005, Section 4 if a sewer system served by a regional facility becomes available, the WWTP shall be abandoned and the influent flow shall be diverted to the regional facility.

4.7. Certified Operators

Wastewater treatment plants and wastewater collection systems that accept wastewaters containing domestic sewage are to be operated by a certified operator [401 KAR 5:010].

4.8. Location Map



DR

KPDES



**KENTUCKY POLLUTANT
DISCHARGE ELIMINATION
SYSTEM**

PERMIT

**AUTHORIZATION TO DISCHARGE UNDER THE
KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM**

PERMIT NO.: KY0090956

AGENCY INTEREST NO.: 3955

Pursuant to Authority in KRS 224,

Bluegrass Water Utility Operating Company LLC
1630 Des Peres Road, Suite 140
Des Peres, MO 63131

is authorized to discharge from a facility located at

Persimmon Ridge WWTF
72 Persimmon Ridge Drive
Louisville, Shelby County, Kentucky

to receiving waters named

Floyds Fork

in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Date Signed:

Carey M. Johnson, Director
Division of Water

THIS KPDES PERMIT CONSISTS OF THE FOLLOWING SECTIONS:

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SECTION 1
EFFLUENT LIMITATIONS AND MONITORING
REQUIREMENTS

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.1. Compliance Monitoring Locations (Outfalls)

The following table lists the outfalls authorized by this permit, the latitude and longitude of each and the DOW assigned KPDES outfall number:

TABLE 1.					
Outfall No.	Outfall Type	Latitude (N)	Longitude (W)	Receiving Water	Description of Outfall
001	External	38.296989°	85.440433°	Floyds Fork	Domestic Wastewater

1.2. Effluent Limitations and Monitoring Requirements

Beginning on the effective date and lasting through the term of this permit, discharges from Outfall 001 shall comply with the following effluent limitations:

TABLE 2.									
EFFLUENT LIMITATIONS								MONITORING REQUIREMENTS	
Effluent Characteristic	Units	Loadings (lb/day)		Concentrations				Frequency	Sample Type
		Maximum Monthly Average	Maximum Weekly Average	Minimum	Maximum Monthly Average	Maximum Weekly Average	Maximum		
Flow	MGD	Report	Report ¹	N/A	N/A	N/A	N/A	2/Month	Instantaneous
pH	SU	N/A	N/A	6.0	N/A	N/A	9.0	2/Month	Grab
CBOD ₅ ²	mg/l	N/A	N/A	N/A	10	15	N/A	2/Month	Composite ³
Total Suspended Solids	mg/l	N/A	N/A	N/A	30	45	N/A	2/Month	Composite ³
Nitrogen, Ammonia total [as N]									
May 1 – October 31	mg/l	N/A	N/A	N/A	2.0	3.0 ¹	N/A	2/Month	Composite ³
November 1 – April 30	mg/l	N/A	N/A	N/A	5.0	7.5 ¹	N/A	2/Month	Composite ³
Dissolved Oxygen	mg/l	N/A	N/A	7.0	N/A	N/A	N/A	2/Month	Grab
E. coli ⁴	#/100 ml	N/A	N/A	N/A	130 ⁵	240 ⁶	N/A	2/Month	Grab
Total Phosphorus	mg/l	5.76	Report ¹	N/A	Report	Report ¹	N/A	2/Month	Composite ³
Total Nitrogen ⁷	mg/l	N/A	N/A	N/A	Report	Report ¹	N/A	2/Month	Composite ³
Oil & Grease	mg/l	N/A	N/A	N/A	Report	Report ¹	N/A	Annually	Grab

¹Daily Maximum

²CBOD₅ – Carbonaceous Biochemical Oxygen Demand, 5-day

TABLE 2.

EFFLUENT LIMITATIONS								MONITORING REQUIREMENTS	
Effluent Characteristic	Units	Loadings (lb/day)		Concentrations				Frequency	Sample Type
		Maximum Monthly Average	Maximum Weekly Average	Minimum	Maximum Monthly Average	Maximum Weekly Average	Maximum		
³ A sample composed of four or more equal or flow-proportional aliquots collected over a period of no less than eight and no more than twenty-four hours and aggregated so that the aggregate sample reflects the average water quality of the effluent during the compositing or sample period									
⁴ E. coli – <i>Escherichia coli</i> Bacteria									
⁵ Thirty (30) day Geometric Mean									
⁶ Seven (7) day Geometric Mean									
⁷ Total Nitrogen is the summation of the analytical results for Total Nitrates, Total Nitrites, and Total Kjeldahl Nitrogen.									

1.3. Standard Effluent Requirements

The discharges to Waters of the Commonwealth shall not produce floating solids, visible foam or a visible sheen on the surface of the receiving waters.

SECTION 2
STANDARD CONDITIONS

2. STANDARD CONDITIONS

The following conditions apply to all KPDES permits.

2.1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of KRS Chapter 224 and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Any person who violates applicable statutes or who fails to perform any duty imposed, or who violates any determination, permit, administrative regulation, or order of the Cabinet promulgated pursuant thereto shall be liable for a civil penalty as provided at KRS 224.99.010.

2.2. 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.

2.3. Need to Halt or Reduce Activity 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.

2.4. Duty to Mitigate

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

2.5. Proper Operation and Maintenance

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 back-up 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.

2.6. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. 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.

2.7. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

2.8. 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.

2.9. Inspection and Entry

The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- (1) 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;
- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (4) Sample 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.

2.10. Monitoring and Records

- (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (2) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 401 KAR 5:065, Section 2(10) [40 CFR 503]), 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 three (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.
- (3) Records of monitoring information shall include:
 - a) The date, exact place, and time of sampling or measurements;
 - b) The individual(s) who performed the sampling or measurements;
 - c) The date(s) analyses were performed;
 - d) The individual(s) who performed the analyses;
 - e) The analytical techniques or methods used; and
 - f) The results of such analyses.
- (4) Monitoring must be conducted according to test procedures approved under 401 KAR 5:065, Section 2(8) [40 CFR 136] unless another method is required under 401 KAR 5:065, Section 2(9) or (10) [40 CFR subchapters N or O].
- (5) KRS 224.99-010 provides that any person who knowingly violates KRS 224.70-110 or other enumerated statutes, or who knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall be guilty of a Class D felony and, upon conviction, shall be punished by a fine of not more than \$25,000, or by imprisonment for not less than one (1) year and not more than five (5) years, or by both fine and imprisonment for each separate violation. Each day upon which a violation occurs shall constitute a separate violation.

2.11. Signatory Requirement

(1) All applications, reports, or information submitted to the Director shall be signed and certified pursuant to 401 KAR 5:060, Section 4 [40 CFR 122.22].

(2) KRS 224.99-010 provides that any person who knowingly provides false information in any document filed or required to be maintained under KRS Chapter 224 shall be guilty of a Class D felony and upon conviction thereof, shall be punished by a fine not to exceed twenty-five thousand dollars (\$25,000), or by imprisonment, or by fine and imprisonment, for each separate violation. Each day upon which a violation occurs shall constitute a separate violation.

2.12. Reporting Requirements**2.12.1. Planned Changes**

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(1) The alteration or addition to a permitted facility may meet one (1) of the criteria for determining whether a facility is a new source in KRS 224.16-050 [40 CFR 122.29(b)]; or

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under KRS 224.16-050 [40 CFR 122.42(a)(1)].

(3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2.12.2. 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.

2.12.3. Transfers

This permit is not transferable 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 KRS 224 [CWA; see 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory].

2.12.4. Monitoring Reports

Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.

(2) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 401 KAR 5:065, Section 2(8) [40 CFR 136], or another method required for an industry-specific waste stream under 401 KAR 5:065, Section 2(9) or (10) [40 CFR subchapters N or O], the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

2.12.5. Compliance Schedules

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 fourteen (14) days following each schedule date.

2.12.6. Twenty-four-Hour Reporting

1) The permittee shall report any noncompliance which may endanger health or the environment to the DOW Regional Office. Any information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; 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; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

2) The following shall be included as information which must be reported within twenty-four (24) hours under this paragraph:

- a) Any unanticipated bypass which exceeds any effluent limitation in the permit [40 CFR 122.41 (g)].
- b) Any upset which exceeds any effluent limitation in the permit.
- c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within twenty-four (24) hours.

3) The Director may waive the written report on a case-by-case basis under 40 CFR 122.41 (l), if the oral report has been received within twenty-four (24) hours.

4) The permittee is assigned to the Department for Environmental Protection's Louisville Regional Field Office.

- a. Reporting shall be as required in paragraphs 1 through 3 of this subsection except that, if a spill or release of pollutants or contaminants, bypass, upset, or other event of non-compliance occurs that may present an imminent or substantial danger to the environment or the public health or welfare, the permittee shall immediately notify the regional field office by calling the Louisville Regional Field Office at (502) 429-7122.
- b. If a report required by this subsection is made during other than normal business hours, it shall be made through the **twenty-four (24) hour environmental emergency telephone number at (800) 928-2380**.
- c. The reporting requirements of this subsection does not relieve the permittee of reporting required under other laws, regulations, programs, or emergency response plans.

2.12.7. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Sections 2.12.1, 2.12.4, 2.12.5 and 2.12.6, at the time monitoring reports are submitted. The reports shall contain the information listed in Section 2.12.6.

2.12.8. 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.

2.13. Bypass**2.13.1. Definitions**

- (1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
- (2) Severe property damage means 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. Severe property damage does not mean economic loss caused by delays in production.

2.13.2. Bypass Not Exceeding Limitations

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 Section 2.13.3 and 2.13.4.

2.13.3. 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 (10) days before the date of the bypass.
- (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section 2.12.6.

2.13.4. 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 adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - c) The permittee submitted notices as required under Section 2.13.3.
- (2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three (3) conditions listed above in Section 2.13.4.

2.14. Upset**2.14.1. Definition**

Upset means 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. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2.14.2. 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 Section 2.14.3 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.

2.14.3. Conditions Necessary for a 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 cause(s) of the upset;
- (2) The permitted facility was at the time being properly operated; and
- (3) The permittee submitted notice of the upset as required in Section 2.12.6; and
- (4) The permittee complied with any remedial measures required under Section 2.4.

2.14.4. Burden of Proof

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

SECTION 3
OTHER CONDITIONS

3. OTHER CONDITIONS

3.1. Schedule of Compliance

The permittee shall attain compliance with all requirements of this permit on the effective date of this permit unless otherwise stated.

3.2. Other Permits

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

3.3. Continuation of Expiring Permit

This permit shall be continued in effect and enforceable after the expiration date of the permit provided the permittee submits a timely and complete application in accordance with 401 KAR 5:060, Section 2(4).

3.4. Antidegradation

For those discharges subject to the provisions of 401 KAR 10:030, Section 1(3)(b)5, the permittee shall install, operate, and maintain wastewater treatment facilities consistent with those identified in the Socioeconomic Demonstration and Alternatives Analysis (SDAA) submitted with the KPDES permit application.

3.5. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved in accordance with 401 KAR 5:050 through 5:080, if the effluent standard or limitation so issued or approved:

- (1) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
- (2) Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

3.6. Connection to Regional Sewer System

This WWTP is temporary and in no way supersedes the need of a regional sewer system. The permittee shall eliminate the discharge and WWTP plant by connection to a regional sewer system when it becomes available as defined in 401 KAR 5:002.

3.7. Certified Operators

The wastewater treatment plant shall be under the primary responsibility of a Class II Wastewater Treatment Plant Certified Operator or higher.

3.8. Outfall Signage

This KPDES permit establishes monitoring points, effluent limitations, and other conditions to address discharges from the permitted facility. In an effort to better document and clarify these locations, the permittee should place and maintain a permanent marker at each of the monitoring locations.

SECTION 4
MONITORING AND REPORTING REQUIREMENTS

4. MONITORING AND REPORTING REQUIREMENTS

4.1. KPDES Outfalls

Discharge samples and measurements shall be collected at the compliance point for each KPDES Outfall identified in this permit. Each sample shall be representative of the volume and nature of the monitored discharge.

4.2. Sufficiently Sensitive Analytical Methods

Analytical methods utilized to demonstrate compliance with the effluent limitations established in this permit shall be sufficiently sensitive to detect pollutant levels at or below the required effluent limit, i.e. the Method Minimum Level shall be at or below the effluent limit. In the instance where an EPA-approved method does not exist that has a Method Minimum Level at or below the established effluent limitation, the permittee shall:

- (1) Use the method specified in the permit; or
- (2) The EPA-approved method with an ML that is nearest to the established effluent limit.

It is the responsibility of the permittee to demonstrate compliance with permit parameter limitations by utilization of sufficiently sensitive analytical methods.

4.3. Certified Laboratory Requirements

All laboratory analyses and tests required to demonstrate compliance with the conditions of this permit shall be performed by a laboratory holding the appropriate general or field-only certification issued by the Cabinet pursuant to 401 KAR 5:320.

4.4. Submission of DMRs

The completed DMR for each monitoring period must be entered into the DOW approved electronic system no later than midnight on the 28th day of the month following the monitoring period for which monitoring results were obtained.

For more information regarding electronic submittal of DMRs, please visit the Division's website at: <https://eec.ky.gov/Environmental-Protection/Water/SubmitReport/Pages/NetDMR.aspx> or contact the DMR Coordinator at (502) 564-3410.

KPDES



**KENTUCKY POLLUTANT
DISCHARGE ELIMINATION
SYSTEM**

PERMIT

**AUTHORIZATION TO DISCHARGE UNDER THE
KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM**

PERMIT NO.: KY0090956

AGENCY INTEREST NO.: 3955

Pursuant to Authority in KRS 224,

Bluegrass Water Utility Operating Company LLC
1630 Des Peres Road, Suite 140
Des Peres, MO 63131

is authorized to discharge from a facility located at

Persimmon Ridge WWTF
72 Persimmon Ridge Drive
Louisville, Shelby County, Kentucky

to receiving waters named

Floyds Fork

in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Date Signed:

Carey M. Johnson, Director
Division of Water

THIS KPDES PERMIT CONSISTS OF THE FOLLOWING SECTIONS:

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SECTION 1
EFFLUENT LIMITATIONS AND MONITORING
REQUIREMENTS

1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.1. Compliance Monitoring Locations (Outfalls)

The following table lists the outfalls authorized by this permit, the latitude and longitude of each and the DOW assigned KPDES outfall number:

TABLE 1.					
Outfall No.	Outfall Type	Latitude (N)	Longitude (W)	Receiving Water	Description of Outfall
001	External	38.296989°	85.440433°	Floyds Fork	Domestic Wastewater

1.2. Effluent Limitations and Monitoring Requirements

Beginning on the effective date and lasting through the term of this permit, discharges from Outfall 001 shall comply with the following effluent limitations:

TABLE 2.									
EFFLUENT LIMITATIONS								MONITORING REQUIREMENTS	
Effluent Characteristic	Units	Loadings (lb/day)		Concentrations				Frequency	Sample Type
		Maximum Monthly Average	Maximum Weekly Average	Minimum	Maximum Monthly Average	Maximum Weekly Average	Maximum		
Flow	MGD	Report	Report ¹	N/A	N/A	N/A	N/A	2/Month	Instantaneous
pH	SU	N/A	N/A	6.0	N/A	N/A	9.0	2/Month	Grab
CBOD ₅ ²	mg/l	N/A	N/A	N/A	10	15	N/A	2/Month	Composite ³
Total Suspended Solids	mg/l	N/A	N/A	N/A	30	45	N/A	2/Month	Composite ³
Nitrogen, Ammonia total [as N]									
May 1 – October 31	mg/l	N/A	N/A	N/A	2.0	3.0 ¹	N/A	2/Month	Composite ³
November 1 – April 30	mg/l	N/A	N/A	N/A	5.0	7.5 ¹	N/A	2/Month	Composite ³
Dissolved Oxygen	mg/l	N/A	N/A	7.0	N/A	N/A	N/A	2/Month	Grab
E. coli ⁴	#/100 ml	N/A	N/A	N/A	130 ⁵	240 ⁶	N/A	2/Month	Grab
Total Phosphorus	mg/l	5.76	Report ¹	N/A	Report	Report ¹	N/A	2/Month	Composite ³
Total Nitrogen ⁷	mg/l	N/A	N/A	N/A	Report	Report ¹	N/A	2/Month	Composite ³
Oil & Grease	mg/l	N/A	N/A	N/A	Report	Report ¹	N/A	Annually	Grab
¹ Daily Maximum									
² CBOD ₅ – Carbonaceous Biochemical Oxygen Demand, 5-day									

TABLE 2.

EFFLUENT LIMITATIONS								MONITORING REQUIREMENTS	
Effluent Characteristic	Units	Loadings (lb/day)		Concentrations				Frequency	Sample Type
		Maximum Monthly Average	Maximum Weekly Average	Minimum	Maximum Monthly Average	Maximum Weekly Average	Maximum		
³ A sample composed of four or more equal or flow-proportional aliquots collected over a period of no less than eight and no more than twenty-four hours and aggregated so that the aggregate sample reflects the average water quality of the effluent during the compositing or sample period									
⁴ E. coli – <i>Escherichia coli</i> Bacteria									
⁵ Thirty (30) day Geometric Mean									
⁶ Seven (7) day Geometric Mean									
⁷ Total Nitrogen is the summation of the analytical results for Total Nitrates, Total Nitrites, and Total Kjeldahl Nitrogen.									

1.3. Standard Effluent Requirements

The discharges to Waters of the Commonwealth shall not produce floating solids, visible foam or a visible sheen on the surface of the receiving waters.

SECTION 2
STANDARD CONDITIONS

2. STANDARD CONDITIONS

The following conditions apply to all KPDES permits.

2.1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of KRS Chapter 224 and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Any person who violates applicable statutes or who fails to perform any duty imposed, or who violates any determination, permit, administrative regulation, or order of the Cabinet promulgated pursuant thereto shall be liable for a civil penalty as provided at KRS 224.99.010.

2.2. 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.

2.3. Need to Halt or Reduce Activity 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.

2.4. Duty to Mitigate

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

2.5. Proper Operation and Maintenance

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 back-up 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.

2.6. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. 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.

2.7. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

2.8. 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.

2.9. Inspection and Entry

The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- (1) 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;
- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (4) Sample 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.

2.10. Monitoring and Records

- (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (2) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 401 KAR 5:065, Section 2(10) [40 CFR 503]), 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 three (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.
- (3) Records of monitoring information shall include:
 - a) The date, exact place, and time of sampling or measurements;
 - b) The individual(s) who performed the sampling or measurements;
 - c) The date(s) analyses were performed;
 - d) The individual(s) who performed the analyses;
 - e) The analytical techniques or methods used; and
 - f) The results of such analyses.
- (4) Monitoring must be conducted according to test procedures approved under 401 KAR 5:065, Section 2(8) [40 CFR 136] unless another method is required under 401 KAR 5:065, Section 2(9) or (10) [40 CFR subchapters N or O].
- (5) KRS 224.99-010 provides that any person who knowingly violates KRS 224.70-110 or other enumerated statutes, or who knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall be guilty of a Class D felony and, upon conviction, shall be punished by a fine of not more than \$25,000, or by imprisonment for not less than one (1) year and not more than five (5) years, or by both fine and imprisonment for each separate violation. Each day upon which a violation occurs shall constitute a separate violation.

2.11. Signatory Requirement

(1) All applications, reports, or information submitted to the Director shall be signed and certified pursuant to 401 KAR 5:060, Section 4 [40 CFR 122.22].

(2) KRS 224.99-010 provides that any person who knowingly provides false information in any document filed or required to be maintained under KRS Chapter 224 shall be guilty of a Class D felony and upon conviction thereof, shall be punished by a fine not to exceed twenty-five thousand dollars (\$25,000), or by imprisonment, or by fine and imprisonment, for each separate violation. Each day upon which a violation occurs shall constitute a separate violation.

2.12. Reporting Requirements**2.12.1. Planned Changes**

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(1) The alteration or addition to a permitted facility may meet one (1) of the criteria for determining whether a facility is a new source in KRS 224.16-050 [40 CFR 122.29(b)]; or

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under KRS 224.16-050 [40 CFR 122.42(a)(1)].

(3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2.12.2. 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.

2.12.3. Transfers

This permit is not transferable 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 KRS 224 [CWA; see 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory].

2.12.4. Monitoring Reports

Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.

(2) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 401 KAR 5:065, Section 2(8) [40 CFR 136], or another method required for an industry-specific waste stream under 401 KAR 5:065, Section 2(9) or (10) [40 CFR subchapters N or O], the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

2.12.5. Compliance Schedules

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 fourteen (14) days following each schedule date.

2.12.6. Twenty-four-Hour Reporting

1) The permittee shall report any noncompliance which may endanger health or the environment to the DOW Regional Office. Any information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; 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; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

2) The following shall be included as information which must be reported within twenty-four (24) hours under this paragraph:

- a) Any unanticipated bypass which exceeds any effluent limitation in the permit [40 CFR 122.41 (g)].
- b) Any upset which exceeds any effluent limitation in the permit.
- c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within twenty-four (24) hours.

3) The Director may waive the written report on a case-by-case basis under 40 CFR 122.41 (l), if the oral report has been received within twenty-four (24) hours.

4) The permittee is assigned to the Department for Environmental Protection's Louisville Regional Field Office.

- a. Reporting shall be as required in paragraphs 1 through 3 of this subsection except that, if a spill or release of pollutants or contaminants, bypass, upset, or other event of non-compliance occurs that may present an imminent or substantial danger to the environment or the public health or welfare, the permittee shall immediately notify the regional field office by calling the Louisville Regional Field Office at (502) 429-7122.
- b. If a report required by this subsection is made during other than normal business hours, it shall be made through the **twenty-four (24) hour environmental emergency telephone number at (800) 928-2380**.
- c. The reporting requirements of this subsection does not relieve the permittee of reporting required under other laws, regulations, programs, or emergency response plans.

2.12.7. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Sections 2.12.1, 2.12.4, 2.12.5 and 2.12.6, at the time monitoring reports are submitted. The reports shall contain the information listed in Section 2.12.6.

2.12.8. 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.

2.13. Bypass**2.13.1. Definitions**

- (1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
- (2) Severe property damage means 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. Severe property damage does not mean economic loss caused by delays in production.

2.13.2. Bypass Not Exceeding Limitations

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 Section 2.13.3 and 2.13.4.

2.13.3. 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 (10) days before the date of the bypass.
- (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section 2.12.6.

2.13.4. 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 adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - c) The permittee submitted notices as required under Section 2.13.3.
- (2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three (3) conditions listed above in Section 2.13.4.

2.14. Upset**2.14.1. Definition**

Upset means 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. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2.14.2. 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 Section 2.14.3 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.

2.14.3. Conditions Necessary for a 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 cause(s) of the upset;
- (2) The permitted facility was at the time being properly operated; and
- (3) The permittee submitted notice of the upset as required in Section 2.12.6; and
- (4) The permittee complied with any remedial measures required under Section 2.4.

2.14.4. Burden of Proof

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

SECTION 3
OTHER CONDITIONS

3. OTHER CONDITIONS

3.1. Schedule of Compliance

The permittee shall attain compliance with all requirements of this permit on the effective date of this permit unless otherwise stated.

3.2. Other Permits

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

3.3. Continuation of Expiring Permit

This permit shall be continued in effect and enforceable after the expiration date of the permit provided the permittee submits a timely and complete application in accordance with 401 KAR 5:060, Section 2(4).

3.4. Antidegradation

For those discharges subject to the provisions of 401 KAR 10:030, Section 1(3)(b)5, the permittee shall install, operate, and maintain wastewater treatment facilities consistent with those identified in the Socioeconomic Demonstration and Alternatives Analysis (SDAA) submitted with the KPDES permit application.

3.5. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved in accordance with 401 KAR 5:050 through 5:080, if the effluent standard or limitation so issued or approved:

- (1) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
- (2) Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

3.6. Connection to Regional Sewer System

This WWTP is temporary and in no way supersedes the need of a regional sewer system. The permittee shall eliminate the discharge and WWTP plant by connection to a regional sewer system when it becomes available as defined in 401 KAR 5:002.

3.7. Certified Operators

The wastewater treatment plant shall be under the primary responsibility of a Class II Wastewater Treatment Plant Certified Operator or higher.

3.8. Outfall Signage

This KPDES permit establishes monitoring points, effluent limitations, and other conditions to address discharges from the permitted facility. In an effort to better document and clarify these locations, the permittee should place and maintain a permanent marker at each of the monitoring locations.

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4.1. KPDES Outfalls

Discharge samples and measurements shall be collected at the compliance point for each KPDES Outfall identified in this permit. Each sample shall be representative of the volume and nature of the monitored discharge.

4.2. Sufficiently Sensitive Analytical Methods

Analytical methods utilized to demonstrate compliance with the effluent limitations established in this permit shall be sufficiently sensitive to detect pollutant levels at or below the required effluent limit, i.e. the Method Minimum Level shall be at or below the effluent limit. In the instance where an EPA-approved method does not exist that has a Method Minimum Level at or below the established effluent limitation, the permittee shall:

- (1) Use the method specified in the permit; or
- (2) The EPA-approved method with an ML that is nearest to the established effluent limit.

It is the responsibility of the permittee to demonstrate compliance with permit parameter limitations by utilization of sufficiently sensitive analytical methods.

4.3. Certified Laboratory Requirements

All laboratory analyses and tests required to demonstrate compliance with the conditions of this permit shall be performed by a laboratory holding the appropriate general or field-only certification issued by the Cabinet pursuant to 401 KAR 5:320.

4.4. Submission of DMRs

The completed DMR for each monitoring period must be entered into the DOW approved electronic system no later than midnight on the 28th day of the month following the monitoring period for which monitoring results were obtained.

For more information regarding electronic submittal of DMRs, please visit the Division's website at: <https://eec.ky.gov/Environmental-Protection/Water/SubmitReport/Pages/NetDMR.aspx> or contact the DMR Coordinator at (502) 564-3410.

PLEASE COMPLETE THE FOLLOWING FORM AND FORWARD TO THE NEXT PERSON.

PLEASE NOTE A TOPO MAP IS ATTACHED TO THIS DOCUMENT. TO VIEW IT, CHANGE YOUR WORD DOCUMENT VIEW TO "PRINT LAYOUT".

DRINKING WATER AND WATER QUALITY INFORMATION REQUEST FORM			
DISCHARGE			
PERMIT WRITER	Andrew Parrish	DATE	4/17/2023
KPDES NO.	KY0090956	FACILITY NO.	12/027/042
FACILITY NAME	Persimmon Ridge WWTF	OUTFALL NO.	002
RECEIVING STREAM / NHD RIVER MILE	Floyds Fork at mile point 49.4	TOPO MAP NO.	15-37
OUTFALL LAT. / LONG.	38.296989 / -85.440433	AI #	3955
COMMENTS	Shelby Co		
DRINKING WATER			
REVIEWER	Matthew Fields	DATE	4/18/23
NEAREST DOWNSTREAM DRINKING WATER INTAKE	Evansville Water Utility, IN	INTAKE COUNTY	Vanderburgh
INTAKE WATER NAME / NHD RIVER MILE	Ohio River/ 788.5	TOPO MAP NO.	08-7
INTAKE LAT. / LONG.	37.957651/ -87.574393		
COMMENTS REGARDING INTAKE	Intake is appx 235 miles downstream		
KPDES - WLA COORDINATOR			
REVIEWER	Matthew Fields	DATE	4/18/23
		DISCHARGE	INTAKE
LOW FLOW (7Q10), CFS		0.00 <u>1/</u>	12,900
HARMONIC MEAN, CFS		1.10 <u>1/</u>	60,900
STREAM HARDNESS, MG/L		Unknown	130
STREAM pH, SU		Unknown	7.5
COMMENTS	<u>1/</u> : Based on Drainage area ratios		

KERRY P. MAGAN
CONSULTING ENGINEERS, PLC

August 20, 2020

506 Main Street
Shelbyville, KY 40065

Phone (502) 633-4365
Fax: (502) 633-1374

Terry Humphries, P.E.
Supervisor, Engineering Section
Water Infrastructure Branch - KY Division of Water
300 Sower Blvd, 3rd Floor
Frankfort, KY 40601

Re: Persimmon Ridge Golf Course Sewer Section 19
Activity ID 3955, APE20200001
Receiving WWTP – KY0090956
Engineer Certification

Dear Mr. Humphries:

The 8" PVC Sewer Extension for Section 19 has been completely constructed and tested according to the approved plans and specifications. If you have any questions or need any additional information, please call our office.

Sincerely,



Will Hagan, PE
Project Manager

cc: Mrs. Lawren Just

This document represents the request via an electronic submittal. The details associated with transaction, including payment information, are as follows:

Payment ID: 129116

Payment Date: 04/25/2023

Amount Paid: \$3,700.00

Bill Company Name: Bluegrass Water Utility Operating Company LLC

Bill Person Name: ,

Bill Address: 1630 Des Peres Rd, Ste 140

Bill City, State, Zip: St. Louis, MO, 63131

email: ap@cswrgroup.com

Last 4 Numbers: 8767

Name on Account: Bluegrass Water Utility Operating Company LLC

Details:

AI ID: 3955

Name: Persimmon Ridge Subd & WWTP

ID: 287079

Amount: \$3,700.00

Credit Card Fee:

Desc: KPDES complete fee large nonPOTW

This document represents the request via an electronic submittal. The details associated with transaction, including payment information, are as follows:

Payment ID: 123150
Payment Date: 09/27/2022
Amount Paid: \$200.00
Bill Company Name: John Honiotes
Bill Person Name: ,
Bill Address: 700 Springer Drive
Bill City, State, Zip: Lombard, IL, 60148
email: tnobles@manhard.com
Last 4 Numbers: 1740
Name on Account: John Honiotes

Details:

AI ID: 3901
Name: Delaplain Disposal
ID: -1
Amount: \$200.00
Credit Card Fee: \$6.00
Desc: construction permit sewers small fac

Permit to Withdraw Public Water

Longview Country Club

Facility Requirements

Permit Number: 1173

Activity ID No.:APE19910001

Page 1 of 6

Limitation Requirements:

Condition No.	Item ID	Parameter	Condition
L-1	GACT1 (1173 Lake #1)	Withdrawal	Withdrawal <= 0 MGD (MA) shall be allowed from the location specified in the Narrative Requirements below. [KRS 151.170] This requirement is applicable during the following months: January. Statistical basis: Daily maximum (MX).
L-2	GACT1 (1173 Lake #1)	Withdrawal	Withdrawal <= 0 MGD (MA) shall be allowed from the location specified in the Narrative Requirements below. [KRS 151.170] This requirement is applicable during the following months: February. Statistical basis: Daily maximum (MX).
L-3	GACT1 (1173 Lake #1)	Withdrawal	Withdrawal <= 0 MGD (MA) shall be allowed from the location specified in the Narrative Requirements below. [KRS 151.170] This requirement is applicable during the following months: March. Statistical basis: Daily maximum (MX).
L-4	GACT1 (1173 Lake #1)	Withdrawal	Withdrawal <= 0 MGD (MA) shall be allowed from the location specified in the Narrative Requirements below. [KRS 151.170] This requirement is applicable during the following months: April. Statistical basis: Daily maximum (MX).
L-5	GACT1 (1173 Lake #1)	Withdrawal	Withdrawal <= 0.055 MGD (MA) shall be allowed from the location specified in the Narrative Requirements below. [KRS 151.170] This requirement is applicable during the following months: May. Statistical basis: Daily maximum (MX).
L-6	GACT1 (1173 Lake #1)	Withdrawal	Withdrawal <= 0.055 MGD (MA) shall be allowed from the location specified in the Narrative Requirements below. [KRS 151.170] This requirement is applicable during the following months: June. Statistical basis: Daily maximum (MX).
L-7	GACT1 (1173 Lake #1)	Withdrawal	Withdrawal <= 0.055 MGD (MA) shall be allowed from the location specified in the Narrative Requirements below. [KRS 151.170] This requirement is applicable during the following months: July. Statistical basis: Daily maximum (MX).
L-8	GACT1 (1173 Lake #1)	Withdrawal	Withdrawal <= 0.055 MGD (MA) shall be allowed from the location specified in the Narrative Requirements below. [KRS 151.170] This requirement is applicable during the following months: August. Statistical basis: Daily maximum (MX).

Permit to Withdraw Public Water

Longview Country Club

Facility Requirements

Permit Number: 1173

Activity ID No.:APE19910001

Limitation Requirements:

Condition No.	Item ID	Parameter	Condition
L-9	GACT1 (1173 Lake #1)	Withdrawal	Withdrawal <= 0.055 MGD (MA) shall be allowed from the location specified in the Narrative Requirements below. [KRS 151.170] This requirement is applicable during the following months: September. Statistical basis: Daily maximum (MX).
L-10	GACT1 (1173 Lake #1)	Withdrawal	Withdrawal <= 0.055 MGD (MA) shall be allowed from the location specified in the Narrative Requirements below. [KRS 151.170] This requirement is applicable during the following months: October. Statistical basis: Daily maximum (MX).
L-11	GACT1 (1173 Lake #1)	Withdrawal	Withdrawal <= 0 MGD (MA) shall be allowed from the location specified in the Narrative Requirements below. [KRS 151.170] This requirement is applicable during the following months: November. Statistical basis: Daily maximum (MX).
L-12	GACT1 (1173 Lake #1)	Withdrawal	Withdrawal <= 0 MGD (MA) shall be allowed from the location specified in the Narrative Requirements below. [KRS 151.170] This requirement is applicable during the following months: December. Statistical basis: Daily maximum (MX).

Permit to Withdraw Public Water

Longview Country Club

Facility Requirements

Permit Number: 1173

Activity ID No.:APE19910001

Monitoring Requirements:

Condition No.	Item ID	Parameter	Condition
M-1	GACT1 (1173 Lake #1)	Withdrawal	The permittee shall measure Withdrawal monitored by meter or other approved method daily as described in the Narrative Requirements below. [401 KAR 4:010 Section 2] This requirement is applicable during the following months: January. Statistical basis: Daily maximum (MX).
M-2	GACT1 (1173 Lake #1)	Withdrawal	The permittee shall measure Withdrawal monitored by meter or other approved method daily as described in the Narrative Requirements below. [401 KAR 4:010 Section 2] This requirement is applicable during the following months: February. Statistical basis: Daily maximum (MX).
M-3	GACT1 (1173 Lake #1)	Withdrawal	The permittee shall measure Withdrawal monitored by meter or other approved method daily as described in the Narrative Requirements below. [401 KAR 4:010 Section 2] This requirement is applicable during the following months: March. Statistical basis: Daily maximum (MX).
M-4	GACT1 (1173 Lake #1)	Withdrawal	The permittee shall measure Withdrawal monitored by meter or other approved method daily as described in the Narrative Requirements below. [401 KAR 4:010 Section 2] This requirement is applicable during the following months: April. Statistical basis: Daily maximum (MX).
M-5	GACT1 (1173 Lake #1)	Withdrawal	The permittee shall measure Withdrawal monitored by meter or other approved method daily as described in the Narrative Requirements below. [401 KAR 4:010 Section 2] This requirement is applicable during the following months: May. Statistical basis: Daily maximum (MX).
M-6	GACT1 (1173 Lake #1)	Withdrawal	The permittee shall measure Withdrawal monitored by meter or other approved method daily as described in the Narrative Requirements below. [401 KAR 4:010 Section 2] This requirement is applicable during the following months: June. Statistical basis: Daily maximum (MX).
M-7	GACT1 (1173 Lake #1)	Withdrawal	The permittee shall measure Withdrawal monitored by meter or other approved method daily as described in the Narrative Requirements below. [401 KAR 4:010 Section 2] This requirement is applicable during the following months: July. Statistical basis: Daily maximum (MX).
M-8	GACT1 (1173 Lake #1)	Withdrawal	The permittee shall measure Withdrawal monitored by meter or other approved method daily as described in the Narrative Requirements below. [401 KAR 4:010 Section 2] This requirement is applicable during the following months: August. Statistical basis: Daily maximum (MX).

Permit to Withdraw Public Water

Longview Country Club

Facility Requirements

Permit Number: 1173

Activity ID No.:APE19910001

Page 4 of 6

Monitoring Requirements:

Condition No.	Item ID	Parameter	Condition
M-9	GACT1 (1173 Lake #1)	Withdrawal	The permittee shall measure Withdrawal monitored by meter or other approved method daily as described in the Narrative Requirements below. [401 KAR 4:010 Section 2] This requirement is applicable during the following months: September. Statistical basis: Daily maximum (MX).
M-10	GACT1 (1173 Lake #1)	Withdrawal	The permittee shall measure Withdrawal monitored by meter or other approved method daily as described in the Narrative Requirements below. [401 KAR 4:010 Section 2] This requirement is applicable during the following months: October. Statistical basis: Daily maximum (MX).
M-11	GACT1 (1173 Lake #1)	Withdrawal	The permittee shall measure Withdrawal monitored by meter or other approved method daily as described in the Narrative Requirements below. [401 KAR 4:010 Section 2] This requirement is applicable during the following months: November. Statistical basis: Daily maximum (MX).
M-12	GACT1 (1173 Lake #1)	Withdrawal	The permittee shall measure Withdrawal monitored by meter or other approved method daily as described in the Narrative Requirements below. [401 KAR 4:010 Section 2] This requirement is applicable during the following months: December. Statistical basis: Daily maximum (MX).

Record-Keeping Requirements:

Withdrawal:

Condition No.	Item ID	Condition
R-1	GACT1 (1173 Lake #1)	The permittee shall perform Withdrawal recordkeeping by reporting water withdrawals daily on forms supplied by the Cabinet. [401 KAR 4:010 Section 2]

Permit to Withdraw Public Water

Longview Country Club

Facility Requirements

Permit Number: 1173

Activity ID No.:APE19910001

Submittal/Action Requirements:

Condition No.	Item ID	Condition
S-1	GACT1 (1173 Lake #1)	The permittee shall submit water withdrawal reporting forms: Due monthly, by the 15th of the month. [401 KAR 4:010 Section 2]

Permit to Withdraw Public Water
Longview Country Club
Facility Requirements
Permit Number: 1173
Activity ID No.: APE19910001

Narrative Requirements:

Condition No.	Item ID	Condition
T-1	GACT1 (1173 Lake #1)	The Environmental and Public Protection Cabinet authorizes the above named party to withdraw Public Water of the Commonwealth of Kentucky. This permit has been issued under provisions of KRS Chapter 151.125, 151.140, and 151.150 and regulations promulgated with respect to the withdrawal of public waters. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet, or other state, federal, or local agencies. Withdrawals are restricted to the stated quantities, times, and locations specified above. This permit represents a limited right of use and does not vest ownership nor absolute right to withdrawal or use of Public Water, nor does it guarantee that requested amounts will be available for use at all times. In times of drought or emergency, the Cabinet may temporarily alter the conditions of the permit. Any violation of the Water Resources Act of 1966 as amended is subject to penalties as set forth in KRS 151.990 and other applicable provisions of law. [KRS 151]
T-2	GACT1 (1173 Lake #1)	Monitoring equipment shall be calibrated annually according to the manufacturer's recommendations and a record kept to include date of calibration, calculations for percent error, and adjustments made either to the equipment or to the use of the data obtained from the equipment. Records shall be maintained and updated annually and shall be made available upon request for review by the Cabinet. [401 KAR 4:010 Section 2]
T-3	GACT1 (1173 Lake #1)	If average monthly withdrawal amounts begin to exceed permitted amounts, or if there is any change in the location of the withdrawal site, you must contact this office immediately and request a revision. [KRS 151.170]
T-4	GACT1 (1173 Lake #1)	The location of the authorized withdrawal is from the Longview Golf Course Lake #1 at river mile 0.4 of an unnamed tributary of North Elkhorn Creek in Scott County, with coordinates: latitude 38° 13' 03.84", longitude 84° 39' 59.10". [KRS 151.170]
T-5	GACT1 (1173 Lake #1)	As approved, the permittee shall monitor water withdrawals with a meter or other device approved by Cabinet. [401 KAR 4:010 Section 2]

Form 1	KENTUCKY POLLUTION DISCHARGE ELIMINATION SYSTEM Permit Application	 Division of Water
NAME OF FACILITY: Persimmon Ridge WWTF	AGENCY USE ONLY	AI: 3955 Received 4-10-2023 JH
PERMIT NO.: KY0090956	COUNTY: Shelby	
<p>This is an application to: (check one)</p> <p><input type="checkbox"/> Apply for a new permit.</p> <p><input checked="" type="checkbox"/> Apply for reissuance of expiring permit.</p> <p><input type="checkbox"/> Modify an existing permit.* (Give reason for modification under Section III)</p> <p>A complete application consists of this form (Form 1), and one or more of the following: Form A, Form B, Form C, Form F, or Form SC.</p>		
I. FACILITY AND CONTACT INFORMATION		
Name of business, municipality, company, etc. requesting permit: Confluence Rivers Utility Operating Company		
Owner Name (and Title if applicable): Confluence Rivers Utility Operating Company		
Owner Mailing Address (Street, etc.): 1630 Des Peres Road, Suite 140		
Owner City, State, Zip: Des Peres, MO, 63131		
Owner Telephone Number: 314-464-3976		
Owner Email Address: msappington@cswrgroup.com		
Type of Ownership:	<input type="checkbox"/> Publicly Owned	<input checked="" type="checkbox"/> Privately Owned
	<input type="checkbox"/> State Owned	<input type="checkbox"/> Both Publicly and Privately Owned
		<input type="checkbox"/> Federally Owned
Contact Name and Title (if different): Mandy Sappington - EHS Compliance Manager		
Contact Mailing Address (if different): Same as above		
Contact City, State, Zip (if different): Same as above		
Contact Telephone Number (if different): Same as above		
Contact Email Address (if different): Same as above		
NetDMR Official Contact for Facility: Jo Anna McMahon		
NetDMR Official Contact Telephone Number: 314-736-4743		
NetDMR Official Contact Email Address: env.comp@cswrgroup.com		
II. FACILITY LOCATION		
Facility Location (street, road, highway, etc.): 72 Persimmon Ridge Drive		
Facility City, State, Zip: Louisville, Kentucky, 40245		
Facility Latitude (Decimal Degrees): 38.29767		
Facility Longitude (Decimal Degrees): -85.43998		
<input checked="" type="checkbox"/> Attach a site location map with the facility and outfalls clearly marked. Provide either an aerial map, topographic map, or other map that identifies the site location and significant features.		

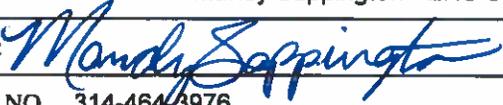
III. FACILITY DESCRIPTION	
Provide a brief description of activities, products, etc.:	
Residential WWTF	
* Reason for modifying existing permit, if applicable:	
N/A	
Principal SIC Code and description: 4952 - Sewerage Systems	
Other SIC Codes: N/A	
IV. OPERATOR INFORMATION	
Treatment Plant Operator Name: Kathy Carey	
Operator Mailing Address (Street, etc.): 3734 Shelbyville Road	
Operator City, State, Zip: Shelbyville, KY 40065	
Operator Telephone Number: 225-333-7510	
Operator Email Address:	
Operator Certification Class: Level II - Treatment Collection	Operator Certification Number: Treatment - 31288 Collection - 31241
V. ENVIRONMENTAL PERMITS/REGISTRATIONS FOR THIS FACILITY	
KPDES Permit Number: KY0090956	Issue Date of Current Permit: October 1, 2018
Expiration Date of Current Permit: September 30, 2023	Date of Original Permit Issuance: August 2, 2018
<input type="checkbox"/> Other DOW Permits (list): N/A	
<input type="checkbox"/> Sludge Disposal Permit Number: N/A	
<input type="checkbox"/> Air Emission Source Control Permit Number: N/A	
<input type="checkbox"/> Solid Waste or Special Waste Permit Number: N/A	
<input type="checkbox"/> Hazardous Waste Registration or Permit Number: N/A	
<input type="checkbox"/> Surface Mine or Underground Mine Permit Number: N/A	
<input type="checkbox"/> Other (specify):	
VI. PERMIT FEE (See instructions)	
Select the type of permit being requested. See instructions for applicable fees and methods of payment. Additional information can be found in "General Instructions" at Water.Ky.Gov/Permitting/WastewaterDischarge	
<input type="checkbox"/> Major Industry	<input checked="" type="checkbox"/> Large Non-POTW
<input type="checkbox"/> Minor Industry	<input type="checkbox"/> Intermediate Non-POTW
<input type="checkbox"/> Non-Process Industry	<input type="checkbox"/> Small Non-POTW
<input type="checkbox"/> Surface Mining Operation	<input type="checkbox"/> 501(c)(3)
<input type="checkbox"/> Agriculture	<input type="checkbox"/> Exempt Publicly Owned Facility

<input checked="" type="checkbox"/> Total Amount Enclosed \$	\$3,700
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IX. 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.

PRINTED NAME AND TITLE: Mandy Sappington - EHS Compliance Manager

SIGNATURE: 	DATE: 4/6/23
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TELEPHONE NO. 314-464-3976	EMAIL: msappington@cswrgroup.com
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Return completed application form and attachments to:
 Division of Water
 Surface Water Permits Branch
 300 Sower Boulevard, 3rd Floor
 Frankfort, KY 40601

Direct questions to: Surface Water Permits Branch at (502) 564-3410.

KPDES FORM 1 – INSTRUCTIONS

Section A: GENERAL INSTRUCTIONS

The facility name should be the official or legal name by which the facility is commonly known and/or uniquely identified. Do not use a colloquial name. List the county where the facility is located.

With the exceptions described in Section C of these instructions, Federal and State laws prohibit you from the discharge of pollutants into the waters of the United States or waters of the Commonwealth.

Where to File: Return completed application form and attachments to:
Division of Water
Surface Water Permits Branch
300 Sower Boulevard, 3rd Floor
Frankfort, KY 40601

When to File: File the application at least 180 days prior to expiration of your current KPDES permit or at least 180 days prior to startup of a new facility.

Fees: Permit Fees are listed in Section B of these instructions.

Completion of Form: Unless otherwise specified in the detailed instructions, you must answer each item in the form. To indicate that you have considered each item, enter "NA," for not applicable, if a particular item does not fit the circumstances of your facility or activity. If more space is necessary to answer a question, attach a separate sheet entitled "Additional Information."

Section B: COMPLETING FORM 1

Listed below are explanations of select Form 1 questions. If further information is needed concerning any section, please contact Division of Water, Surface Water Permits Branch at (502) 564-3410.

I. Facility and Contact Information

Use the official or legal name of the business, company, municipality, etc. requesting permit. Do not use a colloquial name. Give the name, as it is legally referred to, of the person, firm, public organization, or any other entity that operates the facility described in this application. This may or may not be the same name as the facility. The operator of the facility is the legal entity which controls the facility's operation rather than the plant or site manager. This use of "operator" in many cases is not the same as the treatment plant Certified Operator.

The owner mailing address should be the legal permittee of record and is the address where correspondence regarding the application, permit, etc. for the facility will be sent unless otherwise indicated. This often is not the address used to designate the location of the facility or activity. Give the name, title, and work telephone number of a person who is thoroughly familiar with the operation of the facility and with the facts reported in this application and who can be contacted by reviewing offices if necessary. The contact mailing address is to be provided if different from the owner mailing address. The name, telephone number, and email address of the facility's official contact for netDMR (Discharge Monitoring Reports) is to be provided.

II. Facility Location

The facility location should be for the actual location of the facility (i.e. road name, highway number, not the P.O. Box address). If there is no street address, identify the facility by the most accurate alternative geographic information such as direction and distance to the nearest intersection or permanent landmark (e.g., ½ mile east of intersection of KY 70 and US 127).

