

COMMONWEALTH OF KENTUCKY
ENERGY AND ENVIRONMENT CABINET
DIVISION OF ENFORCEMENT
CASE NO. DOW 21-3-0029

IN RE: Herrington Haven Wastewater Co., Inc.
Herrington Haven WWTP
Herrington Haven Subdivision
Lancaster, KY 40444
AI No. 1469
Activity ID No. ERF20210001

AGREED ORDER

* * * * *

WHEREAS, the parties to this Agreed Order, the Energy and Environment Cabinet (hereinafter “Cabinet”) and Bluegrass Water Utility Operating Company, LLC (hereinafter “BWUOC”) state:

STATEMENTS OF FACT

1. The Cabinet is charged with the statutory duty of enforcing KRS Chapter 224 and the regulations promulgated pursuant thereto.
2. BWUOC is an active Kentucky Limited Liability Company in good standing that owns and operates utilities and whose principal address according to the Kentucky Secretary of State, is 1650 Des Peres Road, Suite 303, St. Louis, Missouri 63131.
3. Herrington Haven Wastewater Treatment Plant (hereinafter “Herrington,” “Herrington Haven WWTP” or “facility”), is located at Herrington Haven Subdivision, Lancaster, Kentucky 40444. The facility has a design capacity of 0.0098 million gallons per day and discharges to Herrington Lake.
4. Herrington Haven WWTP is currently owned and operated by Herrington Haven Wastewater Co., Inc. The facility’s discharges are permitted under Kentucky Pollutant Discharge

Elimination Systems (hereinafter “KPDES”) permit number KY0053431, issued by the Cabinet’s Division of Water (hereinafter “DOW”). The facility’s KPDES permit expires on July 31, 2023.

5. Herrington Haven Wastewater Co., Inc is an active for-profit Kentucky corporation in good standing, according to the Kentucky Secretary of State.

6. BWUOC has indicated to the Cabinet that it plans to acquire Herrington Haven WWTP, provided it receives from the Kentucky Public Service Commission (“Commission”) all approvals required to make the acquisition. If the Commission approves the acquisition, BWUOC plans to assume ownership and operation of Herrington Haven WWTP on or around March 1, 2021.

7. BWUOC has contracted with a third-party firm to produce an engineering memorandum detailing the status of and repairs needed at Herrington Haven WWTP (Exhibit A). This report was submitted to the Cabinet on or about January 26, 2021.

8. If it receives all required Commission approvals, BWUOC has indicated to the Cabinet that it plans to make substantial repairs and/or upgrades to the facility to address the deficiencies noted in Exhibit A.

NOW THEREFORE, in the interest of providing corrective actions to Herrington Haven WWTP, the parties hereby consent to the entry of this Agreed Order and agree as follows:

REMEDIAL MEASURES

9. BWUOC shall notify the Cabinet in writing that it has assumed ownership and operation of Herrington Haven WWTP within fifteen (15) days of acquiring the facility.

10. Within fifteen (15) days of assuming ownership and operation of the facility, BWUOC shall submit a “Change in Ownership Certification” to the Cabinet.

11. At all times, commencing with assuming ownership of the facility, BWUOC shall

provide for proper operation and maintenance of the facility in accordance with 401 KAR 5:065 Section 2(1).

12. Within thirty (30) days of execution of this Agreed Order, BWUOC shall submit to the Cabinet for review and acceptance, a written Corrective Action Plan (hereinafter “CAP”) to bring the facility into compliance with its KPDES permit and correct the deficiencies noted in Exhibit A. The CAP shall include, but not be limited to, an identification of actions BWUOC shall implement to ensure compliance that includes; proper operation and maintenance to its sewage treatment system, collection system, and disinfection unit. The CAP shall also include a list of all actions necessary to ensure the completion of upgrades to its facility including a list of completion dates for each action. Include in the CAP a final compliance date for completion of all remedial measures listed;

A. Upon review of the CAP, the Cabinet may, in whole or in part, (1) accept or (2) decline and provide comments to BWUOC identifying the deficiencies. Upon receipt of Cabinet comments, BWUOC shall have ninety (90) days to revise and resubmit the CAP for review and acceptance. Upon resubmittal, the Cabinet may, in whole or in part, (1) accept or (2) disapprove and provide comments to BWUOC identifying the deficiencies. Upon such resubmittal, if the CAP is disapproved, the Cabinet may deem BWUOC to be out of compliance with this Agreed Order for failure to timely submit the CAP. The parties to this Agreed Order may also agree in writing to further extend the period in which BWUOC and the Cabinet accept a revised and resubmitted CAP.