List the latitude and longitude for the facility site. The latitude/longitude reading for the site should be taken at the influent to the wastewater treatment plant, if applicable.

Attach a site location map with the facility and outfalls clearly marked. Provide either an aerial map, topographic map, or other map that identifies the site location and significant features including the facility's intake and discharge structures. Also mark the locations of those wells, springs, surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within one-quarter mile of the facility property boundary.

III. Facility Description

Briefly describe the nature of the business and the activities being conducted that require a KPDES permit.

Identify the principal 4-digit standard industrial classification (SIC) code and other applicable SIC codes that best describe your facility in terms of the principal products or services you produce or provide. Also, specify each classification in words. These classifications may differ from the SIC codes describing the operation generating the discharge. The SIC codes are numbers and descriptions of activities classified by the Executive Office of the President, Office of Management and Budget. These are found in the latest edition of the Standard Industrial Classification (SIC) Manual.

If the application is for the modification of an existing permit, please provide the specific reason(s) for modifying the existing permit.

IV. Operator Information

For those facilities that require a Certified Operator, enter the name of a Certified Operator who will operate the treatment plant, or enter the name of an operator who will be certified before commencement of discharge. The operator of the treatment plant is often someone other than the operator of the facility identified in Section I.

List the Certified Operator's mailing address, telephone number, and email address. Also, provide the Certified Operator's Certification Class and Certification Number.

The operator must be currently certified with the Division of Water. For information concerning those requirements, please contact the Division of Compliance Assistance at (502) 564-0323.

V. Environmental Permits/Registrations for This Facility

List any existing environmental permits for this facility and identify any permits for which the facility will apply. KPDES permits use an NPDES generated number.

VI. Permit Fee

The payment of the permit fee, as listed below, must accompany the application for a new KPDES Permit or for reissuance of an expiring KPDES Permit in order for the permit application to be processed. For an application to modify an existing permit, the Division of Water will notify the applicant of the required permit fee to be paid prior to issuance of the permit modification. Your check must be made payable to "Kentucky State Treasurer." For permit renewals, to ensure proper credit to your account, please include the KPDES permit number on the check. The permit fee is not refundable if the application is withdrawn or the permit is denied. Listed below are the facility categories and associated base five-year permit fees. (See the separate "General Instructions" for definitions of facility categories.)

<u>Facility Category</u>	<u>Five-Year Permit Fee</u>
Major Industry	\$7,000
Minor Industry	\$4,500
Non-Process Industry	\$2,200
Large Non-POTW	\$3,700
Intermediate Non-POTW	\$3,200
Small Non-POTW	\$2,200
Agriculture	\$1,200
Surface Mining Operation	\$3,300
501(c)(3)	\$100

If this application is for a new project, see separate General Instructions for the applicable Construction Permit fee.

VII. Certification

The permit application must be signed as follows:

- **Corporation:** by a principal executive officer of at least the level of vice president.
- **Partnership or sole proprietorship:** by a general partner or the proprietor respectively.
- **Municipality, state, federal, or other public agency:** by either a principal executive officer or ranking elected official.

Section C: ACTIVITIES WHICH DO NOT REQUIRE KPDES PERMITS

You are not required to obtain a KPDES permit if your discharge is one of the following categories, as provided by the Clean Water Act (CWA) and KPDES regulations (401 KAR Chapter 5).

1. **Dredged or Fill Material:** Discharges of dredged or fill material as defined at 33 CFR 323.2 into waters of the Commonwealth do not need KPDES permits if the dredging or filling is authorized by a permit issued by the U.S. Army Corp of Engineers.
2. **Discharges into Publicly Owned Treatment Works (POTW):** The introduction of sewage, industrial wastes, or other pollutants into a POTW does not need a KPDES permit. You must comply with all applicable pretreatment standards promulgated under Section 307 (b) of the CWA, which may be included in the permit issued to the POTW. If you have a plan or an agreement to switch to a POTW in the future, this does not relieve you of the obligation to apply for and receive a KPDES permit until you have stopped discharging pollutants into waters of the Commonwealth.
3. **Dischargers into Privately Owned Treatment Works:** Dischargers into privately owned treatment works do not have to apply for or obtain KPDES permits except as otherwise required by the Cabinet. The owner or operator of the treatment works itself, however, must apply for a permit and identify all users in its application.
4. **Discharges from Agricultural and Silvicultural Activities:** Most discharges from agricultural and silvicultural activities to waters of the Commonwealth do not require KPDES permits. These include runoff from orchards, cultivated crops, pastures, range lands, and forest lands. However, the discharge listed below DO require KPDES permits.
 - a. Discharges from Concentrated Animal Feeding Operations.
 - b. Discharges from Concentrated Aquatic Animal Production Facilities.
 - c. Discharges associated with approved Aquaculture Projects.
 - d. Discharges from Silvicultural Point Sources. Nonpoint source silvicultural activities are excluded from KPDES permit requirements. However, some of these activities, such as stream crossings for roads, may involve point source discharge of dredged or fill material which may require a Section 404 permit. See 33 CFR 209.120.
5. **Underground Injection Control Permits Under the Safe Drinking Water Act**

Form 1**KENTUCKY POLLUTION DISCHARGE
ELIMINATION SYSTEM**

Permit Application



NAME OF FACILITY: Persimmon Ridge WWTF

AGENCY USE ONLY

AI: 3955

 Revision
 Received
 4-13-2023
 JH

PERMIT NO.: KY0090956

COUNTY: Shelby

This is an application to: (check one)

- Apply for a new permit.
- Apply for reissuance of expiring permit.
- Modify an existing permit.* (Give reason for modification under Section III)

A complete application consists of this form (Form 1), and one or more of the following: Form A, Form B, Form C, Form F, or Form SC.

I. FACILITY AND CONTACT INFORMATION

Name of business, municipality, company, etc. requesting permit: Bluegrass Water Utility Operating Company LLC

Owner Name (and Title if applicable): Bluegrass Water Utility Operating Company LLC

Owner Mailing Address (Street, etc.): 1630 Des Peres Road, Suite 140

Owner City, State, Zip: Des Peres, MO, 63131

Owner Telephone Number: 314-464-3976

Owner Email Address: msappington@cswrgroup.com

 Type of Ownership:
 Publicly Owned
 Privately Owned
 State Owned
 Both Publicly and Privately Owned
 Federally Owned

Contact Name and Title (if different): Mandy Sappington - EHS Compliance Manager

Contact Mailing Address (if different): Same as above

Contact City, State, Zip (if different): Same as above

Contact Telephone Number (if different): Same as above

Contact Email Address (if different): Same as above

NetDMR Official Contact for Facility: Jo Anna McMahon

NetDMR Official Contact Telephone Number: 314-736-4743

NetDMR Official Contact Email Address: env.comp@cswrgroup.com

II. FACILITY LOCATION

Facility Location (street, road, highway, etc.): 72 Persimmon Ridge Drive

Facility City, State, Zip: Louisville, Kentucky, 40245

Facility Latitude (Decimal Degrees): 38.29767

Facility Longitude (Decimal Degrees): -85.43998

- Attach a site location map with the facility and outfalls clearly marked. Provide either an aerial map, topographic map, or other map that identifies the site location and significant features.

III. FACILITY DESCRIPTION	
Provide a brief description of activities, products, etc.:	
Residential WWTF	
* Reason for modifying existing permit, if applicable:	
N/A	
Principal SIC Code and description: 4952 - Sewerage Systems	
Other SIC Codes: N/A	
IV. OPERATOR INFORMATION	
Treatment Plant Operator Name: Kathy Carey	
Operator Mailing Address (Street, etc.): 3734 Shelbyville Road	
Operator City, State, Zip: Shelbyville, KY 40065	
Operator Telephone Number: 225-333-7510	
Operator Email Address:	
Operator Certification Class: Level II - Treatment Collection	Operator Certification Number: Treatment - 31288 Collection - 31241
V. ENVIRONMENTAL PERMITS/REGISTRATIONS FOR THIS FACILITY	
KPDES Permit Number: KY0090956	Issue Date of Current Permit: October 1, 2018
Expiration Date of Current Permit: September 30, 2023	Date of Original Permit Issuance: August 2, 2018
<input type="checkbox"/> Other DOW Permits (list): N/A	
<input type="checkbox"/> Sludge Disposal Permit Number: N/A	
<input type="checkbox"/> Air Emission Source Control Permit Number: N/A	
<input type="checkbox"/> Solid Waste or Special Waste Permit Number: N/A	
<input type="checkbox"/> Hazardous Waste Registration or Permit Number: N/A	
<input type="checkbox"/> Surface Mine or Underground Mine Permit Number: N/A	
<input type="checkbox"/> Other (specify):	
VI. PERMIT FEE (See instructions)	
Select the type of permit being requested. See instructions for applicable fees and methods of payment. Additional information can be found in "General Instructions" at Water.Ky.Gov/Permitting/WastewaterDischarge	
<input type="checkbox"/> Major Industry	<input checked="" type="checkbox"/> Large Non-POTW
<input type="checkbox"/> Minor Industry	<input type="checkbox"/> Intermediate Non-POTW
<input type="checkbox"/> Non-Process Industry	<input type="checkbox"/> Small Non-POTW
<input type="checkbox"/> Surface Mining Operation	<input type="checkbox"/> 501(c)(3)
<input type="checkbox"/> Agriculture	<input type="checkbox"/> Exempt Publicly Owned Facility

<input checked="" type="checkbox"/> Total Amount Enclosed \$	\$3,700
--	---------

IX. 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.

PRINTED NAME AND TITLE: Mandy Sappington - EHS Compliance Manager

SIGNATURE: *Mandy Sappington*

DATE: 4/12/23

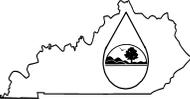
TELEPHONE NO. 314-464-3976

EMAIL: msappington@cswrgroup.com

Return completed application form and attachments to:

Division of Water
 Surface Water Permits Branch
 300 Sower Boulevard, 3rd Floor
 Frankfort, KY 40601

Direct questions to: Surface Water Permits Branch at (502) 564-3410.

Form 1	KENTUCKY POLLUTION DISCHARGE ELIMINATION SYSTEM Permit Application	 Division of Water
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NAME OF FACILITY:	AGENCY USE ONLY
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PERMIT NO.:	COUNTY:
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This is an application to: (check one)

Apply for a new permit.

Apply for reissuance of expiring permit.

Modify an existing permit.* (Give reason for modification under Section III)

A complete application consists of this form (Form 1), and one or more of the following: Form A, Form B, Form C, Form F, or Form SC.

I. FACILITY AND CONTACT INFORMATION

Name of business, municipality, company, etc. requesting permit:

Owner Name (and Title if applicable):

Owner Mailing Address (Street, etc.):

Owner City, State, Zip:

Owner Telephone Number:

Owner Email Address:

Type of Ownership:	<input type="checkbox"/> Publicly Owned	<input type="checkbox"/> Privately Owned	<input type="checkbox"/> State Owned	<input type="checkbox"/> Both Publicly and Privately Owned	<input type="checkbox"/> Federally Owned
--------------------	---	--	--------------------------------------	--	--

Contact Name and Title (if different):

Contact Mailing Address (if different):

Contact City, State, Zip (if different):

Contact Telephone Number (if different):

Contact Email Address (if different):

NetDMR Official Contact for Facility:

NetDMR Official Contact Telephone Number:

NetDMR Official Contact Email Address:

II. FACILITY LOCATION

Facility Location (street, road, highway, etc.):

Facility City, State, Zip:

Facility Latitude (Decimal Degrees):

Facility Longitude (Decimal Degrees):

Attach a site location map with the facility and outfalls clearly marked. Provide either an aerial map, topographic map, or other map that identifies the site location and significant features.

III. FACILITY DESCRIPTION	
Provide a brief description of activities, products, etc.:	
* Reason for modifying existing permit, if applicable:	
Principal SIC Code and description:	
Other SIC Codes:	
IV. OPERATOR INFORMATION	
Treatment Plant Operator Name:	
Operator Mailing Address (Street, etc.):	
Operator City, State, Zip:	
Operator Telephone Number:	
Operator Email Address:	
Operator Certification Class:	Operator Certification Number:
V. ENVIRONMENTAL PERMITS/REGISTRATIONS FOR THIS FACILITY	
KPDES Permit Number:	Issue Date of Current Permit:
Expiration Date of Current Permit:	Date of Original Permit Issuance:
<input type="checkbox"/> Other DOW Permits (list):	
<input type="checkbox"/> Sludge Disposal Permit Number:	
<input type="checkbox"/> Air Emission Source Control Permit Number:	
<input type="checkbox"/> Solid Waste or Special Waste Permit Number:	
<input type="checkbox"/> Hazardous Waste Registration or Permit Number:	
<input type="checkbox"/> Surface Mine or Underground Mine Permit Number:	
<input type="checkbox"/> Other (specify):	
VI. PERMIT FEE (See instructions)	
Select the type of permit being requested. See instructions for applicable fees and methods of payment. Additional information can be found in "General Instructions" at Water.Ky.Gov/Permitting/WastewaterDischarge	
<input type="checkbox"/> Major Industry	<input type="checkbox"/> Large Non-POTW
<input type="checkbox"/> Minor Industry	<input type="checkbox"/> Intermediate Non-POTW
<input type="checkbox"/> Non-Process Industry	<input type="checkbox"/> Small Non-POTW
<input type="checkbox"/> Surface Mining Operation	<input type="checkbox"/> 501(c)(3)
<input type="checkbox"/> Agriculture	<input type="checkbox"/> Exempt Publicly Owned Facility

<input type="checkbox"/> Total Amount Enclosed \$	
---	--

IX. 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.	
PRINTED NAME AND TITLE:	
SIGNATURE:	DATE:
TELEPHONE NO.	EMAIL:

Return completed application form and attachments to:
 Division of Water
 Surface Water Permits Branch
 300 Sower Boulevard, 3rd Floor
 Frankfort, KY 40601

Direct questions to: Surface Water Permits Branch at (502) 564-3410.

KPDES FORM 1 – INSTRUCTIONS

Section A: GENERAL INSTRUCTIONS

The facility name should be the official or legal name by which the facility is commonly known and/or uniquely identified. Do not use a colloquial name. List the county where the facility is located.

With the exceptions described in Section C of these instructions, Federal and State laws prohibit you from the discharge of pollutants into the waters of the United States or waters of the Commonwealth.

Where to File: Return completed application form and attachments to:
Division of Water
Surface Water Permits Branch
300 Sower Boulevard, 3rd Floor
Frankfort, KY 40601

When to File: File the application at least 180 days prior to expiration of your current KPDES permit or at least 180 days prior to startup of a new facility.

Fees: Permit Fees are listed in Section B of these instructions.

Completion of Form: Unless otherwise specified in the detailed instructions, you must answer each item in the form. To indicate that you have considered each item, enter “NA,” for not applicable, if a particular item does not fit the circumstances of your facility or activity. If more space is necessary to answer a question, attach a separate sheet entitled “Additional Information.”

Section B: COMPLETING FORM 1

Listed below are explanations of select Form 1 questions. If further information is needed concerning any section, **please contact Division of Water, Surface Water Permits Branch at (502) 564-3410.**

I. Facility and Contact Information

Use the official or legal name of the business, company, municipality, etc. requesting permit. Do not use a colloquial name. Give the name, as it is legally referred to, of the person, firm, public organization, or any other entity that operates the facility described in this application. This may or may not be the same name as the facility. The operator of the facility is the legal entity which controls the facility’s operation rather than the plant or site manager. This use of “operator” in many cases is not the same as the treatment plant Certified Operator.

The owner mailing address should be the legal permittee of record and is the address where correspondence regarding the application, permit, etc. for the facility will be sent unless otherwise indicated. This often is not the address used to designate the location of the facility or activity. Give the name, title, and work telephone number of a person who is thoroughly familiar with the operation of the facility and with the facts reported in this application and who can be contacted by reviewing offices if necessary. The contact mailing address is to be provided if different from the owner mailing address. The name, telephone number, and email address of the facility’s official contact for netDMR (Discharge Monitoring Reports) is to be provided.

II. Facility Location

The facility location should be for the actual location of the facility (i.e. road name, highway number, not the P.O. Box address). If there is no street address, identify the facility by the most accurate alternative geographic information such as direction and distance to the nearest intersection or permanent landmark (e.g., ½ mile east of intersection of KY 70 and US 127).

List the latitude and longitude for the facility site. The latitude/longitude reading for the site should be taken at the influent to the wastewater treatment plant, if applicable.

Attach a site location map with the facility and outfalls clearly marked. Provide either an aerial map, topographic map, or other map that identifies the site location and significant features including the facility’s intake and discharge structures. Also mark the locations of those wells, springs, surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within one-quarter mile of the facility property boundary.

III. Facility Description

Briefly describe the nature of the business and the activities being conducted that require a KPDES permit.

Identify the principal 4-digit standard industrial classification (SIC) code and other applicable SIC codes that best describe your facility in terms of the principal products or services you produce or provide. Also, specify each classification in words. These classifications may differ from the SIC codes describing the operation generating the discharge. The SIC codes are numbers and descriptions of activities classified by the Executive Office of the President, Office of Management and Budget. These are found in the latest edition of the Standard Industrial Classification (SIC) Manual.

If the application is for the modification of an existing permit, please provide the specific reason(s) for modifying the existing permit.

IV. Operator Information

For those facilities that require a Certified Operator, enter the name of a Certified Operator who will operate the treatment plant, or enter the name of an operator who will be certified before commencement of discharge. The operator of the treatment plant is often someone other than the operator of the facility identified in Section I.

List the Certified Operator's mailing address, telephone number, and email address. Also, provide the Certified Operator's Certification Class and Certification Number.

The operator must be currently certified with the Division of Water. For information concerning those requirements, please contact the Division of Compliance Assistance at (502) 564-0323.

V. Environmental Permits/Registrations for This Facility

List any existing environmental permits for this facility and identify any permits for which the facility will apply. KPDES permits use an NPDES generated number.

VI. Permit Fee

The payment of the permit fee, as listed below, must accompany the application for a new KPDES Permit or for reissuance of an expiring KPDES Permit in order for the permit application to be processed. For an application to modify an existing permit, the Division of Water will notify the applicant of the required permit fee to be paid prior to issuance of the permit modification. Your check must be made payable to "Kentucky State Treasurer." For permit renewals, to ensure proper credit to your account, please include the KPDES permit number on the check. The permit fee is not refundable if the application is withdrawn or the permit is denied. Listed below are the facility categories and associated base five-year permit fees. (See the separate "General Instructions" for definitions of facility categories.)

<u>Facility Category</u>	<u>Five-Year Permit Fee</u>
Major Industry	\$7,000
Minor Industry	\$4,500
Non-Process Industry	\$2,200
Large Non-POTW	\$3,700
Intermediate Non-POTW	\$3,200
Small Non-POTW	\$2,200
Agriculture	\$1,200
Surface Mining Operation	\$3,300
501(c)(3)	\$100

If this application is for a new project, see separate General Instructions for the applicable Construction Permit fee.

VII. Certification

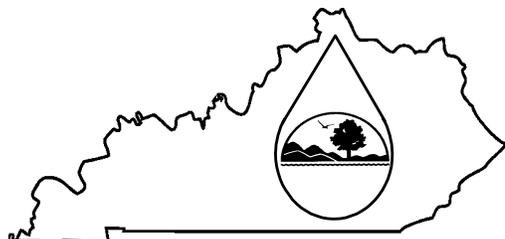
The permit application must be signed as follows:

- **Corporation:** by a principal executive officer of at least the level of vice president.
- **Partnership or sole proprietorship:** by a general partner or the proprietor respectively.
- **Municipality, state, federal, or other public agency:** by either a principal executive officer or ranking elected official.

Section C: ACTIVITIES WHICH DO NOT REQUIRE KPDES PERMITS

You are not required to obtain a KPDES permit if your discharge is one of the following categories, as provided by the Clean Water Act (CWA) and KPDES regulations (401 KAR Chapter 5).

1. Dredged or Fill Material: Discharges of dredged or fill material as defined at 33 CFR 323.2 into waters of the Commonwealth do not need KPDES permits if the dredging or filling is authorized by a permit issued by the U.S. Army Corp of Engineers.
2. Discharges into Publicly Owned Treatment Works (POTW): The introduction of sewage, industrial wastes, or other pollutants into a POTW does not need a KPDES permit. You must comply with all applicable pretreatment standards promulgated under Section 307 (b) of the CWA, which may be included in the permit issued to the POTW. If you have a plan or an agreement to switch to a POTW in the future, this does not relieve you of the obligation to apply for and receive a KPDES permit until you have stopped discharging pollutants into waters of the Commonwealth.
3. Dischargers into Privately Owned Treatment Works: Dischargers into privately owned treatment works do not have to apply for or obtain KPDES permits except as otherwise required by the Cabinet. The owner or operator of the treatment works itself, however, must apply for a permit and identify all users in its application.
4. Discharges from Agricultural and Silvicultural Activities: Most discharges from agricultural and silvicultural activities to waters of the Commonwealth do not require KPDES permits. These include runoff from orchards, cultivated crops, pastures, range lands, and forest lands. However, the discharge listed below DO require KPDES permits.
 - a. Discharges from Concentrated Animal Feeding Operations.
 - b. Discharges from Concentrated Aquatic Animal Production Facilities.
 - c. Discharges associated with approved Aquaculture Projects.
 - d. Discharges from Silvicultural Point Sources. Nonpoint source silvicultural activities are excluded from KPDES permit requirements. However, some of these activities, such as stream crossings for roads, may involve point source discharge of dredged or fill material which may require a Section 404 permit. See 33 CFR 209.120.
5. Underground Injection Control Permits Under the Safe Drinking Water Act



Commonwealth of Kentucky
 Energy and Environment Cabinet
 Division of Water

**CONSTRUCTION PERMIT APPLICATION
 for CLEAN WATER COLLECTION SYSTEM**

See the INSTRUCTIONS for more information about selected portions of this application.

Questions on completing this application? Contact the Water Infrastructure Branch at 502/564-3410 or visit our website at <http://water.ky.gov> for more information.

I. CONSTRUCTION PROJECT INFORMATION

Project Name: R & L Carriers - Georgetown

Name of WWTP which will treat sewage from this project: Delaplain Disposal Co.

KPDES Number of the WWTP: KYKY0079049 WWTP County: Scott

Name of Receiving Collection System (if different than WWTP): _____

KPDES Number of Receiving Collection System (if applicable): KY Project County: _____

Project Latitude/Longitude (DMS): 38.270686,-84.550502 Estimated Construction Cost: \$95,000

Identify the funding sources for the project:

CWSRF SPAP Other: Private

If the project is SRF, is the SRF Plans and Specs Checklist included? _____

II. APPLICANT MAILING ADDRESS

Applicant (Entity paying for construction): R & L Investments L.L.C.

Street Address: 600 Gillam Road P.O. Box 800

City, State, Zip: Wilmington, Ohio 45177

Phone: 937-603-3900 Fax: 937-655-2110 E-mail: srichards@rlcarriers.com

Will ownership be transferred? Yes, future owner will be: _____ No

III. DESIGN CONSIDERATIONS

A. PLANS AND SPECIFICATIONS COMPLIANCE REQUIREMENTS:

Design plans and specifications shall comply with **401 KAR 5:005** and “**Recommended Standards for Wastewater Facilities**” (“**Ten States’ Standards**”), 2014 edition. If engineering practices, other than those contained in “Ten States’ Standards”, were used in the design, indicate the source and the corresponding portion of the design. [See **401 KAR 5:005, Section 7**]

Plans and specification submittals shall meet one of the following options:

- Submit at least one paper printed set of detailed plans (no larger than 24" x 36") and a PDF copy of the plans and specifications on a data storage device such as a USB flash drive. Both copies shall be dated with a stamp, signature of a licensed professional engineer in Kentucky which complies with the requirements of 201 KAR 18:104. The plans digital plans shall consist of a single pdf file and be in a folder called "Engineering Plans" and the specifications manual shall be in a folder called "Specifications".
- Submit a PDF copy of the plans and specifications digitally via the electronic form on the KY One Stop Business Portal website. The PDF copy shall be dated with stamp and signature of a licensed engineer in Kentucky which complies with the requirements of 201 KAR 18:104 Section 3. The plans shall be submitted as a single pdf file.

B. DESIGN ENGINEER, if the project will become part of a sewer system served by a regional facility. **[Section 6]**

P.E.'s Name: Joe Iovinelli Firm: Manhard Consulting
 Street Address: 700 Springer Drive
 City, State, Zip: Lombard, Illinois 60148
 Phone: 630-925-1110 Fax: _____ E-mail: jiovinelli@manhard.com

C. CONFORMITY TO PLANS AND SPECIFICATIONS. Provide name of person who will inspect and certify that the constructed facility conforms to the approved plans and specifications. If the sewer lines will become part of a sewer system served by a regional facility, this person must be a professional engineer (P.E.). **[Section 3]**

Name: Joe Iovinelli Firm: Manhard Consulting
 Street Address: 700 Springer Drive
 City, State, Zip: Lombard, Illinois 60148
 Phone: 630-925-1110 Fax: _____ E-mail: jiovinelli@manhard.com

D. DESIGN CAPACITIES. The amount of average daily flow added by the sewer line extension is 7600 gpd. The basis for the amount of additional flow is New Sanitary Sewer Lines to service site

E. OTHER INFORMATION TO BE SUBMITTED WITH APPLICATION. Place a **check (✓)** by the items that are included in this application or an **N/A** if the item is not applicable to the project.

- 1. A copy of a USGS 7½ minute topographic map with the locations of the proposed sewer lines shown. **[Section 3]**
- N/A 2. If modifying, replacing or abandoning an existing facility, a closure plan indicating how the new facility will be constructed without a by-pass to a stream and the procedures that will be used for abandoning the existing facility. **[Section 3]**
- 3. If the project includes a pump station, provide the pump performance curve, design calculations, and detailed wet well drawing with elevations. **[Section 8]**
- 4. If the project includes gravity sewer lines or force mains, a plan view and a profile view of each. **[Section 6]**
- N/A 5. A model of the hydraulic analysis if the project consists of, or is connected to a network of pumps. **[Section 8]**
- 6. A brief description of the project, including what is being constructed, who will be served by this project, the flow rate, and the flow rate calculations. **[Section 8]**
- 7. A signed letter from the owner of the proposed sewer line stating that the owner will accept responsibility for



the operation and maintenance of the sewer line when it is constructed. **[Section 8]**



8. Letters from both the owner of the sewer system and the WWTP stating that they approve the connection and accept responsibility for the additional flow. **[Section 8]**



9. A written statement that the portion of the sewer system used by the connection has adequate capacity to transport the current and anticipated peak flow to the WWTP and that the portion of the sewer system used by the connection is not subject to excessive infiltration or excessive inflow. **[Section 8]**

10. A written statement that the WWTP has adequate capacity to treat the current and anticipated flow and is not subject to excessive infiltration or excessive inflow. **[Section 8]**

IV. Fees

Fees. Check or money order must be made payable to "Kentucky State Treasurer" for the total amount. **Fees do not apply** for a municipality, sanitation district, or other publicly owned facility. **[Section 5]** If claiming Non-Profit status, provide proof.

Sewer Collection Project Category: Small Facility : Sewer Lines

Total Amount: \$ 200.00

VI. CERTIFICATION

I, the applicant, certify under penalty of law that this document and all attachments were prepared under my direction or supervision. 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 or imprisonment or both for known violations. **[Section 2]**

Applicant's Name and Official Title (Type or Print) <input type="text" value="Stan Richards"/>	Phone Number (Include area code) <input type="text" value="937-603-3900"/>
Signature 	Date 10-26-2022

Form SC	KENTUCKY POLLUTION DISCHARGE ELIMINATION SYSTEM Permit Application	 Division of Water
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NAME OF FACILITY: Persimmon Ridge WWTF	AGENCY USE ONLY AI: 3955	Received 4-10-2023 JH
PERMIT NO.: KY0090956	COUNTY: Shelby	

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to five decimal points.

OUTFALL NUMBER	LATITUDE In Decimal Degrees	LONGITUDE In Decimal Degrees	RECEIVING WATER (name)
002	38.29722	-85.44121	Persimmon Ridge Subdivision pond then to Floyds Fork (RMI 49.4)

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B.

For each outfall, provide a description of:

B. (1) operations contributing wastewater to the effluent;
 (2) the average and/or design flow contributed by each operation; and
 (3) the treatment received by the wastewater.

OUTFALL NUMBER	SOURCES OF WASTEWATER		TREATMENT DESCRIPTION (refer to Table SC-1 for description)
	Operations Contributing to Flow	Average / Design Flow (include units)	
002	Domestic Sanitary	0.2848 MGD/0.142 MGD	MBBR, aerated lagoon, post-aeration, PAA disinfectant, sludge stored in the lagoon 2H, 3B, 3L

III. FACILITY DISCHARGE

A. Check the appropriate boxes indicating the types of wastewater discharged.

<input checked="" type="checkbox"/>	Domestic wastewater (60% or more sanitary sewage)
<input type="checkbox"/>	Non-contact cooling water
<input type="checkbox"/>	Filter backwash
<input type="checkbox"/>	Other non-process wastewaters. Provide description:

B. Does discharge occur all year?

Yes.

How many days per week does discharge occur? 7

What is the average duration of discharge? Specify hours or days. Continuous

No.

C. Except for stormwater runoff, leaks, or spills, are any of the discharges intermittent or seasonal?

Yes. If yes, provide description of approximate number, duration, and volume of seasonal or intermittent flows.

No.

D. Provide the basis for design and sizing of the wastewater facility.
designed in accordance with 2014 Ten State Standards for Wastewater Facilities and 401 KAR 5:005. see Attached.

E. If the facility is a new discharger, what is the anticipated discharge date? N/A

Treatment Plants Only to complete Section F & G.

F. Does all water used at facility (except for human consumption) flow to a treatment plant?

Yes.

No. If no, please describe.

G. What is the design capacity of the treatment system? 0.142 MGD

IV. AREA SERVED BY WASTEWATER TREATMENT PLANT

NAME OF AREA OR COMMUNITY	ACTUAL POPULATION SERVED
Persimmon Ridge Subdivision	357 connections
Total Population Served	357 connections

V. COOLING WATER ADDITIVES

Are cooling water additives used?

Yes. In the table below, list each additive, its composition, concentration, and feed rate. Attach Safety Data Sheets for each.

No

NAME OF ADDITIVE	COMPOSITION	CONCENTRATION	FEED RATE

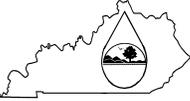
VI. EFFLUENT CHARACTERISTICS		OUTFALL NO: <u>002</u>		
Complete Sections A, B, and C for each outfall.				
A. What is the frequency and duration of flow? <u>Continuous</u>				
B. In the first part of the table below, provide results of effluent analysis for each pollutant / parameter listed.				
C.				
POLLUTANT/PARAMETER	UNITS	MAX DAILY VALUE	AVG DAILY VALUE	NUMBER OF SAMPLES
<input checked="" type="checkbox"/> BOD ₅ or <input type="checkbox"/> CBOD ₅	mg/l	71 mg/L	6.72 mg/L	35
Total Suspended Solids	mg/l	20 mg/L	5.75 mg/L	35
E.Coli	colonies/ 100 ml	206 #/100 mL	4.34 #/100 mL	35
Total Residual Chlorine	mg/l	N/A Chlorine not used. PAA added for disinfection		
Oil and Grease	mg/l	4.7	4.7	2
Chemical Oxygen Demand	mg/l	79	71	2
Total Organic Carbon	mg/l	16.3	16.2	2
Ammonia	mg/l	20.1 mg/L	4.66 mg/L	35
Discharge of Flow	MGD	0.761 MGD	0.279 MGD	Daily
pH	s.u.	6.72 min/8.35 max	N/A	
Temperature (winter)	°F			
Temperature (summer)	°F			
METALS	UNITS	AVG CONCENTRATION		
<input type="checkbox"/> Antimony	µg/l	N/A		
<input type="checkbox"/> Arsenic	µg/l	N/A		
<input type="checkbox"/> Beryllium	µg/l	N/A		
<input type="checkbox"/> Cadmium	µg/l	N/A		
<input type="checkbox"/> Chromium	µg/l	N/A		
<input type="checkbox"/> Copper	µg/l	N/A		
<input type="checkbox"/> Lead	µg/l	N/A		
<input type="checkbox"/> Mercury	µg/l	N/A		
<input type="checkbox"/> Nickel	µg/l	N/A		
<input type="checkbox"/> Selenium	µg/l	N/A		
<input type="checkbox"/> Silver	µg/l	N/A		
<input type="checkbox"/> Thallium	µg/l	N/A		
<input type="checkbox"/> Zinc	µg/l	N/A		

lab's enclosed

VII. 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.	
PRINTED NAME AND TITLE: <i>Joshiah Cox</i>	
SIGNATURE: <i>[Signature]</i>	DATE: <i>4/6/23</i>
TELEPHONE NO. <i>314-736-4672</i>	EMAIL: <i>jcox@cswirgroup.com</i>

Return completed application form and attachments to:
 Division of Water
 Surface Water Permits Branch
 300 Sower Boulevard, 3rd Floor
 Frankfort, KY 40601

Direct questions to: Surface Water Permits Branch at (502) 564-3410.

Form SC	KENTUCKY POLLUTION DISCHARGE ELIMINATION SYSTEM Permit Application	 Division of Water
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NAME OF FACILITY: Persimmon Ridge WWTF	AGENCY USE ONLY AI: 3955	Revision Received 4-13-2023 JH
PERMIT NO.: KY0090956	COUNTY: Shelby	

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to five decimal points.

OUTFALL NUMBER	LATITUDE In Decimal Degrees	LONGITUDE In Decimal Degrees	RECEIVING WATER (name)
002	38.29722	-85.44121	Persimmon Ridge Subdivision pond then to Floyds Fork (RMI 49.4)

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B.

For each outfall, provide a description of:

B. (1) operations contributing wastewater to the effluent;
 (2) the average and/or design flow contributed by each operation; and
 (3) the treatment received by the wastewater.

OUTFALL NUMBER	SOURCES OF WASTEWATER		TREATMENT DESCRIPTION (refer to Table SC-1 for description)
	Operations Contributing to Flow	Average / Design Flow (include units)	
002	Domestic Sanitary	0.2848 MGD/0.142 MGD	MBBR, aerated lagoon, post-aeration, PAA disinfectant, sludge stored in the lagoon 2H, 3B, 3L

III. FACILITY DISCHARGE

A. Check the appropriate boxes indicating the types of wastewater discharged.

Domestic wastewater (60% or more sanitary sewage)

Non-contact cooling water

Filter backwash

Other non-process wastewaters. Provide description:

B. Does discharge occur all year?			
<input checked="" type="checkbox"/> Yes.			
How many days per week does discharge occur?		7	
What is the average duration of discharge? Specify hours or days.		Continuous	
<input type="checkbox"/> No.			
C. Except for stormwater runoff, leaks, or spills, are any of the discharges intermittent or seasonal?			
<input type="checkbox"/> Yes. If yes, provide description of approximate number, duration, and volume of seasonal or intermittent flows.			
<input checked="" type="checkbox"/> No.			
D. Provide the basis for design and sizing of the wastewater facility. designed in accordance with 2014 Ten State Standards for Wastewater Facilities and 401 KAR 5:005. see Attached.			
E. If the facility is a new discharger, what is the anticipated discharge date? N/A			
Treatment Plants Only to complete Section F & G.			
F. Does all water used at facility (except for human consumption) flow to a treatment plant?			
<input checked="" type="checkbox"/> Yes.			
<input type="checkbox"/> No. If no, please describe.			
G. What is the design capacity of the treatment system? 0.142 MGD			
IV. AREA SERVED BY WASTEWATER TREATMENT PLANT			
NAME OF AREA OR COMMUNITY			ACTUAL POPULATION SERVED
Persimmon Ridge Subdivision			893
Total Population Served			893
V. COOLING WATER ADDITIVES			
Are cooling water additives used?			
<input type="checkbox"/> Yes. In the table below, list each additive, its composition, concentration, and feed rate. Attach Safety Data Sheets for each.			
<input checked="" type="checkbox"/> No			
NAME OF ADDITIVE	COMPOSITION	CONCENTRATION	FEED RATE

VI. EFFLUENT CHARACTERISTICS		OUTFALL NO: <u>002</u>		
Complete Sections A, B, and C for each outfall.				
A. What is the frequency and duration of flow? Continuous				
B. In the first part of the table below, provide results of effluent analysis for each pollutant / parameter listed.				
C.				
POLLUTANT/PARAMETER	UNITS	MAX DAILY VALUE	AVG DAILY VALUE	NUMBER OF SAMPLES
<input checked="" type="checkbox"/> BOD ₅ or <input type="checkbox"/> CBOD ₅	mg/l	71 mg/L	6.72 mg/L	35
Total Suspended Solids	mg/l	20 mg/L	5.75 mg/L	35
E.Coli	colonies/ 100 ml	206 #/100 mL	4.34 #/100 mL	35
Total Residual Chlorine	mg/l	N/A Chlorine not used. PAA added for disinfection		
Oil and Grease	mg/l	4.7	4.7	2
Chemical Oxygen Demand	mg/l	79	71	2
Total Organic Carbon	mg/l	16.3	16.2	2
Ammonia	mg/l	20.1 mg/L	4.66 mg/L	35
Discharge of Flow	MGD	0.761 MGD	0.279 MGD	Daily
pH	s.u.	6.72 min/8.35 max	N/A	
Temperature (winter)	°F	70	44	72
Temperature (summer)	°F	76	76	1
METALS	UNITS	AVG CONCENTRATION		
<input type="checkbox"/> Antimony	µg/l	N/A		
<input type="checkbox"/> Arsenic	µg/l	N/A		
<input type="checkbox"/> Beryllium	µg/l	N/A		
<input type="checkbox"/> Cadmium	µg/l	N/A		
<input type="checkbox"/> Chromium	µg/l	N/A		
<input type="checkbox"/> Copper	µg/l	N/A		
<input type="checkbox"/> Lead	µg/l	N/A		
<input type="checkbox"/> Mercury	µg/l	N/A		
<input type="checkbox"/> Nickel	µg/l	N/A		
<input type="checkbox"/> Selenium	µg/l	N/A		
<input type="checkbox"/> Silver	µg/l	N/A		
<input type="checkbox"/> Thallium	µg/l	N/A		
<input type="checkbox"/> Zinc	µg/l	N/A		

VII. 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.	
PRINTED NAME AND TITLE: <i>Josiah Cox President</i>	
SIGNATURE: <i>[Signature]</i>	DATE: 4/13/23
TELEPHONE NO. <i>314-464-3976</i>	EMAIL: <i>jcox@csurgroup.com</i>

Return completed application form and attachments to:
 Division of Water
 Surface Water Permits Branch
 300 Sower Boulevard, 3rd Floor
 Frankfort, KY 40601

Direct questions to: Surface Water Permits Branch at (502) 564-3410.

**STANDARD SPECIFICATIONS:
DUPLEX PREFABRICATED FIBERGLASS LIFT STATION
WITH VALVE VAULT
R & L CARRIERS
GEORGETOWN, KENTUCKY
2/23/23**

GENERAL

Furnish and install a complete factory-built Metro-Rail Packaged System as manufactured by the Metropolitan Pump Company, Romeoville, Illinois. The system shall include two submersible grinder pumps with quick disconnect system, 2" base elbows, stainless steel guide rails, discharge piping, upper & lower guide rail supports, aluminum access frame with cover for each pump, wiring bracket as required, all installed in a pre-fabricated fiberglass basin. The system shall also include a fiberglass outside valve vault, which shall house the discharge piping, gate valves, check valves, and sump pump. The duplex control system is to be housed in a NEMA-3R Pad mounted painted steel (Green in color) traffic box enclosure with a manual transfer switch and generator receptacle. Structure and dimensions to be as shown on drawing.

WET WELL AND VALVE VAULT

SUMP BASIN

The filament wound fiberglass shall have an inside diameter of 5 feet, 0 inches, and a height as shown on the plans. The basin shall have a fiberglass coated, steel anti-floatation flange mounted on the bottom. Basin shall incorporate an outside valve vault, as described below. The basin shall have an aluminum cover encompassing both the wet well and valve, and provided with openings to bolt in the aluminum access hatches. **Contractor to provide concrete fillet in the bottom of the wet well with a 1:1 slope.**

PIPING

Piping in the basin shall be 2 inch stainless steel and shall terminate with a flange outside the basin wall for connection to valves in an external valve vault. The valve vault shall include two 2" check valves with lever and spring and two 2" gate valves. Inlet or inlets into basin shall be grout sleeves for an 8" inch inlet pipe. The guide rails shall be 1" stainless steel pipe. Valve vault piping shall include a bypass connection with riser pipe, shut-off valve, and connection for portable pump connection. **(NOTE: PUMP STATION TO HAVE 2 INCH PLAIN END PIPE FOR CONNECTION TO 3 INCH FORCEMAIN BY CONTRACTOR)**

The valve vault shall include piping for sump pump with check valve that would discharge back into the wet well as shown on the drawings. 3" Schedule 80 PVC Vent piping for the wet well shall be provided by the contractor as shown on the drawings.

Metal-To-Metal Rail System:

The MTM rail system shall include a discharge base elbow, sealing flange with rail guide, upper guide bracket, stainless steel lifting chain, and stainless steel guide rails.

The discharge base elbow shall have mounted directly on the sump floor and sized according to the plans. It shall have a standard 125 lb flange, with machined face. The design shall be such that the pump to discharge connection is made without the need for any nuts, bolts, or gaskets. The base elbow shall also anchor two (2) 1" stainless steel guide rails.

The sealing flange/rail guide bracket shall be mounted on each pump discharge. It shall have a machined mating flange, which matches the base elbow discharge connection. Sealing of this discharge connection shall be accomplished by simple linear downward motion of the pump culminating with the entire weight of the pumping unit supported entirely by the base elbow.

The upper guide bracket shall align and support the two guide rails at the top of the sump. It shall bolt directly to the hatch frame and incorporate an expandable rubber grommet.

Each pump shall be provided with a stainless steel lifting chain, and be of sufficient length to extend from the pump to the top of the wet well. The access frame shall provide a hook to attach the chain when not in use. The stainless steel lifting chain shall be sized according to the pump weight.

Access Frame and Cover:

A double door access frame assembly shall be supplied. Access frame and covers shall be fabricated of aluminum and bolted to basin. Frame shall support guide rails and electrical wiring bracket. A separate hinged cover shall be provided for each pump. Cover shall be provided with lifting handle and safety latch to hold cover in the open position. Locking hasps shall be furnished for each cover along with weather resistant locks preferably all keyed the same.

Fall-Through Prevention System (Safety Grate):

The wet well access openings shall be fitted with a permanently installed fall through prevention SAFETY GRATE for access to the opening below. The system shall be Hatch Safety Grate as manufactured by USF Fabrication, Inc., or equal. The system shall consist of the following components:

- * Hatch Safety Grate rotates 90 degrees.
- * Safety Grate designed for 300 p.s.f. loading.
- * Hold Open Rods
- * Aluminum Grate has an OSHA safety orange finish
- * Hardware components are made of stainless steel to resist corrosion.

Sump Pump:

The valve vault pump shall be Model SH30i with 1/3 hp, 1 ph, 60 hz, 115v motor designed for automatic operation through a piggy-back diaphragm switch. The pump discharge shall be 1-1/2".

SUBMERSIBLE PUMPS

Provide two heavy duty submersible grinder pumps as supplied by Metropolitan Industries, Romeoville, Illinois.

CONSTRUCTION

The pump, motor housings, and seal housing to be of high quality cast iron, ASTM A-48, Class 30. Impeller to be bronze. All fasteners to be of 300 Series stainless steel.

MOTOR (Explosion Proof)

Pump motor shall be of the sealed submersible type with standard insulation for operation in high-dielectric oil to give better heat dissipation and longer bearing life. Motor stator shall be held in place with removable end ring so that it can be removed for repair without heating outer shell or using a press. Motor housing shall be filled with high-dielectric oil and no pressure balancing devices shall be used. Motor shaft and housing to be sealed with two mechanical shaft seals with an oil chamber between seals. Seals to have carbon and ceramic seal faces. Integral motor and pump shaft to be of 416 stainless steel supported by an upper ball radial and thrust bearing and a lower bronze sleeve bearing. Each pump motor will be provided with heat sensing units which shall trip the starter if the motor over heats. Seal chamber shall be fitted with an electrode probe to detect water in the seal chamber.

POWER CORD

The power cable entry into the cord cap assembly shall first be made with a compression fitting. Each individual lead shall be stripped down to bare wire, at staggered intervals, and each strand shall be individually separated. This area of the cord cap shall then be fitted with an epoxy compound potting which will prevent water contamination to gain entry even in the event of wicking or capillary attraction. There shall be an additional epoxy compound potting area separating the motor housing from the cord cap assembly for added protection.

GRINDERS

The two-stage grinder assembly shall consist of a primary grinder to macerate the solids and a secondary cutter impeller that grinds the macerated solids to fine particles for pumping by the centrifugal impeller. The cutters are made of 440C stainless steel hardened to Rockwell 60C and ground to close tolerance. The cutter and stationary ring must be capable of being turned over to provide new cutting edges for double life. The complete grinder assembly must be removable from pump without disturbing pump, seals, or motor. Shredders or single blade cutters are not considered comparable to the grinder assembly.

Operating Conditions:

Each pump shall have a capacity of 55 g.p.m. at a total head of 34 feet when operating at 1750 r.p.m. Pump motor shall be 3 HP, 1750 r.p.m., 3 phase, 230 volts, 60 Hz. The pump shall include a 2 inch discharge as supplied by Metropolitan Industries of Romeoville, Illinois.

NOTE: POWER REQUIREMENTS MUST BE VERIFIED BY ENGINEER/OWNER.

CONTROL EQUIPMENT (UL Approved)

Control Panel Construction

The control panel shall have a NEMA-1 enclosure with inside sub panel to protect electrical equipment. The enclosure shall be constructed of 16 gauge galvanized steel and finished with ANSI 61 gray polyester powder coat inside and out. The control panel shall be located inside the pad mounted traffic box enclosure and the traffic box shall have provision to be pad lockable provided on outside door. The control panel shall include the following; A circuit breaker shall be provided for protection on each pump including the valve vault sump pump. Each pump shall also come equipped with an IEC magnetic starter, including 3-leg overload protection. All of the pilot-devices, operators, interfaces and indicators shall be installed on the face of the door, to accommodate the operating personnel, as listed:

- A door-interlocked main power disconnect-switch; An integral color touch-screen operator interface panel.
- A 3-position control-mode selector switch.
- A Hand-Off-Automatic selector switch for each pump.
- A Pump-Running indicator-light for each pump.
- A Seal-Failure indicator-light for each pump.
- A Motor-Over-Temperature indicator-light for each pump.
- An Elapsed-Time-Meter for each pump.

A terminal strip shall be provided for connecting pump and control wires. The panel shall include a GFI convenience outlet. The PLC shall include a DC power supply with battery back-up. The enclosure shall be protected from condensation through the use of a pre-wired thermostatically-controlled 30-watt anti-condensation heater. The control components shall be mounted on a 12 gauge painted steel subpanel. Individual electrical components shall be mounted in accordance with the manufacturer's recommendations. Wiring within the

enclosure shall be run through plastic wiring duct or tied and bundled to prevent strain and abrasion. All customer connections shall be wired to individually numbered terminals and wires shall be numbered at both ends for ease of trouble shooting. The control panel manufacturer shall be listed with underwriters laboratories under UL508 (type I) listing category for the manufacture of control equipment. The control panel shall contain UL listed components wherever practical. The entire control panel assembly shall be approved by UL and labeled to that effect.

Integrated Level-Management Pump Control System

Furnish a Metropolitan LMS-II microprocessor based electronic Level-Management operational control system within the control panel. The level-management system shall be furnished as a complete factory assembled unit requiring only field installation and required electrical and sensor connections. The level-management system shall sequence the pumps automatically, in response to changing wet well levels. The control system shall be a complete automatic control package consisting of pump sequencing logic, operator interface terminal, and discreet operator controls. The system shall operate completely unattended, and shall provide annunciation of abnormal conditions. The entire assembly shall be completely pre-wired and function-tested at the factory prior to shipment.

The LMS-II shall receive an analog signal proportional to the level in the wet-well and sequence the pumps as required in order to maintain the desired level set-point. The level management system shall provide totally automated sequencing of the pumps. The LMS-II shall be easily configured for pump-down applications. The analog input shall be provided for wet well level reference, via(1) submersible level-transducer, provided with cords which shall be 50-foot long, or longer if required by jobsite conditions. All cords must extend the entire distance from the transducer to the control panel terminals, without junction boxes or splices. The input signals shall be 0-5 vdc scalable or 4-20 mA. The transducers shall serve as the primary level-sensor and a float back up system shall serve as a fail-safe secondary unit. The transducer housing shall be 316 stainless-steel fitted with a stainless-steel cable support bracket. Liquid level shall be sensed by the deflection of a stainless-steel diaphragm having a displacement of less than 5 cu.mm from 0 to full scale. The atmospheric pressure side of the diaphragm shall be bonded to a silicon strain sensor coupled to an integral bridge circuit. Atmospheric venting shall be through the signal cable, directly to atmosphere. Transmitters requiring separate, sealed, expansion breathing systems shall not be accepted. Electrical connection shall be 2 wire, 4-20 mA, and shall be reverse polarity and surge protected. Accuracy shall be 0.6 percent of full scale. Full scale range shall be 0 to 14 feet (or as shown on the plans). Temperature compensated range shall be -20°F to 122°F., maximum operating temperature shall be -40°F to 176°F. The level-transducers shall be field-adjustable from above the wet-well, via the use of a chain & anchor system, consisting of a stainless-steel chain, stabilized by a cast-iron anchor, as shown on the drawings.

The level management system shall alternate the lead pump after each cycle. The LMS-II shall alternate each available pump, as scheduled by the operator's preference. Pumps which are faulted or out of service shall automatically be omitted from the alternation scheme. The operator shall also be capable of manually selecting the lead pump.

The wet well level shall be displayed on the controller's color touch-screen operator interface terminal. Each pump and alarm set point shall also be displayed accordingly. Pump-on and pump-off set points shall be independently adjustable providing true differential level control. All set points shall be adjusted via the LMS-II operator-interface color touch-screen.

The programmable logic controller (PLC) shall include integral processor, power supply, input and output circuits and communications ports. This specification requires the use of a non-proprietary, commercially available PLC and touch screen operator interface device. Universal, proprietary controllers and/or displays with separate function buttons, indicators and complex multi-level function trees will not be considered equal or acceptable. A built in real time clock shall provide reference for time based control applications. The unit shall include a memory module for backup and portability of user program. Processor on board memory shall be non-volatile. The unit shall provide a minimum of 4K user program space, 4K user data space, 128K data logging and up to 64K for recipe. The processor shall function as specified over an ambient temperature range of -4°F to +140°F with a relative humidity up to 95%, non-condensing. The PLC shall be UL listed for industrial control equipment. To facilitate inter-connectivity the PLC shall include two communications channels, an isolated RS-232/485 communication port and an Ethernet/IP port.

The operator interface panel shall show system status, and shall provide the operator with convenient soft screen touch keys for the entry of pass codes, set points, and commands. Screen menu keys shall produce instructional screens that will guide the operator in set point entry and alarm diagnosis. Multi-level password protection shall be available to prevent unauthorized set point changes. All information displayed on the screen shall be in plain English and simple graphic representations of the system components. An alarm log shall be provided at the operator interface. This screen shall allow the user to view a summary of a minimum of 20 alarm occurrences. The screen shall show the time and date at the onset of the alarm.

The operator interface shall consist of an 800 x 600 pixel, color transmissive, TFT active matrix LCD with backlight. The viewing area shall be a minimum of 5.55" x 4.16". The touch panel shall be sealed from dirt & moisture and shall not exhibit parallax within the viewing angle.

Statistical Display Screen:

- Pump Status (Off/Running/Alarm) (Each Pump)
- Pump Running Hours (Each Pump)
- Wet-Well Level
- Alarm Conditions
- Transducer Failure

Set-Point Screens:

- Level Set-Points
- Alarm Set-Points

Both the transducer and mechanical floats shall incorporate intrinsically safe barriers to maintain a class 1 division 1 safe operation.

Provide support brackets as required or shown on the drawings.

Traffic Enclosure (PAINTED STEEL GREEN IN COLOR):

The control panel and all above mentioned equipment shall be mounted in a free standing, pad mounted traffic type, NEMA-3R module painted steel (painted green in color). In addition to the control panel, the traffic box shall include a manual transfer switch with a generator receptacle and a dual 120 volt AC GFI convenience outlet. A meter socket shall be supplied and mounted by the contractor.

Float Switch Back-up System:

Sealed float type mechanical switches shall be supplied for back-up in case of transducer failure. The mechanical tube switches shall be sealed in a solid polyurethane float for corrosion and shock resistance. The support wire shall have heavy neoprene jacket and a weight shall be attached to the cord above the float to hold switch in place in sump. The weight shall be above the float to prevent sharp bends in the cord when the float operates under water. The float switches shall hang in the sump supported only by the cord that is held to the wiring channel. Four (4) float switches shall be used to control level. One for pump turn-on lead pump, one for turn on lag pump, One for Override and one for high water alarm, and one for pump turn-off. Float switches shall be Model No. 2900.

High Water Alarm:

A high water alarm light shall be supplied for mounting on the control box. Alarm light shall glow bright and flash under alarm conditions. Alarm light shall have reset button. Contacts shall be supplied for separate remote alarm in building.

EQUIPMENT RESPONSIBILITY

All controls, pumps, and motors shall be furnished by one equipment supplier. The equipment supplier shall have responsibility for the complete and proper operation of the new and existing pumping equipment, control equipment, and program as specified and furnished. The system supplier shall furnish 24-hour service for the complete system, and shall stock all parts used of the installation. Start-up services shall be included, and shall include operating instruction to the operators. The equipment shall be as manufactured and furnished by Metropolitan Equipment Co. (Division of Metropolitan Pump Co., Romeoville, IL.) or equal.

SHOP DRAWINGS

The contractor shall submit a minimum of one (1) one electronic copy of all drawings to the engineer for approval. Of these, two copies will be returned to the contractor with appropriate action taken. Receipt of less than the minimum required number of copies will be cause for withholding the shop drawings from being checked until receipt of the necessary additional copies. Each set of shop drawings shall include, but not necessarily be limited to:

-Drawings showing dimensions of all equipment. Control details and electrical schematic diagrams. Performance data including, when applicable, pump curves, and motor data.

-All other information necessary to enable the engineer to determine whether the proposed equipment meets the requirements.

INSTALLATION AND OPERATING INSTRUCTIONS

One (1) electronic copy of a manual, containing installation instructions, operating instructions, wiring diagrams, parts list, and, where applicable, test data and curves shall be provided.

The contractor shall provide the services of factory-trained representative for a maximum period of one (1) day to start up the station and to instruct the owner=s operating personnel in the operation and maintenance of the equipment provided.

WARRANTY

The manufacturer shall warrant his product to be free from defects in workmanship for a period of one (1) year from date of completion.

Warranties and guarantees by the suppliers of various components in lieu of a single source responsibility by the contractor shall not be accepted. The contractor shall be solely responsible for the warranty.

In the event a component failure to perform as specified or is proven defective in service during the warranty period, excluding items of supply normally expended during operation, the manufacturer shall provide a replacement part without cost to the owner.

This warranty shall be valid only if the product is installed, serviced, and operated under normal conditions, in accordance with the manufacturer instructions.

EQUIPMENT MANUFACTURER

In order to establish a standard of quality and to insure a uniform basis of bidding, pump station equipment shall be supplied by Metropolitan Pump Company or a written approval equal.

To be considered an approved equal, complete details and shop drawings must be submitted to the engineer no later than ten (10) days prior to the bid date. Sufficient data must be submitted so that the engineer has the required information available to determine that the alternate station meets the required specifications.

The contractor shall prepare his bid on the basis of the specific equipment and materials specified for purpose of determining the low bid.

After the execution of the contract, substitution of non-specified equipment will be considered, if the substitution is, in the opinion of the engineer, equal in quality to that named. If such substitution is approved by the engineer, all savings affected by the contractor in the purchase of the substituted equipment shall be passed on to the owner by reducing the contract price. In submitting for substitution, the contractor shall provide certified copies of equipment proposals from the named manufacturer.

ANDY BESHEAR
GOVERNOR



REBECCA W. GOODMAN
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

September 14, 2020

Mr. Luther Conlay
3243 Frankfort Pike
Georgetown, KY 40324

RE: Scheduled Inspection
ID of Dam: KY00459
LONGVIEW GOLF COURSE LAKE NO 1
Scott County
Hazard Class: LOW
Agency Interest: 8083
Activity: CIN20200001

Dear Mr. Luther Conlay:

Energy and Environment Cabinet, Division of Water (Division) is responsible for performing safety inspections of dams in Kentucky. Kentucky Revised Statutes Chapter 151 and associated regulations establish minimum maintenance and design criteria for dams. KRS 151.125 gives the Division authority to require any measures necessary to bring the dam into compliance with statutes and regulations.

As the owner you are required to operate and maintain the dam to ensure public safety. On September 1, 2020, personnel from the Division inspected the above referenced structure. A copy of the inspection report is enclosed. Based on our visual inspection of the dam, the following deficiencies must be corrected:

- Remove all trees, saplings, and brush off the dam.
- Mow tall grass on the dam.
- Be advised that any construction activity on a 'regulated' dam in Kentucky require a permit from the Division of Water before work can begin. Failure to obtain a permit prior to construction activity will result in enforcement action and could result in fines and penalties being levied.

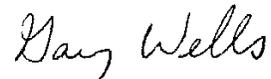
The dam should be inspected regularly as part of a good preventative maintenance program and the following maintenance items should be given attention:

- The dam should be kept mowed to facilitate visual inspection to identify any possible structural issues with the dam. Brush and weeds must be controlled. A grass height of 8 to 12 inches is optimal for maintenance of the vegetative cover. The dam should be mowed a minimum of 3 times per growing season, monthly is preferred.
- The drawdown system should be inspected and operated. If this is not possible, any damaged or worn components should be repaired or replaced. Regular operation and maintenance of the valves and gates will ensure proper operation in case of an emergency.
- Vehicle access to the dam should be limited to maintenance activities only. Vehicles can damage the structure and are also a public safety issue.
- Establish a 25 foot buffer around the dam clear of tree growth to prevent damage to the dam from downed trees, root systems growing into the embankment, and tree canopy shading the grass cover.

This structures is currently capable of passing/storing 7.5 in/6hr rainfall without overtopping in 2020 hydraulic analysis. The requirement for a Low Hazard dam in Scott County is 7.1 in/6hr. This dam is hydraulically compliant.

If you have any questions concerning this matter, please contact me at 502-782-7128 or gary.wells@ky.gov.

Sincerely,

A handwritten signature in cursive script that reads "Gary Wells".

Gary Wells, P.E.
Dam Safety Section
Division of Water

Enclosure

ANDY BESHEAR
GOVERNOR



REBECCA W. GOODMAN
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

February 12, 2021

Delivered via Email

Mr. Joe Arnold
Whitaker Bank Corporation of Kentucky
101 W. Main Street
Georgetown, KY 40324

RE: Scheduled Inspection
ID of Dam: KY00460
LONGVIEW GOLF COURSE LAKE NO 2
Scott County
Hazard Class: LOW
Agency Interest: 8083
Activity: CIN20210001

Dear Mr. Joe Arnold:

The Energy and Environment Cabinet, Division of Water (Division) is responsible for performing safety inspections of dams in Kentucky. Kentucky Revised Statutes Chapter 151 and associated regulations establish minimum maintenance and design criteria for dams. KRS 151.125 gives the Division authority to require any measures necessary to bring the dam into compliance with statutes and regulations.

As the owner you are required to operate and maintain the dam to ensure public safety. On January 14, 2021, personnel from the Division inspected the above referenced structure. A copy of the inspection report is enclosed. Based on our visual inspection of the dam, the following deficiencies must be corrected:

- Remove all trees, tall brush, and thick vegetation on dam.
- Increase spillway capacity to pass more flows or risk overtopping and possible embankment failure.
- Repair operation of principal spillway inlet and outlet pipe.
- Reestablish upstream slope with wave protection.

As part of a good preventative maintenance program, the dam should be inspected regularly and the following maintenance items should be given attention:

- Dam should be kept mowed to facilitate visual inspection to identify any possible structural issues with the dam. Brush and weeds must be controlled. Dam should be mowed a minimum of 3 times per growing season, monthly is preferred.
- Dam should be reseeded with a perennial sod-forming grass to protect the slopes and crest from erosion.
- Drawdown system should be inspected and operated. If this is not possible, any damaged or worn components should be repaired or replaced. Regular operation and maintenance of the valves and gates will ensure proper operation in case of an emergency.

- Monitor the seepage for any significant increase in flow or change in color. Report any significant changes to this office. Uncontrolled seepage can erode the embankment internally and lead to eventual failure of the dam.
- Establish a 25 foot buffer around the dam clear of tree growth to prevent damage to the dam from downed trees, root systems growing into the embankment, and tree canopy shading the grass cover.

If you have any questions concerning this matter, please contact me at 502-782-7128 or gary.wells@ky.gov.

Sincerely,



Gary Wells, P.E.
Dam Safety Section
Division of Water

Enclosure

KY DOW Dam Condition Assessment				
NID ID (KY00000): KY00460 Dam Name: Longview Golf Course Lake No 2 Hazard Classification: Low Dam Owner: Whitaker Bank - Contact: Joe Arnold Assessment by: Gary Wells Date of Assessment: 10-Feb-2021		Overall Condition Assessment: POOR		
Assessment answers are placed in orange fields Green fields are calculated by the sheet				
Metric	Instructions	Comments	Result	Assessment
Hydraulic Capacity	Enter the dam's hydraulic capacity expressed as a percentage of the design storm required by 401 KAR 4.030. Not enough data = 0 >=95% = SATISFACTORY, 80%<95% = FAIR, <80% = POOR	Dam is capable of passing 5.5 in/hr storm without overtopping in 2021 SITES analysis. Low hazard dams in Scott County are required to meet 7.1 in/hr design rainfall. This meets 77% of the required storm. Dam is NOT hydraulically compliant.	77	POOR
Stability Criteria	Does the dam meet the stability requirements of 401 KAR 4.030? Not enough data = "Unknown" Low Hazard = "Not Required" *Pre-regulation structures and older structures with no recorded stability issues can be considered compliant - rate as "Prereg - no issues"	Not required for a low hazard structure	N/A	POOR
Maintenance	Is the dam being properly maintained? Select assessment for each of the following based on NID definitions and the following:	No, dam is not being properly maintained		
Surface Condition	Assess the condition of the surface of embankment dams (grass, rip rap, concrete, erosion, etc.) or concrete condition on concrete dams. SATISFACTORY: Well maintained, only minor deficiencies that are new FAIR: Dam has some maintenance deficiencies beyond minor issues, or issues are continuous POOR: Dam has significant/repetitive maintenance deficiencies that could affect the stability/integrity of the structure UNSATISFACTORY: Dam has severe maintenance deficiencies that are causing the condition of the dam to deteriorate, immediate remediation is required, emergency action may be required	Poor, dam is overgrown with thick brush and trees. These significant maintenance deficiencies could affect stability of structure		POOR
Trees	ASSESSES THE DAM FOR TREES: SATISFACTORY: No trees FAIR: A few small trees that can be cut flush and do not have large root systems POOR: Dam has a significant amount of trees and/or the trees are large enough to need total removal, including root system excavation UNSATISFACTORY: Dam is completely overgrown with trees that are severely impacting the safety of the structure (causing seepage/piping, voids, etc.)	Trees on dam		POOR
Spillways	Are the spillways clear, functional, and in good condition: SATISFACTORY: Well maintained, only minor deficiencies that are new FAIR: Dam has some maintenance deficiencies beyond minor issues, or issues are continuous POOR: Dam has significant/repetitive maintenance deficiencies that could affect the stability/integrity of the structure UNSATISFACTORY: Dam has severe maintenance deficiencies that are causing the condition of the dam to deteriorate, immediate remediation is required, emergency action may be required	Principal spillway pipe is plugged raising water level. Auxiliary spillway is running continuously and significant rainfall will overtop dam.		POOR
Drawdown	Is the drawdown system in place, functional, and in good condition: SATISFACTORY: Yes, operated recently FAIR: Appears to be functional, but has not been operated recently POOR: Damaged or inoperable UNSATISFACTORY: Severely damaged to the point of imminent component failure	Drawdown is in pump house located on bank of upper lake		POOR
Drainage System	Assess the internal drainage system: SATISFACTORY: Well maintained and functional FAIR: Some deficiencies beyond minor issues, or issues are continuous POOR: Significant/repetitive deficiencies that could affect the stability/integrity of the structure UNSATISFACTORY: Severe deficiencies that are causing the condition of the dam to deteriorate, strong/muddy flow, immediate remediation is required, emergency action may be required	Principal spillway pipe is plugged raising water level and causing auxiliary spillway to run continuously		POOR
Other Maintenance	Assess any other items of maintenance: SATISFACTORY: Well maintained, only minor deficiencies that are new FAIR: Dam has some maintenance deficiencies beyond minor issues, or issues are continuous POOR: Dam has significant/repetitive maintenance deficiencies that could affect the stability/integrity of the structure UNSATISFACTORY: Dam has severe maintenance deficiencies that are causing the condition of the dam to deteriorate, immediate remediation is required, emergency action may be required	Dam is overgrown with trees and thick brush		POOR
Structural Condition	Do any significant stability/structural issues exist that COULD threaten the stability of the dam? (Slope stability, seepage, cracks, concrete/metal deterioration, differential movement, etc.)	Auxiliary spillway runs continuously because pipe is inoperable. Water level can overtop dam from significant rainfall	Yes	POOR
	Do any stability/structural issues exist that are causing an imminent threat to the stability of the dam and, if unaddressed, could likely cause failure of the dam? (Slope stability, seepage, cracks, concrete/metal deterioration, differential movement, etc.)	No stability/structural issues exist that could cause an imminent threat to the stability of the dam	No	SATISFACTORY

NATIONAL INVENTORY OF DAMS

CONDITION ASSESSMENT

Assessment that best describes the condition of the dam based on available information.

Satisfactory:
Fair;
Poor;
Unsatisfactory
Not Rated.

A dam safety deficiency is defined as a load capacity limit or other issue that can result in a failure of the dam or appurtenant structure. It is a characteristic or condition that does not meet the applicable minimum regulatory criteria. Condition Assessment definitions, as accepted by the National Dam Safety Review Board, are as follows:

SATISFACTORY

No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions (static, hydrologic, seismic) in accordance with the minimum applicable state or federal regulatory criteria or tolerable risk guidelines.

Typical Circumstances:

- No existing deficiencies or potentially unsafe conditions are recognized, with the exception of minor operational and maintenance items that require attention.
- Safe performance is expected under all loading conditions including the design earthquake and design flood.
- Permanent risk reduction measures (reservoir restrictions, spillway modifications, operating procedures, etc) have been implemented to eliminate identified deficiencies.

FAIR

No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action. Note: Rare or extreme event is defined by the regulatory agency based on their minimum applicable state or federal criteria.

Typical Circumstances:

- Lack of maintenance requires attention to prevent developing safety concerns.
- Minor maintenance conditions may exist that require remedial action greater than routine work and/or secondary studies or investigations.
- Interim or permanent risk reduction measures may be under consideration.

POOR

A dam safety deficiency is recognized for normal operational loading conditions which may realistically occur. Remedial action is necessary. POOR may also be used when uncertainties exist as to critical analysis parameters which identify a potential dam safety deficiency. Further investigations and studies are necessary. Note: Normal operations are defined as loading on the dam resulting from day-to-day pool operations to achieve authorized purposes in accordance with minimum state or federal regulatory criteria.

Typical Circumstances:

- Dam has multiple deficiencies or a significant deficiency that requires extensive remedial work.
- Lack of maintenance (erosion, sinkholes, settlement, cracking, unwanted vegetation, animal burrows, inoperable outlet gates) has affected the integrity or the operation of the dam under normal operational conditions and requires major maintenance work or remedial action to resolve.
- Critical design information is needed to evaluate the potential performance of the dam. For example, a field observation or a review of the dam's performance history has identified a question that can only be answered by review of the design and construction history for the dam. Uncertainty arises when there is no design and/or construction documentation available for review and additional analysis is needed to better understand the risk associated with operation under normal operational loading conditions.
- Interim or permanent risk reduction measures may be under consideration.

UNSATISFACTORY

A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.

Typical Circumstances:

- Critical component of the dam has deteriorated to unacceptable condition or failed.
- A safety inspection indicates major structural distress (excessive uncontrolled seepage, cracks, slides, sinkholes, severe deterioration, etc.), advanced deterioration, or operational deficiencies which could lead to failure of the dam or its appurtenant structures under normal operating conditions.
- Reservoir restrictions or other interim risk reduction measures are required.
- A partial or complete reservoir drawdown may be mandated.



ANDY BESHEAR
GOVERNOR

REBECCA W. GOODMAN
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

May 8, 2020

Bluegrass Water Utility Operating Company
River Bluffs WWTP
13121 Creekview Rd
Prospect, KY 40059

RE: **Change of Ownership**
Agency Interest # 3367
KPDES Permit #: KY0043150
Location: Jefferson County, Kentucky

Dear Mr. Freeman and Mr. Cox:

The Division of Water received your request for modification of the Kentucky Pollutant Discharge Elimination System (KPDES) coverage for the above-referenced facility. The KPDES permit has been modified to reflect the change of ownership.

If you have any questions, please contact me at [502-782-1363](tel:502-782-1363), or via e-mail at joy.haden@ky.gov.

Sincerely,

A handwritten signature in black ink that reads "Joy Haden".

Joy Haden
Surface Water Permits Branch
Division of Water

Enclosure

KPDES



**KENTUCKY POLLUTANT
DISCHARGE ELIMINATION
SYSTEM**

PERMIT TRANSFER

**TRANSFER OF
AUTHORIZATION TO DISCHARGE UNDER THE
KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM**

PERMIT NO.: [KY0043150](#)

AGENCY INTEREST NO.: [3367](#)

Pursuant to Authority in KRS 224, this permit for:

New Facility Name: [River Bluffs WWTP](#)
Facility Address: [13121 Creekview Rd](#)
[Prospect, Jefferson County, Kentucky](#)

Prior Owner: [River Bluffs Inc](#)
Address: [5501 West Hwy 524](#)
[Westport, KY 40077](#)

is hereby transferred to:

New Owner: [Bluegrass Water Utility Operating Company](#)
Mailing Address: [1650 Des Peres Rd. Ste 303](#)
[St Louis, MO 63131](#)

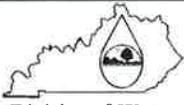
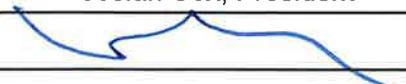
in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

The effective date of this permit transfer is May 8, 2020.

[May 8, 2020](#)

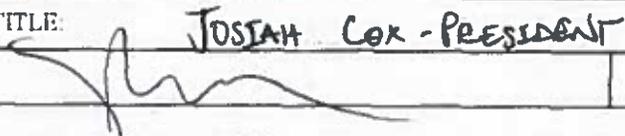
Date Signed

Jason Hurt, Acting Director
Division of Water

Form TPR	TRANSFER OF PERMIT REQUEST Kentucky Pollutant Discharge Elimination System (KPDES)		 Division of Water
NAME OF FACILITY: River Bluffs Subdivision	AGENCY USE ONLY	AI: 3367	
PERMIT NO.: KY0043150	COUNTY: Oldham		Received 5-6-2020 JH
I. CURRENT PERMITTEE INFORMATION (Existing permit holder)			
Name of Current Permittee: River Bluffs Inc			
Facility Location Address (Street, road, etc.): 5501 West Highway 524		← Please see email in greybar with address correction.	
Facility City, State, Zip Code: Westport, KY 40077			
II. PROPOSED OWNER OR OPERATOR INFORMATION			
Name of Proposed Permittee and Official Title: Josiah Cox, President			
NEW Name of Facility (if applicable): River Bluffs WWTF			
NEW Name of Company (if applicable): Bluegrass Water Utility Operating Company			
Proposed Permittee Mailing Address: 1650 Des Peres Rd., Suite 303			
Proposed Permittee City, State, Zip Code: St. Louis, MO 63131			
Proposed Permittee Telephone Number: (314) 380-8512			
Proposed Permittee Email Address: jcox@cswrgroup.com			
NetDMR Official Contact for Proposed Permittee: Kaleb Stephens			
NetDMR Official Contact Telephone Number: (715) 790-2559			
NetDMR Official Contact Email Address: kstephens@cswrgroup.com			
III. NOTIFICATION BY CURRENT PERMITTEE			
<input checked="" type="checkbox"/> Effective Date of Transfer of Permit Ownership: 5/1/20			
<input type="checkbox"/> Attach a signed copy of the contractual written agreement between the existing permittee and new proposed permittee containing a specific date for transfer of the permit responsibility, coverage, and liability between them.			
PRINTED NAME AND TITLE:			
SIGNATURE:			DATE:
IV. ACKNOWLEDGEMENT BY NEW PERMITTEE			
I hereby certify that I agree to the transfer of the permit, and I will assume ownership and all responsibility for meeting the permit conditions relating to water quality at the permitted facility listed above on the effective date of transfer indicated.			
PRINTED NAME AND TITLE: Josiah Cox, President			
SIGNATURE: 			DATE: 5/6/20

Return completed application form and attachments to: Division of Water, Surface Water Permits Branch, 300 Sower Boulevard, 3rd Floor, Frankfort, KY 40601. Direct questions to: Surface Water Permits Branch at (502) 564-3410.

AI-8083

Form TPR		TRANSFER OF PERMIT REQUEST Kentucky Pollutant Discharge Elimination System (KPDES)		 Division of Water	
NAME OF FACILITY: Schinola Treatment Plant			AGENCY USE ONLY		
PERMIT NO.: KY0081591			COUNTY: Scott		
I. CURRENT PERMITTEE INFORMATION (Existing permit holder)					
Name of Current Permittee: Longview Land Co. LLC					
Facility Location Address (Street, road, etc.): 3243 Frankfort Rd					
Facility City, State, Zip Code: Georgetown, KY 40324					
II. PROPOSED OWNER OR OPERATOR INFORMATION					
Name of Proposed Permittee and Official Title: Josiah Cox, President					
NEW Name of Facility (if applicable): LH WWTF					
NEW Name of Company (if applicable): Blugrass Water Utility Operating Company, LLC					
Proposed Permittee Mailing Address: 500 Northwest Plaza Dr. Suite 500					
Proposed Permittee City, State, Zip Code: St. Ann, MO 63074					
Proposed Permittee Telephone Number: (314) 736-4672					
Proposed Permittee Email Address: jcox@cswwgroup.com					
NetDMR Official Contact for Proposed Permittee: Kaleb Stephens					
NetDMR Official Contact Telephone Number: (715) 790-2559					
NetDMR Official Contact Email Address: kstephens@cswwgroup.com					
III. NOTIFICATION BY CURRENT PERMITTEE					
<input type="checkbox"/> Effective Date of Transfer of Permit Ownership:					
<input checked="" type="checkbox"/> Attach a signed copy of the contractual written agreement between the existing permittee and new proposed permittee containing a specific date for transfer of the permit responsibility, coverage, and liability between them.					
PRINTED NAME AND TITLE:					
SIGNATURE:				DATE:	
IV. ACKNOWLEDGEMENT BY NEW PERMITTEE					
I hereby certify that I agree to the transfer of the permit, and I will assume ownership and all responsibility for meeting the permit conditions relating to water quality at the permitted facility listed above on the effective date of transfer indicated.					
PRINTED NAME AND TITLE:					
SIGNATURE: 				DATE: 9/25/19	

Return completed application form and attachments to: Division of Water, Surface Water Permits Branch, 300 Sower Boulevard, 3rd Floor, Frankfort, KY 40601. Direct questions to: Surface Water Permits Branch at (502) 564-3410.



MATTHEW G. BEVIN
GOVERNOR

CHARLES G. SNAVELY
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

September 27, 2019

Bluegrass Water Utility Operating Company LLC
LH WWTF
500 Northwest Plaza Dr Ste 500
Saint Ann, MO 63074

RE: **Change of Ownership**
Agency Interest # 8083
KPDES Permit #: KY0081591
Location: Scott County, Kentucky

Dear Mr. Cox:

The Division of Water received your request for modification of the Kentucky Pollutant Discharge Elimination System (KPDES) coverage for the above-referenced facility. The KPDES permit has been modified to reflect the change of ownership.

If you have any questions, please contact me at (502) 564-3410, or via e-mail at Joy.Haden@ky.gov.

Sincerely,

Joy Haden
Surface Water Permits Branch
Division of Water

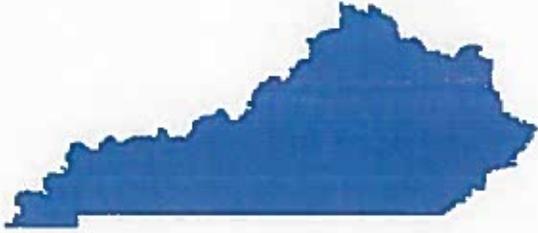
JH: jh

Enclosure

C: ARM



KPDES



**KENTUCKY POLLUTANT
DISCHARGE ELIMINATION
SYSTEM**

PERMIT TRANSFER

**TRANSFER OF
AUTHORIZATION TO DISCHARGE UNDER THE
KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM**

PERMIT NO.: KY0081591

AGENCY INTEREST NO.: 8083

Pursuant to Authority in KRS 224, this permit for:

New Facility Name: Longview Country Club
Facility Address: 3243 Frankfort Pike
Georgetown, Scott County, Kentucky

Prior Owner: Longview Land Company LLC
Address: 3243 Frankfort Rd
Georgetown, KY 40324

is hereby transferred to:

New Owner: Bluegrass Water Utility Operating Company LLC
Mailing Address: 500 Northwest Plaza Dr Ste 500
Saint Ann, MO 63074

in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

The effective date of this permit transfer is September 27, 2019.

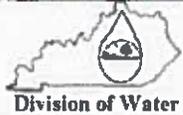
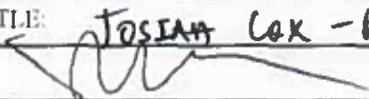
September 27, 2019

Date Signed

A handwritten signature in black ink that reads "Sara J. Anderson".

**Peter T. Goodmann, Director
Division of Water**

AI: 3955

Form TPR		TRANSFER OF PERMIT REQUEST Kentucky Pollutant Discharge Elimination System (KPDES)		 Division of Water	
NAME OF FACILITY: Persimmon Ridge			AGENCY USE ONLY		
PERMIT NO.: KY0090956			COUNTY: Shelby		
I. CURRENT PERMITTEE INFORMATION (Existing permit holder)					
Name of Current Permittee: PR Wastewater Management, Incorporated					
Facility Location Address (Street, road, etc.): 72 Persimmon Ridge Drive					
Facility City, State, Zip Code: Louisville, KY 40245					
II. PROPOSED OWNER OR OPERATOR INFORMATION					
Name of Proposed Permittee and Official Title: Josiah Cox, President					
NEW Name of Facility (if applicable): Persimmon Ridge WWTF					
NEW Name of Company (if applicable): Bluegrass Water Utility Operating Company, LLC					
Proposed Permittee Mailing Address: 500 Northwest Plaza Dr. Suite 500					
Proposed Permittee City, State, Zip Code: St. Ann, MO 63074					
Proposed Permittee Telephone Number: (314) 736-4672					
Proposed Permittee Email Address: jcox@cswrgroup.com					
NetDMR Official Contact for Proposed Permittee: Kaleb Stephens					
NetDMR Official Contact Telephone Number: (715) 790-2559					
NetDMR Official Contact Email Address: kstephens@cswrgroup.com					
III. NOTIFICATION BY CURRENT PERMITTEE					
<input type="checkbox"/> Effective Date of Transfer of Permit Ownership:					
<input type="checkbox"/> Attach a signed copy of the contractual written agreement between the existing permittee and new proposed permittee containing a specific date for transfer of the permit responsibility, coverage, and liability between them.					
PRINTED NAME AND TITLE:					
SIGNATURE:			DATE:		
IV. ACKNOWLEDGEMENT BY NEW PERMITTEE					
I hereby certify that I agree to the transfer of the permit, and I will assume ownership and all responsibility for meeting the permit conditions relating to water quality at the permitted facility listed above on the effective date of transfer indicated.					
PRINTED NAME AND TITLE: <u>JOSIAH COX - PRESIDENT</u>					
SIGNATURE: 			DATE: <u>9/16/19</u>		

Return completed application form and attachments to: Division of Water, Surface Water Permits Branch, 300 Sower Boulevard, 3rd Floor, Frankfort, KY 40601. Direct questions to: Surface Water Permits Branch at (502) 564-3410.



MATTHEW G. BEVIN
GOVERNOR

CHARLES G. SNAVELY
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

September 19, 2019

Persimmon Ridge WWTF
72 Persimmon Ridge Dr
Louisville, KY 40245

RE: **Change of Ownership**
Agency Interest # 3955
KPDES Permit #: KY0090956, KYR10K177
Location: Jefferson County, Kentucky

Dear Mr. Cox:

The Division of Water received your request for modification of the Kentucky Pollutant Discharge Elimination System (KPDES) coverage for the above-referenced facility. The KPDES permit has been modified to reflect the change of ownership.

If you have any questions, please contact me at (502) 564-3410, or via e-mail at Joy.Haden@ky.gov.

Sincerely,

Joy Haden
Surface Water Permits Branch
Division of Water

JH: jh

Enclosure

C: ARM

KPDES



**KENTUCKY POLLUTANT
DISCHARGE ELIMINATION
SYSTEM**

PERMIT TRANSFER

**TRANSFER OF
AUTHORIZATION TO DISCHARGE UNDER THE
KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM**

PERMIT NO.: KY0090956, KYR10K177

AGENCY INTEREST NO.: 3955

Pursuant to Authority in KRS 224, this permit for:

New Facility Name: Persimmon Ridge WWTF
Facility Address: 72 Persimmon Ridge Dr
Louisville, Jefferson County, Kentucky

Prior Owner: PR Wastewater Management Inc
Address: 72 Persimmon Dr
Louisville, KY 40245

is hereby transferred to:

New Owner: Bluegrass Water Utility Operating Company LLC
Mailing Address: 500 Northwest Plaza Dr Ste 500
St Ann, MO 63074

in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

The effective date of this permit transfer is September 19, 2019.

September 19, 2019

Date Signed

A handwritten signature in black ink, appearing to read "Peter T. Goodmann".

**Peter T. Goodmann, Director
Division of Water**

Civil Engineering
Surveying & Mapping
Potable Water
Wastewater Treatment



Civil Site Design
Construction Support
Transportation
Wastewater Collection

December 20, 2019

Wes Dement
Kentucky Department for Environmental Protection
Division of Enforcement
300 Sower Blvd., 3rd Floor
Frankfort, KY 40601

Bluegrass Water Utility Operating Company, Inc.
LH WWTF
KYPDES Permit No. KY0081591
Agency Interest No. 8083
Corrective Action Plan

In light of the LH WWTF's failure to meet permitted limits we submit the following corrective action plan.

BWUOC has recently purchased this treatment plant. With the change of ownership, operational modifications have been implemented and are ongoing. With proper operation, the facility should be capable of meeting permit limits without process modification. Over the next several months, repairs will be made and monitoring will continue in order to confirm that the existing processes can meet permit limits.

1. Causes of the Effluent Violations

- Ammonia (Intermittent)
- Carbonaceous Biological Oxygen Demand (CBOD)
- Total Suspended Solids (TSS) (Intermittent)
- Dissolved Oxygen (DO)
- E. Coli

A review was performed of EPA's Echo compliance website which lists violations. Prior to July 1, 2017, the facility regularly exceeded most of its NPDES permit effluent limits. Improvements were made to the plant by the previous owner to correct the process deficiencies, however the system continued to occasionally exceed limits. In 2018, the facility exceeded limits for CBOD, TRC, E. Coli, Ammonia, DO and TSS at least once for each parameter. The tankage and piping of this facility appears to be efficiently laid out and in good condition with adequate capacity. This would imply that the system exceedances were due to operational issues rather than capacity of the facility. Since acquisition by BWUOC the facility has been meeting permit limits.

2. System Evaluation and Corrective Actions

The facility is currently meeting permit limits. As mentioned above, previous ownership had made improvements to the facility and now BWUOC has improved operations, allowing the plant to meet limits it

Civil Engineering
Surveying & Mapping
Potable Water
Wastewater Treatment



Civil Site Design
Construction Support
Transportation
Wastewater Collection

previously violated. Operations staff will continue to make adjustments and monitor the plant to ensure a quality effluent is maintained.

A Mission remote monitoring system and magnetic flow meter will be installed to provide real time monitoring of the facility. This will improve capabilities to monitor the effect of inflow and infiltration and status of the facility. A Mission monitoring system will also be installed on the lift station. The monitoring system will improve operations and maintain reliable service for the customers.

Inflow and Infiltration is a known problem within this system. Flow monitoring will help determine the extents of I and I, but further investigation is needed. The collection system will be evaluated using a multi-step process. The first two steps are to smoke test and then to clean and jet the system. These tasks have been completed. The results of these two processes allow problem areas to be identified and targeted for repair/replacement. Results are being reviewed to establish an I and I improvement plan for the collection system. This will improve all aspects of the treatment process.

3. Project Milestones

- Continue monitoring performance of facility (May 31, 2020)
- Install new magnetic flow meter and Mission monitoring systems (March 31, 2020)
- Submit status report detailing improvements and whether process changes are required (May 31, 2020)

Sincerely

A handwritten signature in blue ink that reads 'Benjamin Kuenzel'.

Benjamin Kuenzel, PE
Principal of 21 Design Group, Inc.

Civil Engineering
Surveying & Mapping
Potable Water
Wastewater Treatment



Civil Site Design
Construction Support
Transportation
Wastewater Collection

December 20, 2019

Wes Dement
Kentucky Department for Environmental Protection
Division of Enforcement
300 Sower Blvd., 3rd Floor
Frankfort, KY 40601

Bluegrass Water Utility Operating Company, Inc.
LH WWTF
KYPDES Permit No. KY0081591
Agency Interest No. 8083
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Civil Engineering
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Sincerely

A handwritten signature in blue ink that reads 'Benjamin Kuenzel'.

Benjamin Kuenzel, PE
Principal of 21 Design Group, Inc.



BLUEGRASS WATER

Utility Operating Company

A CSWR Managed Utility

July 29, 2020

Michael Kroeger (CC. Wesley Dement)
Kentucky Department for Environmental Protection
Division of Enforcement
300 Sower Blvd., 3rd Floor
Frankfort, KY 40601

Bluegrass Water Utility Operating Company, Inc.
LH Treatment WWTF
KYPDES Permit No. KY0081591
Agency Interest No. 8083

Corrective Action Plan Revision:

I am pleased to submit this update to the Corrective Action Plan for the LH Treatment WWTF approved by EEC/DEP on 12/20/2019. The scope of the original CAP was completed within the projected schedule of the CAP. Triage and repair work has been completed and the aeration plant is in better shape than it was at acquisition.

Significant improvements have been made to the LH Treatment facility. Handrails have been installed around the treatment basins to ensure safe operation. Damaged components of the aeration and clarification system have been repaired or replaced to ensure proper treatment can occur. The collapsing chlorine shack has been replaced to ensure proper disinfection can continue and proper containment for the chlorine solution to prevent spills. The facility is mostly meeting limits, but has had some issues with pin floc formation leading to E.Coli exceedances. Adjustments are being made that should eliminate this issue. There are some significant I&I issues in one part of the collection system that will be repaired over the next several years, however the plant is in good condition now and doesn't immediately require further improvements.

Sincerely,

JON MEANY

Utility Engineer

 (314) 380-8537 Ext. 215
 (314) 482-0342
 (314) 736-4759
 jmeany@cswrgroup.com
 1650 Des Peres Rd., Suite 303,
Des Peres, MO 63131



BLUEGRASS WATER

Utility Operating Company

A CSWR Managed Utility

July 29, 2020

Michael Kroeger (CC. Wesley Dement)
Kentucky Department for Environmental Protection
Division of Enforcement
300 Sower Blvd., 3rd Floor
Frankfort, KY 40601

Bluegrass Water Utility Operating Company, Inc.
LH Treatment WWTF
KYPDES Permit No. KY0081591
Agency Interest No. 8083

Corrective Action Plan Revision:

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JON MEANY

Utility Engineer

 (314) 380-8537 Ext. 215
 (314) 482-0342
 (314) 736-4759
 jmeany@cswrgroup.com
 1650 Des Peres Rd., Suite 303,
Des Peres, MO 63131



ENERGY AND ENVIRONMENT CABINET

Department for Environmental Protection
300 Sower Boulevard
Frankfort, KY 40601



04/02/21

UTP

AT: 163895

DP

LH WWTP
Josiah Cox
500 Northwest Plaza Dr Ste 500
Saint Ann, MO 63074

NIXIE 631 FE 1260 0005/19/21
RETURN TO SENDER
NOT DELIVERABLE AS ADDRESSED
UNABLE TO FORWARD

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UTP
BC: 40601171999
*0170-04208-02-36





41A

ENERGY AND ENVIRONMENT CABINET

Department for Environmental Protection
300 Sower Boulevard
Frankfort, KY 40601

10/26/20

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ZIP 40601

LH WWTP
Josiah Cox
500 Northwest Plaza Dr Ste 500
Saint Ann, MO 63074

NIXIE 631 SE 1 2211/19/20

RETURN TO SENDER
NO SUCH STREET
UNABLE TO FORWARD

BC: 4060171999 *0170-10386-26-42



AI: 103895

DP



Item number	: Default	Size	: Hydromatic - HPGF/HPGFX-300
Service	:	Stages	: 1
Quantity	: 1	Based on curve number	: SUB_G_O_AH_00001_B_4 Rev
Quote number	:		2012-03-23
		Date last saved	: 04 Apr 2022 1:35 PM

Operating Conditions

Flow, rated	: 55.00 USgpm
Differential head / pressure, rated (requested)	: 36.00 ft
Differential head / pressure, rated (actual)	: 37.60 ft
Suction pressure, rated / max	: 0.00 / 0.00 psi.g
NPSH available, rated	: Ample
Site Supply Frequency	: 60 Hz

Performance

Speed criteria	: Synchronous
Speed, rated	: 1750 rpm
Impeller diameter, rated	: 7.75 in
Impeller diameter, maximum	: 8.00 in
Impeller diameter, minimum	: 7.00 in
Efficiency	: -
NPSH required / margin required	: - / 0.00 ft
nq (imp. eye flow) / S (imp. eye flow)	: 24 / - Metric units
Minimum Continuous Stable Flow	: 15.00 USgpm
Head, maximum, rated diameter	: 46.25 ft
Head rise to shutoff	: 28.22 %
Flow, best eff. point	: -
Flow ratio, rated / BEP	: -
Diameter ratio (rated / max)	: 96.88 %
Head ratio (rated dia / max dia)	: 79.67 %
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00
Selection status	: Acceptable

Liquid

Liquid type	: Water
Additional liquid description	:
Solids diameter, max	: 0.00 in
Solids diameter limit	: 0.00 in
Solids concentration, by volume	: 0.00 %
Temperature, max	: 68.00 deg F
Fluid density, rated / max	: 1.000 / 1.000 SG
Viscosity, rated	: 1.00 cP
Vapor pressure, rated	: 0.34 psi.a

Material

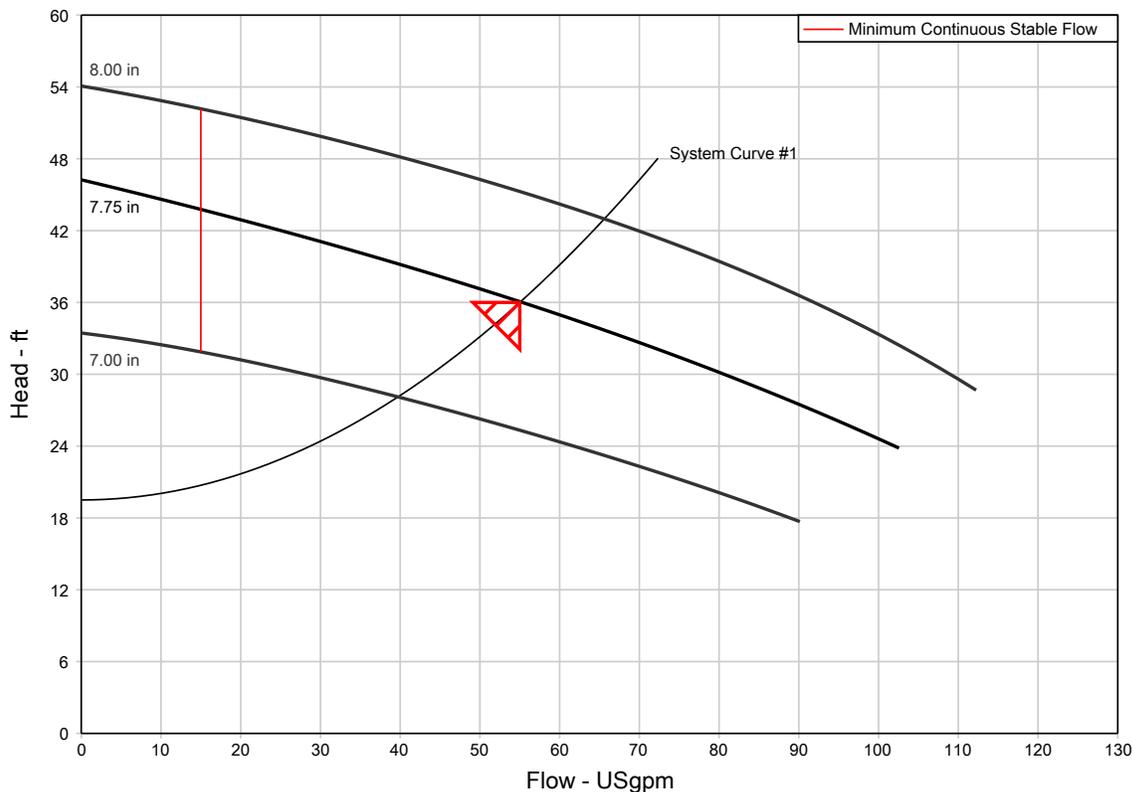
Material selected	: Standard
-------------------	------------

Pressure Data

Maximum working pressure	: 20.01 psi.g
Maximum allowable working pressure	: N/A
Maximum allowable suction pressure	: N/A
Hydrostatic test pressure	: N/A

Driver & Power Data (@Max density)

Driver sizing specification	: Maximum power
Margin over specification	: 0.00 %
Service factor	: 1.00
Power, hydraulic	: 0.50 hp
Power, rated	: 2.95 hp
Power, maximum, rated diameter	: 2.96 hp
Motor rating	: 3.00 hp / 2.24 kW (Fixed)



STATIC:

Highest Point of F.M. (ft): 884.16
Pump "off" Level (ft): 863.94
Static Head: 20.22

STATION LOSSES:

Station "C" Factor: 100
Dia. of Station Piping (in): 2

Number of Fittings		
Items per Pump	Item	Eq. Length
0	Plug	0.0
1	Gate	1.1
0	45 Bends	0.0
0	Long 90	0.0
1	Std 90	5.2

Number of Fittings		
Items per Pump	Item	Eq. Length
1	Std Tee	10.4
0	Short 90	0.0
1	Swing Ck	13.4
0	Angle Val	0.0
0	Globe Val	0.0

Eq. Lgth.due to Fittings (ft) 30.1
Length of Straight Pipe (ft) 19.0
Total Eq. Lgth. of Pipe (ft): **49.1**

Flow (gpm)	15	22	55	55	75	100
Station Loss (ft)	0.53	1.07	5.90	5.82	10.33	17.58
Velocity (ft/sec)	1.53	2.25	5.66	5.62	7.66	10.21

FORCE MAIN LOSSES:

Force Main "C" Factor: 120
Length of Force Main (ft.) 852
Diameter of Force Main (in) 3 Nominal (Based on I.D. Size of F.M.)