B. BWUOC may request an amendment of the accepted CAP by writing the

Director of the Division of Enforcement at 300 Sower Blvd., Frankfort, Kentucky 40601 and stating the reasons for the request. If granted, the amended CAP shall not affect any provision of this Agreed Order unless expressly provided in the amended CAP. This does not require an amendment request pursuant to paragraph 20 of this Agreed Order.

- C. Upon Cabinet acceptance of all or any part of the CAP, the amended CAP or any accepted part thereof (provided that the accepted part is not dependent upon implementation of any part not yet accepted), shall be deemed incorporated into this Agreed Order as an enforceable requirement of this Agreed Order. This does not require an amendment request pursuant to paragraph 20 of this Agreed Order.

13. So long as BWUOC is in compliance with the terms and conditions of this Agreed Order, the Cabinet's Division of Enforcement agrees to hold any formal enforcement action for numeric permit parameter violations for the KPDES permit described in paragraph 4, in abeyance. Should BWUOC fail to comply with the terms and conditions of this Agreed Order, the Cabinet may seek formal enforcement action that would have otherwise been held in abeyance.

14. By the final compliance date in the accepted CAP, BWUOC shall be in full compliance with its KPDES permit.

15. All submittals required by the terms of this Agreed Order shall be submitted to: Division of Enforcement, Attention: Director, 300 Sower Blvd., Frankfort, Kentucky, 40601.

MISCELLANEOUS PROVISIONS

16. This Agreed Order shall be of no force and effect unless BWUOC assumes ownership and operations of Herrington Haven WWTP.

17. This Agreed Order addresses only the items described above. Other than the matters agreed to by entry of this Agreed Order, nothing contained herein shall be construed to waive or to limit any remedy or cause of action by the Cabinet based on statutes or regulations under its jurisdiction and BWUOC reserves its defenses thereto. The Cabinet expressly reserves its right at any time to issue administrative orders and to take any other action it deems necessary that is not inconsistent with this Agreed Order, including the right to order all necessary remedial measures, assess penalties for violations, or recover all response costs incurred, and BWUOC reserves its defenses thereto.

18. This Agreed Order shall not prevent the Cabinet from issuing, reissuing, renewing, modifying, revoking, suspending, denying, terminating, or reopening any permit to BWUOC. BWUOC reserves its defenses thereto, except that BWUOC shall not use this Agreed Order as a defense.

19. BWUOC waives its right to any hearing on the matters admitted herein. However, failure by BWUOC to comply strictly with any or all of the terms of this Agreed Order shall be grounds for the Cabinet to seek enforcement of this Agreed Order in Franklin Circuit Court and to pursue any other appropriate administrative or judicial action under KRS Chapter 224 and the regulations promulgated pursuant thereto.

20. The Agreed Order may not be amended except by a written order of the Cabinet's Secretary or a designee thereof. BWUOC may request an amendment by writing the Director of the Division of Enforcement at 300 Sower Blvd., Frankfort, Kentucky 40601, and stating the reasons for the request. If granted, the amended Agreed Order shall not affect any provision of this Agreed Order unless expressly provided in the amended Agreed Order.

21. The Cabinet does not, by its consent to the entry of this Agreed Order, warrant or aver in any manner that BWUOC's complete compliance with this Agreed Order will result in compliance with the provisions of KRS Chapter 224 and the regulations promulgated pursuant thereto. Notwithstanding the Cabinet's review and approval of any plans formulated pursuant to this Agreed Order, BWUOC shall remain solely responsible for compliance with the terms of KRS Chapter 224 and the regulations promulgated thereto, this Agreed Order, and any permit and compliance schedule requirements.

22. BWUOC shall give notice of this Agreed Order to any purchaser, lessee or successor in interest prior to the transfer of ownership and/or operation of any part of the facility occurring prior to termination of this Agreed Order, shall notify the Cabinet that such notice has been given, and shall follow all statutory requirements for a transfer.

23. This Agreed Order applies specifically and exclusively to the unique facilities referenced herein and is inapplicable to any other facility.