Flow (gpm)	15	22	55	55	75	100
F.M. Loss (ft)	0.91	1.84	10.15	10.02	17.79	30.28
Velocity (ft/sec)	0.68	1.00	2.51	2.50	3.40	4.54

SYSTEM HEAD CONDITIONS:

Loss Type	Flow (gpm)					
	15	22	55	55	75	100
Static	20.22	20.22	20.22	20.22	20.22	20.22
Station	0.53	1.07	5.90	5.82	10.33	17.58
Force Main	0.91	1.84	10.15	10.02	17.79	30.28
TDH (ft)	21.66	23.13	36.27	36.06	48.34	68.09

PUMP DESIGN CONDITIONS:

DUPLEX SYSTEM:

Each pump to be rated at: 55 GPM, at a TDH of 36.3 (FT)

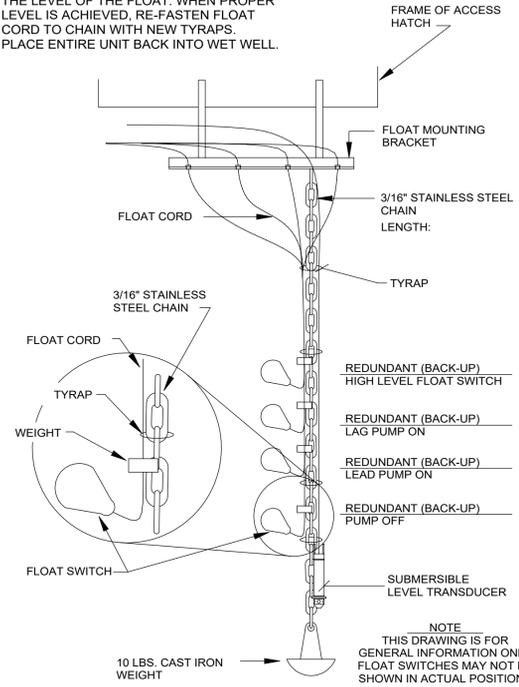
Pump Selection:

Recommended pump is See attached pump curve

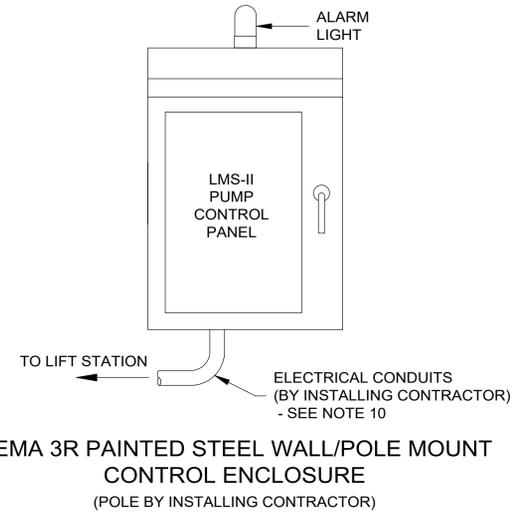
NOTES:

1. THIS DRAWING IS PRELIMINARY LAYOUT ONLY. NOT FOR CONSTRUCTION. CONSTRUCTION DRAWINGS WILL BE FORWARDED UPON RECEIPT OF APPROVED SUBMITTALS.
2. SOME ITEMS NOT SHOWN FOR CLARITY.
3. ADEQUATE LIFTING POINTS TO BE PROVIDED.
4. CONTRACTOR TO FILL INLET HUB WITH GROUT AFTER INSTALLING FIELD PIPING.
5. ALL COMPRESSION COUPLINGS, EPC's & FCA's, TO BE RESTRAINED WITH A MINIMUM OF 2 CONTROL RODS WHEN REQUIRED.
6. LIFT STATION TO BE INSTALLED BY AN EXPERIENCED AND QUALIFIED CONTRACTOR.
7. ALL CONCRETE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR AND/OR ENGINEER TO VERIFY ALL DIMENSIONS, ELEVATIONS, PIPING LAYOUT, AND ORIENTATION OF INLET(S), DISCHARGE AND CONDUIT(S).
9. ELECTRICAL COMPONENTS IN THE WET WELL SHALL BE RATED FOR CLASS I, DIV. 1, GROUP C & D LOCATIONS.
10. CONDUITS ARE AS FOLLOWS: (1) 2" FOR SENSOR CABLES, (1) 2" FOR LEVEL SWITCHES, (1) 2" FOR EACH PUMP POWER CORD (1) 1" FOR TRANSDUCER CABLE AND (1) 1" FOR VALVE VAULT SUMP PUMP POWER.
11. CONTRACTOR TO ORDER CONTROL AND POWER CORDS OF SUFFICIENT LENGTH TO REACH CONTROL PANEL FROM POINT OF ORIGIN ON PUMPS **WITHOUT SPLICING**.

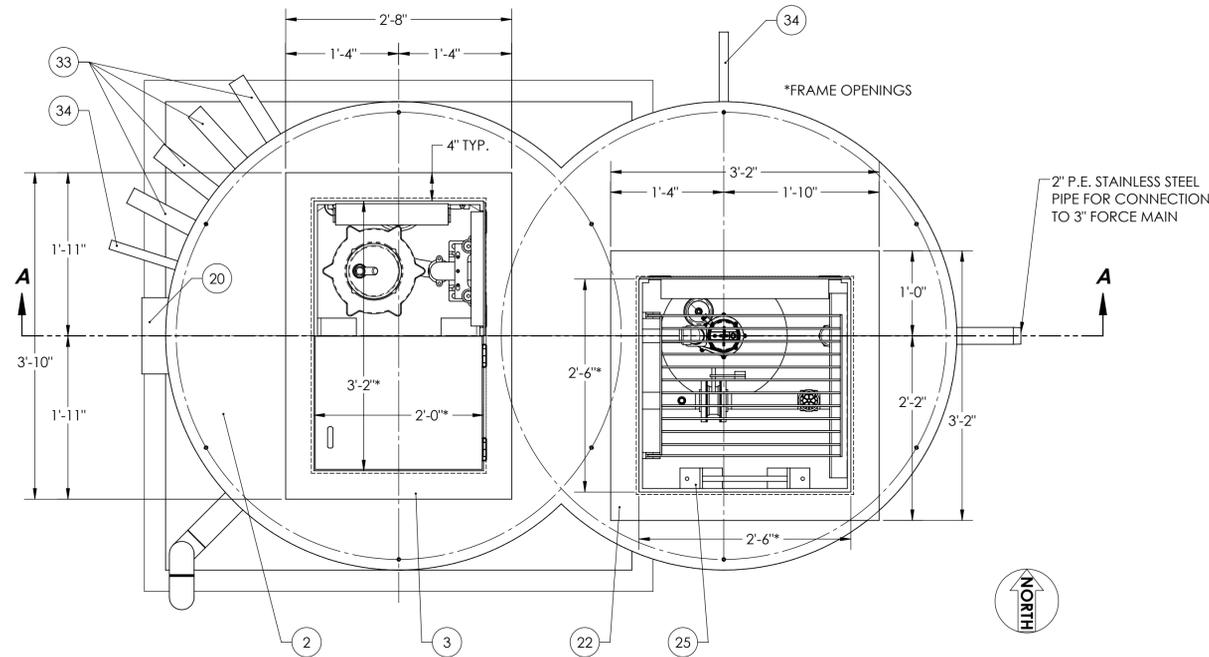
WHEN CHANGING FLOAT LEVELS, PULL CHAIN, ANCHOR, AND FLOATS OUT OF WET WELL. CUT NECESSARY TYRAPS AND READJUST THE LEVEL OF THE FLOAT. WHEN PROPER LEVEL IS ACHIEVED, RE-FASTEN FLOAT CORD TO CHAIN WITH NEW TYRAPS. PLACE ENTIRE UNIT BACK INTO WET WELL.



NOTE
THIS DRAWING IS FOR GENERAL INFORMATION ONLY. FLOAT SWITCHES MAY NOT BE SHOWN IN ACTUAL POSITIONS.



NEMA 3R PAINTED STEEL WALL/POLE MOUNT CONTROL ENCLOSURE
(POLE BY INSTALLING CONTRACTOR)



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	FIBERGLASS WET WELL & VALVE VAULT	5'-0" DIA. x 19'-0" DEEP	1
2	LIFT STATION COVER	1/4" THK. ALUM. PLT.	1
3	R-APD300-24x38	DUPLEX ALUMINUM ACCESS HATCH	1
4	DUPLEX SAFETY GRATE		1
5	UPPER GUIDE RAIL SUPPORT		2
6	IGB-100S	INTERMEDIATE GUIDE RAIL BRACKET, S.S.	2
7	1" GUIDE RAIL	SCHED. 40 STAINLESS STEEL PIPE	8
8	CONERY BERS 0200 BASE ELBOW		2
9	HPGFX	SEWAGE GRINDER PUMP, 2" NPT DISCHARGE	2
10	BERS 0200 SEALING FLANGE ASSEMBLY		2
11	2" RISER	ANSI CLASS 150 FLANGES, STAINLESS STEEL PIPE	2
12	LINK SEAL SLEEVE FOR 2" SCHED. 40 STAINLESS STEEL PIPE		2
13	FLOAT MOUNTING BRACKET	STAINLESS STEEL, TO BE SHIPPED LOOSE - CONTRACTOR TO INSTALL IN FIELD	1
14	FLOAT: OFF LEVEL	METROPOLITAN SUBMERSIBLE LEVEL SWITCH	1
15	FLOAT: ONE PUMP ON	METROPOLITAN SUBMERSIBLE LEVEL SWITCH	1
16	FLOAT: TWO PUMPS ON	METROPOLITAN SUBMERSIBLE LEVEL SWITCH	1
17	FLOAT: ALARM LEVEL	METROPOLITAN SUBMERSIBLE LEVEL SWITCH	1
18	SUBMERSIBLE LEVEL TRANSDUCER	XXXX	1
19	ANCHOR	10lbs CAST IRON, WITH STAINLESS STEEL CHAIN FOR LEVEL CONTROL MOUNTING	1
20	INLET HUB FOR 8" PVC PIPING	SUPPLIED LOOSE, CONTRACTOR TO LOCATE & INSTALL IN FIELD	1
21	LINK SEAL SLEEVE FOR 2" SCHED. 40 STATION DISCHARGE		1
22	R-APS300-30x30	30"x30" OPENING	1
23	SIMPLEX SAFETY GRATE		1
24	1.50" CHECK VALVE	FOR SUMP PUMP	1
25	LADDER	ALUMINUM LADDER	1
26	SH30i	1/3 HP, 115 V SUMP PUMP	1
27	2" WAFER CHECK VALVE	w/ EXTERNAL SPRING, LEVER & WEIGHT, CHAMPION SDX	2
28	2" GATE VALVE	NON-RISING STEM	3
29	1.5" COUPLING 60" ID		1
30	2" COUPLING 60" ID	CONDUIT COUPLINGS	4
31	3" COUPLING 60" ID		1
32	1" COUPLING 60" ID		2
33	2" CONDUIT	BY OTHERS	4
34	1" CONDUIT	BY OTHERS	2
35	CONCRETE FILLET - BY OTHERS	SLOPE 1:1	1
36	3" SCHED. 80 PVC VENT PIPING w/ BUG SCREENING	BY OTHERS	1

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DATE	BY	REVISION	DATE	BY	REVISION
4/20/2022	F.U.	ELEVATIONS			

SCALE: 1:12
DRN. BY: F.U.
DATE: 4/4/2022
APP. BY:

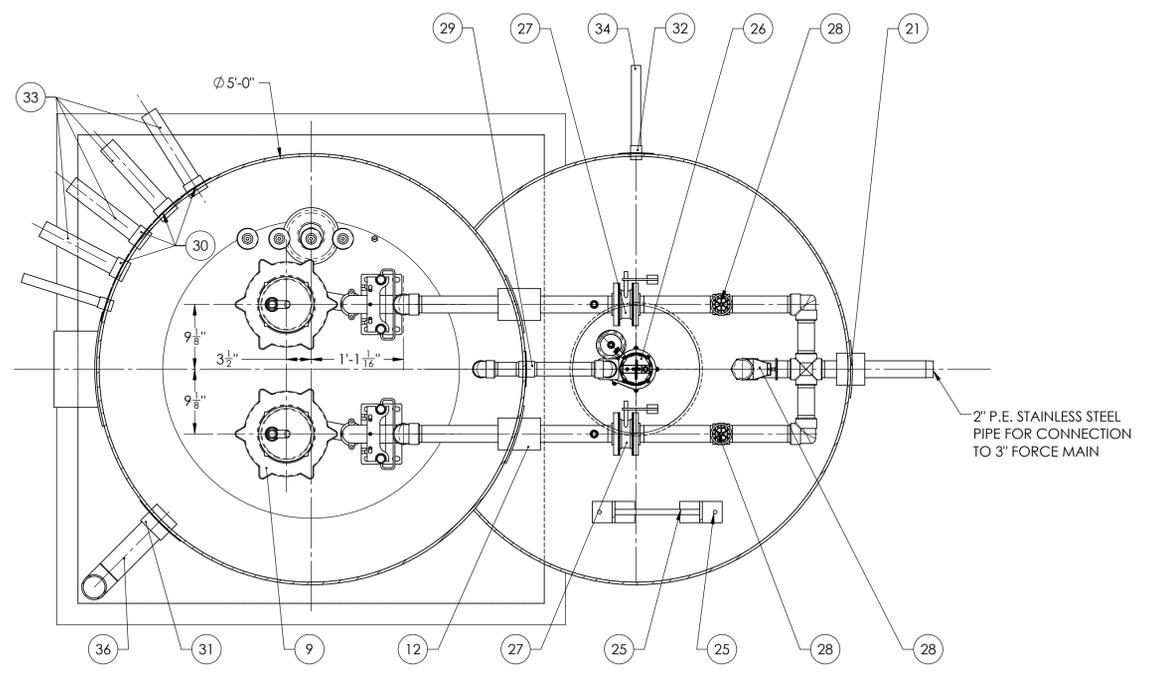
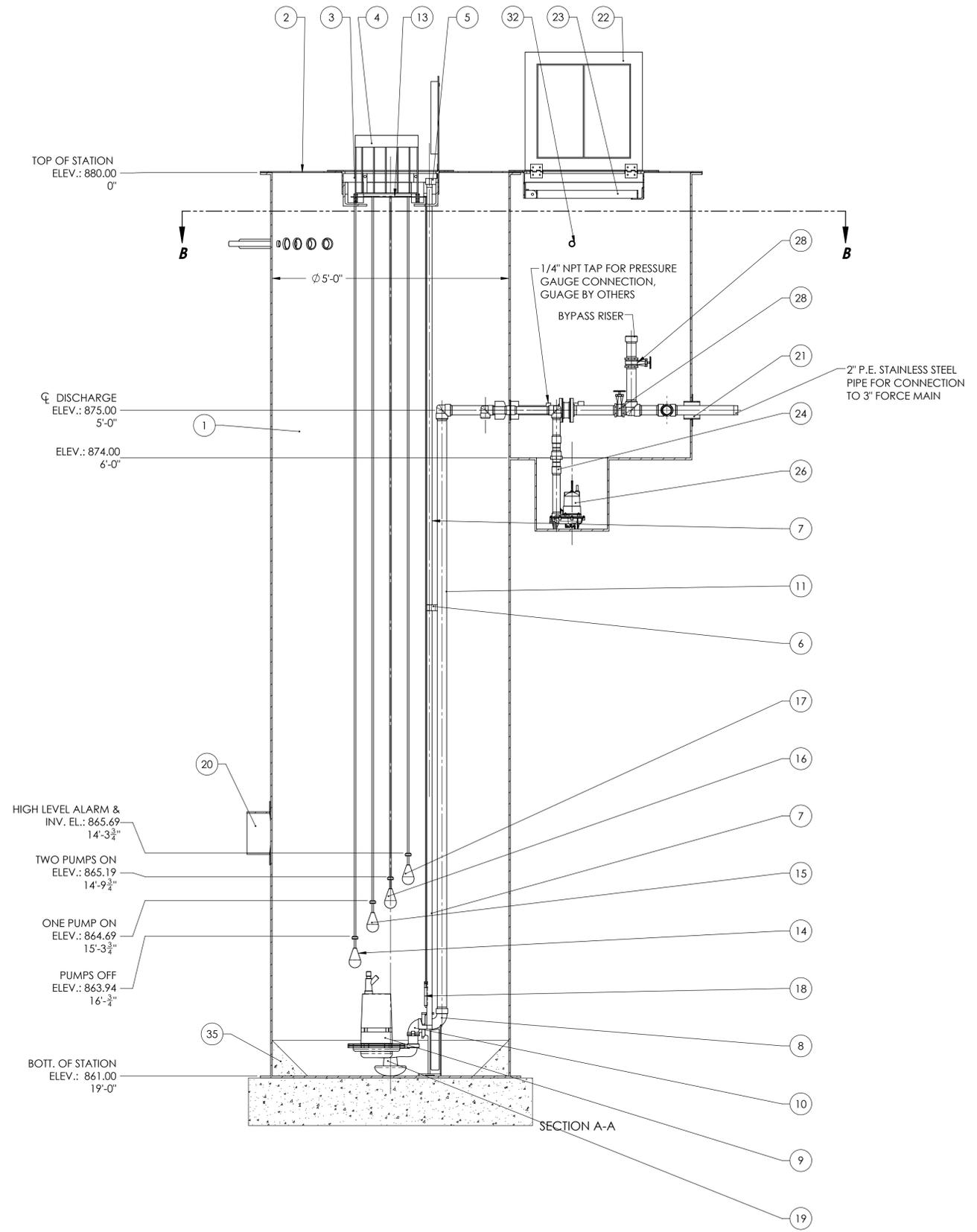


METROPOLITAN INDUSTRIES, INC.
37 FORESTWOOD DR. ROMEOVILLE, ILLINOIS 60446
(815)886-9200 FAX (815)886-4573
PUMPS - CONTROLS - SYSTEMS

TITLE: **DUPLEX METRORAIL FIBERGLASS LIFT STATION**

PROJECT: **SANITARY LIFT STATION
R&L CARRIERS
GEORGETOWN, KENTUCKY**

SHEET 1 OF 2
DRWG INDEX / JOB NO.
22S1W065F204-22N



SECTION B-B
SCALE 1 : 12

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DATE	BY	REVISION	DATE	BY	REVISION
4/20/2022	F.U.	ELEVATIONS			

SCALE: 1:16
 DRN. BY: F.U.
 DATE: 4/4/2022
 APP. BY:



METROPOLITAN INDUSTRIES, INC.
 37 FORESTWOOD DR. ROMEOVILLE, ILLINOIS 60446
 (815)886-9200 FAX (815)886-4573
 PUMPS - CONTROLS - SYSTEMS

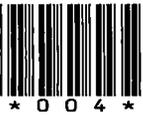
TITLE: **DUPLEX METRORAIL FIBERGLASS LIFT STATION**

PROJECT: **SANITARY LIFT STATION
 R&L CARRIERS
 GEORGETOWN, KENTUCKY**

SHEET 2 OF 2
 DRWG INDEX / JOB NO.
 22S1W065F204-22N

Scanning Batch Sheet

Show Form



SCANNED
NOV 26 2019
QUALITY CHECK

DAILY (NOV 25 2019 04:33 PM) REC

INTERNAL ACTIVITY CLOSURE MEMO

TO: Michael B. Kroeger, Director
Division of Enforcement

JS for MK

THRU: Justin Schul, Manager
Division of Enforcement
Civil Enforcement

JS

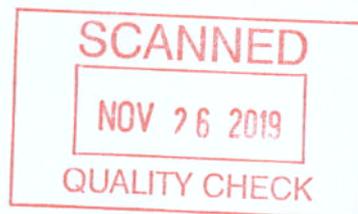
FROM: Donald L. Hansel, II
Env. Scientist IV
Division of Enforcement
Civil Enforcement

D. Hansel

DATE: October 8, 2019

SUBJECT: Closure Activity Memorandum

Longview Country Club
Case number: DOW-18-3-0005
AI Number: 8083
ERF20180001
Scott County



- This site was referred to the Division of Enforcement on January 18, 2018, by the Frankfort Regional Office.
- This case encapsulated the violations of: *exceeding permitted limits* for: E.coli, Dissolved Oxygen (DO), Total Residual Chlorine (TRC), Total Suspended Solids (TSS), Total Ammonia Nitrogen (TAN), Biochemical Oxygen Demand (BOD) and pH.
- On May 22, 2018, the Responsible Party's representatives, *Ricky Pulliam* and *Kevin Hammond*, attended an administrative conference in person with the Division of Enforcement in Frankfort, Kentucky.
- On July 31, 2018, an agreement in principle was reached between the parties.
- The Responsible Party elected to settle the case with the Cabinet through an Agreed Order.
- The Agreed Order addressed the issues of *completing a corrective action plan (CAP)* concerning their reporting requirements along with the maintenance and operation procedures; and a civil penalty.
- The agreed upon amount was **four thousand dollars (\$4,000) payable in a single installment.**
- On January 4, 2019, the **penalty was paid in full.**
- On January 16, 2019, the *corrective action plan was accepted.*
- On September 24, 2019, the wastewater treatment plant was sold to *Bluegrass Water Utility Operating Company, LLC.*
- The new owner was briefed and brought up to speed on the corrective action plan *prior to purchase.*
- With the above stated facts in mind, the Division of Enforcement recommends the closure of this case.
- The Frankfort Regional Office concurs that the closure of this case is appropriate. Therefore, pending final approval, **DOW-18-3-0005** will be closed at the Division of Enforcement. Approval of such closure will be acknowledged by your initialing this memorandum.

PK



Legend

-  Floyds Fork
-  Outfall



**PERSIMMON RIDGE WWTF
NPDES PERMIT RENEWAL
SITE MAP**

Persimmon Ridge Drive
Louisville, Kentucky 40245

NOTES



Source: Google Earth, dated
March 2022
Not to Scale

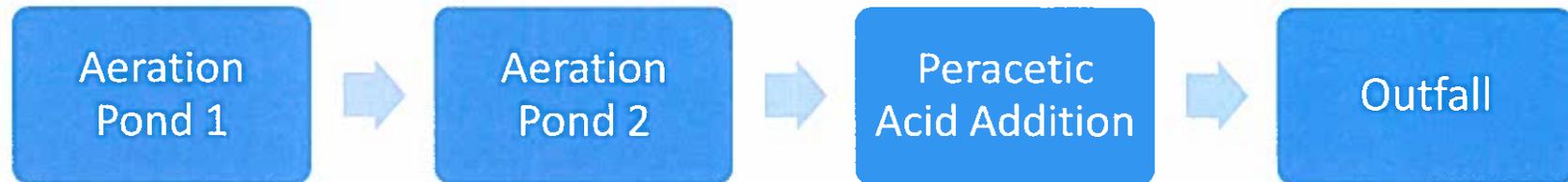
TRC Project No. 503581 0005 0000

Figure: 2

Drawn by: AWS

Date: 01/2023

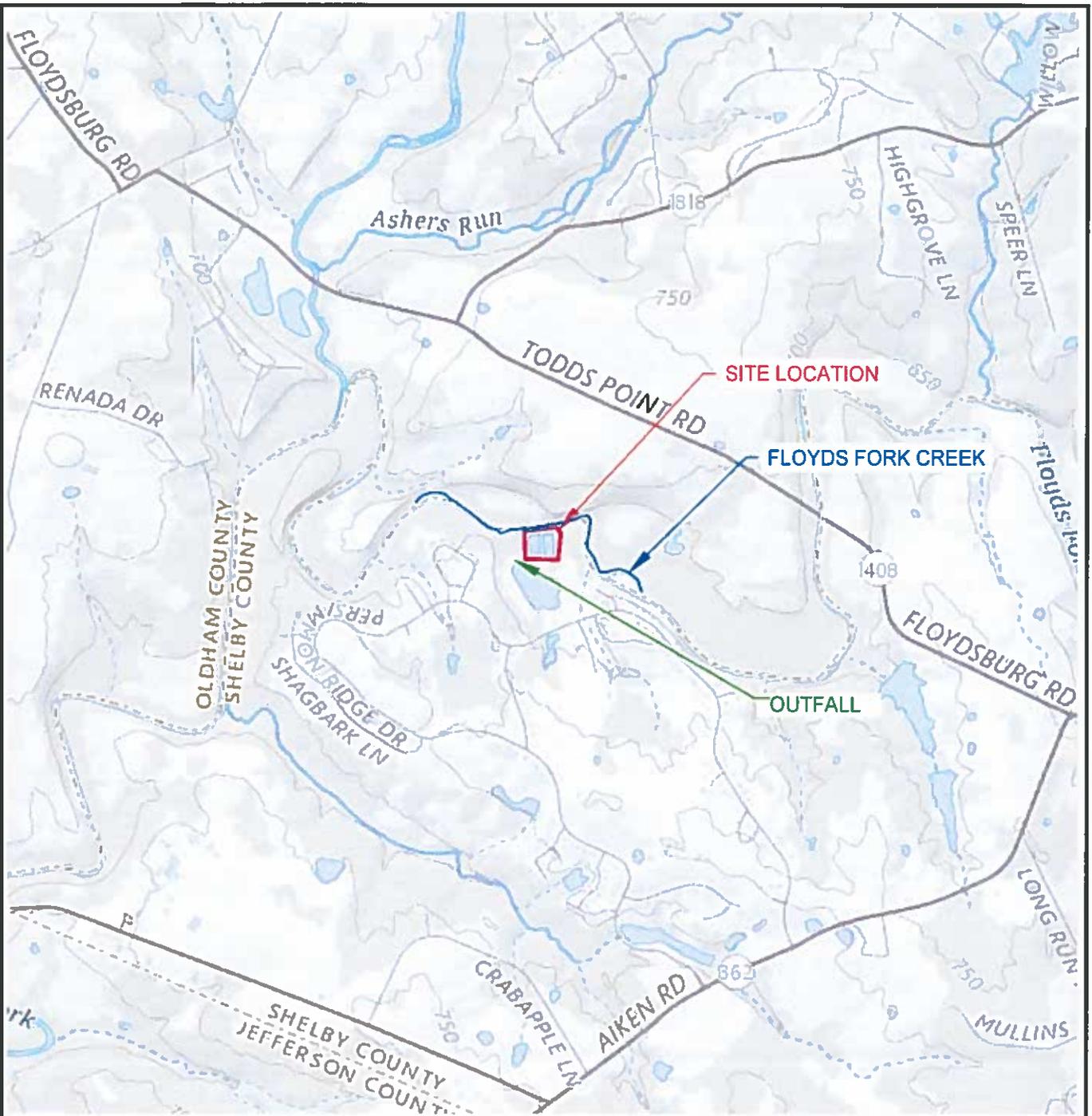
Flow Diagram – Persimmon Ridge Wastewater Treatment Facility



Sludge



8-11 - USER: jkniar - ATTACHED SHEETS - ATTACHED IMAGES - Crestwood, TOPO
 DRAWING NAME: J:\Central States Water Resources\Persimmon Ridge\503581.0005.0002-01.dwg - PLOT DATE: January 20, 2023 - 10:39AM - LAYOUT: FIGURE 1
 Version: 2013.10-21

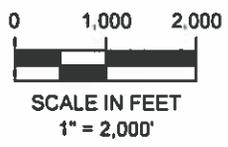


SOURCE NOTE: USGS 7.5 MINUTE US TOPO SERIES TOPOGRAPHIC MAP, CRESTWOOD, 2022.

PROJECT:		PERSIMMON RIDGE WWTF PERSIMMON RIDGE DRIVE LOUISVILLE, KENTUCKY 40245 NPDES PERMIT RENEWAL	
TITLE:		TOPOGRAPHIC MAP	
DRAWN BY	J. KONIAR	PROJ NO.	503581.0005
CHECKED BY	A. SCHULZ	FIGURE 1	
APPROVED BY	A. SCHULZ		
DATE	JANUARY 2023	 6737 West Washington St. Suite 2100 West Allis, WI 53214 Phone: 262.879.1212	
FILE NO.	503581.0005.0002-01.dwg		



QUADRANGLE LOCATION



Persimmon Ridge Facility Improvements - KY0080845
Design Considerations – Construction Permit Application
Date: November 18, 2021

Introduction

The purpose of this document is to specifically address the criteria used for the design of various improvements to the Persimmon Ridge Wastewater Treatment Facility, and to describe pertinent information required in Section IV - "Design Considerations" of the Construction Permit Application for said improvements.

E. Design Criteria

The process flow diagram for the proposed improvements is included in Section A of the appendix to this specific document.

As currently practiced, raw sewage will enter the facility in the existing influent lift station, and the flow will be pumped into the existing lagoon cell # 1 and then flow to existing lagoon cell #2 for further treatment. In the proposed improvements, the flow in lagoon cell # 2 will be airlifted in a side stream into a two stage Moving Bed Biological Reactor, for secondary treatment and the MBBR effluent will be recycled into lagoon cell # 1. The existing, four-zone chlorine contact tank (upgraded with the addition of diffusers to allow the tank to simultaneously be used for post-aeration) will be used for disinfection and to elevate the dissolved oxygen levels to meet the disinfection limits and the DO residual limit prior to effluent discharge.

Based on the level of redundancy in the design, we believe the plant qualifies for classification as Grade A Reliability. A manual transfer switch will be installed that allows the use of a backup generator which will provide sufficient power for the entire facility including the blowers and raw sewage pumps, allowing continuous use of all treatment processes. The use of multiple stages in each process allows the system to reliably meet the effluent parameters given by the KDEP.

A summary of the design criteria used for unit process sizing is included in Section B of the Appendix including:

- MBBR Influent Characteristics
- MBBR Tank Sizing Summary
- MBBR Aeration Requirement Summary
- MBBR Blower Requirement Summary
- Post Aeration
- Chlorine Contact Tank
- Effluent Parameters

Civil Engineering

Surveying & Mapping

Potable Water

Wastewater Treatment



Civil Site Design

Construction Support

Transportation

Wastewater Collection

The system was generally designed in accordance with the 2014 version of Ten State Standards for Wastewater Facilities and 401 KAR 5:005.

G. Site Location

A site plan can be found in the Plans which clearly shows the site boundaries and the proposed improvements in reference to those boundaries. The most recently available subdivision plat available will be attached in the appendix, as well as a screenshot of the site on google earth with the plans superimposed onto the image.

H. Other Information

The proposed facility improvements will be constructed on the existing site, and the existing lagoons and chlorine contact chamber will continue to be used for treatment and disinfection. Vegetation will be added over the top of the site once construction is finished.

Civil Engineering
Surveying & Mapping
Potable Water
Wastewater Treatment



Civil Site Design
Construction Support
Transportation
Wastewater Collection

Appendix

- Section A - Process Flow Diagram
- Section B - Summary of Design Criteria
- Section C - Subdivision Plat
- Section D – Alta Survey

Civil Engineering
Surveying & Mapping
Potable Water
Wastewater Treatment



Civil Site Design
Construction Support
Transportation
Wastewater Collection

Section A – Process Flow Diagram

Section B – Summary of Design Criteria

Plant Influent Characteristics

Annual Average Daily Flow	55,000	gpd
Maximum Monthly Average Daily Flow	55,000	gpd
Peak Daily Flow	165,000	gpd
Peak Hourly Flow (w/out Equalization)	220,000	gpd
Influent BOD	225	mg/L
Influent BOD	103.2	lbs/day
Influent TSS	225	mg/L
Influent TSS	103.2	lbs/day
Influent NH3-N	33	mg/L
Influent NH3-N	15.1	lbs/day
Influent TKN	38	mg/L
Influent TKN	17.4	lbs/day
Influent pH	7	
Water Temperature	12	deg-C

Lagoon Aeration

Actual Oxygen Supplied (BOD Reduction Only)	127	lbs/day
Target DO Residual	2.0	mg/L
Use 6, Existing 5.0 hp Mechanical Surface Aerators and 1		
Use 1, Existing 25.0 hp Mechanical Surface Aerator		

MBBR Influent Characteristics

Annual Average Daily Flow	55,000	gpd
Maximum Monthly Average Daily Flow	55,000	gpd
Peak Daily Flow (w/Equalization)	110,000	gpd
Peak Hourly Flow (w/Equalization)	110,000	gpd
Influent BOD	40	mg/L
Influent TSS	40	mg/L
Influent NH3-N	26	mg/L
Influent TKN	13	mg/L
Design Influent TKN	13	mg/L
Influent pH	7	
Minimum MBBR Water Temperature	4	deg-C

Tank Sizing Summary

No. of Tanks Proposed	2	
Length of Each	8.0	ft
Width of Each	8.0	ft

Civil Engineering
 Surveying & Mapping
 Potable Water
 Wastewater Treatment



Civil Site Design
 Construction Support
 Transportation
 Wastewater Collection

Side Water Depth of Each	5.75	ft
Tank Height of Each	7.25	ft
Volume of Each	2,753	gallons
Volume Total	5,505	gallons
Hydraulic Retention Time at Average Flow	2.4	hours
Hydraulic Retention Time at Peak Daily Flow	1.2	hours
Total Media Surface Area Requirement	4,627	m ²
Total Media Surface Area Proposed	4,741	m ²
<u>MBBR Aeration Requirement Summary</u>		<u>Stage 1</u>
AOR (lbs/day)	35	lbs/day
Assumed Diffuser Subm. at AWL (ft.)	5	ft
Elevation (ft.)	634	ft
Alpha	0.70	
Beta	0.9	
Target DO Residual (MBBR Process) (mg/L)	5.0	mg/L
SOR (lbs/day)	138	lbs/day
Target Diffuser Efficiency/ft. Submergence	1.1	%
Airflow (scfm)	141	scfm
Airflow per 1,000 scfm	192	scfm/1,000 cf
<u>Blower Requirement Summary</u>		
No. of Blowers	2	
Airflow Requirement for MBBR	141	scfm
Airflow Requirement for Air Lift into MBBR (4" Eductor)	17	scfm
Airflow Requirement for Post-Aeration in CCT	13	scfm
Airflow Requirement per Blower	171	scfm
Discharge Pressure	5.37	psig
Assumed Overall Efficiency	0.62	
Approximate BHP Requirement/Blower	5.9	bhp
Approximate BHP Requirement Total	5.9	bhp
Estimated Nameplate HP / Blower	7.5	hp
Blower Type	<i>Dual Lobe PD</i>	
<u>Existing Chlorine Contact Tank / Post Aeration</u>		
Length	7.58	ft
Width	12	ft
Depth	7	ft
Contact Tank Volume	4,763	gallons
Disinfection HRT at Peak Flow	31.2	minutes
scfm/1,000 cf	20	scfm/1KCF

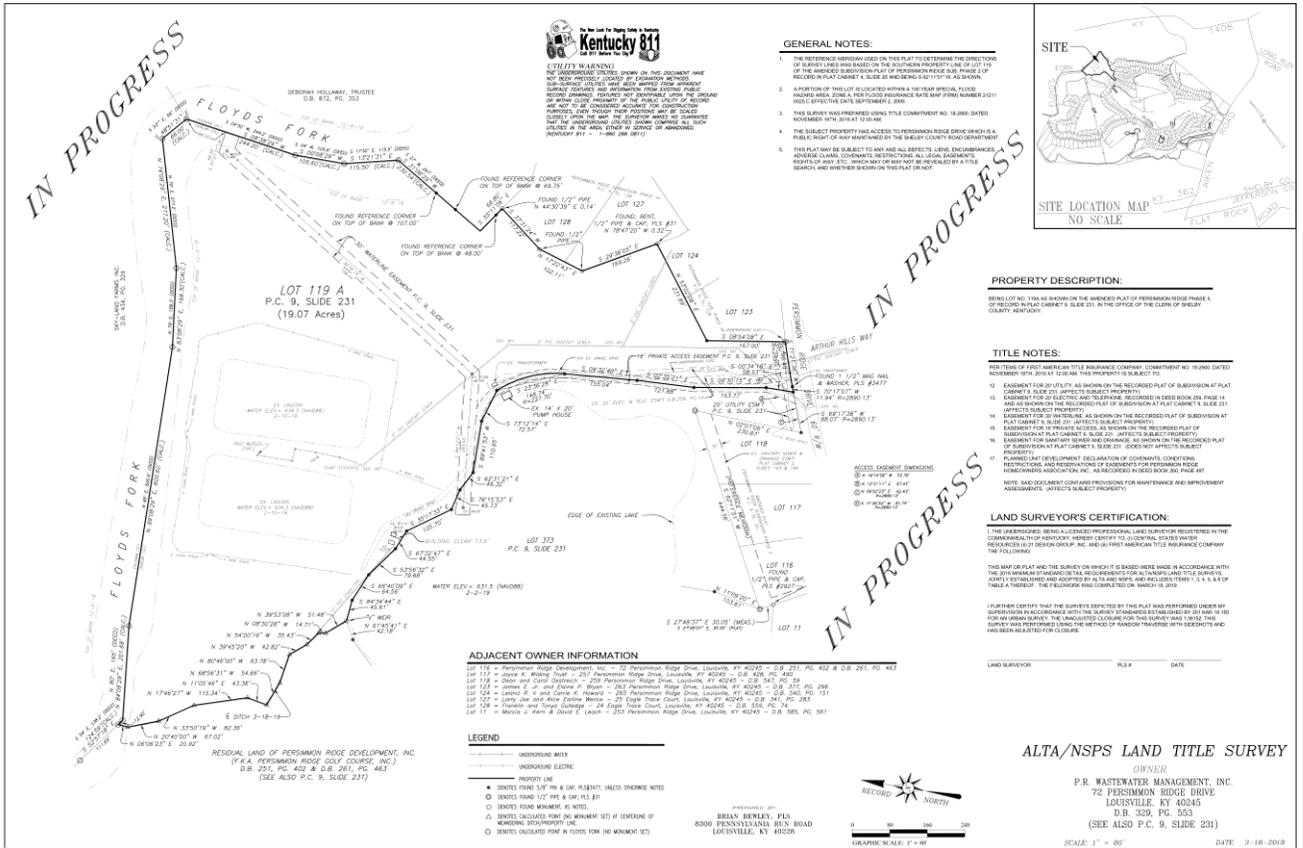
Civil Engineering
 Surveying & Mapping
 Potable Water
 Wastewater Treatment



Civil Site Design
 Construction Support
 Transportation
 Wastewater Collection

scfm Required for Complete Mixing (provided with blowers common for MBBR, Airlift and Lagoon Aeration)	12.73	scfm
Discharge Pressure	4.01	psig
<u>Effluent Parameters</u>		
Effluent CBOD	10	mg/L
Effluent CBOD	4.6	lbs/day
Effluent TSS	30	mg/L
Effluent TSS	13.8	lbs/day
Summer Effluent NH3-N	2.0	mg/L
Summer Effluent NH3-N	0.9	lbs/day
Winter Effluent NH3-N	5.0	mg/L
Winter Effluent NH3-N	2.3	lbs/day
E Coli	130/240	cfu/100 mL
Minimum Dissolved Oxygen	7.0	mg/L
Total Chlorine Residual	0.011	mg/L

Section D – Alta Survey



KY0090956	Persimmon Ridge WWTF	Shelby	002-1	11/30/2018	BOD, carbonaceous [5 day,	80082-1-0	Effluent Gross								8.5	mg/L			mg/L
KY0090956	Persimmon Ridge WWTF	Shelby	002-1	11/30/2018	BOD, carbonaceous [5 day,	80082-1-0	Effluent Gross										15	mg/L	mg/L
KY0090956	Persimmon Ridge WWTF	Shelby	002-1	10/31/2018	BOD, carbonaceous [5 day,	80082-1-0	Effluent Gross	0.81	lb/d			lb/d							
KY0090956	Persimmon Ridge WWTF	Shelby	002-1	10/31/2018	BOD, carbonaceous [5 day,	80082-1-0	Effluent Gross			0.97	lb/d	lb/d							
KY0090956	Persimmon Ridge WWTF	Shelby	002-1	10/31/2018	BOD, carbonaceous [5 day,	80082-1-0	Effluent Gross								2.5	mg/L			mg/L
KY0090956	Persimmon Ridge WWTF	Shelby	002-1	10/31/2018	BOD, carbonaceous [5 day,	80082-1-0	Effluent Gross										3	mg/L	mg/L

Effluent Vio. Exists	Non-Receipt Vio. Exists	DMR Received Date
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N	N	11/22/2021
N	N	10/20/2021
N	N	10/20/2021
N	N	9/19/2021
N	N	9/19/2021
N	N	8/16/2021
N	N	8/16/2021
N	N	7/21/2021
N	N	7/21/2021
N	N	6/21/2021
N	N	6/21/2021
N	N	5/18/2021
N	N	5/18/2021
N	N	4/23/2021
N	N	4/23/2021
N	N	3/19/2021
N	N	3/19/2021
N	N	2/18/2021
N	N	2/18/2021
N	N	1/19/2021
N	N	1/19/2021
N	N	12/21/2020
N	N	12/21/2020
N	N	11/22/2020
N	N	11/22/2020
N	N	10/26/2020
N	N	10/26/2020
N	N	9/28/2020
N	N	9/28/2020

N	N	8/18/2020
N	N	8/18/2020
N	N	7/21/2020
N	N	7/21/2020
N	N	6/23/2020
N	N	6/23/2020
N	N	5/16/2020
N	N	5/16/2020
N	N	4/19/2020
N	N	4/19/2020
N	N	3/25/2020
N	N	3/25/2020
N	N	2/18/2020
N	N	2/18/2020
N	N	1/27/2020
N	N	1/27/2020
N	N	12/27/2019
N	N	12/27/2019
N	N	11/22/2019
N	N	11/22/2019
N	N	10/28/2019
N	N	10/28/2019
N	N	9/27/2019
N	N	9/27/2019
N	N	8/30/2019
N	N	8/30/2019
N	N	7/28/2019
N	N	7/28/2019
N	N	6/28/2019
N	N	6/28/2019
N	N	5/28/2019
N	N	5/28/2019
Y	N	4/26/2019
Y	N	4/26/2019
N	N	3/27/2019
N	N	3/27/2019
N	N	2/28/2019
N	N	2/28/2019
N	N	1/28/2019
N	N	1/28/2019
N	N	12/27/2018
N	N	12/27/2018
N	N	11/27/2018
N	N	11/27/2018
N	N	4/13/2023
N	N	4/13/2023
N	N	3/10/2023
N	N	3/10/2023
N	N	2/16/2023
Y	N	2/16/2023
N	N	1/13/2023
N	N	1/13/2023
N	N	12/15/2022
N	N	12/15/2022
N	N	11/17/2022
N	N	11/17/2022
N	N	10/15/2022
N	N	10/15/2022
N	N	9/15/2022
N	N	9/15/2022
N	N	8/14/2022
N	N	8/14/2022
N	N	7/16/2022
N	N	7/16/2022
N	N	6/16/2022
N	N	6/16/2022
N	N	5/16/2022
N	N	5/16/2022
N	N	4/14/2022
N	N	4/14/2022
N	N	3/17/2022
N	N	3/17/2022
N	N	2/16/2022
N	N	2/16/2022
N	N	1/20/2022
N	N	1/20/2022
N	N	12/14/2021
N	N	12/14/2021
N	N	11/22/2021
N	N	11/22/2021
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N	N	9/19/2021
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N	N	6/21/2021
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N	N	5/18/2021
N	N	5/18/2021
N	N	4/23/2021
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N	N	3/19/2021
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N	N	1/19/2021
N	N	12/21/2020
N	N	12/21/2020
N	N	11/22/2020
N	N	11/22/2020
N	N	10/26/2020
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N	N	9/28/2020
N	N	9/28/2020
N	N	8/18/2020
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N	N	7/21/2020
N	N	6/23/2020
N	N	6/23/2020
N	N	5/16/2020
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N	N	5/16/2020
N	N	4/19/2020
N	N	4/19/2020
N	N	3/25/2020
N	N	3/25/2020
N	N	2/18/2020
N	N	2/18/2020
Y	N	1/27/2020
Y	N	1/27/2020
N	N	12/27/2019
N	N	12/27/2019
N	N	11/22/2019
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N	N	4/26/2019
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N	N	3/27/2019
N	N	2/28/2019
N	N	2/28/2019
N	N	1/28/2019
N	N	1/28/2019
Y	N	12/27/2018
Y	N	12/27/2018
N	N	11/27/2018
N	N	11/27/2018
Y	N	4/13/2023
N	N	3/10/2023
Y	N	2/16/2023
N	N	1/13/2023
N	N	1/13/2023
N	N	12/15/2022
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Y	N	6/16/2022
N	N	6/16/2022
N	N	5/16/2022
Y	N	4/14/2022
N	N	3/17/2022
N	N	2/16/2022
N	N	1/20/2022
N	N	12/14/2021
N	N	11/22/2021
N	N	10/20/2021
N	N	9/19/2021
N	N	8/16/2021
N	N	7/21/2021
N	N	6/21/2021
N	N	5/18/2021
N	N	4/23/2021
N	N	3/19/2021
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N	N	12/21/2020
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N	N	3/25/2020
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N	N	1/27/2020
N	N	12/27/2019
N	N	11/22/2019
N	N	10/28/2019
N	N	9/27/2019
N	N	8/30/2019
N	N	7/28/2019
N	N	6/28/2019
N	N	5/28/2019
N	N	5/28/2019
Y	N	5/28/2019
N	N	5/28/2019
N	N	4/26/2019
N	N	3/27/2019
N	N	2/28/2019
Y	N	1/28/2019
N	N	1/28/2019
Y	N	1/28/2019
N	N	1/28/2019
N	N	12/27/2018
N	N	12/27/2018

N	N	12/27/2018
N	N	12/27/2018
N	N	11/27/2018

Statistical Base Short	Statistical Base Long	Statistical Base Type	DMR Comment	Modification Effect	Modification Type
INST MIN	Instantaneous Minin	MIN	Beckmar only collected 1 sample in January. We thought we		
INST MIN	Instantaneous Minin	MIN	Data is still being collected at Persimmon Ridge to determine		
INST MIN	Instantaneous Minin	MIN	Division of Compliance Assistance is working with us and Ma		
INST MIN	Instantaneous Minin	MIN	Heavy rains and sudden increase in flow may have caused a		
INST MIN	Instantaneous Minin	MIN	I am working with the Division of Compliance Assistance to se		
INST MIN	Instantaneous Minin	MIN	information from weekly sampling is continuing to be collecte		
INST MIN	Instantaneous Minin	MIN	Information is still being collected to find a long term solution f		
INST MIN	Instantaneous Minin	MIN	Midwest is still collecting data to determine the best, long term		
INST MIN	Instantaneous Minin	MIN	Seasonal temperature changes and algae bloom are the likely		
INST MIN	Instantaneous Minin	MIN	sorry for being late in filing. I have been in Cleveland Clinic si		
INST MIN	Instantaneous Minin	MIN	The ammonia levels have been an issue during winter months		
INST MIN	Instantaneous Minin	MIN	The BOD may be due to warming water temperature		
INST MIN	Instantaneous Minin	MIN	The E.coli readings from this lab have been challenged by ou		
INST MIN	Instantaneous Minin	MIN	The effluent from Persimmon Ridge wastewater does not ente		
INST MIN	Instantaneous Minin	MIN	The sample results we due to excessive rainfall and unusually		
INST MIN	Instantaneous Minin	MIN	We are checking into possible causes for this issue. Tempera		
INST MIN	Instantaneous Minin	MIN	we are conducting a trial and collecting data on a new aerator		
INST MIN	Instantaneous Minin	MIN	We are continuing to monitor and collecting data with weekly		
INST MIN	Instantaneous Minin	MIN	we are continuing to try different products to lower the ammor		
INST MIN	Instantaneous Minin	MIN	We are continuing to work towards a solution for the winter ni		
INST MIN	Instantaneous Minin	MIN	we are still working a solution for the annual ammonia issue.		
INST MIN	Instantaneous Minin	MIN	We are working on better removal of ammonia.		
INST MIN	Instantaneous Minin	MIN	We are working with division of compliance to work through th		
INST MIN	Instantaneous Minin	MIN	We have been working with compliance to get our distribution		
INST MIN	Instantaneous Minin	MIN	We have been working with Division of Compliance, Dennis M		
INST MIN	Instantaneous Minin	MIN	We have been working with the Division of Compliance to try		
INST MIN	Instantaneous Minin	MIN	We have perched an ammonia test kit for faster results and t		
INST MIN	Instantaneous Minin	MIN			
MINIMUM	Minimum	MIN	Beckmar only collected 1 sample in January. We thought we		
MINIMUM	Minimum	MIN	Data is still being collected at Persimmon Ridge to determine		
MINIMUM	Minimum	MIN	Division of Compliance Assistance is working with us and Ma		
MINIMUM	Minimum	MIN	Heavy rains and sudden increase in flow may have caused a		
MINIMUM	Minimum	MIN	I am working with the Division of Compliance Assistance to se		
MINIMUM	Minimum	MIN	information from weekly sampling is continuing to be collecte		
MINIMUM	Minimum	MIN	Information is still being collected to find a long term solution f		
MINIMUM	Minimum	MIN	Midwest is still collecting data to determine the best, long term		
MINIMUM	Minimum	MIN	Seasonal temperature changes and algae bloom are the likely		
MINIMUM	Minimum	MIN	sorry for being late in filing. I have been in Cleveland Clinic si		
MINIMUM	Minimum	MIN	The ammonia levels have been an issue during winter months		
MINIMUM	Minimum	MIN	The BOD may be due to warming water temperature		

MINIMUM	Minimum	MIN	The E.coli readings from this lab have been challenged by ou
MINIMUM	Minimum	MIN	The effluent from Persimmon Ridge wastewater does not ente
MINIMUM	Minimum	MIN	The sample results we due to excessive rainfall and unusually
MINIMUM	Minimum	MIN	We are checking into possible causes for this issue. Tempera
MINIMUM	Minimum	MIN	we are conducting a trial and collecting data on a new aerator
MINIMUM	Minimum	MIN	We are continuing to monitor and collecting data with weekly
MINIMUM	Minimum	MIN	we are continuing to try different products to lower the ammor
MINIMUM	Minimum	MIN	We are continuing to work towards a solution for the winter ni
MINIMUM	Minimum	MIN	we are still working a solution for the annual ammonia issue.
MINIMUM	Minimum	MIN	We are working on better removal of ammonia.
MINIMUM	Minimum	MIN	We are working with division of compliance to work through th
MINIMUM	Minimum	MIN	We have been working with compliance to get our distribution
MINIMUM	Minimum	MIN	We have been working with Division of Compliance, Dennis M
MINIMUM	Minimum	MIN	We have been working with the Division of Compliance to try
MINIMUM	Minimum	MIN	We have perched an ammonia test kit for faster results and t
MINIMUM	Minimum	MIN	
MAXIMUM	Maximum	MAX	Beckmar only collected 1 sample in January. We thought we
MAXIMUM	Maximum	MAX	Data is still being collected at Persimmon Ridge to determine
MAXIMUM	Maximum	MAX	Division of Compliance Assistance is working with us and Ma
MAXIMUM	Maximum	MAX	Heavy rains and sudden increase in flow may have caused a
MAXIMUM	Maximum	MAX	I am working with the Division of Compliance Assistance to se
MAXIMUM	Maximum	MAX	information from weekly sampling is continuing to be collecte
MAXIMUM	Maximum	MAX	Information is still being collected to find a long term solution f
MAXIMUM	Maximum	MAX	Midwest is still collecting data to determine the best, long term
MAXIMUM	Maximum	MAX	Seasonal temperature changes and algae bloom are the likely
MAXIMUM	Maximum	MAX	sorry for being late in filing. I have been in Cleveland Clinic si
MAXIMUM	Maximum	MAX	The ammonia levels have been an issue during winter months
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MAXIMUM	Maximum	MAX	The effluent from Persimmon Ridge wastewater does not ente
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MAXIMUM	Maximum	MAX	we are continuing to try different products to lower the ammor
MAXIMUM	Maximum	MAX	We are continuing to work towards a solution for the winter ni
MAXIMUM	Maximum	MAX	we are still working a solution for the annual ammonia issue.
MAXIMUM	Maximum	MAX	We are working on better removal of ammonia.
MAXIMUM	Maximum	MAX	We are working with division of compliance to work through th
MAXIMUM	Maximum	MAX	We have been working with compliance to get our distribution
MAXIMUM	Maximum	MAX	We have been working with Division of Compliance, Dennis M

MAXIMUM	Maximum	MAX	We have been working with the Division of Compliance to try
MAXIMUM	Maximum	MAX	We have perched an ammonia test kit for faster results and t
MAXIMUM	Maximum	MAX	
MO AVG	Monthly Average	AVG	Beckmar only collected 1 sample in January. We thought we
MO AVG	Monthly Average	AVG	Data is still being collected at Persimmon Ridge to determine
MO AVG	Monthly Average	AVG	Division of Compliance Assistance is working with us and Ma
MO AVG	Monthly Average	AVG	Heavy rains and sudden increase in flow may have caused a
MO AVG	Monthly Average	AVG	I am working with the Division of Compliance Assistance to se
MO AVG	Monthly Average	AVG	information from weekly sampling is continuing to be collectec
MO AVG	Monthly Average	AVG	Information is still being collected to find a long term solution f
MO AVG	Monthly Average	AVG	Midwest is still collecting data to determine the best, long term
MO AVG	Monthly Average	AVG	Seasonal temperature changes and algae bloom are the likely
MO AVG	Monthly Average	AVG	sorry for being late in filing. I have been in Cleveland Clinic si
MO AVG	Monthly Average	AVG	The ammonia levels have been an issue during winter months
MO AVG	Monthly Average	AVG	The BOD may be due to warming water temperature
MO AVG	Monthly Average	AVG	The E.coli readings from this lab have been challenged by ou
MO AVG	Monthly Average	AVG	The effluent from Persimmon Ridge wastewater does not ente
MO AVG	Monthly Average	AVG	The sample results we due to excessive rainfall and unusually
MO AVG	Monthly Average	AVG	We are checking into possible causes for this issue. Tempera
MO AVG	Monthly Average	AVG	we are conducting a trial and collecting data on a new aerator
MO AVG	Monthly Average	AVG	We are continuing to monitor and collecting data with weekly
MO AVG	Monthly Average	AVG	we are continuing to try different products to lower the ammor
MO AVG	Monthly Average	AVG	We are continuing to work towards a solution for the winter ni
MO AVG	Monthly Average	AVG	we are still working a solution for the annual ammonia issue.
MO AVG	Monthly Average	AVG	We are working on better removal of ammonia.
MO AVG	Monthly Average	AVG	We are working with division of compliance to work through th
MO AVG	Monthly Average	AVG	We have been working with compliance to get our distribution
MO AVG	Monthly Average	AVG	We have been working with Division of Compliance, Dennis N
MO AVG	Monthly Average	AVG	We have been working with the Division of Compliance to try
MO AVG	Monthly Average	AVG	We have perched an ammonia test kit for faster results and t
MO AVG	Monthly Average	AVG	
MX WK AV	Maximum Weekly A	MAX	Beckmar only collected 1 sample in January. We thought we
MX WK AV	Maximum Weekly A	MAX	Data is still being collected at Persimmon Ridge to determine
MX WK AV	Maximum Weekly A	MAX	Division of Compliance Assistance is working with us and Ma
MX WK AV	Maximum Weekly A	MAX	Heavy rains and sudden increase in flow may have caused a
MX WK AV	Maximum Weekly A	MAX	I am working with the Division of Compliance Assistance to se
MX WK AV	Maximum Weekly A	MAX	information from weekly sampling is continuing to be collectec
MX WK AV	Maximum Weekly A	MAX	Information is still being collected to find a long term solution f
MX WK AV	Maximum Weekly A	MAX	Midwest is still collecting data to determine the best, long term
MX WK AV	Maximum Weekly A	MAX	Seasonal temperature changes and algae bloom are the likely
MX WK AV	Maximum Weekly A	MAX	sorry for being late in filing. I have been in Cleveland Clinic si

MX WK AV	Maximum Weekly A	MAX	The ammonia levels have been an issue during winter months
MX WK AV	Maximum Weekly A	MAX	The BOD may be due to warming water temperature
MX WK AV	Maximum Weekly A	MAX	The E.coli readings from this lab have been challenged by our
MX WK AV	Maximum Weekly A	MAX	The effluent from Persimmon Ridge wastewater does not enter
MX WK AV	Maximum Weekly A	MAX	The sample results were due to excessive rainfall and unusually
MX WK AV	Maximum Weekly A	MAX	We are checking into possible causes for this issue. Temperature
MX WK AV	Maximum Weekly A	MAX	we are conducting a trial and collecting data on a new aerator
MX WK AV	Maximum Weekly A	MAX	We are continuing to monitor and collecting data with weekly
MX WK AV	Maximum Weekly A	MAX	we are continuing to try different products to lower the ammonia
MX WK AV	Maximum Weekly A	MAX	We are continuing to work towards a solution for the winter nitrate
MX WK AV	Maximum Weekly A	MAX	we are still working on a solution for the annual ammonia issue.
MX WK AV	Maximum Weekly A	MAX	We are working on better removal of ammonia.
MX WK AV	Maximum Weekly A	MAX	We are working with division of compliance to work through the
MX WK AV	Maximum Weekly A	MAX	We have been working with compliance to get our distribution
MX WK AV	Maximum Weekly A	MAX	We have been working with Division of Compliance, Dennis M
MX WK AV	Maximum Weekly A	MAX	We have been working with the Division of Compliance to try
MX WK AV	Maximum Weekly A	MAX	We have purchased an ammonia test kit for faster results and to
MX WK AV	Maximum Weekly A	MAX	
MO AVG	Monthly Average	AVG	Beckmar only collected 1 sample in January. We thought we
MO AVG	Monthly Average	AVG	Data is still being collected at Persimmon Ridge to determine
MO AVG	Monthly Average	AVG	Division of Compliance Assistance is working with us and Mar
MO AVG	Monthly Average	AVG	Heavy rains and sudden increase in flow may have caused a
MO AVG	Monthly Average	AVG	I am working with the Division of Compliance Assistance to se
MO AVG	Monthly Average	AVG	information from weekly sampling is continuing to be collected
MO AVG	Monthly Average	AVG	Information is still being collected to find a long term solution f
MO AVG	Monthly Average	AVG	Midwest is still collecting data to determine the best, long term
MO AVG	Monthly Average	AVG	Seasonal temperature changes and algae bloom are the likely
MO AVG	Monthly Average	AVG	sorry for being late in filing. I have been in Cleveland Clinic si
MO AVG	Monthly Average	AVG	The ammonia levels have been an issue during winter months
MO AVG	Monthly Average	AVG	The BOD may be due to warming water temperature
MO AVG	Monthly Average	AVG	The E.coli readings from this lab have been challenged by our
MO AVG	Monthly Average	AVG	The effluent from Persimmon Ridge wastewater does not enter
MO AVG	Monthly Average	AVG	The sample results were due to excessive rainfall and unusually
MO AVG	Monthly Average	AVG	We are checking into possible causes for this issue. Temperature
MO AVG	Monthly Average	AVG	we are conducting a trial and collecting data on a new aerator
MO AVG	Monthly Average	AVG	We are continuing to monitor and collecting data with weekly
MO AVG	Monthly Average	AVG	we are continuing to try different products to lower the ammonia
MO AVG	Monthly Average	AVG	We are continuing to work towards a solution for the winter nitrate
MO AVG	Monthly Average	AVG	we are still working on a solution for the annual ammonia issue.
MO AVG	Monthly Average	AVG	We are working on better removal of ammonia.
MO AVG	Monthly Average	AVG	We are working with division of compliance to work through the

MO AVG	Monthly Average	AVG	We have been working with compliance to get our distribution
MO AVG	Monthly Average	AVG	We have been working with Division of Compliance, Dennis M
MO AVG	Monthly Average	AVG	We have been working with the Division of Compliance to try
MO AVG	Monthly Average	AVG	We have perched an ammonia test kit for faster results and t
MO AVG	Monthly Average	AVG	
MX WK AV	Maximum Weekly A	MAX	Beckmar only collected 1 sample in January. We thought we
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MX WK AV	Maximum Weekly A	MAX	Division of Compliance Assistance is working with us and Ma
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MX WK AV	Maximum Weekly A	MAX	Midwest is still collecting data to determine the best, long term
MX WK AV	Maximum Weekly A	MAX	Seasonal temperature changes and algae bloom are the likely
MX WK AV	Maximum Weekly A	MAX	sorry for being late in filing. I have been in Cleveland Clinic si
MX WK AV	Maximum Weekly A	MAX	The ammonia levels have been an issue during winter months
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MX WK AV	Maximum Weekly A	MAX	The E.coli readings from this lab have been challenged by ou
MX WK AV	Maximum Weekly A	MAX	The effluent from Persimmon Ridge wastewater does not ente
MX WK AV	Maximum Weekly A	MAX	The sample results we due to excessive rainfall and unusually
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MX WK AV	Maximum Weekly A	MAX	we are conducting a trial and collecting data on a new aerator
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MX WK AV	Maximum Weekly A	MAX	
MO AVG	Monthly Average	AVG	Beckmar only collected 1 sample in January. We thought we
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MO AVG	Monthly Average	AVG	The ammonia levels have been an issue during winter months
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MO AVG	Monthly Average	AVG	We have been working with compliance to get our distribution
MO AVG	Monthly Average	AVG	We have been working with Division of Compliance, Dennis M
MO AVG	Monthly Average	AVG	We have been working with the Division of Compliance to try
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MX WK AV	Maximum Weekly A	MAX	We are checking into possible causes for this issue. Tempera
MX WK AV	Maximum Weekly A	MAX	we are conducting a trial and collecting data on a new aerator
MX WK AV	Maximum Weekly A	MAX	We are continuing to monitor and collecting data with weekly
MX WK AV	Maximum Weekly A	MAX	we are continuing to try different products to lower the ammor
MX WK AV	Maximum Weekly A	MAX	We are continuing to work towards a solution for the winter ni
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30DA GEO	30 Day Geometric	AVG	We have been working with the Division of Compliance to try
30DA GEO	30 Day Geometric	AVG	We have perched an ammonia test kit for faster results and t
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7 DA GEO	7 Day Geometric	AVG	Data is still being collected at Persimmon Ridge to determine
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7 DA GEO	7 Day Geometric	AVG	Heavy rains and sudden increase in flow may have caused a
7 DA GEO	7 Day Geometric	AVG	I am working with the Division of Compliance Assistance to se
7 DA GEO	7 Day Geometric	AVG	information from weekly sampling is continuing to be collecte
7 DA GEO	7 Day Geometric	AVG	Information is still being collected to find a long term solution f
7 DA GEO	7 Day Geometric	AVG	Midwest is still collecting data to determine the best, long term
7 DA GEO	7 Day Geometric	AVG	Seasonal temperature changes and algae bloom are the likely

7 DA GEO	7 Day Geometric	AVG	sorry for being late in filing. I have been in Cleveland Clinic si
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7 DA GEO	7 Day Geometric	AVG	The sample results we due to excessive rainfall and unusually
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7 DA GEO	7 Day Geometric	AVG	we are conducting a trial and collecting data on a new aerator
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Modification Type	Modification Effect	Modification Type	Modification Type
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had scheduled and collected two sets of samples in January, but on February 3rd we noticed that we only had 1 set of samples. We are currently reviewing the data to determine the best long term approach to the ammonia issue.

We contacted Conway with Beckmar Labs to try and determine the reason for the high N. To date, no one has been able to correct the temporary deficit with disinfecting system.

We are currently reviewing what can be done to ensure the N and BOD stay within the permitted limits. Todd Giles of Division of Water also contacted Conway to help find the best long term solution for the seasonal ammonia issue at Persimmon Ridge. A temporary solution is being implemented for the ammonia issue at Persimmon Ridge.

The current solution to this issue.

Additional cause additional ph. and DO monitoring are being done

since August 13th with major surgery.

Tests were conducted at Persimmon Ridge in the past and a trial is being conducted with a new aerator and data is being collected. This

is being done by a local testing company, and this is the last testing done by this lab. Their location is over one hour from where the sample is drawn from the irrigation lake at anytime.

Due to high flows. We are actively working on trying to lower the ammonia levels

by adjusting the sludge depth, DO, ph and short circuiting in the lagoons and are trying to pinpoint the cause so that we can correct

the issue that was installed a few months ago. The information collected will be used to help determine what percent that the

current process control samples in addition to the monthly samples to help develop the best plan to correct these issues.

We are also looking at ammonia as well as looking for a more permanent solution. The temporary elevated BOD was most likely due to a couple of

trifurcation issues.

Due to lagoon issues.

The issue has been corrected and find the issue with the high ammonia readings. Dennis Minch has offered some suggestions for us

to discuss with Minch, and our inspector Todd Giles to determine the issue with ammonia. Mr. Minch did an on-site visit this week

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As a result, solution to this issue.

As a result, cause additional ph. and DO monitoring are being done

since August 13th with major surgery.

As a result, tests at Persimmon Ridge in the past and a trial is being conducted with a new aerator and data is being collected. This

is done by an outside laboratory company, and this is the last testing done by this lab. Their location is over one hour from where the sample is drawn from the irrigation lake at anytime.

As a result, during high flows. We are actively working on trying to lower the ammonia levels

by adjusting sludge depth, DO, ph and short circuiting in the lagoons and are trying to pinpoint the cause so that we can correct

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st of samples that were logged in and received in January. Beckmar notified the owners of the facility of our error, a

ne up with a reason or solution. we continue to work on this to try and resolve the issue.

ng with Dennis Minch and Beckmar Labs are helping us work through this.

n may be to add bacteria to help lower the ammonia, this is being looked into.

s will be used to keep the ammonia within compliance in the future.

awn, and we have questioned whether this sample is being tested timely or not. McCoy Labs was given notice that

orrect this.

ie aerator improves plant efficiency as a part of finding a long term solution to this annual issue.

æ of excessively heavy rainfalls

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**Environmental Protection Agency
Integrated Compliance Information
System
DMR Data Report**

Version 1.0, modified 08/12/2011

Created Date: 05/02/2011

Last Refresh Date: 04/18/2023

Report Selection Criteri

NPDES ID(s): KY0090956

State Code: KY

Region Code(s):

SIC Code(s):

NAICS Code(s):

Major/Minor Indicator:

County(ies):

Permit Type(s):

Permit Status(es):

Monitoring Period Date Range: 10/01/2018 - 04/

Violation Type: All Data

Parameter Code(s):

State Water Body(ies):

NODI Code	Acceptable?
2	Y
3	Y
6	N
7	Y
9	Y
A	Y
B	Y
C	Y
E	N
F	Y
I	Y
N	Y
P	N
Q	Y
R	Y
T	Y
W	Y
X	N
Y	Y

18/2023

NODI Desc
Operation Shutdown
Special Report Attached
State-specific No Data Indicator - Invalid
No Influent
Conditional Monitoring - Not Required This Period
General Permit Exemption
Below Detection Limit/No Detection
No Discharge
Failed to Sample/Required Analysis Not Conducted
Insufficient Flow for Sampling
Land Applied
Not Constructed
Laboratory Error or Invalid Test
Not Quantifiable
Administratively Resolved
Environmental Conditions - Monitoring Not Possible
Dry Lysimeter/Well
Parameter/Value Not Reported
State-specific No Data Indicator - Valid

NPDES ID	State Code	Region Code	Permit Name	Permittee Address	Facility Name	County	Major Minor Indicator	Permit Type	Permit Status	Federal Grant Flag	Primary SIC Code	Primary NAICS Code	State Water Body	Lat/Long.Latit ude in Decimal Degrees	Lat/Long.Longit ude in Decimal Degrees	Limit Set	Param Cd - MLC - Season ID	Parameter	Mon. Loc. Desc.	Limit Type Code
KY0090956	KY	04	Persimmon Ridge WWTF	500 Northwest Plaza Dr Ste 500 St. Ann, MO 63074	PERSIMMON RIDGE WWTF	Shelby	Minor	NPDES Individual Permit	Effective	N	6552	237210	05140102-FLOYDS FORK	38.297778	-85.439722	002-1	00300-1-0	Oxygen, dissolved [DO]	Effluent Gross	ENF
KY0090956	KY	04	Persimmon Ridge WWTF	500 Northwest Plaza Dr Ste 500 St. Ann, MO 63074	PERSIMMON RIDGE WWTF	Shelby	Minor	NPDES Individual Permit	Effective	N	6552	237210	05140102-FLOYDS FORK	38.297778	-85.439722	002-1	00400-1-0	pH	Effluent Gross	ENF
KY0090956	KY	04	Persimmon Ridge WWTF	500 Northwest Plaza Dr Ste 500 St. Ann, MO 63074	PERSIMMON RIDGE WWTF	Shelby	Minor	NPDES Individual Permit	Effective	N	6552	237210	05140102-FLOYDS FORK	38.297778	-85.439722	002-1	00530-1-0	Solids, total suspended	Effluent Gross	ENF
KY0090956	KY	04	Persimmon Ridge WWTF	500 Northwest Plaza Dr Ste 500 St. Ann, MO 63074	PERSIMMON RIDGE WWTF	Shelby	Minor	NPDES Individual Permit	Effective	N	6552	237210	05140102-FLOYDS FORK	38.297778	-85.439722	002-1	00600-1-0	Nitrogen, total [as N]	Effluent Gross	ENF
KY0090956	KY	04	Persimmon Ridge WWTF	500 Northwest Plaza Dr Ste 500 St. Ann, MO 63074	PERSIMMON RIDGE WWTF	Shelby	Minor	NPDES Individual Permit	Effective	N	6552	237210	05140102-FLOYDS FORK	38.297778	-85.439722	002-1	00610-1-1	Nitrogen, ammonia total [as N]	Effluent Gross	ENF
KY0090956	KY	04	Persimmon Ridge WWTF	500 Northwest Plaza Dr Ste 500 St. Ann, MO 63074	PERSIMMON RIDGE WWTF	Shelby	Minor	NPDES Individual Permit	Effective	N	6552	237210	05140102-FLOYDS FORK	38.297778	-85.439722	002-1	00610-1-2	Nitrogen, ammonia total [as N]	Effluent Gross	ENF
KY0090956	KY	04	Persimmon Ridge WWTF	500 Northwest Plaza Dr Ste 500 St. Ann, MO 63074	PERSIMMON RIDGE WWTF	Shelby	Minor	NPDES Individual Permit	Effective	N	6552	237210	05140102-FLOYDS FORK	38.297778	-85.439722	002-1	00665-1-0	Phosphorus, total [as P]	Effluent Gross	ENF
KY0090956	KY	04	Persimmon Ridge WWTF	500 Northwest Plaza Dr Ste 500 St. Ann, MO 63074	PERSIMMON RIDGE WWTF	Shelby	Minor	NPDES Individual Permit	Effective	N	6552	237210	05140102-FLOYDS FORK	38.297778	-85.439722	002-1	50050-1-0	Flow, in conduit or thru treatment plant	Effluent Gross	ENF
KY0090956	KY	04	Persimmon Ridge WWTF	500 Northwest Plaza Dr Ste 500 St. Ann, MO 63074	PERSIMMON RIDGE WWTF	Shelby	Minor	NPDES Individual Permit	Effective	N	6552	237210	05140102-FLOYDS FORK	38.297778	-85.439722	002-1	50060-1-0	Chlorine, total residual	Effluent Gross	ENF
KY0090956	KY	04	Persimmon Ridge WWTF	500 Northwest Plaza Dr Ste 500 St. Ann, MO 63074	PERSIMMON RIDGE WWTF	Shelby	Minor	NPDES Individual Permit	Effective	N	6552	237210	05140102-FLOYDS FORK	38.297778	-85.439722	002-1	51040-1-0	E. coli	Effluent Gross	ENF
KY0090956	KY	04	Persimmon Ridge WWTF	500 Northwest Plaza Dr Ste 500 St. Ann, MO 63074	PERSIMMON RIDGE WWTF	Shelby	Minor	NPDES Individual Permit	Effective	N	6552	237210	05140102-FLOYDS FORK	38.297778	-85.439722	002-1	80082-1-0	BOD, carbonaceous [5 day, 20 C]	Effluent Gross	ENF

KY0090956	Persimmon Ridge WWTF	Shelby	002-1	10/31/2018	BOD, carbonaceous [5 day,	80082-1-0	Effluent Gross								2.5	mg/L		mg/L	N	
KY0090956	Persimmon Ridge WWTF	Shelby	002-1	10/31/2018	BOD, carbonaceous [5 day,	80082-1-0	Effluent Gross										3	mg/L	mg/L	N

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ENERGY AND ENVIRONMENT CABINET

Department for Environmental Protection
300 Sower Boulevard
Frankfort, KY 40601

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ZIP 40601
CALL 1-800-250-799

Persimmon Ridge Subd & WWTP
Josiah Cox
500 Northwest Plaza Dr Ste 500

Saint Ann, MO 63074

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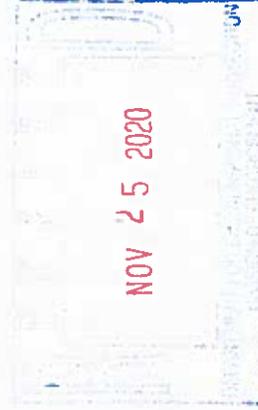
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DP



BLUEGRASS WATER

Utility Operating Company

A CSWR Managed Utility

July 29, 2020

Michael Kroeger (CC. Wesley Dement)
Kentucky Department for Environmental Protection
Division of Enforcement
300 Sower Blvd., 3rd Floor
Frankfort, KY 40601

Bluegrass Water Utility Operating Company, Inc.
Persimmon Ridge WWTF
KYPDES Permit No. KY0077674
Agency Interest No. 458

Corrective Action Plan Revision:

I am pleased to submit this update to the Corrective Action Plan for the Persimmon Ridge WWTF approved by EEC/DEP on 12/13/2019. The scope of the original CAP was completed within the projected schedule of the CAP. Triage and repair work has been completed and the plant is in better shape than it was at acquisition. Additional aeration has been installed aimed at lowering the ammonia levels in effluent and improving BOD removal. Basic cleanup and repairs have been made at the facility as well. The facility is consistently meeting limits; however it has historically struggled with BOD and Ammonia in the January to April winter months and continued observation will be required to determine if additional aeration is needed based on its performance in the upcoming months.

Should the facility struggle to comply with BOD and Ammonia limits in these cold months, Bluegrass will apply for a construction permit to either install additional aeration or install a small MBBR to knock ammonia levels down. It will be possible to determine if this additional improvement is necessary by the end of April of 2021, at which point we will send a status update to confirm one way or the other.

Sincerely,

JON MEANY

Utility Engineer

 (314) 380-8537 Ext. 215
 (314) 482-0342
 (314) 736-4759
 jmeany@cswrgroup.com
 1650 Des Peres Rd., Suite 303,
Des Peres, MO 63131

Civil Engineering
Surveying & Mapping
Potable Water
Wastewater Treatment



Civil Site Design
Construction Support
Transportation
Wastewater Collection

December 13, 2019

Wes Dement
Kentucky Department for Environmental Protection
Division of Enforcement
300 Sower Blvd., 3rd Floor
Frankfort, KY 40601

Bluegrass Water Utility Operating Company, Inc.
Persimmon Ridge WWTF
KYPDES Permit No. KY0090956
Corrective Action Plan

In light of the Persimmon Ridge WWTF's failure to meet permitted limits Bluegrass Water Utility Operating Company (BWUOC) submits the following corrective action plan.

BWUOC has recently purchased this treatment plant. With the change of ownership, operational modifications have been implemented and are ongoing. With proper operation, the facility should be capable of meeting permit limits without process modification. Over the next several months, repairs will be made, and monitoring will continue to confirm that the existing processes can meet permit limits.

1. Causes of the Effluent Violations

- Ammonia
- Carbonaceous Biological Oxygen Demand (CBOD)
- Chlorine Residual
- Total Suspended Solids (TSS)
- E. Coli

Effluent testing data found on echo.epa.gov shows the plant hasn't consistently met permitted limits. Sporadic permit limit exceedances occurred in the parameters listed above prior to BWUOC ownership transfer. During a site visit, several aerators were not in service providing treatment. Additionally, the last cell includes a curtain style baffle that is not installed correctly. When the aerators and baffle are not functioning as designed, the plant will struggle to meet limits on a consistent basis. Sporadic exceedances of E. Coli and chlorine residual at this facility would have been the failure of previous ownership to maintain the necessary supply of chemicals on hand and available for feeding into the process.

2. System Evaluation and Corrective Actions

Repairs have been under way since BWUOC acquisition. The aerators have been returned to service, but the baffle is not properly installed. This will cause short circuiting of the last lagoon cell and the wastewater will not be capable of receiving full treatment as designed. While the system has been meeting limits since acquisition, the baffle needs to be repaired and properly installed.

Civil Engineering

Surveying & Mapping

Potable Water

Wastewater Treatment



Civil Site Design

Construction Support

Transportation

Wastewater Collection

Previous chlorine residual and E. Coli exceedances were the result of a lack of chemical supply. Both chemicals are liquid and are pumped into the wastewater. Therefore, a scale should be installed and setup with real time monitoring and an alarm system that can notify the operator when chemicals on hand start to get low.

The influent lift station was evaluated and it was determined that one of the influent pumps is nearing failure. Operations staff are obtaining pricing for both rebuilding the 5 Hp influent pump as well as replacement. This is a priority in order to maintain redundancy at the influent of the lagoon.

A Mission remote monitoring system will be installed for active monitoring. The system already has an influent flow meter and effluent flow meter, which can be hooked up to the Mission system. The recommended scales can also be hooked up to the Mission system to notify the operator when chemical supply is low. The monitoring system will improve operations and maintain reliable service for the customers.

I and I is a problem within this system. Flow monitoring will help determine the extents of the I and I issue. A three-step process has begun to evaluate the collection system. The first step was smoke testing the system, which is already complete. Next the system will be cleaned and jetted. Finally, the results of these two processes will allow problem areas to be identified and targeted for repair/replacement. The sanitary sewers at Persimmon are predominately located in the back yards of properties. Currently saturated ground conditions make jetting and repair work difficult to complete without considerable damage to the homeowners' properties. As a result, this evaluation will be completed next summer unless conditions become significantly dryer sooner.

3. Project Milestones

- Continue monitoring performance of facility (July 31, 2020)
- Repair existing lagoon baffle in second cell (July 31, 2020)
- Install scales for both chlorine and dechlorination chemicals in use (April 30, 2020)
- Install mission alarms (July 31, 2020)
- Clean and jet the collection system (July 31, 2020)
- Submit status report detailing improvements and whether process changes are required (August 31, 2020)

Sincerely,

A handwritten signature in blue ink that reads 'Benjamin Kuenzel'.

Benjamin Kuenzel, PE

Principal of 21 Design Group, Inc.

ANDY BESHEAR
GOVERNOR



REBECCA W. GOODMAN
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

February 13, 2020

Mr. Lawren Just
72 Persimmon Ridge Rd
Louisville, KY 40245

Re: Persimmon Ridge Golf Course Sewer Section 19
Shelby County, Kentucky
Persimmon Ridge Subd & WWTP
Activity ID #: 3955, APE20200001
Receiving Treatment Plant KPDES #: KY0090956

Dear Mr. Just:

We have reviewed the plans and specifications for the above referenced project. The plans include the construction of approximately 1,084 feet of 8-inch PVC sewer line. This is to advise that plans and specifications for the above referenced project are APPROVED with respect to sanitary features of design, as of this date with the requirements contained in the attached construction permit.

If we can be of any further assistance or should you wish to discuss this correspondence, please do not hesitate to contact Mr. Mohammed Mohiuddin at 502-782-7020.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Humphries".

Terry Humphries, P.E.
Supervisor, Engineering Section
Water Infrastructure Branch
Division of Water

TH / MM
Enclosures

C: Shelby County Health Department
Kerry P Magan Consulting
Division of Plumbing
Bluegrass Water

DESIGN CRITERIA:

PLANT INFLUENT FLOW

Q_{ADF}= 55,000 GPD BOD= 225 MG/L
Q_{PDF}= 165,000 GPD TSS= 225 MG/L
Q_{PHF}= 220,000 GPD TKN= 40 MG/L

MBBR INFLUENT FLOW (EQUALIZED)

Q_{ADF}= 55,000 GPD
Q_{PDF}= 110,000 GPD
Q_{PHF}= 110,000 GPD

LAGOON AERATION

BOD REMOVED – 185 MG/L, 84.9 LBS/D
LBS O₂/LB BOD – 1.5
ACTUAL OXYGEN REQUIREMENT – 127 LBS/DAY
USE 6, EXISTING 5.0 HP MECHANICAL SURFACE
AERATORS USE 1, 25.0 HP MECHANICAL SURFACE
AERATOR (ACTUAL OXYGEN DEMAND MET WITH
LARGEST UNIT OUT OF SERVICE)

MBBR (SIDESTREAM)

NO. OF MBBRS: 2
DIMENSIONS: 8'x8'x5.75'
TOTAL VOLUME = 5,505 GALLONS
INF. BOD = 40 MG/L , 18.4 LBS/D
EFF. BOD (SOLUBLE) TARGET = 5 MG/L, 2.3 LBS/DAY
HRT @ ADF = 2.4 HRS
MEDIA SURFACE RQD. = 4,741 M²
MEDIA VOLUME RQD. (W/650 M²/M³ MEDIA) = 251 CF
MEDIA FILL % = 35%
SCFM RQD. = 141 SCFM

BLOWERS

FUNCTION: LAGOON AERATION, MBBR
AERATION, AIRLIFTS, POST-AERATION
TOTAL SCFM RQD.: 171 SCFM
SCFM/BLOWER: 171 SCFM
DISCHARGE PRESSURE: 4.00 PSIG
NO. OF BLOWERS: 2 (1 OP. & 1
STANDBY)

CCT/POST-AERATION *

VOLUME: 4,763 GAL.
DIMENSIONS: 7'-7"X12'X7' SWD
HRT @ PHF: 31 MIN
THE TANK WILL HAVE FOUR FLEXCAP DIFFUSERS
TO ACHIEVE COMPLETE MIXING TO PROVIDE
EFFECTIVE CONTACT TIME FOR DISINFECTION
AIR FLOW RATE: 20 SCFM/1,000 CF
SCFM PROVIDED: 13 SCFM

As currently practiced, raw sewage will enter the facility in the existing influent lift station, and the flow will be pumped into the existing lagoon cell # 1 and then flow to existing lagoon cell #2 for further treatment. In the proposed improvements, the flow in lagoon cell # 2 will be airlifted in a side stream into a two stage Moving Bed Biological Reactor, for secondary treatment and the MBBR effluent will be recycled into lagoon cell # 1. The existing, four-zone chlorine contact tank (upgraded with the addition of diffusers to allow the tank to simultaneously be used for post-aeration) will be used for disinfection and to elevate the dissolved oxygen levels to meet the disinfection limits and the DO residual limit prior to effluent discharge.

AI#3955 APE20210001

Aeration Tank – Air Requirement (Ten States Standard 92.332)

- Ten States Standards air requirement = 1,500 ftcu/lb BOD₅
- Min. Flow Rate in Aeration Tank = $\frac{1500 \text{ ftcu}}{\text{lbs}} \text{ BOD}_5 (.055 \text{ mgd}) \left(\frac{225 \text{ mg}}{\text{L}} \right) (8.34)}{1440 \text{ min/day}} = 107.51 \text{ cfm}$
- 107.51 cfm needed < 141 cfm provided

Surface Area Loading Rate (SALR)=Suitable Design SALR value for BOD removal with target BOD removal of 90-95% would be 0.001536 lb/ft

- Required Carrier Surface Area = (55.044 lbs/day)/(0.001536 lb/ft/day) =35,835.93 ft² or 4,842.571 m²

Required Carrier Volume = required carrier surf. Area/carrier specific surf. Area

- Required Carrier Volume = 35,835.93 ft²/(251 ft²/ft³) = 142.77 ftcu or 9.71 m³ cu
- 142.77 ftcu required <251 ft³ provided

Required Tank Volume = required carrier volume/carrier fill %

- Required Tank Volume = $251 \text{ ft cu} / 0.35 = 717 \text{ ft cu} = 5,364.94 \text{ gallon}$
- 5,364.94 gallons needed < 5,505 gallons provided

Liquid Volume In Tank = required tank volume – (required carrier volume(1-carrier % void space))

- Liquid Volume in Tank = $717 - (251(1-.57)) = 609.07 \text{ ft cu} = 4,556.45 \text{ gallons}$
- 4,556.45 gallons required < 5,505 gallon provided

Ave. HRTdes ave = (liquid vol. in tank *7.48)/(Q*10⁶/(24*60))

- Ave. HRTdes ave = $(735.86*7.48)/(.055*10^6/(24*60)) = (5,505)/(55,000/1440) = 144.147 \text{ min} = 2.4 \text{ hrs}$
- HRT peak hr = HRT des ave/peak hour factor = $144.147/4 = 36 \text{ min} = 0.60 \text{ hr}$

Chlorine Contact Time

- 55,000 gpd = 2,291.67 gph = 38.19 gpm
- Contact tank volume = 4,763 gallons
- 4,763 gallons/38.19 gpm = 124.72 min.

Post Aeration

- 0.154 cfm per 1,000 gallons of average daily design capacity shall be provided
- 55,000 gallon/1,000 gallons * 0.154 cfm = 8.47 cfm
- 8.47 cfm needed < 13 cfm provided



See the INSTRUCTIONS for more information about selected portions of this application.
 Questions on completing this application? Contact the Water Infrastructure Branch at 502/564-3410 or visit our website at <http://water.ky.gov> for more information.

I. CONSTRUCTION PROJECT INFORMATION

Project Name: _____
 Project City/County: _____
 Name of WWTP: _____
 KPDES Number of WWTP, if known (for modifications to an existing plant): KY _____
 Estimated cost of WWTP improvements and sewer line extension: \$ _____
 Project is: WWTP Only WWTP with sewer lines
 Minor Modification to WWTP (Complete only Sections I, II, IV A, B, C, E3, H1, VII, VIII)

II. APPLICANT INFORMATION

Applicant (Entity paying for construction): _____ E-mail: _____
 Street Address: _____
 City, State, Zip: _____
 Will ownership be transferred? Yes. Name of new owner: _____ No

III. PRELIMINARY SUBMITTAL

Has a Preliminary Submittal been made with all the information in this section? [See 401 KAR 5:005, Section 3]
 Yes. Name of project: _____
 County and Location of project, then skip to next section: _____
 No. Provide the information below that has not been previously submitted (use additional pages, as necessary). Place a **check** (✓) by the items included in the application or an **N/A** if the item is not applicable to the project.
 ___ A. A copy of a 7½ minute USGS topographic map, with the WWTP, any proposed sewer lines, service area, and discharge location identified.
 ___ B. For a WWTP located within a planning area, a letter from the regional or facility planning agency stating the proposed WWTP is compatible with the regional facility plan or the water quality management plan.
 ___ C. For a WWTP located within a planning area, a demonstration that a connection to the regional facility is not available.
 ___ D. For a regional WWTP, a water quality management plan that is in compliance with **401 KAR 5:006**.

IV. DESIGN CONSIDERATIONS

A. PLANS AND SPECIFICATIONS.

Design plans and specifications shall comply with 401 KAR 5:005 and "Recommended Standards for Wastewater Facilities" ("Ten States' Standards") 2014 edition. If engineering practices, other than those contained in "Ten States' Standards", were used in the design, indicate the source and the corresponding portion of the design. **[See 401 KAR 5:005, Section 7]**

Plans and specifications submittals shall meet on of the following options:

- Submit at least one paper printed set of detailed plans (no larger than 24" x 36") and a PDF copy of the plans and specifications on a data storage device such as a USB flash drive. Both copies shall be dated with a stamp, signature of a licensed professional engineer in Kentucky which complies with the requirements of 201 KAR 18:104. The digital plans shall consist of a single pdf file and be in a folder called "Engineering Plans" and the specifications manual shall be in a folder called "Specifications".
- Submit a PDF copy of the plans and specifications digitally via the electronic form on the KY One Stop Business Portal website. The PDF copy shall be dated with stamp and signature of a licensed engineer in Kentucky which complies with the requirements of 201 KAR 18:104 Section 3. The plans shall be submitted as a single pdf file.

B. DESIGN ENGINEER, if the WWTP design capacity is greater than 10,000 gpd or if the sewer lines associated with the WWTP will become part of a sewer system served by a regional facility. **[Section 6]**

P.E.'s Name: _____ Firm: _____
Street Address: _____
City, State, Zip: _____
Phone: _____ Fax: _____ E-mail: _____

C. CONFORMITY TO PLANS AND SPECIFICATIONS. Provide name of person who will inspect and certify that the constructed facility conforms to the approved plans and specifications. If the WWTP's design capacity is greater than 10,000 gpd, or if the sewer lines will become part of a sewer system served by a regional facility, this person must be a professional engineer (P.E.). **[Section 3]**

Name: _____ Firm: _____
Street Address: _____
City, State, Zip: _____
Phone: _____ Fax: _____ E-mail: _____

D. DESIGN CAPACITIES. Provide the following design capacities, in million gallons per day or pounds per day. **[Section 3]**

Average Daily Flow: _____ MGD Influent BOD: _____ lb/day
Peak Daily Flow: _____ MGD Influent SS: _____ lb/day
Peak Hourly Flow: _____ MGD Influent NH₃-N: _____ lb/day

E. Design Criteria. Provide the following information (use additional pages, as necessary). Place a **check (✓)** by the items included in the application or an **N/A** if the item is not applicable to the project.

- ____ 1. A schematic drawing of the facility layout and explanation of the proposed facility and method of operation. **[Section 3]**
- ____ 2. WWTP's Reliability Category, Grade A, B, or C: _____. Include a detailed description of the reliability measures that will be used for the WWTP. **[Sections 3 and 13]**
3. A discussion of the design criteria used to size the unit processes. **[Section 3]**

F. LABORATORY SERVICES. Give name of laboratory that will provide services for self-monitoring and process control. **[Section 3]**

Firm Name: _____
Street Address: _____
City, State, Zip: _____

G. SITE LOCATION. Place a **check (✓)** by the items that are included in this application or an **N/A** if the item is not applicable to the project.

- ___ 1. Include a plat or survey clearly indicating the site's boundaries, position of proposed facility in reference to the boundaries, and position of dwellings within 200 feet of the WWTP. **[Section 3]**
- ___ 2. If an open-top WWTP is closer than 200 feet to the closest dwelling, include what structure or other measures will be used for noise and odor control. **[Section 4]**
- ___ 3. For a WWTP with a spray irrigation system, if the distance from the spray field to the property boundary is less than 20 feet, include what protective measures will be used to inhibit spray from crossing property boundary. **[Section 21]**

H. OTHER INFORMATION TO BE SUBMITTED WITH APPLICATION. Place a **check (✓)** by the items that are included in this application or an **N/A** if the item is not applicable to the project.

- 1. If modifying or replacing an existing WWTP or sewer line, a closure plan indicating how the new facility will be constructed without a by-pass to a stream and the procedures that will be used for abandoning the existing facility. **[Section 3]**
- ___ 2. A Sludge Management Plan for WWTPs, including the sludge processing method and how sludge will be ultimately disposed. **[Section 3]**
- ___ 3. If the discharge point does not coincide with a blue line on a USGS map, a copy of a recorded deed, recorded other right of ownership, or recorded right of easement for a corridor to the nearest blue line stream. **[Section 3]**
- ___ 4. A description of and detailed specifications for the flow measuring device. **[Section 7]**
- ___ 5. If the WWTP discharges to a sinkhole or sinking stream, a plan for a groundwater tracer study (or a previously conducted groundwater tracer study). **[Section 4]**

V. SEWER LINES

Include the following items for projects that include sewer lines. If project is for only a WWTP, skip to next section. Place a **check (✓)** by the items that are included in this application or **N/A** if the item is not applicable to the project.

- ___ A. If the project includes a pump station, the pump performance curve. **[Section 8]**
- ___ B. If the project includes gravity sewer lines or force mains, a plan view and profile view for each. **[Section 6]**
- ___ C. A demonstration that the sewer system has adequate capacity to treat the current and the anticipated flow to the WWTP and that the sewer system is not subject to excessive infiltration or excessive inflow. **[Section 8]**
- ___ D. A demonstration that the WWTP has adequate capacity to transport the anticipated flow to the WWTP and the WWTP is not subject to excessive infiltration or excessive inflow. **[Section 8]**

VI. OTHER REQUIRED APPLICATIONS

- ___ A. If the WWTP has a discharge, complete and file with this application: KPDES Application (KPDES Form 1); and Form A, B, C, or Short Form C, as applicable.
- ___ B. If the WWTP does not have a discharge, complete and file with this application the "No Discharge Operating Permit Application, Form ND."