24. Compliance with this Agreed Order is not conditional on the receipt of any federal, state, or local funds.

25. This Agreed Order shall be of no force and effect unless and until it is entered by the Secretary or a designee thereof as evidenced by his or her signature thereon. If this Agreed Order contains any date by which BWUOC is to take any action or cease any activity, and the Secretary enters the Agreed Order after that date, then BWUOC is nonetheless obligated to have taken the action or ceased the activity by the date contained in this Agreed Order.

TERMINATION

26. This Agreed Order shall terminate upon BWUOC's completion of all requirements

described in this Agreed Order. BWUOC may submit written notice to the Cabinet when it believes all requirements have been performed. The Cabinet shall notify BWUOC in writing whether it concurs that all requirements of this Agreed Order have been completed. The Cabinet reserves its right to enforce this Agreed Order, and BWUOC reserves its right to file a petition for hearing pursuant to KRS 224.10-420(2) contesting the Cabinet's determination.

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AGREED TO BY:


Josiah Cox (Aug 10, 2021 11:19 CDT)

Josiah Cox, President
Bluegrass Water Utility Operating Company, LLC

Aug 10, 2021

Date

APPROVAL RECOMMENDED BY:

Michael B. Kroeger, Director
Division of Enforcement

Date

Elizabeth U. Natter, Executive Director
Office of General Counsel

Date

ORDER

Wherefore, the foregoing Agreed Order is entered as the final Order of the Energy and Environment Cabinet this ____ day of _____, 2021.

ENERGY AND ENVIRONMENT CABINET

John S. Lyons, Deputy Secretary
Authorized Designee, Rebecca W. Goodman,
Secretary Energy & Environment Cabinet

CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing **AGREED ORDER** was mailed, postage prepaid, to the following this _____ day of _____, 2021.

Bluegrass Water Utility Operating Company, LLC
Attn: Jacob Freeman
1650 Des Peres Road, Suite 303
St. Louis, MO 63131

And mailed, messenger to:

Michael B. Kroeger, Director
Division of Enforcement
300 Sower Blvd.
Frankfort, Kentucky 40601

Elizabeth U. Natter, Executive Director
Office of General Counsel
Energy and Environment Cabinet
300 Sower Blvd.
Frankfort, Kentucky 40601

DOCKET COORDINATOR

Exhibit A

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Civil Site Design
Construction Support
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Herrington Haven Subdivision – Herrington Haven WWTP KY0053431
Kentucky
Engineering Memorandum
Date: September 11, 2020

Introduction

The Herrington Haven wastewater treatment facility is located in Lancaster, Kentucky approximately 5 miles northeast of Danville, Kentucky. This facility services 21 parcels. The system operates under Kentucky DEP Permit number KY0053531 and Agency ID number 3901.

Wastewater Treatment Facility Existing Conditions

The plant is authorized to discharge up to 9,800 gallons per day (gpd) by the KDEP per the operating permit.

A summary of the existing permit limits are described below:

- BOD5 – 30/45 mg/L (Monthly average/Maximum Weekly Average)
- TSS – 30/45 mg/L
- NH3-N – 20/30 mg/L
- E-Coli – 130/240 mpn/100 ml
- Total Residual Chlorine – 0.011/0.019 mg/L
- Total Phosphorus – Report Only
- Total Nitrogen – Report Only
- Dissolved Oxygen – 2.0 mg/L minimum

The subdivision has 19 occupied residences out of the 21 parcels, so little additional growth in flow or loading is expected. Based off of the number of possible connections and assuming 375 gpd of flow per customer, we expect to reach the 7,875 gpd when the entire subdivision is occupied, so the 9,800 gpd of capacity would seem to be adequate.



A review was performed of EPA's Echo compliance website which lists violations of wastewater treatment plants across the country. The Herrington Haven wastewater treatment plant has exceeded permit limitations several times in recent

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months and years for E-Coli, Total Residual Chlorine and Total Phosphorus. Note that the permit shown on the KYDEP website indicates that Total Phosphorus levels are to be reported but there is no limit; however, the EPA Echo website describes effluent limit exceedances for Total Phosphorus. Additional research will be required to understand this discrepancy.

The existing facility includes an extended aeration package plant including a mechanically cleaned bar rack screen, a single aeration basin, two hopper bottomed clarifiers, and a chlorine contact tank. Downstream of the packaged plant there is a V-notched weir box that is used for dechlorination contact time and flow monitoring.