VII. FEES

Fees. Check or money order must be made payable to "**Kentucky State Treasurer**" for the total amount. **Fees do not apply** for a municipality, sanitation district, or other publicly owned facility. **[Section 5]**

WWTP Category:	_____	Amount:	\$ _____
Sewer Line Category:	_____	Amount:	\$ _____
		Total Amount:	\$ _____

VIII. CERTIFICATION

I, the applicant, certify under penalty of law that this document and all attachments were prepared under my direction or supervision. 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 or imprisonment or both for known violations. **[Section 2]**

Applicant's Name and Official Title (Type or Print) Jacob Freeman		Phone Number (Include area code) (314)-550-1167
Signature		Date 07/14/2021

ANDY BESHEAR
GOVERNOR



REBECCA W. GOODMAN
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601
TELEPHONE: 502-564-2150
TELEFAX: 502-564-4245

February 22, 2022

Josiah Cox
Bluegrass Water Utility Operating Company LLC
1650 Des Peres Rd Ste 303
Saint Louis, MO 63131

Re: Persimmon Ridge WWTF Improvements
Shelby County, Kentucky
Persimmon Ridge Subd & WWTP
Activity ID #: 3955, APE20210001
Receiving Treatment Plant KPDES #: KY0090956

Dear Josiah Cox:

We have reviewed the plans and specifications for the above referenced project. The plans include the construction of approximately

Two Stage Moving Bed Biological Reactor

- (2) 5,505 gallons MBBR
- Post Aeration
- (4) Flexcap Diffusers
- (2) Blowers capable of 171 SCFM each
- Blower control panels
- All associated yard piping.

This is to advise that plans and specifications for the above referenced project are APPROVED with respect to sanitary features of design, as of this date with the requirements contained in the attached construction permit.

If we can be of any further assistance or should you wish to discuss this correspondence, please do not hesitate to contact Daniel Kulik at 502-782-6998.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Humphries", written over a horizontal line.

Terry Humphries, P.E.
Supervisor, Engineering Section
Water Infrastructure Branch
Division of Water

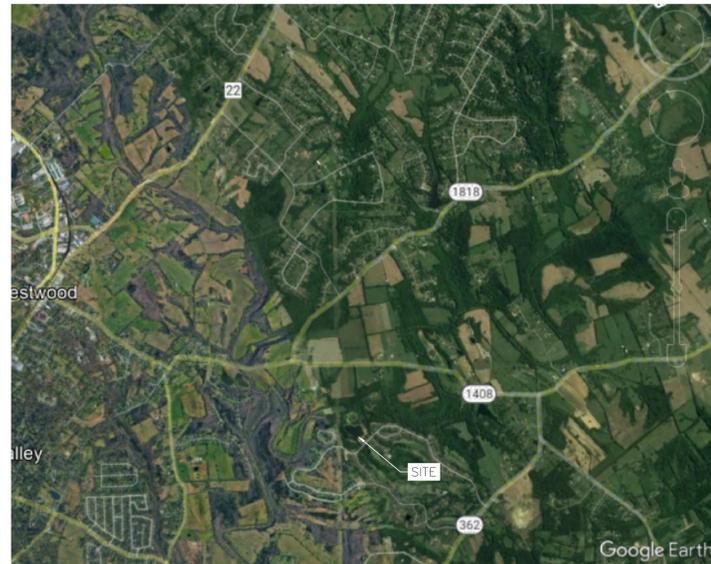
TH / DK

Enclosures

c: Shelby County Health Department
21 Design Group
Division of Plumbing

PERSIMMON RIDGE IN LOUISVILLE, KENTUCKY

PERMIT ISSUE: November 18, 2021
 CONSTRUCTION ISSUE: _____, 2021
 RECORD ISSUE: _____ 2021



VICINITY MAP



1351 Jefferson, Suite 301
 Washington, MO 63090
 mail@21designgroup.net
 P: 636-432-5029

DRAWING LIST

- C01 TITLE
- C02 Notes
- C03 SITE UTILITY PLAN
- C04 DETAIL SHEET
- P1 PROCESS FLOW DIAGRAM
- P2 HYDRAULIC PROFILE
- P3 PROCESS NOTES, ABBREVIATIONS AND LEGEND
- P4 PROCESS PLAN AND BLOWER ARRANGEMENT PLAN
- P5 MBBR PLAN, SECTIONS AND DETAILS
- P6 CLARIFIER PLAN SECTION, SECTIONS AND DETAILS
- P7 PROCESS DETAILS AND ELECTRICAL RISER DIAGRAM

REV	DATE	DESCRIPTION
A	11/18/2021	PERMIT SET



COVER SHEET
 PERSIMMON RIDGE
 72 PERSIMMON RIDGE DRIVE
 LOUISVILLE, KENTUCKY 40245

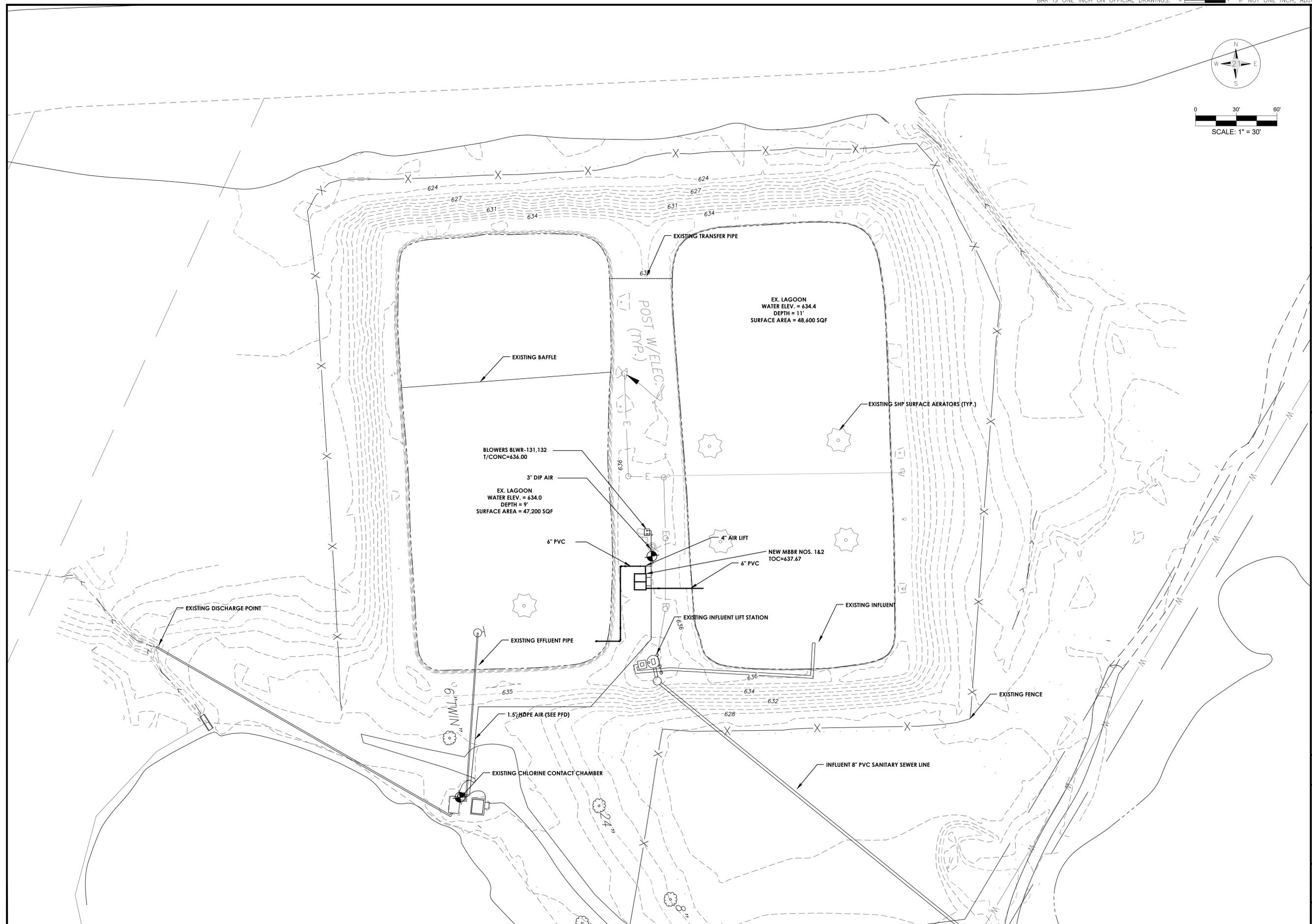
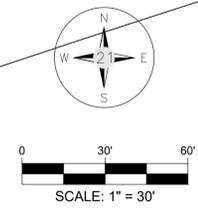
ENGINEERING CERTIFICATE OF AUTHORITY NO. 4804
 ENGINEERING LICENSE: BENJAMIN J. KUENZEL, PE33718



SEAL DATE: 11/18/2021
 DRAWN BY: CMB
 PROJ NUMBER: 0542-18
 DATE: 11/18/2021
 DRAWING NO: C01



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DATE	BY	PERMIT SET
11/18/2021	A	

21 DESIGN GROUP INC.
 1331 Jefferson, Suite 301
 Washington, MO 63090
 mail@21designgroup.net
 P: 636-426-5270

SITE PLAN
 PERSIMMON RIDGE
 72 PERSIMMON RIDGE DRIVE
 LOUISVILLE, KENTUCKY 40245

ENGINEERING CERTIFICATE OF AUTHORITY NO. 4804
 ENGINEERING LICENSE: BENJAMIN J. KUENZEL, PE33718



SEAL DATE	11/18/2021
DRAWN BY	CMB
PROJ NUMBER	0542-18
DATE	11/18/2021
DRAWING NO.	C03

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DESIGN CRITERIA:

PLANT INFLUENT FLOW

Q_{ADF} = 55,000 GPD BOD = 225 MG/L
 Q_{PDF} = 165,000 GPD TSS = 225 MG/L
 Q_{PHF} = 220,000 GPD TKN = 40 MG/L

MBBR INFLUENT FLOW (EQUALIZED)

Q_{ADF} = 55,000 GPD
 Q_{PDF} = 110,000 GPD
 Q_{PHF} = 110,000 GPD

LAGOON AERATION

BOD REMOVED - 185 MG/L, 84.9 LBS/D
 LBS O₂/LB BOD - 1.5
 ACTUAL OXYGEN REQUIREMENT - 127 LBS/DAY
 USE 6, EXISTING 5.0 HP MECHANICAL SURFACE AERATORS USE 1, 25.0 HP MECHANICAL SURFACE AERATOR (ACTUAL OXYGEN DEMAND MET WITH LARGEST UNIT OUT OF SERVICE)

MBBR (SIDESTREAM)

NO. OF MBBRS: 2
 DIMENSIONS: 8'x8'x5.75'
 TOTAL VOLUME = 5,505 GALLONS
 INF. BOD = 40 MG/L, 18.4 LBS/D
 EFF. BOD (SOLUBLE) TARGET = 5 MG/L, 2.3 LBS/DAY
 HRT @ ADF = 2.4 HRS
 MEDIA SURFACE RQD. = 4,741 M²
 MEDIA VOLUME RQD. (W/650 M²/M³ MEDIA) = 251 CF
 MEDIA FILL % = 35%
 SCFM RQD. = 141 SCFM

BLOWERS

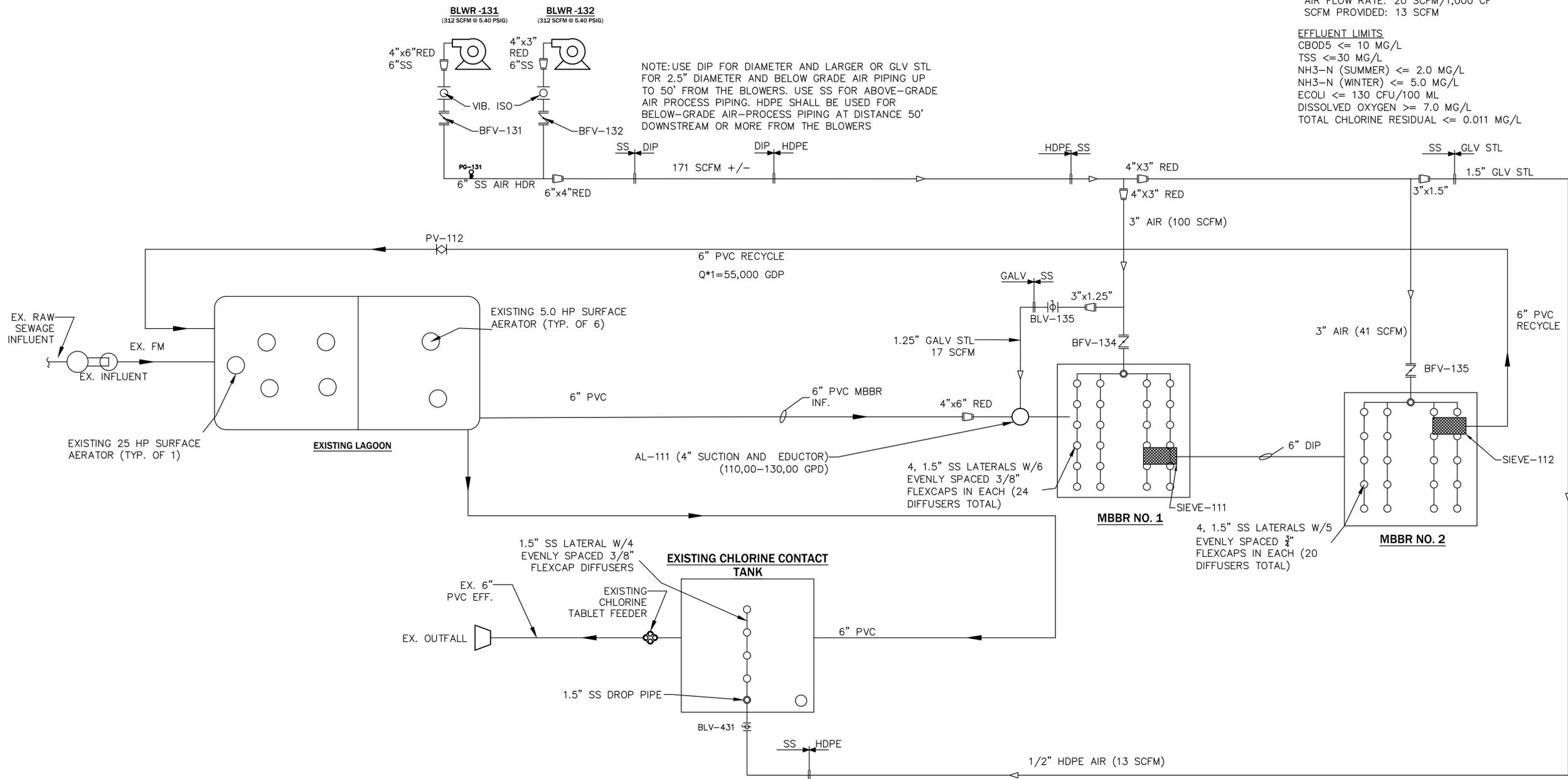
FUNCTION: LAGOON AERATION, MBBR AERATION, AIRLIFTS, POST-AERATION
 TOTAL SCFM RQD.: 171 SCFM
 SCFM/BLOWER: 171 SCFM
 DISCHARGE PRESSURE: 4.00 PSIG
 NO. OF BLOWERS: 2 (1 OP. & 1 STANDBY)

CCT/POST-AERATION *

VOLUME: 4,763 GAL.
 DIMENSIONS: 7'-7"x12'X7' SWD
 HRT @ PHF: 31 MIN
 THE TANK WILL HAVE FOUR FLEXCAP DIFFUSERS TO ACHIEVE COMPLETE MIXING TO PROVIDE EFFECTIVE CONTACT TIME FOR DISINFECTION
 AIR FLOW RATE: 20 SCFM/1,000 CF
 SCFM PROVIDED: 13 SCFM

EFFLUENT LIMITS

CBOD5 <= 10 MG/L
 TSS <= 30 MG/L
 NH3-N (SUMMER) <= 2.0 MG/L
 NH3-N (WINTER) <= 5.0 MG/L
 ECOLI <= 130 CFU/100 ML
 DISSOLVED OXYGEN >= 7.0 MG/L
 TOTAL CHLORINE RESIDUAL <= 0.011 MG/L



PROCESS FLOW DIAGRAM



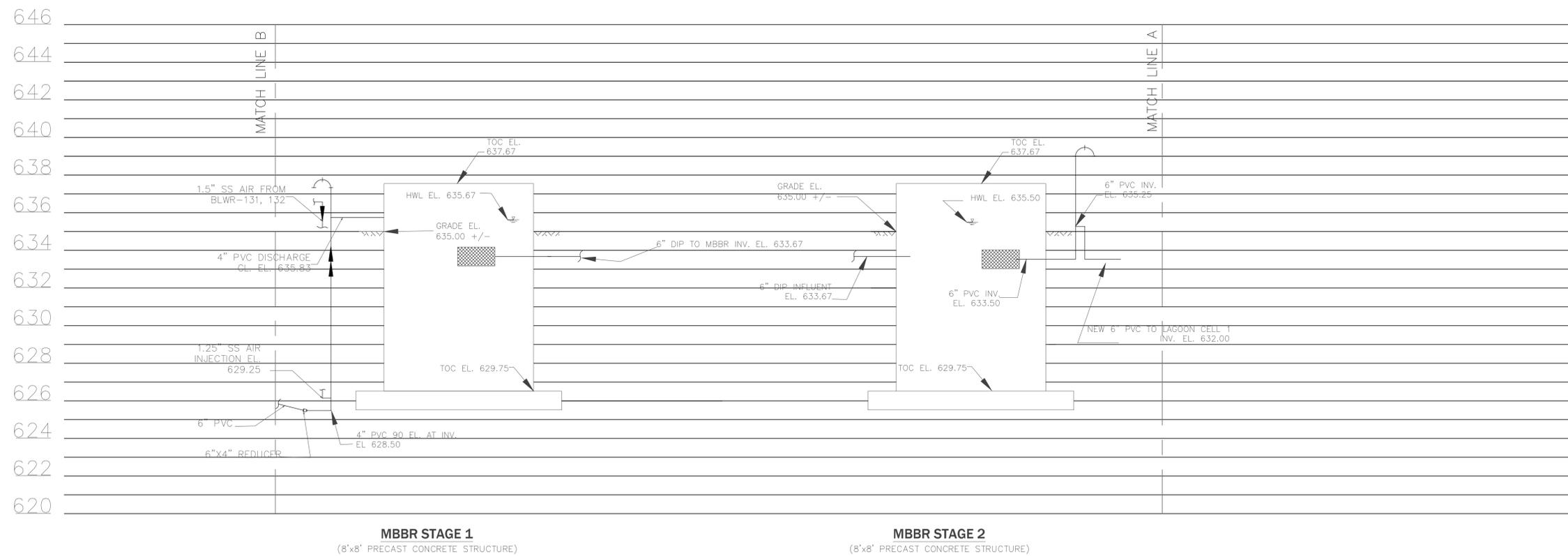
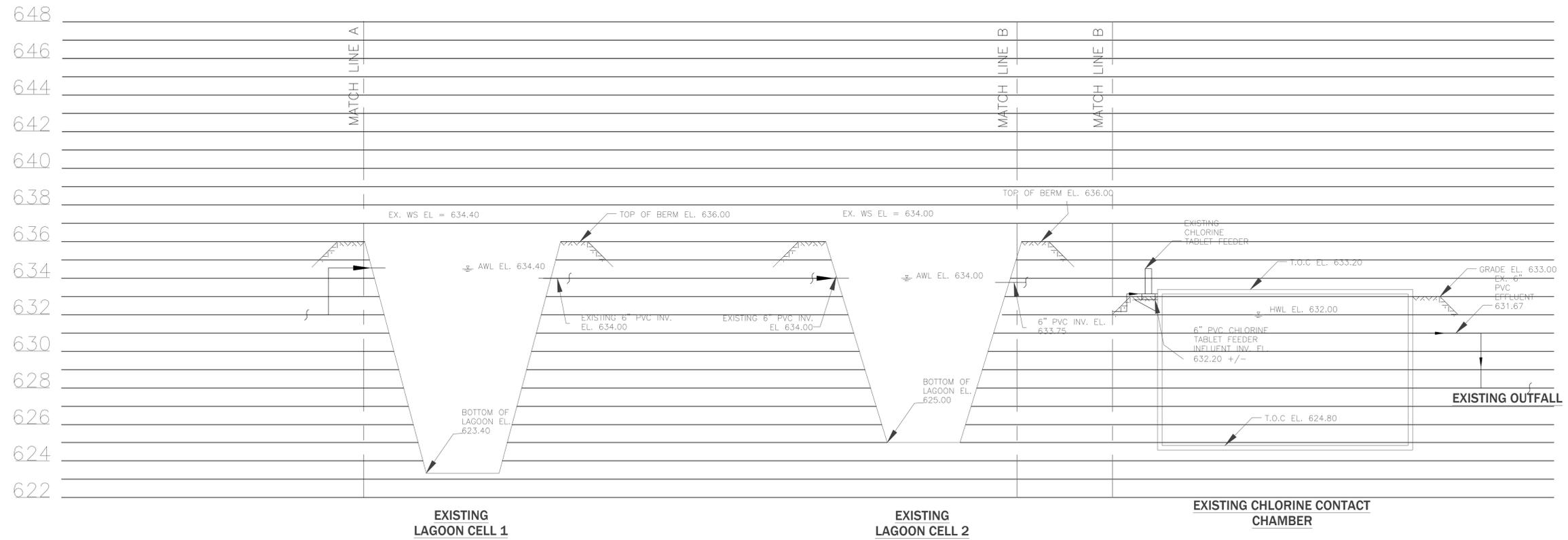
PROCESS FLOW DIAGRAM
 PERSIMMON RIDGE WWTF IMPROVEMENTS
 261 PERSIMMON RIDGE DRIVE
 LOUISVILLE, KENTUCKY

ENGINEERING CERTIFICATE OF AUTHORITY NO. 4804
 ENGINEERING LICENSE: BENJAMIN J. KUENZEL, PE33718



SEAL DATE: 11/18/2021
 DRAWN BY: CMB
 PROJ NUMBER: 0542-8
 DATE: 11/18/2021
 DRAWING NO: P1

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WASTEWATER HYDRAULIC PROFILE
 VERTICAL SCALE: 1"=3'0" HORIZONTAL SCALE: NONE



HYDRAULIC PROFILE
 PERSIMMON RIDGE WWTF
 261 PERSIMMON RIDGE DR.
 LOUISVILLE, KENTUCKY

ENGINEERING CERTIFICATE OF AUTHORITY NO. E-2013005879
 ENGINEERING LICENSE: BENJAMIN J. KUENZEL, PE33718



SEAL DATE	11/8/2021
DRAWN BY	CMB
PROJ NUMBER	0542-18
DATE	11/8/2021
DRAWING NO.	P2

REV	DATE	PERSON	PERMIT SET
A	11/8/2021		

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FOUNDATION NOTES:

- THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT. CONTRACTOR WILL BE FURNISHED WITH GEOTECHNICAL REPORT FOLLOWING WRITTEN REQUEST.
- ALL SOIL SUPPORTED FOOTINGS SHALL BE FOUNDED UPON UNDISTURBED NATURAL SUBGRADE WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 3,000 PSF AS FIELD VERIFIED AND APPROVED BY THE CONTRACTOR'S SOIL TESTING LABORATORY. FINAL, EXACT ELEVATIONS AND SOIL BEARING CAPACITIES SHALL BE FIELD DETERMINED AND VERIFIED BY THE CONTRACTOR'S SOIL TESTING LABORATORY AND REVIEWED BY THE ENGINEER DURING CONSTRUCTION.
- SHOULD UNACCEPTABLE SOIL BE FOUND AT THE BEARING ELEVATION, THE SOIL SHOULD BE REMOVED TO A LEVEL OF ACCEPTABLE MATERIAL. THE OVER EXCAVATION WIDTH SHALL EXTEND Laterally AT LEAST 12" BEYOND THE FOUNDATION EDGE FOR EACH 12" OF OVER EXCAVATION DEPTH. THE OVER EXCAVATION SHALL BE BACKFILLED WITH COMPACTED GRANULAR FILL AND TESTED BY THE CONTRACTOR'S TESTING AGENCY.
- SOIL SUBGRADE FOR ALL FOOTINGS AND SLABS SHALL BE INSPECTED AND APPROVED BY THE CONTRACTOR'S SOIL TESTING LABORATORY PRIOR TO PLACING FOUNDATION CONCRETE OR CONCRETE MUD SUBS.
- ALL FOOTING SUBGRADES AS REQUIRED AND ALL SLAB SUBGRADES INCLUDING PIT SLABS SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT BASED ON LABORATORY DESIGNED ASTM D1557. ALL BACKFILL AROUND AND ABOVE ALL FOUNDATION ELEMENTS, FOOTINGS, CAPS, MATS AND PITS SHALL BE COMPACTED TO 90 PERCENT OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT BASED ON LABORATORY DESIGNATION ASTM D1557.
- ALL ORGANIC AND/OR OTHER UNSUITABLE MATERIALS SHALL BE REMOVED FROM SUBGRADE AND BACKFILL AREAS AND BACKFILLED WITH ACCEPTABLE GRANULAR FILL, COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY. FILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES IN LOOSE THICKNESS.
- DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL GROUND FLOOR AND LOWER LEVEL SLABS AVE BEEN PLACED AND THE CONCRETE HAS ATTAINED FULL DESIGN STRENGTH.
- NO MUD SLABS, FOOTINGS OR SLABS SHALL BE PLACED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST OR ICE. SHOULD WATER OR FROST ENTER A FOOTING EXCAVATION AFTER SUBGRADE APPROVAL THE SUBGRADE SHALL BE RE-INSPECTED BY THE CONTRACTOR'S SOIL TESTING LABORATORY AFTER REMOVAL OF WATER OR FROST.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE BEFORE AND AFTER PLACING OF CONCRETE AND UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT BUILDING STRUCTURE.
- THE CONCRETE FOR EACH ISOLATED FOOTING SHALL BE PLACED IN ONE (1) CONTINUOUS PLACEMENT.
- ALL SLAB AND FOOTING MUD SLABS SHALL BE THOROUGHLY CLEANED IMMEDIATELY PRIOR TO THE FOUNDATION CONCRETE PLACEMENT.
- ALL SLABS-ON-GRADE SHALL BE PLACED OVER A MINIMUM OF 6 INCH COMPACTED GRANULAR FILL MATERIAL OVER COMPACTED SOIL SUBGRADE.
- THE ANTICIPATED GROUND WATER ELEVATION IS APPROXIMATELY 896.50. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING. THE VERY LOOSE TO LOOSE GRANULAR SOILS SHOULD BE DENSIFIED AFTER DEWATERING, AS PER THE DIRECTIVE OF THE SOILS TESTING AGENCY.

CONCRETE NOTES:

- ALL CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, ACI 301 AND ACI 350. THESE DOCUMENTS SHALL BE AVAILABLE IN THE FIELD OFFICE.
- EXCEPT WHERE OTHERWISE INDICATED, CONCRETE TYPES AND MINIMUM 28-DAY COMPRESSIVE STRENGTHS SHALL BE 4000 PSI.
- CEMENT SHALL CONFORM TO ASTM C150 TYPE 1. USE ONLY ONE BRAND OF CEMENT PER ALL EXPOSED TO VIEW CONCRETE. NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE.
- ALL CONCRETE SHALL BE AIR ENTRAINED (4 - 6%) WITH A WATER CEMENT RATIO OF 0.4 (MAX) AND MAY CONTAIN A SUPER PLAST AGENT.
- REINFORCING BARS SHALL CONFORM TO ASTM A515, GRADE 60.
- ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE 'MANUAL OF STANDARD PRACTICE FROM DETAILING REINFORCED CONCRETE STRUCTURES', ACI 315. BAR SUPPORTS IN CONTACT WITH EXPOSED SURFACES SHALL BE PLASTIC TIPPED.
- CHECKED SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
- THE CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS SHOWING THE LOCATIONS OF ALL CONSTRUCTION JOINTS, REVEALS, CURBS, SLAB DEPRESSIONS, SLEEVES, OPENINGS, ETC. ALONG WITH THE CONCRETE POUR SEQUENCE SCHEDULES. THE MAXIMUM DISTANCE BETWEEN JOINTS SHALL BE 40 FT.
- ALL REINFORCING SPLICES SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, LATEST EDITION, BUT IN NO CASE SHALL BE LESS THAN 36 BAR DIAMETERS, UNLESS NOTED OTHERWISE. ALL WELDED WIRE FABRIC SHALL BE LAPPED TWO (2) FULL MESH PANELS AND TIED SECURELY. WHERE REQUIRED, DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN REINFORCING, UNLESS NOTED OTHERWISE. THE LOCATION OF SPLICES FOR HORIZ. BARS SHALL BE STAGGERED BY A MIN. OF 3 FT. WITHIN THE SECTION. SPLICES SHALL NOT LINE UP WITHIN ANY 4 ADJACENT ROWS.
- CONCRETE TESTING WILL BE PERFORMED BY THE CONTRACTOR'S TESTING LABORATORY IN ACCORDANCE WITH ACI 301 EXCEPT AS FOLLOWS: FOR COMPRESSIVE STRENGTH TEST, TAKE ONE SET OF THREE (3) SPECIMENS FOR EACH 50 CUBIC YARDS OR FRACTION THEREOF OF EACH CONCRETE CLASS PLACED IN ANY ONE DAY. TEST ONE (1) SPECIMEN AT 7 DAYS, ONE (1) SPECIMEN AT 28 DAYS, AND KEEP ONE (1) IN RESERVE.
- PROVIDE SHEAR KEY AND WATERSTOP AT ALL CONSTRUCTION & CONSTRUCTION JOINTS.
- PROVIDE CONTROL/CONSTRUCTION JOINTS IN SLABS ON GRADE NO FURTHER THAN 15 FEET APART
- FOLLOW ACI GUIDELINES FOR BOTH HOT & COLD WEATHER CONCRETING.

MISCELLANEOUS NOTES:

- NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
- REFER TO ARCHITECTURAL, MECHANICAL, PROCESSING OR MANUFACT. DRAWINGS FOR LOCATIONS AND DIMENSIONS OF OPENINGS. PROVIDE REINFORCING AROUND OPENINGS PER TYPICAL DETAILS.
- THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED. BACKFILLING SHALL NOT BE ALLOWED UNTIL WALLS REACH DESIGN STRENGTH.
- BACKFILL SHALL NOT BE PLACED AGAINST WALLS UNTIL FLOOR SLABS ARE INSTALLED AND HAVE REACHED 75% STRENGTH (MIN.).
- THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR SHALL FURNISH ALL TEMPORARY BRACING AND/OR SUPPORTS REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
- DO NOT SCALE THESE DRAWINGS, USE DIMENSIONS.
- THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY THE ENGINEER'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, ETC. UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ENGINEER OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ENGINEER HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
- ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS AND AMBIGUITIES IN THE PLANS AND SPECIFICATIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. PLANS AND/OR SPECIFICATIONS WILL BE CORRECTED, OR A WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ENGINEER BEFORE THE AFFECTED WORK PROCEEDS.
- THESE DRAWINGS AND GENERAL NOTES ARE TO BE USED IN CONJUNCTION WITH WRITTEN SPECIFICATIONS PROVIDED. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.
- REMOVE ALL LOOSE AND UNSTABLE MATERIAL BELOW STRUCTURES. ALL AREAS TO BE REVIEWED BY OWNERS TESTING AGENCY PRIOR TO COMMENCEMENT OF WORK. PROVIDE A MINIMUM OF 12" COMPACTED GRANULAR FILL BELOW ALL STRUCTURES.
- PROVIDE GUARDRAILS AT ALL PITS, WALKWAYS AND SLAB EDGES SEE C & P DRAWINGS FOR FURTHER INFORMATION.
- PROVIDE HYDROPHILIC RUBBER WATERSTOP AT ALL NEW TO EXISTING CONDITIONS.
- ALL FILL SHALL BE PLACED IN APPROPRIATE LIFTS AND COMPACTED PER GEOTECHNICAL REPORT IN ORDER TO OBTAIN A BEARING CAPACITY OF 300 PSF. ALL FILL SHALL BE TESTED BY THE CONTRACTOR'S TESTING AGENCY.

PRECAST NOTES:

- THE PRECAST MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL PRECAST CONCRETE ELEMENTS AND CONNECTIONS. THIS DESIGN SHALL MEET THE LOAD AND MATERIAL CRITERIA PRESENTED IN THE PLANS AND SPECIFICATIONS. DETAILS SHOWN ARE SCHEMATIC ONLY. FINAL DESIGN OF ELEMENTS AND CONNECTIONS SHALL BE MADE BY THE PRECAST MANUFACTURER. IN ADDITION, THE DESIGN SHALL BE PERFORMED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF KENTUCKY. SIGNED & SEALED DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
- THE PRECAST ERECTOR SHALL BE RESPONSIBLE TO ADEQUATELY BRACE THE STRUCTURE DURING CONSTRUCTION.
- THE PRECAST ERECTOR SHALL BE RESPONSIBLE FOR THE PROPER HANDLING OF PRECAST ELEMENTS SO THAT THESE MEMBERS ARE NOT DAMAGED DUE TO HANDLING, BRACING, ALIGNING OR OTHER FORCES.
- MINIMUM CONCRETE REQUIREMENTS:

MIN 28 DAY COMPRESSIVE STRENGTH:	5,000 PSI
ENTRAINED AIR:	6 ± 1%
W/C (MAX)	0.40
- PRECAST SUPPLIER SHALL PROVIDE ADDITIONAL REINFORCING AROUND EMBEDDED CONNECTION ITEMS TO SUPPORT ANY VERTICAL OR HORIZONTAL LOADINGS WHICH MAY DEVELOP INCLUDING THOSE FROM ERECTION.
- PRECAST SHOP DRAWINGS SHALL BE REVIEWED AND APPROVED BY ELECTRICAL, HEATING AND PLUMBING SUBCONTRACTORS TO COORDINATE LOCATION OF SUPPORT INSERTS, BLOCKOUTS, CONDUITS, ETC.
- ALL INSERTS IN PRECAST ELEMENTS SHALL BE PROVIDED BY PRECAST SUPPLIER.
- PRECAST BEAMS SUPPORTING MASONRY SHALL HAVE A DEFLECTION LIMITATION OF L/600 AND 0.3 INCHES FOR LIVE LOAD PLUS SUPERIMPOSED DEADLOAD.
- PROVIDE 1 LAYER WIRE MESH IN CONCRETE TOPPING.
- PRECAST CONCRETE CEILINGS SHALL BE AIR TIGHT AT LOCATIONS NOTED.

STRUCTURAL STEEL NOTES:

- ALL STRUCTURAL STEEL PLATES, SHAPES AND BARS SHALL CONFORM TO ASTM A572 GR 50, UNLESS NOTED OTHERWISE. COLD FORMED TUBING SHALL CONFORM TO ASTM A500 GRADE B. PIPES SHALL CONFORM TO ASTM A53 TYPE E OR S. ANCHOR BOLTS SHALL CONFORM TO ASTM A307 OR ASTM A36.
- ALL BOLTS (OTHER THAN ANCHOR BOLTS), NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325. BOLTS USED IN LATERAL LOAD RESISTING CONNECTIONS SHALL BE SLIP CRITICAL TYPE, DESIGNED FOR INDICATED FORCES WITHOUT STRESS INCREASES.
- ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS AND SHALL CONFORM TO AWS D1.1 'STRUCTURAL WELDING CODE', LATEST EDITION. ALL WELDING ELECTRODES SHALL BE E70XX.
- ALL CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR. THE CONNECTIONS SHALL BE DESIGNED BY, OR UNDER THE SUPERVISION OF, A LICENSED STRUCTURAL ENGINEER IN THE STATE OF KENTUCKY. DETAILING SHALL BE PERFORMED USING RATIONAL ENGINEERING DESIGN AND STANDARD PRACTICE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE GENERAL DETAILS SHOWN ON THE DRAWINGS ARE CONCEPTUAL ONLY AND DO NOT INDICATE THE REQUIRED NUMBER OF BOLTS OR WELD SIZES, UNLESS SPECIFICALLY NOTED. ADVISE THE ENGINEER IMMEDIATELY IF THE INFORMATION ON THE DRAWINGS IS NOT SUFFICIENT FOR COMPLETE DESIGN OF CONNECTIONS.
- THE FABRICATOR / ERECTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW, ENGINEERED AND CHECKED DRAWINGS SHOWING SHOP FABRICATION DETAILS, FIELD ASSEMBLY DETAILS AND ERECTION DIAGRAMS FOR ALL STRUCTURAL STEEL. WITH EACH SUBMITTAL OF SHOP DRAWINGS, THE FABRICATOR'S ENGINEER SHALL CERTIFY THAT THE CONNECTIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AISC SPECIFICATIONS AND THE CONTRACT DOCUMENTS. CERTIFIED MILL TEST REPORTS SHALL ALSO BE SUBMITTED.
- MINIMUM SHEAR CAPACITIES: CONNECTIONS SHALL BE DESIGNED FOR THE BEAM REACTIONS INDICATED. IN CASES WHERE REACTIONS ARE NOT INDICATED, PROVIDE AT LEAST ONE HALF OF THE UNIFORM LOAD CARRYING CAPACITY OF THE BEAM WITH THE ASSUMPTION OF FULLY BRACED COMPRESSION FLANGE.
- THE DEPTH OF A SIMPLE SHEAR CONNECTION SHALL NOT BE LESS THAN ONE HALF OF THE NOMINAL DEPTH OF THE BEAM. THE MINIMUM NUMBER OF BOLTS PER CONNECTION SHALL BE TWO (2).
- ALL BEAMS SHALL BE FABRICATED WITH THE NATURAL CAMBER UP. PROVIDE CAMBER, OR SHORING AS INDICATED ON THE DRAWINGS.
- AFTER FABRICATION, ALL STEEL SHALL BE CLEANED OF ALL RUST, LOOSE MILL SCALE AND OTHER FOREIGN MATERIALS. STRUCTURAL STEEL SHALL BE HOT DIPPED GALVANIZED PER ASTM SPECIFICATIONS.
- THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

DESIGN LOADS:

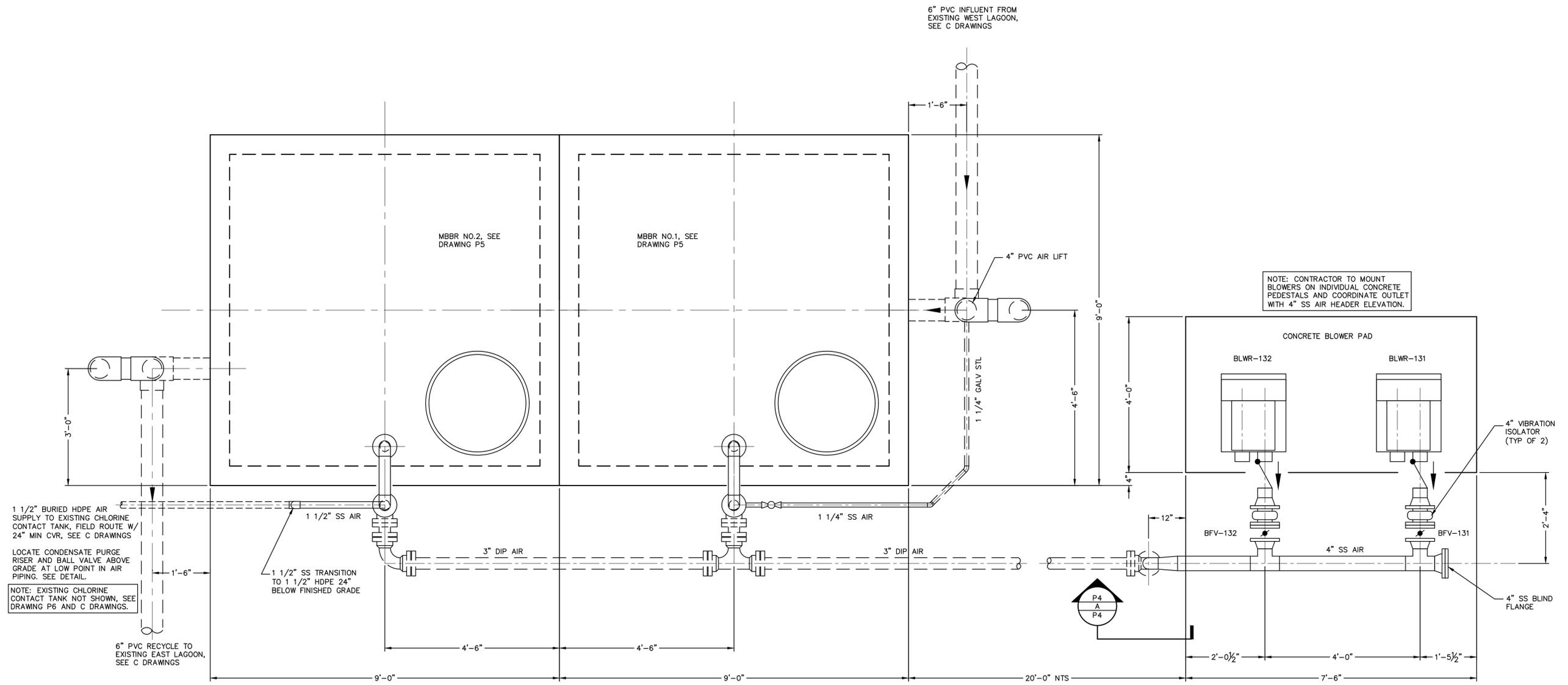
FLOOR LIVE LOADS -	150 PSF
WALKWAY	100 PSF
ROOF LIVE LOAD -	30 PSF
ROOF SNOW LOADS -	
$P_g = 25$ PSF	
$P_f = 18$ PSF	
$C_e = 1.0$	
$C_t = 1.0$	
$L = 1.1$	
WIND DESIGN DATA -	
MIN 28 DAY COMPRESSIVE STRENGTH:	5,000 PSI
ENTRAINED AIR:	6 ± 1%
W/C (MAX)	0.40
BASIC WIND SPEED (3-SECOND GUST) =	90 MPH
ASCE 7-05	
$I_e = 1.15$	
EXPOSURE B	
COMPONENTS & CLADDING =	25 PSF
EARTH QUAKE DESIGN DATA	
OCCUPANCY CATEGORY =	II
$I_e = 1.25$	
$S_s = 0.178$ g	
$S_1 = 0.083$ g	
SITE CLASSIFICATION =	D
$S_{DS} = 0.204$ g	
$S_{D1} = 0.133$ g	
SEISMIC DESIGN CATEGORY =	C

ABBREVIATIONS:

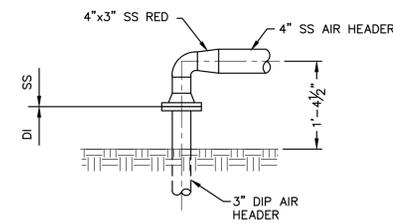
A	ARCHITECTURAL	GAL	GALLON	PSI	POUNDS PER SQUARE INCH
ABBREV	ABBREVIATION	GALV	GALVANIZED	PT	POINT
ABON	ABANDONED	GBT	GRAVITY BELT THICKENER	PV	PLUG VALVE
AC	TO BE ABANDONED, CAP OPEN END	GEN	GENERATOR	PVC	POLYVINYL CHLORIDE
ADF	AVERAGE DAILY FLOW	GLDIP	GLASS LINED DUCTILE IRON PIPE	PWMT	PAVEMENT
AE	ANALYZER ELEMENT	GND	GROUND	PVRV	PRESSURE VACUUM RELIEF VALVE
AFF	ABOVE FINISH FLOOR	GPM	GALLONS PER MINUTE	PW	POTABLE WATER
AGG	AGGREGATE	GPD	GALLONS PER DAY	R	RADIUS
AIT	ANALYZER INDICATING TRANSMITTER	GRD	GRAD	ROW	RIGHT-OF-WAY
AL	ALUMINUM, AIR LIFT	GRDR	GRINDER	RAS	RETURN ACTIVATED SLUDGE
ALUM	ALUMINUM SULFATE	GRTG	GRATING	RCP	REINFORCED CONCRETE PIPE
ALT	ALTERNATE	GV	GATE VALVE	RD	ROOF DRAIN
APPROX	APPROXIMATE(LY)	H	HIGH	RED	REDUCER REDUCING
AR	AIR RELEASE	HB	HOSE BIBB	REF	REFERENCE
ARV	AIR RELEASE VALVE	HDC	HOT DIP GALVANIZED	REQD	REQUIRED
ASPH	ASPHALT	HOPE	HIGH DENSITY POLYETHYLENE	REV	REVISION
AVG	AVERAGE	HDR	HEADER	RJ	RESTRAINED JOINT
B/	BOTTOM OF	HGT	HEIGHT	RK	RAILING
CEV	BACK CHECK VALVE	HH	HANDHOLE	RM	ROOM
BF	BLIND FLANGE	HORIZ	HORIZONTAL	RND	ROUND
BFP	BELT FILTER PRESS	HP	HIGH POINT; HORSE POWER	RR	RAILROAD
BFV	BUTTERFLY VALVE	HR	HOUR	RS	RAW SEWAGE
BITUM	BITUMINOUS	HRT	HYDRAULIC RETENTION TIME	RSPS	RAW SEWAGE PUMP STATION
BLDG	BUILDING	HVAC	HEATING, VENTILATION & AIR CONDITIONING	RW	RAW WATER
BLV	BALL VALVE	HW	HOT WATER; HANDWHEEL	RWGV	RESILIENT WEDGE GATE VALVE
BLWR	BLOWER	HWL	HIGH WATER LEVEL	S	SOUTH; STAIRS; STRUCTURAL
BM	BENCHMARK	ID	INSIDE DIAMETER	SA	SANITARY
BYP	BYPASS	IN	INCH	SC	SCUM; SCREW CONVEYOR
CBW	BACK PRESSURE VALVE	INF	INFLUENT	SCFM	STANDARD CUBIC FEET/ MINUTE
BW	BACKWASH	INSTR	INSTRUMENT(ATION)	SCH	SCHEDULE
CB	CATCH BASIN; CURB BOX	INSUL	INSULATION	SCRN	SCREEN
CC	CENTER TO CENTER	INVERT	INVERT	SEC	SECTION
CEB	CONCRETE EQUIPMENT BASE	IP	IRON PIPE	SF	SQUARE FEET
CF	CUBIC FEET; COMPRESSION FITTING	JT	JOINT	SFP	SLUDGE FEED PUMP
CL2	CHLORINE	LAB	LABORATORY	SG	SLUICE GATE
CL2G	CHLORINE (GAS)	LAD	LADDER	SJT	SHEET
CL2L	CHLORINE (LIQUID)	LAV	LATERAL	SJ	SOLDERED JOINT; SWEATED JOINT
CL2S	CHLORINE (SOLUTION)	LAT	LATERAL	SLG	SLIDE GATE
CL2V	CL2V	LAV	LAVATORY	SM	STATIC MIXER
CI	CAST IRON	LB	POUND	SMH	SANITARY MANHOLE
CISP	CAST IRON SOIL PIPE	LBS	POUNDS	SN	SUPERNATANT
CL	CLEAR	CP	CONTROL PANEL	SOR	SURFACE OVERFLOW RATE
CMF	CORRUGATED METAL PIPE	LD	LEVEL TRANSDUCER	SP	SPACE(D); SAMPLE PORT
CMU	CONCRETE MASONRY UNIT	LE	LEVEL ELEMENT	SPEC	SPECIFICATION, SPECIFIED
CO	CLEANOUT	LF	LINEAR FEET	SPL	SAMPLE; SAMPLE LINE
CONC	CONCRETE, CONCENTRIC	LONG	LONG	SQ	SQUARE
CPGL	COUPLING	LIT	LITRE	SR	SLUDGE RETURN
CPC	CORRUGATED POLYETHYLENE PIPE	LM	LEVEL TRANSMITTER	SS	STAINLESS STEEL
CSP	CORRUGATED STEEL PIPE	LP	LOW POINT	SSK	SERVICE SINK
CT	CONTACT TANK (PAA)	LR	LONG RADIUS	ST	STORM
CTW	CLOSE TO WALL	LS	LUMP SUM	STA	STATION
CU	COPPER; CUBIC	LSH	LEVEL SWITCH HIGH	STD	STANDARD
CUP	CUPPER PIPE	LST	LEVEL SWITCH LOW	STL	STEEL
CV	CHECK VALVE (SWING TYPE)	LT	LIGHT	SW	SOLVENT WELDED
CW	CHAINWHEEL CLOCKWISE	LWL	LOW WATER LEVEL	SWK	SIDEWALK
CY	CUBIC YARDS	M	MOTOR; MECHANICAL; METER	SWP	SCREENINGS WASHING PRESS
D	DOOR	MATL	MATERIAL	SY	SQUARE YARDS
DEMO	DEMOLITION	MAX	MAXIMUM	T	TANK; TELEPHONE
DET	DETAIL	MBBR	MOVING BED BIOLOGICAL REACTOR	T/	TOP OF
DI	DUCTILE IRON	MBS	MANUAL BAR SCREEN	TBLV	TRUE UNION BALL VALVE
DIA	DIAMETER	MCC	MOTOR CONTROL CENTER	T&B	TOP AND BOTTOM
DIFUSER	DIFFUSER	MECH	MECHANICAL	TD	TRENCH DRAIN
DIP	DUCTILE IRON PIPE	MF	MAGNETIC FLOW METER	TE	TEMPERATURE ELEMENT
DISCH	DISCHARGE	MFR	MANUFACTURER	TEL	TELEPHONE
DN	DOWN	MFT	MAGNETIC FLOW TRANSMITTER	TEMP	TEMPERATURE; TEMPORARY
DO	DISSOLVED OXYGEN	MGD	MILLION GALLONS PER DAY	TEMP	TEMPERATURE INDICATING TRANSMITTER
DP	DEEP	MH	MANHOLE	TF	TERTIARY FILTER
DR	DRAIN	MIN	MINIMUM	TP	TRANSFER PUMP
DS	DIGESTED SLUDGE	MISC	MISCELLANEOUS	THD	THREAD(ED)
DV	DIAPHRAGM VALVE	MJ	MECHANICAL JOINT	THK	THICK(NESS)
DWG	DRAWING	MLSS	MIXED LIQUOR SUSPENDED SOLIDS	TLV	TELESCOPING VALVE
E	ELECTRIC(AL); EAST	MON	MONUMENT	TOC	TOP OF CONCRETE
EA	EACH	MTD	MOUNTED	TWAS	THICKENED WASTE ACTIVATED SLUDGE
ECC	ECCENTRIC	MV	MUD VALVE	TYP	TYPICAL
EFF	EFFLUENT	N	NORTH	UH	UNIT HEATER
EJ	EXPANSION JOINT	NACL	SODIUM CHLORIDE	ULS	ULTRASONIC LEVEL SENSOR
EL	ELEVATION	NAOH	SODIUM HYDROXIDE	ULT	ULTRASONIC LEVEL TRANSDUCER
ENG	ENGINEER	NC	NORMALLY CLOSED	UN	UNION
EO	ELECTRIC OPERATOR	NO	NORMALLY OPEN; NUMBER	UNO	UNLESS NOTED OTHERWISE
EOP	EDGE OF PAVEMENT	NPT	NATIONAL PIPE THREAD (TAPER)	UV	ULTRAVIOLET
EQ	EQUAL(LY)	NPW	NON-POTABLE WATER	V	VALVE
EQPM	EQUIPMENT	NRS	NON-RISING STEM	VAC	VACUUM
ES	EXTENDED STEM	NTS	NOT TO SCALE	VAR	VARIOUS; VARIABLE
ESMT	EASEMENT	NWL	NORMAL WATER LEVEL	VB	VALVE BOX
EXH	EXHAUST	OC	ON CENTER	VCP	VITRIFIED CLAY PIPE
EX	EXISTING	OD	OUTSIDE DIAMETER; OXIDATION DITCH	VERT	VERTICAL
EXP	EXPANSION	OE	OVERHEAD ELECTRIC	VFD	VARIABLE FREQUENCY DRIVE
FBW	FILTER BACKWASH	OPNG	OPENING	VF	VERIFY IN FIELD
FCE	FINAL CLARIFIER EFFLUENT	ORP	OXYGEN REDUCTION POTENTIAL	VLV	VALVE
FCO	FLOOR CLEANOUT	OU	OVERHEAD UTILITY	VOL	VOLUME
FD	FLOOR DRAIN	OVF	OVERFLOW	VSD	VARIABLE SPEED DRIVE
FDC	FIRE DEPARTMENT CONNECTION	P	PUMP	VT	VENT
FDN	FOUNDATION	PAA	PEROXYACETIC ACID	VTR	VENT THROUGH ROOF
FDS	FLOW DIVERSION STRUCTURE	PC	POINT OF CURVE	W	WINDOW; WIDE; WEST
FE	FLOW ELEMENT	PCC	PORTLAND CEMENT CONCRETE	W/	WITH
FES	FLARED END SECTION	PCCP	PRESSURE CONCRETE CYLINDER PIPE	W/O	WITHOUT
FF	FINISH FLOOR	PD	PUMP DISCHARGE	WAS	WASTE ACTIVATED SLUDGE
FF	FIRE HYDRANT	PDF	PEAK DAILY FLOW	WC	WATER CLOSET
FIN	FINISH(ED)	PE	PLAIN END	WH	WATER HEATER
FIT	FLOW INDICATING TRANSMITTER	PERF	PERFORATED	WJ	WELDED JOINT
FL	FLANGE(D); FLUSHING CONNECTION	PFD	PROCESS FLOW DIAGRAM	WL	WATER LEVEL
FLD	FLOOD	PFU	POLYMER FEED UNIT	WM	WATER MAIN
FLEX	FLEXIBLE	PG	PRESSURE GAUGE	WT	WEIGHT
FLR	FLOOR	PHF	PEAK HOURLY FLOW	WTP	WATER TREATMENT PLANT
FM	FORCEMAIN; FLOW METER	PHOS	PHOSPHATE	NW	WASTEWATER
FNPT	FINE NATIONAL PIPE THREAD	PI	PRESSURE INDICATOR	WWTP	WASTEWATER TREATMENT PLANT
FP	FIRE PROTECTION	PL	PLATE; PROPERTY LINE	XFER	TRANSFER
FRP	FIBERGLASS REINFORCED PLASTIC	PLC	PROGRAMMABLE LOGIC CONTROLLER	Y	YARD
FS	FLOW SWITCH/FLOAT SWITCH	POLY	POLYMER	YH	YARD HYDRANT
FT	FOOT/FEET	PP	POWER POLE	YV	YARD VALVE
FTG	FOOTING	PR	PROCESS		
FUT	FUTURE	PROP	PROPOSED		
G	NATURAL GAS; GATE; GENERAL	PVRV	PRESSURE RELIEF VALVE		
		PS	PUMP STATION		

PROCESS AND SHEET LEGEND:

	SECTION		PROCESS LINE		FLANGED GATE VALVE		REDUCER AND SIZE
X	X = SHEET WHERE SECTION IS REFERENCED		AIR LINE		FLANGED PLUG VALVE		MAGNETIC FLOW METER
Y	Y = SHEET WHERE SECTION IS SHOWN		WATER LINE		FLANGED BUTTERFLY VALVE		PRESSURE GAUGE
1	1 = SECTION NUMBER		POLYMER LINE		FLANGED GLOBE VALVE		



PROCESS PLAN LAYOUT AND BLOWER ARRANGEMENT PLAN
SCALE: 3/4" = 1'-0"



AIR HEADER ELEVATION
SCALE: 3/4" = 1'-0"



- NOTES:
- CONTRACTOR TO PROVIDE PIPE SUPPORTS AS REQUIRED. SUPPORT LOCATIONS AND TYPES ARE SUBJECT TO ENGINEER'S APPROVAL.
 - SEE HYDRAULIC PROFILE DRAWING P2 FOR PIPE INV. AND CENTERLINE ELEV.
 - SEE DRAWING P7 FOR PIPE PENETRATION DETAILS AND REQUIREMENTS.
 - ALL DIP USED FOR AIR SERVICE SHALL BE UNLINED DUCTILE IRON. DIP AND DI FITTINGS SHALL HAVE EPDM GASKETS.
 - SEE C DRAWINGS FOR YARD VALVES NOT SHOWN ON THIS SHEET.

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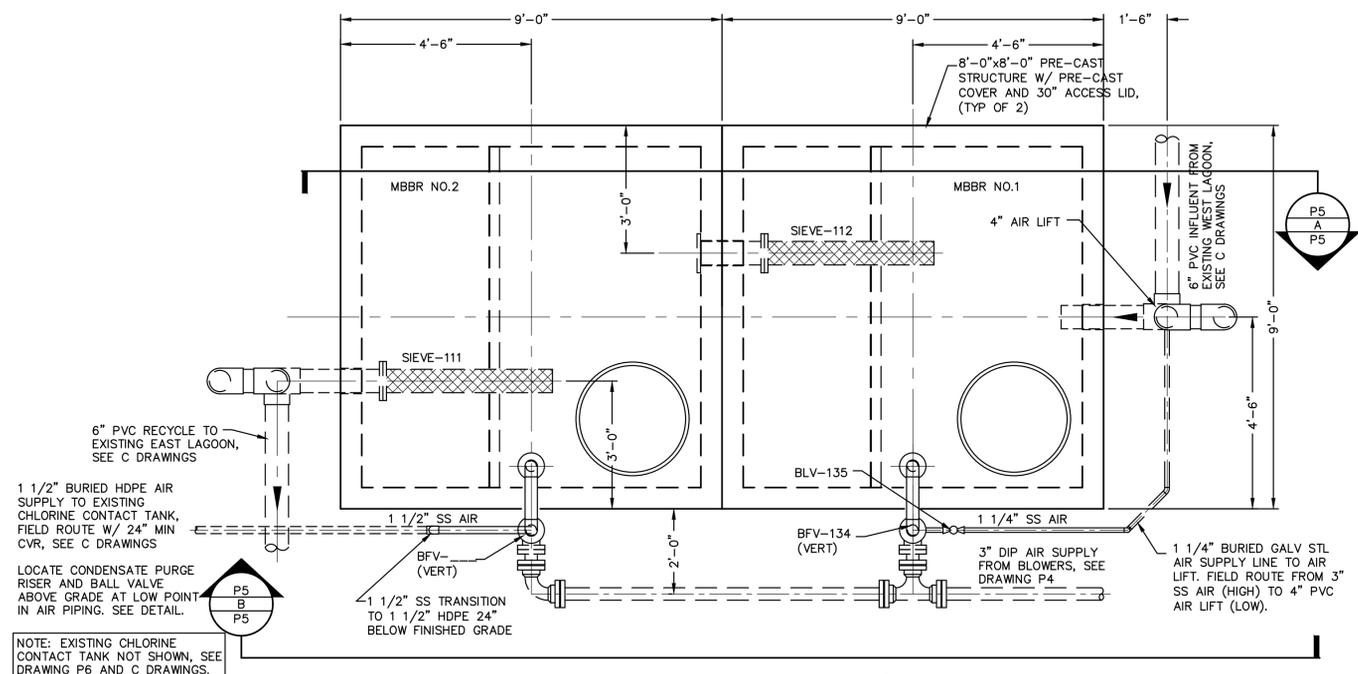
PROCESS PLAN LAYOUT AND BLOWER ARRANGEMENT PLAN

PERSIMMON RIDGE WWTF IMPROVEMENTS
261 PERSIMMON RIDGE DRIVE
LOUISVILLE, KENTUCKY

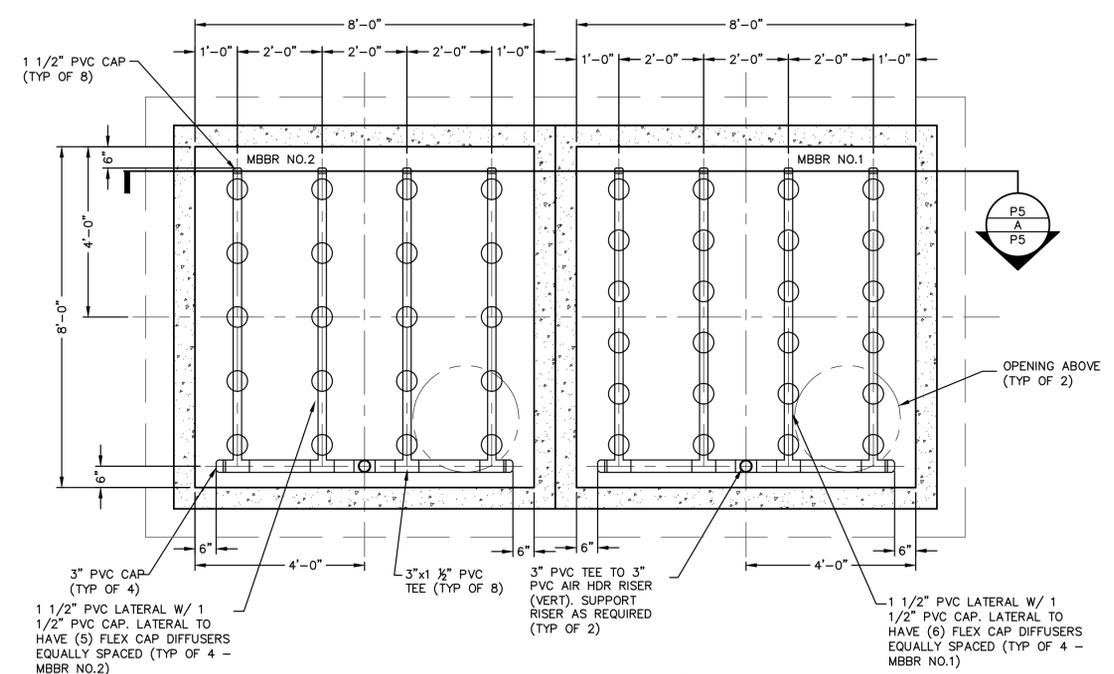
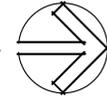
ENGINEERING CERTIFICATE OF AUTHORITY NO. 4804
ENGINEERING LICENSE: BENJAMIN J. KUENZEL, PE33718



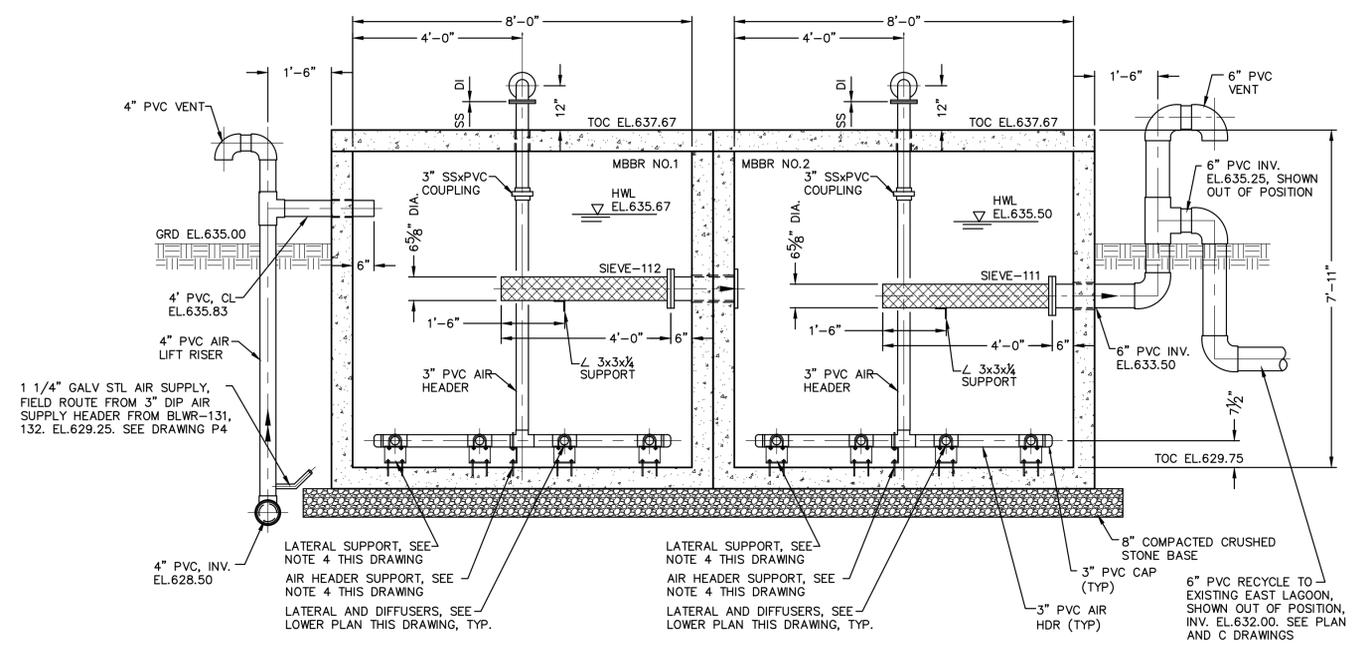
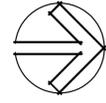
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DRAWN BY: DDG
PROJ NUMBER: 0542
DATE: 07/09/2021
DRAWING NO:



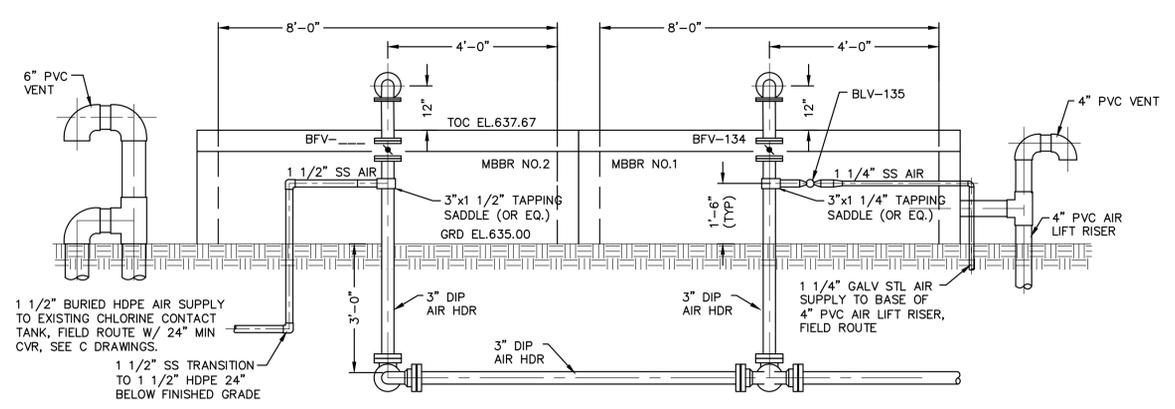
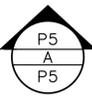
MBBR UPPER PLAN
SCALE: 1/2" = 1'-0"



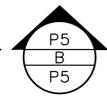
MBBR LOWER PLAN
SCALE: 1/2" = 1'-0"



MBBR SECTION
SCALE: 1/2" = 1'-0"



MBBR ELEVATION
SCALE: 1/2" = 1'-0"



- NOTES:**
- CONTRACTOR TO PROVIDE PIPE SUPPORTS AS REQUIRED. SUPPORT LOCATIONS AND TYPES ARE SUBJECT TO ENGINEER'S APPROVAL.
 - SEE HYDRAULIC PROFILE DRAWING P2 FOR PIPE INV. AND CENTERLINE ELEV.
 - SEE DRAWING P9 FOR PIPE PENETRATION DETAILS AND REQUIREMENTS.
 - SS ADJUSTABLE HEADER & LATERAL SUPPORTS, (1) AT EACH END OF HEADER AND LATERAL AND (1) AT TEE FIELD LOCATED. SUPPORTS TO HAVE DRILLED IN PLACE ANCHORAGE WITH 3" MIN EMBEDMENT. CONTRACTOR TO DESIGN, FABRICATE AND INSTALL SUPPORTS. METHOD OF SUPPORT SUBJECT TO ENGINEER APPROVAL PRIOR TO FABRICATION. TOP OF 3/8" FLEXCAP DIFFUSER SHALL BE SET <= 9" ABOVE FLOOR SLAB. BURRIED GALV STL (GALVANIZED STEEL) PIPE SHALL BE PROVIDED WITH PVC PIPE WRAP TAPE (PW 100 BY SHURTAPE OR EQUAL).

BR	BLK
DATE	07/09/2021
PERSON	PERMIT SET
1	

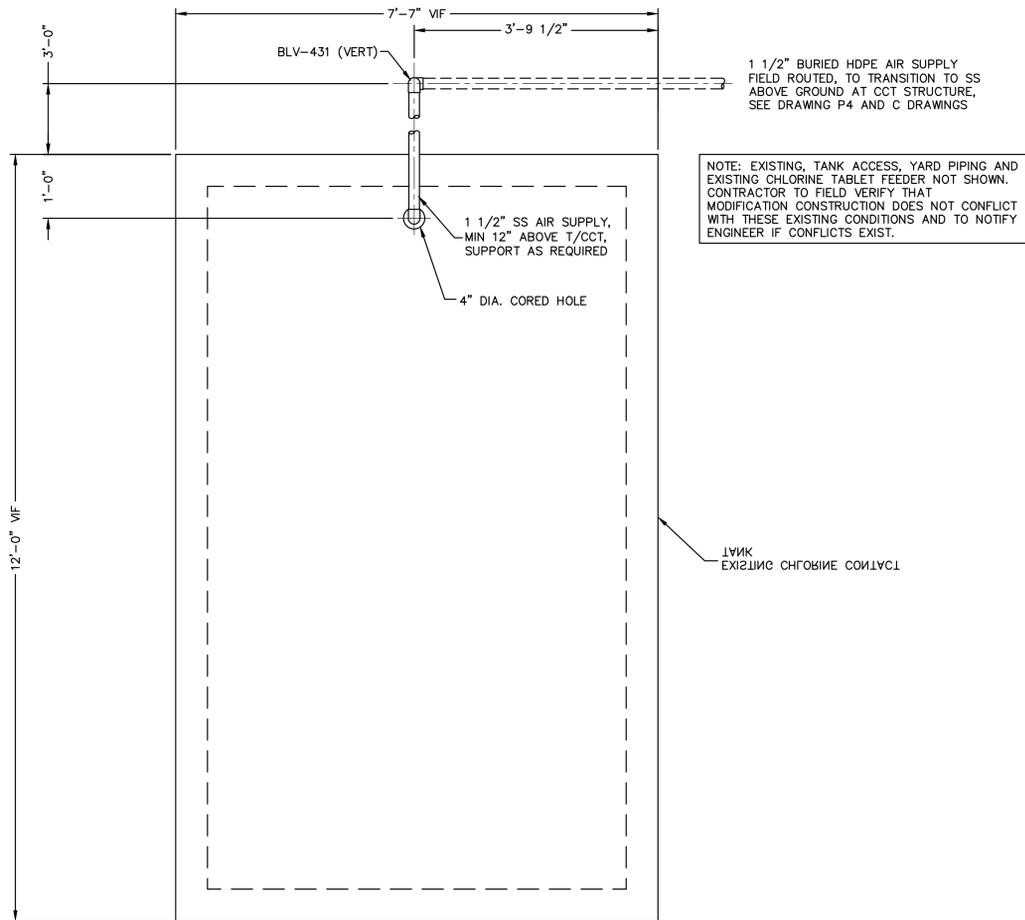
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MBBR PLAN, SECTIONS AND DETAILS
PERSIMON RIDGE WWTF IMPROVEMENTS
261 PERSIMON RIDGE DRIVE
LOUISVILLE, KENTUCKY

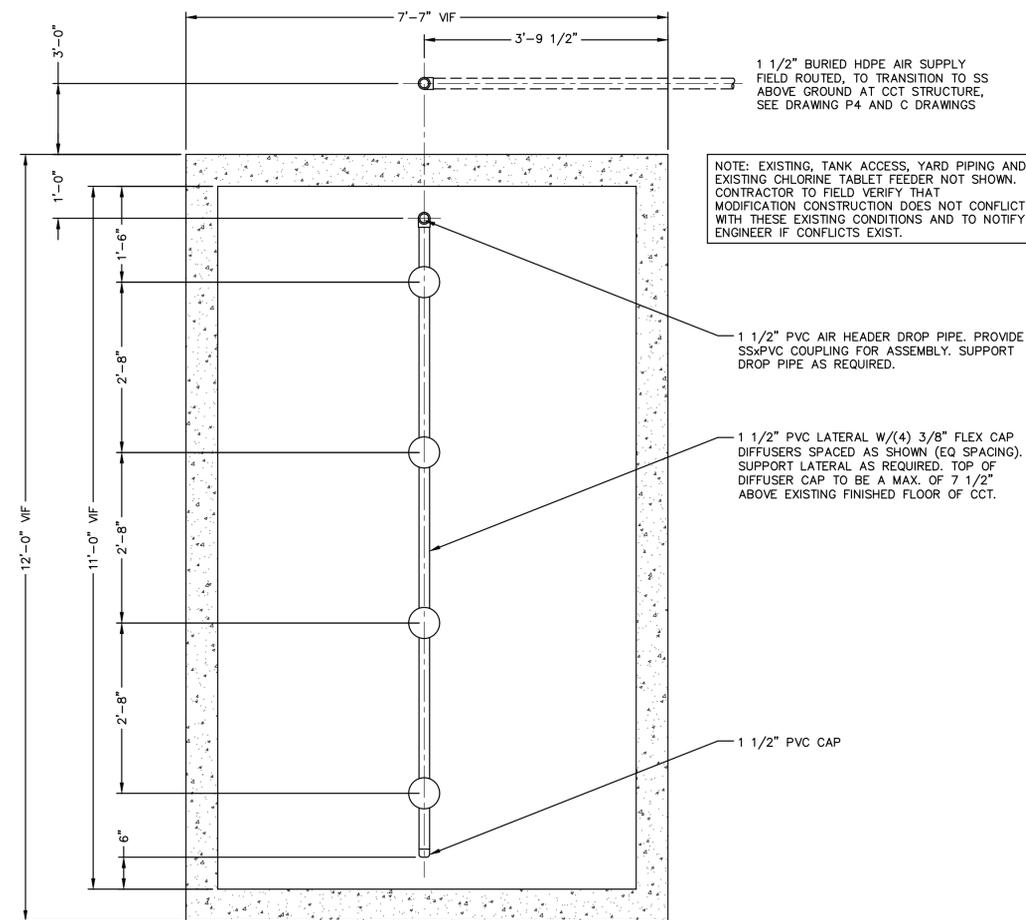
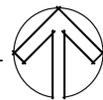
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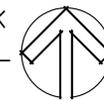
SEAL DATE	07/09/2021
DRAWN BY	DDG
PROJ NUMBER	0542
DATE	07/09/2021
DRAWING NO	P5



EXISTING CHLORINE CONTACT TANK MODIFICATIONS – UPPER PLAN
SCALE: 3/4" = 1'-0"



EXISTING CHLORINE CONTACT TANK MODIFICATIONS – LOWER PLAN
SCALE: 3/4" = 1'-0"



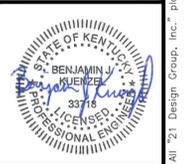
- NOTES:
- CONTRACTOR TO PROVIDE PIPE SUPPORTS AS REQUIRED. SUPPORT LOCATIONS AND TYPES ARE SUBJECT TO ENGINEER'S APPROVAL.
 - SEE HYDRAULIC PROFILE SHEET P2 FOR PIPE INV. AND CENTERLINE ELEV.
 - SEE DRAWING P9 FOR PIPE PENETRATION DETAILS AND REQUIREMENTS.

DATE	PERSON	REVISION
07/09/2021	DDG	PERMIT SET
1		

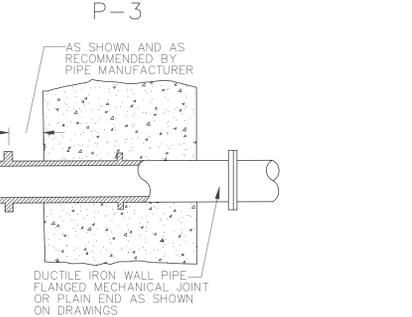
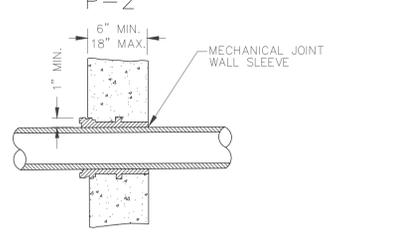
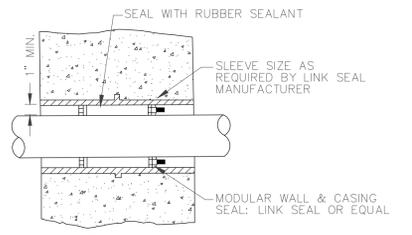
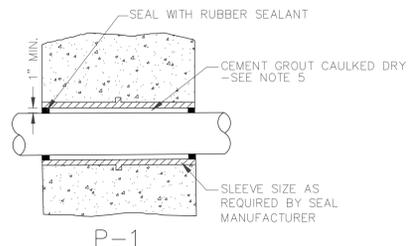
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CHLORINE CONTACT TANK AND POST AERATION DIFFUSER PROCESS PLAN
PERSIMMON RIDGE WWTF IMPROVEMENTS
261 PERSIMMON RIDGE DRIVE
LOUISVILLE, KENTUCKY

ENGINEERING CERTIFICATE OF AUTHORITY NO. 4804
ENGINEERING LICENSE: BENJAMIN J. KUENZEL, PE33718



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DATE	07/09/2021
DRAWING NO.	P6



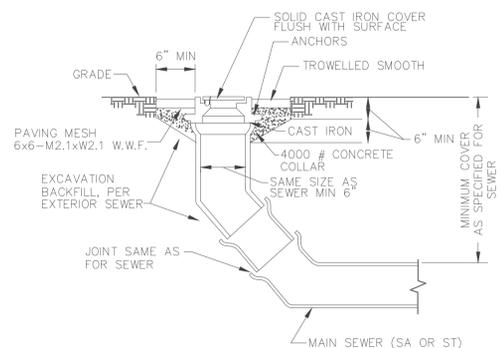
PIPE MATERIAL

CONDITION	STEEL	COPPER	PVC	IRON
EARTH TO PASSAGE	N/A	P-1	P-2	P-3
LIQUID TO PASSAGE	P-2	N/A	P-2	P-4
LIQUID TO EARTH	P-2	N/A	P-2	P-4
PASSAGE TO PASSAGE	P-1	P-1	P-1	P-1
LIQUID TO LIQUID	P-2	N/A	P-2	P-4

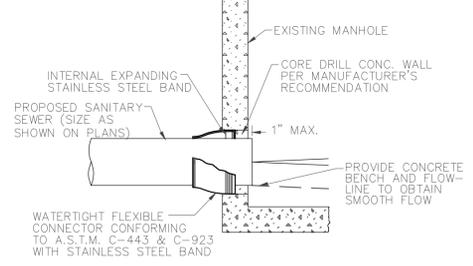
P-2 MAY BE USED IN LIEU OF P-1 AND P-3.
P-4 MAY BE USED IN LIEU OF P-3 AND IF CALLED FOR ON THE DRAWINGS P-4 SHALL BE USED IN LIEU OF P-3.

- NOTES:
- WHERE PIPES PASS THROUGH WALLS, FLOORS, OR CEILINGS, THE METHOD USED SHALL CONFORM TO THE STANDARD DETAILS AS SHOWN ON THIS DRAWING, EXCEPT WHERE SPECIAL DETAILS ARE SHOWN.
 - PASSAGE SHALL MEAN ANY ROOM, GALLERY, TUNNEL OR SIMILAR ENCLOSED SPACE IN WHICH PIPES RUN.
 - ALL SLEEVES SHALL BE CAST IRON UNLESS OTHERWISE NOTED.
 - FLANGES MAY BE INSTALLED FLUSH WITH WALL AND TAPPED FOR STUDS.
 - CEMENT GROUT CAULKING MAY BE ELIMINATED FOR PASSAGE TO PASSAGE PENETRATIONS.
 - LIQUID SHALL MEAN AN ELEVATION 1'-6" ABOVE MAXIMUM WATER ELEVATION.

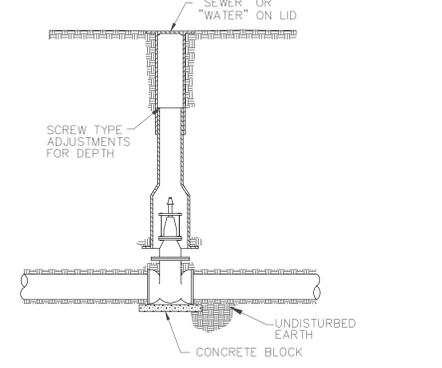
PIPE THROUGH WALLS DETAILS
SCALE: N.T.S.



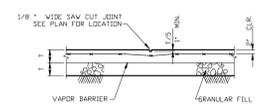
TYPICAL YARD CLEANOUT
SCALE: N.T.S.



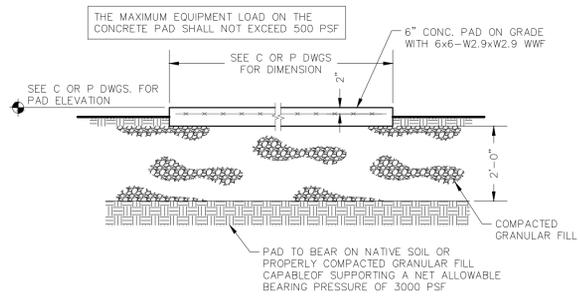
PIPE TO MANHOLE CONNECTION
SCALE: N.T.S.



TYPICAL VALVE BOX INSTALLATION
SCALE: N.T.S.

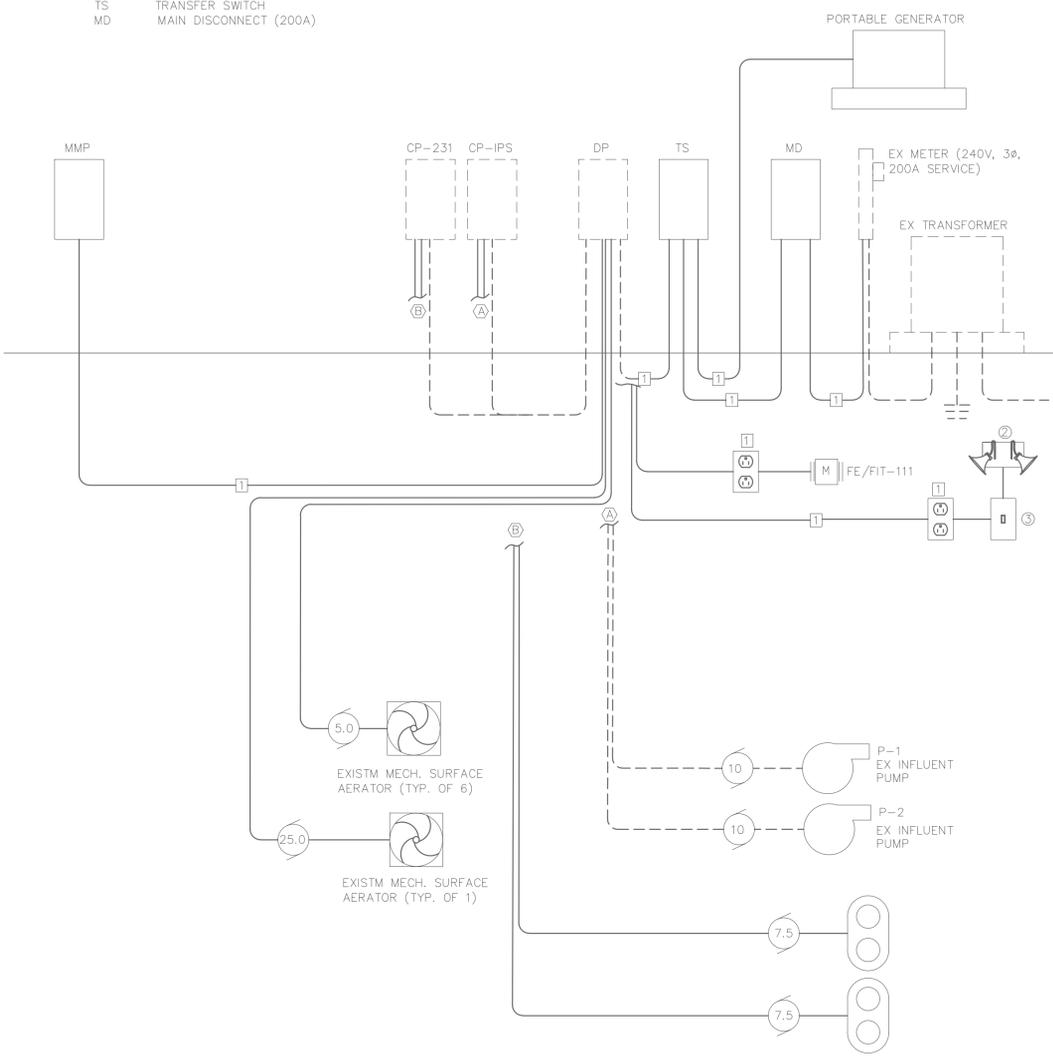


TYPICAL SLAB ON GRADE CONTROL JOINT
SCALE: N.T.S.



TYPICAL EXTERIOR EQUIPMENT PAD ON GRADE
SCALE: N.T.S.

- MMP MISSION MONITORING PANEL
- CP-IPS EXISTING INFLUENT PUMP STATION CONTROL PANEL
- CP-231 NEW MBBR BLOWER PANEL
- DP DISTRIBUTION PANEL
- TS TRANSFER SWITCH
- MD MAIN DISCONNECT (200A)



ELECTRICAL RISER DIAGRAM

- ELECTRICAL RISER DIAGRAM NOTES:
- CONTRACTOR IS REQUIRED TO INSPECT EXISTING ELECTRICAL SYSTEM, DETERMINE EXISTING METER SIZE, AND VERIFY WIRE, CONDUCTOR AND CONDUIT SIZING REQUIREMENTS PRIOR TO SUBMITTING BID.
 - CONTRACTOR TO SUBMIT ELECTRICAL LAYOUT AND DESIGN TO ENGINEER FOR APPROVAL PRIOR TO ORDERING MATERIALS.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL ALL ELECTRICAL EQUIPMENT NECESSARY FOR THE ENTIRE PROJECT INCLUDING ANY TRANSFORMER NEEDS.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL ALL INSTRUMENTATION AND CONTROL PANELS NECESSARY FOR THE ENTIRE PROJECT.
 - UNISTRUT TO BE PROVIDED AS NEEDED TO INSTALL ALL ELECTRICAL AND CONTROL PANEL EQUIPMENT.
 - ALL CONDUIT SHALL BE SIZED AND PROVIDED BY CONTRACTOR, CONDUIT AND CONDUIT SIZING SHALL MEET ALL NEC CODE REQUIREMENTS FOR ABOVE AND BELOW GRADE INSTALLATION.
 - ALL WIRE AND CONDUCTORS SHALL BE ENCLOSED IN CONDUIT.
 - ALL WIRE SHALL BE COPPER EXCEPT ALUMINUM WILL BE ALLOWED UP TO THE DISTRIBUTION PANEL.

REMOTE WIRELESS MONITORING AND CONTROL REQUIREMENTS:
THE OWNER FURNISHED REMOTE WIRELESS MONITORING UNIT SHALL BE M850 SERIES UNIT PROVIDED BY MISSION COMMUNICATIONS (SALES REPRESENTATIVE IS JEFF CLARKE WITH HYDRO-KINETICS; 314-647-6104).

CONTRACTOR TO ROUTE CONDUIT AND WIRING AS FIELD DETERMINED AND COORDINATED WITH THE ENGINEER TO THE MISSION UNIT FOR TERMINATION AND PROGRAMMING BY MIDWEST WATER OPERATIONS.

- DIGITAL INPUTS
 - a. P-1 FAIL
 - b. P-2 FAIL
 - c. P-3 FAIL
 - d. BLWR-231 FAIL
 - e. BLWR-232 FAIL
- ANALOGUE INPUTS
 - a. FE/FIT-111 FLOW (EFFLUENT METER)
 - b. BLWR-231 SPEED
 - c. BLWR-232 SPEED

- 120V GFCI RECEPTACLE IN WEATHERPROOF BOX ON UNISTRUT.
 - TWO SETS OF LED DOUBLE ADJUSTABLE HEAD LIGHTS MOUNTED ON 6"x6" CCA TIMBER AT 8 FT. OFF GROUND. COORDINATE FIELD LOCATION FOR INSTALLATION W/ENGINEER FOR ONE AT CONTROL CENTER & ONE AT INFLUENT PUMP STATION.
 - 120V SINGLE POLE SWITCH IN WEATHERPROOF BOX.
- *SEE ELECTRICAL RISER DIAGRAM NOTE 1



PROCESS DETAILS AND ELECTRICAL RISER DIAGRAM
PERMISSION RIDGE WWTF IMPROVEMENTS
72 PERMISSION RIDGE DRIVE
LOUISVILLE, KENTUCKY



SEAL DATE:	11/8/2021
DRAWN BY:	CMB
PROJ NUMBER:	0542-B
DATE:	11/8/2021
DRAWING NO:	P7

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Hurt, Jason M (EEC)

From: Hurt, Jason M (EEC)
Sent: Wednesday, April 19, 2023 9:12 AM
To: msappington@cswrgroup.com; env.comp@cswrgroup.com
Subject: FW: KPDES Public Notice - KY0090956 Shelby

A draft Kentucky Pollutant Discharge Elimination System (KPDES) permit for the subject facility has been completed and the information sent to public notice, as per Regulation 401 KAR 5:075, Sections 3 and 5. The public notice email is copied below. Copies of the draft permit, draft fact sheet, and application can be found at the link shown in the email below. Comments on the draft permit must be received by the close of comment period as noted in the email below.

If you have any questions, please contact me.

Sincerely,

Jason M. Hurt, PE
Branch Manager
Surface Water Permits Branch
Kentucky Division of Water
Ph. 502.782.6167

From: EEC DEP DOW Public Notice
Sent: Wednesday, April 19, 2023 9:10 AM
Subject: FW: KPDES Public Notice - KY0090956 Shelby

Attention Public Notice Participant:

This is an e-mail notification that comments are being solicited on the following draft Kentucky Pollutant Discharge Elimination System (KPDES) permit.

Facility Name: Persimmon Ridge Subd & WWTP
Facility Address: 72 Persimmon Ridge Drive
Louisville, Shelby County, Kentucky
Permittee Name: Bluegrass Water Utility Operating Company LLC
Permittee Address: 1630 Des Peres Road, Suite 140
Des Peres, MO 63131
NPDES No: KY0090956
AI No.: 3955
County: Shelby
Open of Comment Period: 04-19-2023
Close of Comment Period: 05-19-2023
Action: KPDES Sanitary-Renewal

Description of Activity:

The applicant operates a domestic wastewater treatment plant serving a subdivision.

Description of Outfalls:

Outfall No.	Outfall Type	Latitude (N)	Longitude (W)	Receiving Water	Description of Outfall
001	External	38.296989°	85.440433°	Floyds Fork	Domestic Wastewater

Copies of the draft permit, fact sheet, application and other support material may be viewed by using the e-Search feature on the Department's Pending Approvals page at <https://dep.gateway.ky.gov/eSearch/Approvals/Pending?Program=Wastewater&NumDays=30>. Once on the page, enter the AI No. in the Agency Interest ID field and click the Search button to view the documents available.

Persons wishing to comment on the proposed action are invited to submit comments to the Division of Water. In addition, interested persons may request that the Director of the Division of Water hold a public hearing on an application. The request shall state the nature of the issues proposed to be raised in the hearing. Comments and requests must be received by the Division of Water no later than 4:30 PM on the closing date of the comment period. Comments and requests may be submitted by e-mail at: DOWPublicNotice@ky.gov or written comments and written requests may be submitted to the Division of Water at 300 Sower Blvd, Frankfort, Kentucky 40601.

For further information, please contact:

Surface Water Permits Branch
Kentucky Division of Water
300 Sower Blvd.
Frankfort, KY 40601
(502) 564-3410
DOWPublicNotice@ky.gov



Civil Engineering

Surveying

Water Resources Management

Construction Management

Landscape Architecture

Land Planning

August 15, 2022

Commonwealth of Kentucky
Energy and Environmental Cabinet
Division of Water

**RE: R+L CARRIERS – GEORGETOWN
CITY OF GEORGETOWN, KENTUCKY
APPLICATION FOR CLEAN WATER COLLECTION SYSTEM**

To whom it may concern,

R+L Carriers is proposing a new service center located at 425 Cherry Blossom Way in the City of Georgetown, Kentucky. The new terminal consists of a cross dock facility with 80 loading doors, a maintenance facility, fueling island, and vehicular parking for tractors, trailers, and employees.

The site will be served by a new, privately funded and owned lift station. Wastewater will be collected from the maintenance garage, cross dock, and fueling island. Both the maintenance garage and fueling island will have oil-water separators downstream of their service connection, but upstream of the lift station. The lift station will pump the wastewater through a 3" forcemain and discharge into an existing sanitary manhole owned and operated by Bluegrass Water & Sewer (also known as Central States Water Resources). A copy of the service agreement with Bluegrass has been included in the submittal package.

The lift station was sized for the current buildout, and the anticipated average daily flow is expected to be 1,400 gallons per day. Since the lift station is private, it will only serve the proposed buildings onsite. No wastewater from other entities will be collected and discharged through the proposed sanitary sewer network.

All necessary calculations and engineering drawings have been included in the submittal package. Should you have any questions or need further information, please do not hesitate to contact me at 630-925-1110 or jjovinelli@manhard.com.

Sincerely,
MANHARD CONSULTING, LTD

A handwritten signature in blue ink, appearing to read 'Joe Iovinelli', written over a horizontal line.

Joe Iovinelli, P.E.
Project Manager



JOB	RLR.GTKY01		
SHEET NO.	1	OF	1
CALCULATED BY	JMI	DATE	8/15/2022
CHECKED BY		DATE	8/15/2022
SCALE	NTS		
DESCRIPTION	R+L CARRIERS - GEORGETOWN		
	Sanitary Sewer Flow Calculations		

**SANITARY SEWER FLOW ANALYSIS
FOR
R+L CARRIERS
City of Georgetown, Kentucky**

	AVG FLOW <i>P.E.</i>	PEAK FACTOR	PEAK FLOW		
			<i>P.E.</i>	<i>GPD</i>	<i>GPM</i>
DOMESTIC FLOW - Main Building	12	4.41	53	5,288	4
DOMESTIC FLOW - Maintenance Shop	2	4.46	9	892	1
TOTAL	14.0		62	6180	4

Notes:

1. Domestic flow based on 15 GPD per full-time employee and 5 GPD per truck trip in/out of the facility
 15 x 60 employees = 900 GPD
 5 x 50 truck trips in/out = 250 GPD

2. Maintenance garage assumed to have 15 full time employees.
 15 x 15 employees = 225 GPD

Total Estimated GPD = 900 + 250 + 225 = 1,375 GPD OR 14 P.E.

(1) Provide reasoning/justification for the assumption that addition of 3 IFAS cages (total volume 12,118 gal) to the aeration tank (with a volume approx. 25 times larger) will remove (target) 70% of the BOD? How were the cage locations determined as shown on the plans? How severe could affects of short-circuiting in the aeration tank have on IFAS (treatment) efficacy?