The packaged plant has aged and shows significant signs of wear and corrosion. The blowers and diffusers are in need of replacement, and one of the two RAS lines has broken off into the aeration basin. The access platform became dangerous to use and has since been removed. The basin does not include handrail needed to protect operators or visitors from falling into the package plant.

Functionally, the system also has some limitations:

- The plant was installed behind retaining walls on 3 of 4 sides and includes very limited perimeter property boundary, with little room to work or add improvements.
- The plant is theoretically above the flood elevation (which exists just southwest of the plant), but the plant has historically flooded several times according to operators.
- The facility has somewhat limited site access for bringing in drums of liquid chemicals (if metal salt addition or disinfection chemicals are required).
- According to operators, the all gravity collection system results in significant I&I, impacting system performance.
- The system does not include aerobic digestion / sludge storage to allow for routine wasting or maintenance of a healthy mixed liquor concentration throughout the year.
- The blower has reached the end of its useful life.
- The operator believes it is necessary to turn off aeration during wet weather events to minimize the loss of solids and to retain a healthy biomass.
- The clarifier influent and effluent each enter/exit through a single pipe, and the clarifier level control is with a horizontally placed pipe (no weir), so there's poor flow distribution through the clarifier surface area that exists.
- There is no ideal place for chlorine tablet addition or dechlorination tablet addition.
- The apex of the V-notch weir used for flow monitoring was submerged during the site visit, making any reading from it inaccurate. (The ultrasonic flow meter was also located downstream of the V, so the system installation is incorrect).
- The V-notch weir structure is located offsite (outside of the property limits) and within the flood zone.

The wood fencing around most of the site is generally in good shape.

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Currently no remote monitoring is in place at the site. This makes it difficult for the operators to know when the facility is failing. Operational monitoring should be completed to monitor the quality of effluent, which should then be compared to the operating permit.

Wastewater Treatment Facility Recommended Improvements

- The condition of the tank calls for taking the facility off line for structural repair, at a minimum to include the addition of either supplemental or replacement stiffeners, safety handrail, welding repairs, and the addition of a new RAS line from one of the hopper bottomed clarifiers to the front end of the plant.
- A new roughing MBBR in the form of a 4-foot diameter, 11-foot deep manhole will be installed upstream of the existing influent manhole to remove BOD, reducing the load and in turn stabilizing the existing system and improving nitrification.
- The new system will generate significantly less sludge than previously, so sludge handling needs will significantly decrease.
- The 10' foot deep clarifier will function much better in this application than with only the existing activated sludge system, as the roughing MBBR will reduce the amount of activated sludge mixed liquor required to meet effluent objectives. This will reduce the risk of solids carry over during wet weather significantly.
- The effluent from the aeration basin will be evenly distributed into and through the clarifier, and the level control in the clarifier will be maintained with the addition of a weir trough and weir.
- Aluminum sulfate (alum) will be introduced in the extended aeration effluent, upstream of the influent into the clarifier.
- A flow meter will be installed in the clarifier effluent piping, in route to the contact tank.
- Peroxyacetic acid will be introduced directly into the contact tank in lieu of attempting to install chlorination and dechlorination tablet feeders in the limited hydraulic profile. The PAA chemical requires less contact time, and will more consistently achieve the necessary disinfection objectives.
- The existing chlorine contact tank will be equipped with diffusers to help in meeting the dissolved oxygen effluent limit.

The blowers will be replaced and serve the roughing MBBR, extended aeration system, and post-aeration system. [Wastewater Collection System Understanding](#)

While no mapping was provided, the collection system consists of only gravity collection.

According to the operator, the collection system consists of 8" and 10" gravity sewers, and the high groundwater table results in significant peak flow events at the facility. Wastewater enters the wastewater treatment plant through a gravity sewer.

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Wastewater Collection System Recommended Improvements

- The system should be evaluated to create mapping and develop GIS shapefiles for future maintenance. System mapping at the fingertips of the operators will enhance the level of service and timing of responses to emergency and customer issues.
- Perform smoke testing, perform video inspection at selected locations, evaluate systems and create GIS based maintenance priority list.

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APPENDIX



Aeration Tank, Clarifier, Contact Tank



Clarifier and Contact Tank

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Manually Cleaned Bar Screen



WWTP Electrical Meter

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Final Audit Report

2021-08-10

Created:	2021-08-09
By:	Mandy Keubler (mkeubler@cswrgroup.com)
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