Please read the text that is boxed in red on page 6 within the document attached, which served as the basis for the design methodology used in our calculations. Additionally, please see the image attached detailing hydraulic retention times necessary for high-rate BOD removal attached growth processes. Regarding the final sentence in the paragraph, please note that this is an IFAS, so while the MBBR biology is dispersed, we have suspended growth biology downstream that is floc forming. (Image Source: Metcalf & Eddy (2014) Wastewater Engineering: Treatment and Resource Recovery. 5th Edition, McGraw-Hill, New York.)

The cages were located within the influent portion of the aeration tank with the intention to lower the majority of soluble BOD and subsequently lower the population of competitive heterotrophic bacteria downstream, allowing the nitrifying bacteria to thrive in the suspended growth portions of the tank. Short-circuiting should be a non-issue even with the relative size difference between the IFAS cages and the remainder of the aeration basin based on the existence of intense mixing in each of the cages. Similar to Herrington Haven, the entire waste stream will be recycled through the IFAS cages more than once.

(2) Do you anticipate sewer flows with high COD/BOD (from industrial customers) to be frequent and could these adversely affect biofilm growth and maintenance on the IFAS media and lower treatment performance?

High COD/BOD loadings are introduced into the waste stream primarily from commercial sources such as restaurants, convenience stores, gas stations, etc. MBBRs have been utilized in the food industry perhaps more than in pure municipal settings in the United States, and the biofilm is notably effective in handling load variations. Organic loading has been shown to fluctuate at this plant, but only a third of the loading is from commercial sources, so it is steady on average.

(3) Will addition of sulfur dioxide (to de-chlorinate) allow growth of microorganisms in the proposed cloth filter and serve as sites of releases in the effluent (particularly of concern E. coli)?

We will place the sulfur dioxide feed in the filter effluent chamber, which should maintain free chlorine residual in the filter, eliminating the possibility of regrowth.



BLUEGRASS WATER

Utility Operating Company

A CSWR Managed Utility

March 11, 2021

Michael Kroeger (CC. Wesley Dement)
Kentucky Department for Environmental Protection
Division of Enforcement
300 Sower Blvd., 3rd Floor
Frankfort, KY 40601

Bluegrass Water Utility Operating Company, Inc.
River Bluffs WWTP
KYPDES Permit No. KY0043150
Agency Interest No. 3367

Corrective Action Plan Revision:

I am pleased to submit this update to the Corrective Action Plan for the River Bluffs WWTF dated 7/30/2020. AS described in the initial corrective action plan the facility was in poor condition at acquisition. As triage work has proceeded the facility has been found to be in worse condition than originally perceived, especially concerning general degradation of steel tankage and equipment. As a result, the scope of triage work has expanded and is still ongoing. This work still primarily consists of repairs to steel tanks, replacement of aeration piping, diffusers, headers, RAS lines, replacement of blowers and general facility repairs. The plant is still struggling to meet some limits, primarily as a consequence of the triage work being performed requiring portions of the facility to be temporarily shut down, however we expect that the facility will not require any process changes or additional upgrades following initial triage.

The expanded extent of the triage work will require an extension of the projected schedule to complete this work. We now expect that all triage work will be completed, and the plant dialed in for ongoing performance by September 30, 2021. Following these improvements, the facility should be able to consistently comply with permitted limits.

Sincerely,

JON MEANY

Utility Engineer

 (314) 380-8537 Ext. 215
 (314) 482-0342
 (314) 736-4759
 jmeany@cswrgroup.com
 1650 Des Peres Rd., Suite 303,
Des Peres, MO 63131



BLUEGRASS WATER

Utility Operating Company

A CSWR Managed Utility

July 30, 2020

Wes Dement
Kentucky Department for Environmental Protection
Division of Enforcement
300 Sower Blvd., 3rd Floor
Frankfort, KY 40601

Bluegrass Water Utility Operating Company, Inc.
River Bluffs Subdivision WWTF
KYPDES Permit No. KY0043150
Agency Interest No. 3367

Corrective Action Plan:

In light of the River Bluffs WWTF's failure to meet permitted limits we submit the following corrective action plan.

BWUOC has recently purchased this treatment plant. With the change of ownership, operational modifications have been implemented and are ongoing. With proper operation, the facility should be capable of meeting permit limits without process modification. Over the next several months, repairs will be made and monitoring will continue in order to confirm that the existing processes can meet permit limits.

1. Causes of the Effluent Violations

- Ammonia
- Total Suspended Solids (TSS)

A review was performed of EPA's Echo compliance website which lists violations. The River Bluffs WWTF has been in a state of noncompliance for 6 of the last 12 quarters with repeated exceedances of the ammonia facilities ammonia limits as well as an exceedance of the Total Suspended Solids limit. It is noteworthy that while the ammonia exceedances have recurred, the exceedances do not appear to be severe and operational/maintenance improvements will likely be adequate to bring the facility into consistent compliance.

The facility is an activated sludge system, with grinding, chlorination, and dechlorination. The plant has a canopy installed over all plan structures. The facility consists of an influent lift station that flows into a splitter box that divides the flow evenly between two separate plants, which then flow together into an older plant which has been converted for use as the chlorine contact chamber, and into what was the influent lift station for the older plant and has since been converted for dechlorination and a weir ahead of the discharge point. The entire structure of the two activated sludge plants and the older plant exhibit severe rust to both the tank structure and all piping and treatment components. In some places, the piping has been replaced with PVC, which may or may not be adequate as a long-term piping solution given that the canopy offers some protection from UV, which will be evaluated in this initial period. In places where the piping hasn't been replaced, steel piping is severely corroded, and returns are not functioning properly. The older steel pipes that have been replaced with pvc were never properly removed, so corroding pipe is present throughout the plant.

Given the condition of the rest of the plant and apparent lack of maintenance by previous ownership, it is likely that the air lines and diffusers are in similar states of disrepair, potentially compromising the efficacy of the aeration process and leading to the ammonia exceedances. When Bluegrass acquired the plant, the influent line was a PVC main that was strung over and hanging on the fencing around the facility, compressing the 3 strands of barbed wire at the top of the fence. This has already been properly reinstalled underground where it won't be damaged by UV and the fencing repaired. The TSS exceedance may point to improper operation of the facility, or issues with inflow and infiltration causing excessively high flow through the facility.

2. System Evaluation and Corrective Actions

Due to the poor maintenance of the facility by previous ownership, it is not currently clear if the facility is able to consistently meet permit limits with proper operation. To make this determination, it is necessary to begin a period of operational improvement, evaluation and repairs of existing facilities, and observation of plant performance.

In light of this improvements will be staged. The phase of initial improvements should include the inspection and replacement of blowers/service filters as needed, lift station pump inspection and repair/replacement, installation of Mission monitoring/generator quick connect/flow meter, inspection and replacement/repair of control panels, inspection and replacement of diffusers that have failed, evaluation and repair of corrosion/damaged steel components at the facility (patch welding, painting, etc), removal/replacement of corroded piping at the facility, and evaluation of the disinfection system.

The repair/replacement of the existing blowers, diffusers, and piping at the facility should greatly improve the effectiveness of the treatment process. This should aid in reducing ammonia levels.

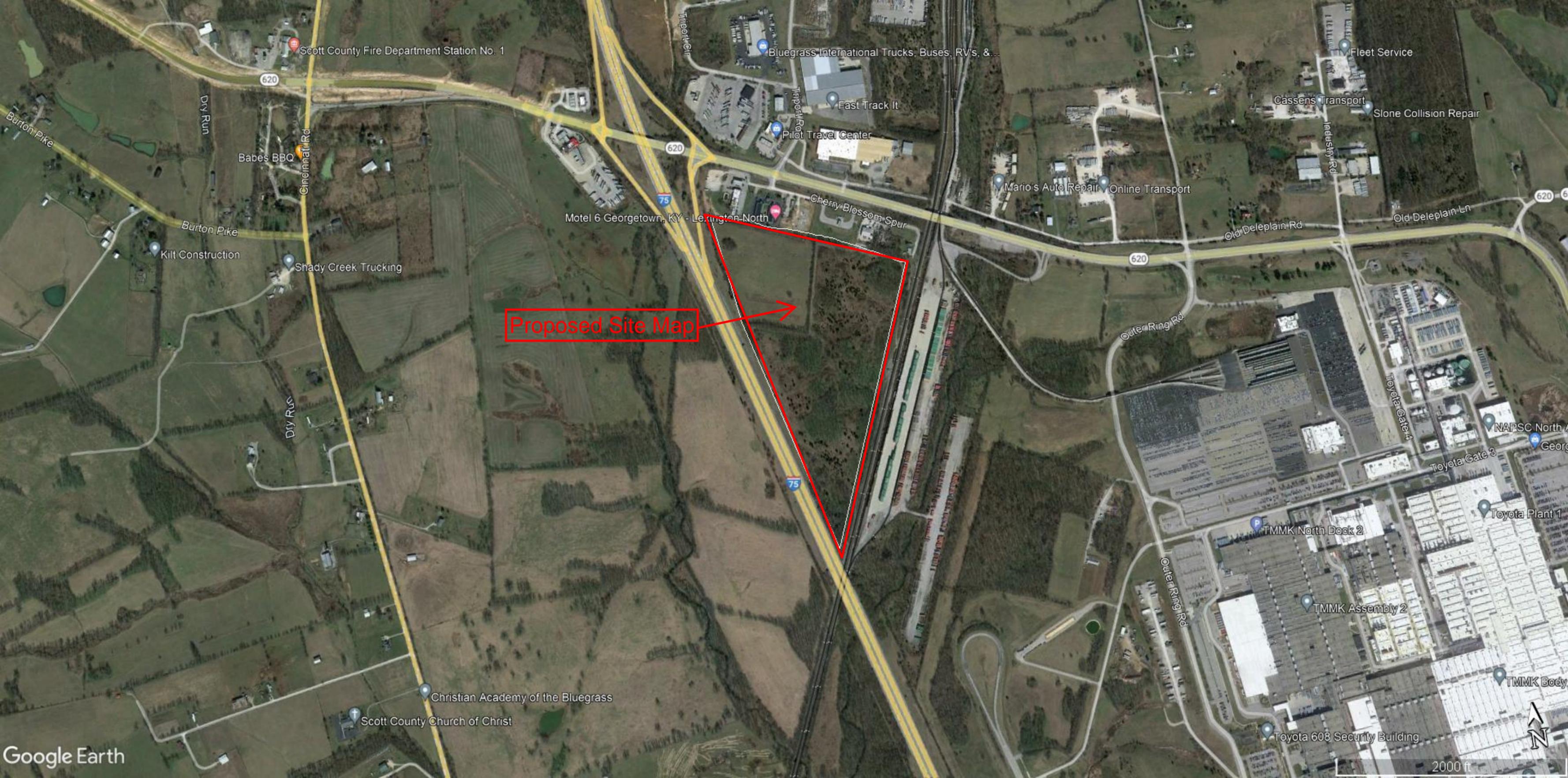
Installation of Mission Remote Monitoring and the flow meter at the facility will allow for greater operational control, as well as real time information on the flow through the facility. This provides invaluable data for accurately evaluating the facilities performance, and the potential need for further improvements. The flow data will also allow for accurate evaluation of the level of Inflow and Infiltration in the system during rain events. I&I can significantly compromise treatment process, and measure of the increased flow will help to determine if collection system repairs are needed.

The initial evaluation and repairs at the facility will also allow the plant to be brought into a state where regular maintenance and inspections can be implemented to prevent the facility from falling back into the sort of disrepair that is evident from previous ownership.

Following these initial improvements, a period of observation and evaluation will be conducted to determine if a process change is needed at the facility to consistently meet limits that the facility has struggled with in the past.

3. Project Milestones

- Continue monitoring the facility for performance (10/31/20)
- Implement initial improvements detailed above (10/31/20)
- Submit status report detailing improvements and whether process changes are required (11/30/20)



Scott County Fire Department Station No. 1

Bluegrass International Trucks, Buses, RV's, &...

Fleet Service

Babes BBQ

Fast Track II

Cassens Transport

Slone Collision Repair

Kill Construction

Shady Creek Trucking

Pilot Travel Center

Mario's Auto Repair Online Transport

Motel 6 Georgetown, KY - Lexington North

Cherry Blossom Spur

Old Deleplain Rd

Old Deleplain Ln

Proposed Site Map

Outer Ring Rd

NAPSC North A

Georg

Toyota Gate 3

Toyota Plant 1

TMMK North Dock 2

TMMK Assembly 2

TMMK Body

Christian Academy of the Bluegrass

Scott County Church of Christ

Toyota 608 Security Building



ANDY BESHEAR
GOVERNOR

REBECCA W. GOODMAN
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

March 13, 2023

Persimmon Ridge Subd & WWTP
72 Persimmon Ridge Dr.
Louisville, KY 40245

RE: **Permit Expiration Notification and Solicitation for New Permit Application**
Agency Interest Number (AI #): 3955
KPDES Permit #: KYR10K177,KY0090956
Location: Jefferson County

Dear Persimmon Ridge Subd & WWTP:

Our records indicate that your Kentucky Pollutant Discharge Elimination System (KPDES) permit is due to expire 09/30/2023. Pursuant to KPDES Regulation 401 KAR 5:060, Section 2, any POTW or permittee with a currently effective permit shall submit a new application at least **180 days** before the expiration of the existing permit. In accordance with 401 KAR 5:060, Section 2(4) the conditions of an expired permit shall continue in force until the effective date of a new permit if a complete and timely application has been submitted. A complete and timely application shall include all elements required by 401 KAR 5:060, Section 2 Applying for a KPDES Permit and 5:310 Surface Water Permit Fees which is deemed complete on or before 180 days prior to the expiration of your permit. Pursuant to 401 KAR 5:075, Section 1 the cabinet shall not begin processing of a permit until the applicant has fully complied with the requirements of 401 KAR 5:060. **Please note that beginning June 28, 2017, an application will not be considered complete without submittal of 100% of the permit fee.**

Copies of the application forms for obtaining a new permit may be found by using this link; <https://eec.ky.gov/Environmental-Protection/Water/PermitCert/KPDES/Pages/default.aspx>. **Please note that the application forms were revised and you are required to utilize these new forms which are available on the provided link beginning April 1, 2019.** You will need a copy of **Form 1**, the **appropriate additional form** as listed in Table 1 of 401 KAR 5:060, Section 2(2) and the General Instructions. Please use the word version as the PDF will not allow you to make changes. Please note that completion of these forms requires the collection and analysis of the discharge and that pursuant to 401 KAR 5:075, Section 15(4) the cabinet has up to 30 days to determine if the application is administratively complete. Incomplete applications shall be returned to the applicant to correct deficiencies. Failure to submit a complete application 180 days prior to the expiration of the permits shall result in the termination of the permit and may result in appropriate enforcement action. Therefore it is recommended that the application be submitted to the Surface Water Permits Branch, Division of Water, at the above address as soon as possible.

If you have any questions regarding the completion of these forms, please contact Darby Small at 502-782-1206.

Sincerely,

Darby Small

Darby Small
Surface Water Permits Branch, Division of Water



Permit to Withdraw Public Water

Longview Country Club

Subject Item Inventory

Permit Number: 1173

Activity ID No.: APE19910001

Subject Item Inventory:

ID	Designation	Description
AIOO8083		
STRC2	Intake Lake #1	WR: Intake in Lake #1

Subject Item Groups:

ID	Description	Components
GACT1	SURFACE - Lake #1 at river mile 0.4 of an unnamed tributary of North Elkhorn Creek	STRC2 WR: Intake in Lake #1

KEY

ACTV = Activity

AREA = Area

COMB = Combustion

FINA = Financial

PERS = Personnel

PSTA = PSTEAF Fund

STRC = Structure

AIOO = Agency Interest

CERT = Certificate

EQPT = Equipment

MNPT = Monitoring Point

PORT = Transport

STOR = Storage

TRMT = Treatment

Persimmon Ridge Facility Improvements - KY0080845
Design Considerations – Construction Permit Application
Date: November 18, 2021

Introduction

The purpose of this document is to specifically address the criteria used for the design of various improvements to the Persimmon Ridge Wastewater Treatment Facility, and to describe pertinent information required in Section IV - “Design Considerations” of the Construction Permit Application for said improvements.

E. Design Criteria

The process flow diagram for the proposed improvements is included in Section A of the appendix to this specific document.

As currently practiced, raw sewage will enter the facility in the existing influent lift station, and the flow will be pumped into the existing lagoon cell # 1 and then flow to existing lagoon cell #2 for further treatment. In the proposed improvements, the flow in lagoon cell # 2 will be airlifted in a side stream into a two stage Moving Bed Biological Reactor, for secondary treatment and the MBBR effluent will be recycled into lagoon cell # 1. The existing, four-zone chlorine contact tank (upgraded with the addition of diffusers to allow the tank to simultaneously be used for post-aeration) will be used for disinfection and to elevate the dissolved oxygen levels to meet the disinfection limits and the DO residual limit prior to effluent discharge.

Based on the level of redundancy in the design, we believe the plant qualifies for classification as Grade A Reliability. A manual transfer switch will be installed that allows the use of a backup generator which will provide sufficient power for the entire facility including the blowers and raw sewage pumps, allowing continuous use of all treatment processes. The use of multiple stages in each process allows the system to reliably meet the effluent parameters given by the KDEP.

A summary of the design criteria used for unit process sizing is included in Section B of the Appendix including:

- MBBR Influent Characteristics
- MBBR Tank Sizing Summary
- MBBR Aeration Requirement Summary
- MBBR Blower Requirement Summary
- Post Aeration
- Chlorine Contact Tank
- Effluent Parameters

Civil Engineering

Surveying & Mapping

Potable Water

Wastewater Treatment



Civil Site Design

Construction Support

Transportation

Wastewater Collection

The system was generally designed in accordance with the 2014 version of Ten State Standards for Wastewater Facilities and 401 KAR 5:005.

G. Site Location

A site plan can be found in the Plans which clearly shows the site boundaries and the proposed improvements in reference to those boundaries. The most recently available subdivision plat available will be attached in the appendix, as well as a screenshot of the site on google earth with the plans superimposed onto the image.

H. Other Information

The proposed facility improvements will be constructed on the existing site, and the existing lagoons and chlorine contact chamber will continue to be used for treatment and disinfection. Vegetation will be added over the top of the site once construction is finished.

Civil Engineering
Surveying & Mapping
Potable Water
Wastewater Treatment



Civil Site Design
Construction Support
Transportation
Wastewater Collection

Appendix

- Section A - Process Flow Diagram
- Section B - Summary of Design Criteria
- Section C - Subdivision Plat
- Section D – Alta Survey

Civil Engineering
Surveying & Mapping
Potable Water
Wastewater Treatment



Civil Site Design
Construction Support
Transportation
Wastewater Collection

Section A – Process Flow Diagram

Section B – Summary of Design Criteria

Plant Influent Characteristics

Annual Average Daily Flow	55,000	gpd
Maximum Monthly Average Daily Flow	55,000	gpd
Peak Daily Flow	165,000	gpd
Peak Hourly Flow (w/out Equalization)	220,000	gpd
Influent BOD	225	mg/L
Influent BOD	103.2	lbs/day
Influent TSS	225	mg/L
Influent TSS	103.2	lbs/day
Influent NH3-N	33	mg/L
Influent NH3-N	15.1	lbs/day
Influent TKN	38	mg/L
Influent TKN	17.4	lbs/day
Influent pH	7	
Water Temperature	12	deg-C

Lagoon Aeration

Actual Oxygen Supplied (BOD Reduction Only)	127	lbs/day
Target DO Residual	2.0	mg/L
Use 6, Existing 5.0 hp Mechanical Surface Aerators and 1		
Use 1, Existing 25.0 hp Mechanical Surface Aerator		

MBBR Influent Characteristics

Annual Average Daily Flow	55,000	gpd
Maximum Monthly Average Daily Flow	55,000	gpd
Peak Daily Flow (w/Equalization)	110,000	gpd
Peak Hourly Flow (w/Equalization)	110,000	gpd
Influent BOD	40	mg/L
Influent TSS	40	mg/L
Influent NH3-N	26	mg/L
Influent TKN	13	mg/L
Design Influent TKN	13	mg/L
Influent pH	7	
Minimum MBBR Water Temperature	4	deg-C

Tank Sizing Summary

No. of Tanks Proposed	2	
Length of Each	8.0	ft
Width of Each	8.0	ft

Civil Engineering
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 Wastewater Treatment



Civil Site Design
 Construction Support
 Transportation
 Wastewater Collection

Side Water Depth of Each	5.75	ft
Tank Height of Each	7.25	ft
Volume of Each	2,753	gallons
Volume Total	5,505	gallons
Hydraulic Retention Time at Average Flow	2.4	hours
Hydraulic Retention Time at Peak Daily Flow	1.2	hours
Total Media Surface Area Requirement	4,627	m ²
Total Media Surface Area Proposed	4,741	m ²
<u>MBBR Aeration Requirement Summary</u>		<u>Stage 1</u>
AOR (lbs/day)	35	lbs/day
Assumed Diffuser Subm. at AWL (ft.)	5	ft
Elevation (ft.)	634	ft
Alpha	0.70	
Beta	0.9	
Target DO Residual (MBBR Process) (mg/L)	5.0	mg/L
SOR (lbs/day)	138	lbs/day
Target Diffuser Efficiency/ft. Submergence	1.1	%
Airflow (scfm)	141	scfm
Airflow per 1,000 scfm	192	scfm/1,000 cf
<u>Blower Requirement Summary</u>		
No. of Blowers	2	
Airflow Requirement for MBBR	141	scfm
Airflow Requirement for Air Lift into MBBR (4" Eductor)	17	scfm
Airflow Requirement for Post-Aeration in CCT	13	scfm
Airflow Requirement per Blower	171	scfm
Discharge Pressure	5.37	psig
Assumed Overall Efficiency	0.62	
Approximate BHP Requirement/Blower	5.9	bhp
Approximate BHP Requirement Total	5.9	bhp
Estimated Nameplate HP / Blower	7.5	hp
Blower Type	<i>Dual Lobe PD</i>	
<u>Existing Chlorine Contact Tank / Post Aeration</u>		
Length	7.58	ft
Width	12	ft
Depth	7	ft
Contact Tank Volume	4,763	gallons
Disinfection HRT at Peak Flow	31.2	minutes
scfm/1,000 cf	20	scfm/1KCF

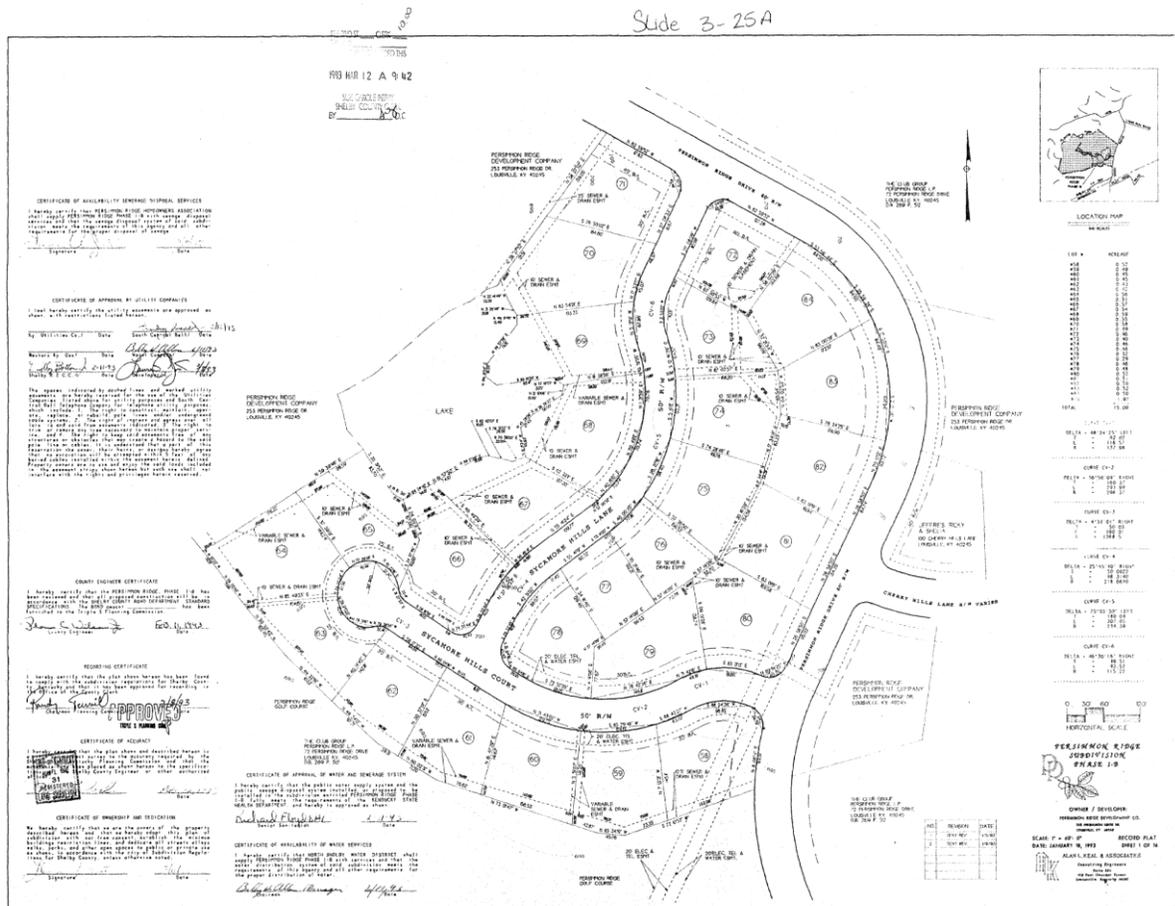
Civil Engineering
 Surveying & Mapping
 Potable Water
 Wastewater Treatment



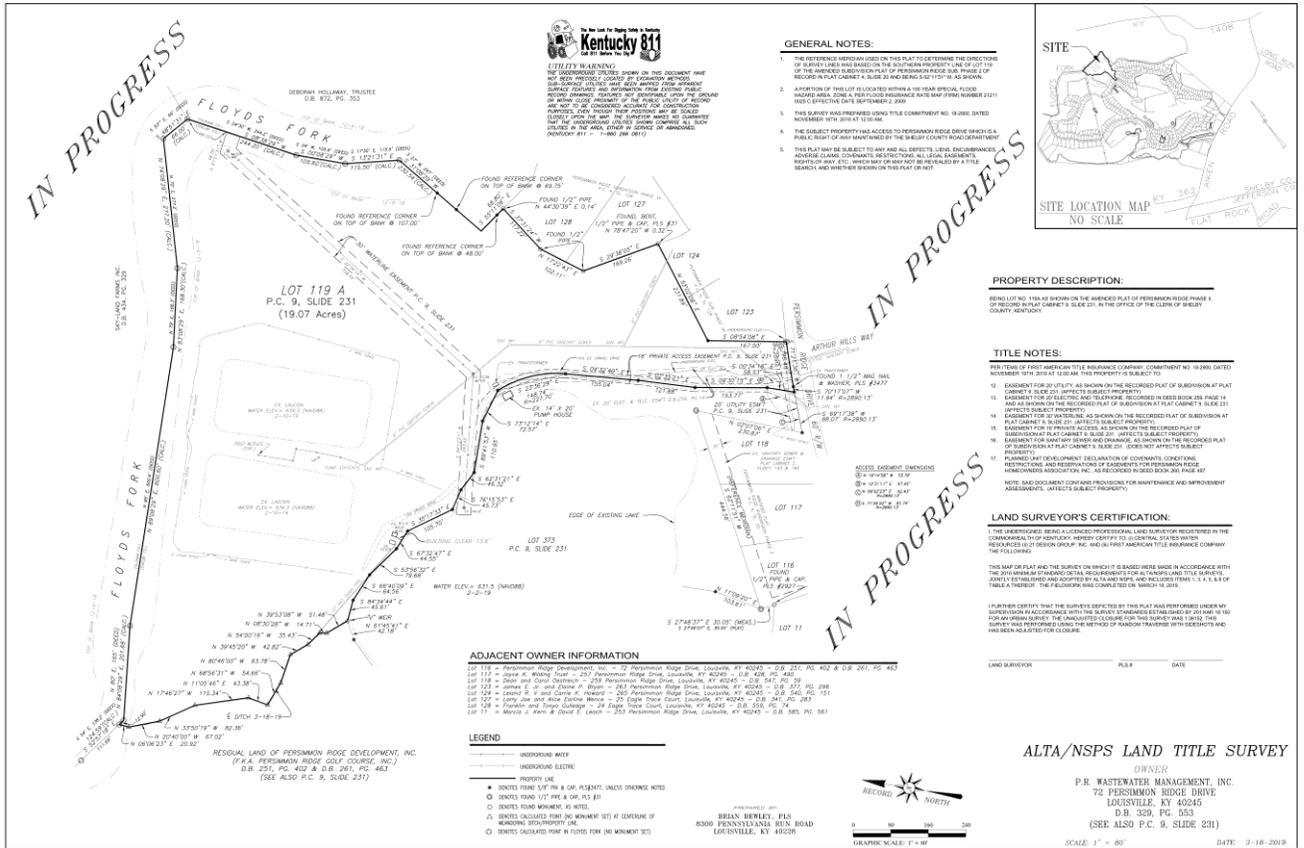
Civil Site Design
 Construction Support
 Transportation
 Wastewater Collection

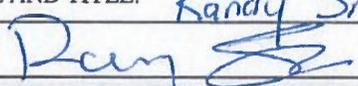
scfm Required for Complete Mixing (provided with blowers common for MBBR, Airlift and Lagoon Aeration)	12.73	scfm
Discharge Pressure	4.01	psig
<u>Effluent Parameters</u>		
Effluent CBOD	10	mg/L
Effluent CBOD	4.6	lbs/day
Effluent TSS	30	mg/L
Effluent TSS	13.8	lbs/day
Summer Effluent NH3-N	2.0	mg/L
Summer Effluent NH3-N	0.9	lbs/day
Winter Effluent NH3-N	5.0	mg/L
Winter Effluent NH3-N	2.3	lbs/day
E Coli	130/240	cfu/100 mL
Minimum Dissolved Oxygen	7.0	mg/L
Total Chlorine Residual	0.011	mg/L

Section C – Subdivision Plat



Section D – Alta Survey



Form TPR	TRANSFER OF PERMIT REQUEST Kentucky Pollutant Discharge Elimination System (KPDES)		 Division of Water
	NAME OF FACILITY: Darlington Creek Subdivision	AGENCY USE ONLY	
PERMIT NO.: KY0105325	COUNTY: Campbell	Received 5-27-2022 JH	
I. CURRENT PERMITTEE INFORMATION (Existing permit holder)			
Name of Current Permittee: Darlington Creek Association, INC (C/O Towne Properties)	RECEIVED MAY 19 2022 SWPB		
Facility Location Address (Street, road, etc.): US-27 South & Highway 154			
Facility City, State, Zip Code: Alexandria, KY 41001			
II. PROPOSED OWNER OR OPERATOR INFORMATION			
Name of Proposed Permittee and Official Title: Josiah Cox, President			
NEW Name of Facility (if applicable): Darlington Creek Subdivision			
NEW Name of Company (if applicable): Bluegrass Water Utility Operating Company, LLC			
Proposed Permittee Mailing Address: 1630 Des Peres Rd. Suite 140	Street address change only		
Proposed Permittee City, State, Zip Code: Des Peres, MO 63131			
Proposed Permittee Telephone Number: (314) 736-4672			
Proposed Permittee Email Address: jcox@cswrgroup.com			
NetDMR Official Contact for Proposed Permittee: Jo Anna McMahon			
NetDMR Official Contact Telephone Number: (314) 380-8571			
NetDMR Official Contact Email Address: jcmahon@cswrgroup.com			
III. NOTIFICATION BY CURRENT PERMITTEE			
<input checked="" type="checkbox"/> Effective Date of Transfer of Permit Ownership:			
<input type="checkbox"/> Attach a signed copy of the contractual written agreement between the existing permittee and new proposed permittee containing a specific date for transfer of the permit responsibility, coverage, and liability between them.			
PRINTED NAME AND TITLE: Randy Smith, President			
SIGNATURE: 	DATE: 3.28.22		
IV. ACKNOWLEDGEMENT BY NEW PERMITTEE			
I hereby certify that I agree to the transfer of the permit, and I will assume ownership and all responsibility for meeting the permit conditions relating to water quality at the permitted facility listed above on the effective date of transfer indicated.			
PRINTED NAME AND TITLE: Josiah M. Cox, President, Central States Water Resources, Inc. Manager of Bluegrass Water Utility Operating Company, LLC			
SIGNATURE:	DATE:		

Return completed application form and attachments to: Division of Water, Surface Water Permits Branch, 300 Sower Boulevard, 3rd Floor, Frankfort, KY 40601. Direct questions to: Surface Water Permits Branch at (502) 564-3410.

Form TPR	TRANSFER OF PERMIT REQUEST Kentucky Pollutant Discharge Elimination System (KPDES)		 Division of Water
PERMIT NO.: KY0105325	COUNTY: Campbell		
I. CURRENT PERMITTEE INFORMATION (Existing permit holder)			
Name of Current Permittee:	Darlington Creek Association, INC (C/O Towne Properties)		
Facility Location Address (Street, road, etc.):	US-27 South & Highway 154		
Facility City, State, Zip Code:	Alexandria, KY 41001		
II. PROPOSED OWNER OR OPERATOR INFORMATION			
Name of Proposed Permittee and Official Title:	Josiah Cox, President		
NEW Name of Facility (if applicable):	Darlington Creek Subdivision		
NEW Name of Company (if applicable):	Bluegrass Water Utility Operating Company, LLC		
Proposed Permittee Mailing Address:	1630 Des Peres Rd. Suite 140		
Proposed Permittee City, State, Zip Code:	Des Peres, MO 63131		
Proposed Permittee Telephone Number:	(314) 736-4672		
Proposed Permittee Email Address:	jcox@cswrgroup.com		
NetDMR Official Contact for Proposed Permittee:	Jo Anna McMahon		
NetDMR Official Contact Telephone Number:	(314) 380-8571		
NetDMR Official Contact Email Address:	jmcmahon@cswrgroup.com		
III. NOTIFICATION BY CURRENT PERMITTEE			
<input checked="" type="checkbox"/> Effective Date of Transfer of Permit Ownership:			
<input type="checkbox"/> Attach a signed copy of the contractual written agreement between the existing permittee and new proposed permittee containing a specific date for transfer of the permit responsibility, coverage, and liability between them.			
PRINTED NAME AND TITLE:			
SIGNATURE:			DATE:
IV. ACKNOWLEDGEMENT BY NEW PERMITTEE			
I hereby certify that I agree to the transfer of the permit, and I will assume ownership and all responsibility for meeting the permit conditions relating to water quality at the permitted facility listed above on the effective date of transfer indicated.			
PRINTED NAME AND TITLE:			Josiah M. Cox, President, Central States Water Resources, Inc. Manager of Bluegrass Water Utility Operating Company, LLC
SIGNATURE:			DATE: 3/31/2022

Return completed application form and attachments to: Division of Water, Surface Water Permits Branch, 300 Sower Boulevard, 3rd Floor, Frankfort, KY 40601. Direct questions to: Surface Water Permits Branch at (502) 564-3410.

**TRANSFER OF PERMIT REQUEST
INSTRUCTIONS FOR FORM 7032-CO**

The Transfer of Permit shall not become effective until acknowledged by the Division of Water.

A Transfer of Permit Request submitted and signed by the current permittee without the signature of the new permittee shall include a fully executed, written agreement between the current and new permittees containing the specific date for transfer of permit responsibility, coverage, and liability.

The Transfer of Permit Request shall be signed as follows:

1. Corporation: by a principal executive officer of at least the level of vice-president.
2. Partnership or sole proprietorship: by a general partner or the proprietor respectively.
3. Municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.



Letter of Transmittal

Date: 11/18/21

Job Number: 0542

Project: Persimmon Ridge WWTF Improvements

To:

Kentucky Department for Environmental Protection
Division of Water

From:

Jeremey T. Lay
21 Design Group, Inc.
1351 Jefferson Street, Suite 301
Washington, MO 63090
636-432-5029

INCLUDED

- One (1) Construction Permit Application, Form W-1
- One (1) Improvement Plans
- One (1) Technical Specifications
- One (1) KPDES Application Form 1

Please call with any questions. 636-222-7341

Signed: _____

Jeremey T. Lay

WLA REQUEST FORM

Requested by: Andrew Parrish Facility Name: Persimmon Ridge WWTF
(New Expansion Reissuance)

Facility Number: 12/027/042 Unit: 002 KPDES Number: KY0090956 AI Number: 3955

Topo Map #: 3955 Facility Flow: 0.142 / 0.142 (mgd) 7Q10 on existing permit: 0.0 cfs
new / previous

NHD River Mile (optional): 49.4

Outfall Lat/Long: 38.296989 / -85.440433 Source of Lat/Long: Arcmap

Stream Name: Floyds Fork

Existing Limits: 10 C CBOD₅/BOD₅ 2.0 / 5.0 NH₃ 7.0 DO Mon / itor Total Phosphorus
(All limits in mg/L unless noted) (Type in one) (Summer/Winter) (Summer/Winter)

Is the facility in compliance with permit conditions? Yes No (explain)

CBOD and Ammoia issues

Other Information:

Date Completed: 4/17/2023

Completed by: Matthew Fields Upstream Flow (7Q10 in cfs): 0.00

Effluent Limits: 10C CBOD₅/BOD₅ 2 / 5 NH₃ 7 DO Mon / itor Total Phosphorus
*(All limits in mg/L unless noted) (Type in one) (Summer/Winter) (Summer/Winter) *(See below or attached)*

Loadings (lbs/day): _____ CBOD₅/BOD₅ _____ / _____ NH₃ _____ / _____ Total Phosphorus
*(All limits in mg/L unless noted) (Type in one) (Summer/Winter) (Summer/Winter) *(See below or attached)*

Reliability Classification: Grade A Grade B Grade C Does not apply

Comments (WLA Coordinator):

Date Completed: 4/18/23

DEP WORKSITE HAZARD ASSESSMENT

<p>PART A</p> <p>Site Name: KY00460 Longview Golf Course Lake No. 2 Dam – Scott Co AI #: 8083</p>	<p>Incident #:</p>
<p>This form must be started before a site visit and considered during the site visit, as worksite conditions change or as new conditions are discovered, but remain incomplete and unsigned until after the site visit is concluded. This will help ensure your safety and health.</p> <p>Description of Activities: <u>Scheduled Dam Inspection of KY00460 – Longview Golf Course Lake No. 2 Dam</u></p> <p>Personnel present at inspection: Gary Wells, PE</p>	
<p>PART B</p> <p>Check the hazard(s) located at the site being assessed to identify required Personal Protection Equipment (PPE).</p>	
<p>I. TORSO/WHOLE BODY</p> <p>LIKELY INJURY/HAZARD</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Cut/Abrasion/Puncture 2. <input type="checkbox"/> Electrical 3. <input type="checkbox"/> Chemical 4. <input type="checkbox"/> Biological 5. <input type="checkbox"/> Temperature 6. <input type="checkbox"/> Struck By/Against 7. <input type="checkbox"/> Body Fluids 8. <input type="checkbox"/> Strain 9. <input type="checkbox"/> Cumulative 10. <input checked="" type="checkbox"/> Slip/Trip/Fall 11. <input checked="" type="checkbox"/> Same Level Fall (A) 12. <input checked="" type="checkbox"/> Different Level Fall (B) 13. <input type="checkbox"/> Entrapment 14. <input type="checkbox"/> Immersion, Submersion, Water 15. <input type="checkbox"/> Permit Required Confined Space 16. <input checked="" type="checkbox"/> <u>Ticks & Snakes</u> 	<p>I.29 CFR 1910. MISC. STANDARDS – TORSO/WHOLE BODY</p> <ol style="list-style-type: none"> 1. Adequate clothing 2. NO GO or maintain safe distance 3. Review MSDS and determine proper PPE 4. Proper clothing/barrier, cream/repellant 5. Cold-insulated jacket/coat, heat-appropriate clothing, work/rest intervals 6. Protective clothing, warning devices, guards 7. Protective apron/coveralls review BBP Plan 8. Proper work habit, assistance, appropriate tools 9. Body mechanics, proper tools, workstations 10. Proper footwear, harness/tether/lifeline, assistance 11. Same as # 10 (A) 12. Same as # 10 (B) 13. NO GO - Do not enter 14. Personal flotation device, tether/lifeline 15. NO GO 16. Call supervisor/branch manager/and/or ERT

<p>II. HEAD</p> <p>LIKELY INJURY/HAZARD</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Struck By 2. <input type="checkbox"/> Struck Against 3. <input type="checkbox"/> Electrical 4. <input type="checkbox"/> Temperature 5. <input type="checkbox"/> Other 	<p>II.29 CFR 1910.135 HEAD PPE</p> <ol style="list-style-type: none"> 1. Hard hat 2. Hard hat 3. NO GO or Maintain distance 4. Hard hat with winter liner or sweat band, cooling device as required 5. Call supervisor, branch manager and/or ERT
<p>III. EYES/FACE</p> <p>LIKELY INJURY/HAZARD</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Airborne 2. <input type="checkbox"/> Chemical 3. <input type="checkbox"/> Flash/Light/UV 4. <input type="checkbox"/> Other 	<p>III.29 CFR 1910.133 EYES/FACE PPE</p> <ol style="list-style-type: none"> 1. Safety goggles with side shields, goggles or full face shield for hazard 2. Review MSDS and determine appropriate eyewear and beware of any respiratory hazard 3. Non-vented goggles or full face shield filter or tinted lens and sunscreen for sun exposure 4. Call supervisor, branch manager and/or ERT
<p>IV.RESPIRATORY</p> <p>LIKELY INJURY/HAZARD</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Oxygen Deficiency 2. <input type="checkbox"/> Airborne Particles 3. <input type="checkbox"/> Dusts 4. <input type="checkbox"/> Fumes 5. <input type="checkbox"/> Mists 6. <input type="checkbox"/> Airborne Contaminants 7. <input type="checkbox"/> Gases 8. <input type="checkbox"/> Vapors 9. <input type="checkbox"/> Combinations 10. <input type="checkbox"/> Temperature 11. <input type="checkbox"/> Other 	<p>IV. 29 CFR 1910.134 RESPIRATORY PPE</p> <ol style="list-style-type: none"> 1. NO GO 2. NO GO unless in DEP Respiratory Protection Program (RPP) OR unless respiratory hazards can be avoided or concentrations above PEL not be exceeded (Explain in PART C comments) 3. Same as #2 4. Same as #2 5. Same as #2 6. Same as #2 7. Same as #2 8. Same as #2 9. Same as #2 10. Cold temps - cover mouth/nose Excessive Heats – Same as #2 11. Call supervisor/branch manager and/or ERT <p>NOTE: If in the RPP follow proper respirator selection protocols and procedures for any item checked above.</p>

<p>V.HAND/ARM</p> <p>LIKELY INJURY/HAZARD</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Cut/Abrasion/Puncture 2. <input type="checkbox"/> Electrical 3. <input type="checkbox"/> Chemical 4. <input type="checkbox"/> Biological 5. <input type="checkbox"/> Temperature 6. <input type="checkbox"/> Sunburn 7. <input type="checkbox"/> Body Fluids 8. <input type="checkbox"/> Cumulative 9. <input checked="" type="checkbox"/> Strain 10. <input checked="" type="checkbox"/> Other <u>Ticks & Snakes</u> 	<p>V.29 CFR 1910.138 HAND/ARM PPE</p> <ol style="list-style-type: none"> 1. Gloves - canvas, leather, mesh, Kevlar 2. NO GO or maintain safe distance 3. Review MSDS and determine appropriate gloves/sleeves or coveralls 4. Clothing/gloves/coveralls/barrier cream repellent 5. Gloves/clothing 6. Wear long sleeves, gloves or sunscreen 7. Latex/nitrile gloves (review Bloodborne Pathogen Plan - BBP) 8. Gloves/restraints – keeps the hands away from hazards area 9. Adequate tools/assistance from others 10. Call supervisor/branch manager and/or ERT
<p>VI.FOOT/LEG</p> <p>LIKELY INJURY/HAZARD</p> <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Cut/Abrasion/Puncture 2. <input type="checkbox"/> Electrical 3. <input type="checkbox"/> Chemical 4. <input type="checkbox"/> Biological 5. <input type="checkbox"/> Temperature 6. <input type="checkbox"/> Struck By/Against 7. <input checked="" type="checkbox"/> Strain 8. <input checked="" type="checkbox"/> Other <u>Ticks & Snakes</u> 9. _____ 	<p>VI.29 CFR 1910.136 FOOT/LEG PPE</p> <ol style="list-style-type: none"> 1. Approved safety shoe, proper clothing 2. NO GO or maintain safe distance 3. Review MSDS and determine proper PPE 4. Coverall/barrier cream/repellent 5. Insulated footwear, clothing adequate for hazard 6. Safety shoes, adequate clothing, proper techniques 7. Adequate tools, assistance from others 8. Call supervisor/branch manager and/or ERT
<p>VII.AUDITORY</p> <p>NOISE LEVEL</p> <ol style="list-style-type: none"> 1. <input type="checkbox"/> Ambient Level above 85 dBA 2. <input type="checkbox"/> Impact Level above 85 dBA 3. <input type="checkbox"/> Other _____ <p>NOTE: Noise level rule of thumb: If you are within 2-3 feet of someone and you have to yell to communicate you are above 85 dBA.</p>	<p>VII.29 CFR 1910.95 HEARING PROTECTION</p> <ol style="list-style-type: none"> 1. Appropriate NRR ear plugs or muffs 2. Appropriate NRR ear plugs or muffs 3. Call supervisor/ branch manager and/or ERT

PART C

GO:

NO GO:

I WILL FOLLOW THE RECOMMENDATION FOUND IN THE RIGHT COLUMN ABOVE FOR EACH HAZARD CHECKED IN THE LEFT COLUMN ABOVE. IF EXCEPTIONS, CONTACT YOUR SUPERVISOR.

COMMENTS:

PART D

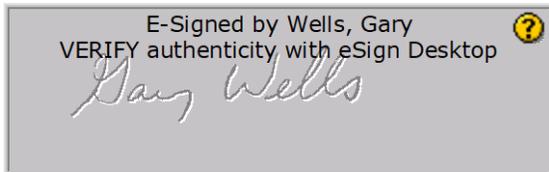
NOTE: Any *NO GO* situation witnessed should prompt immediate notification to your supervisor, branch manager, and/or the DEP's Emergency Response Center, (800) 928-2380, for further assessment and possible emergency declaration/contracting. Need multiple signatures for inspection teams or notes of who comprised the team.

(Optional) SUPERVISOR: I have reviewed this document with the employee to discuss responsible safety measures, equipment and techniques.

(Optional) Supervisor Signature

Date

EMPLOYEE CERTIFICATION: I certify this WORKSITE HAZARD ASSESSMENT was conducted, reviewed and/or updated. Appropriate Personal Protective Equipment was utilized per hazards noted or anticipated.



Gary Wells
Employee Signature(s)

1/14/2021
Date

NOTES:

If you need to refer a facility to OSHA for specific questions or conditions: Kentucky Labor Cabinet, 1047 US HWY 127 South, Suite 4, Frankfort, KY 40601
502-564-3070 – Phone 502-564-5387 – Fax