BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility

January 28, 2022

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

Bluegrass Water Utility Operating Company, Inc.
Airview WWTF
KYPDES Permit No. KY0045390
Agency Interest No. 1643

On behalf of Bluegrass Water Utility Operating Company, LLC, we are submitting this letter to address the current Corrective Action Plan status that was approved January 28, 2020. We are continuing to work to effluent compliance for this facility.

Per the original CAP, Bluegrass Water UOC continues to make improvements stipulated on the submitted construction permit. Due to the effect of COVID-19, our contractors have encountered delays on supplies and materials on common good & services. With uncertainty of material deliveries and unexpected changes to our timeframe for completion, Bluegrass Water Utility Operating Company, LLS determined that the repairs at Airview will be completed by October 1, 2022. Following the improvements included in the construction permit the facility should be able to consistently comply with permitted limits.

Please let me know if this letter meets the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Bluegrass Water Utility Operating Company, LLC
Utility Project Manager

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility

January 28, 2022

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

Bluegrass Water Utility Operating Company, Inc.
Brocklyn WWTF
KYPDES Permit No. KY0081299
Agency Interest No. 2809

On behalf of Bluegrass Water Utility Operating Company, LLC, we are submitting this letter to address the current Corrective Action Plan status that was approved January 28, 2020. We are continuing to work to effluent compliance for this facility.

Per the original CAP, Bluegrass Water UOC continues to make improvements stipulated on the submitted construction permit. Due to the effect of COVID-19, our contractors have encountered delays on supplies and materials on common good & services. With uncertainty of material deliveries and unexpected changes to our timeframe for completion, Bluegrass Water Utility Operating Company, LLS determined that the repairs at Brocklyn will be completed by October 1, 2022. Following the improvements included in the construction permit the facility should be able to consistently comply with permitted limits.

Please let me know if this letter meets the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Bluegrass Water Utility Operating Company, LLC
Utility Project Manager

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility

January 28, 2022

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

Bluegrass Water Utility Operating Company, Inc.
Golden Acres WWTF
KYPDES Permit No. KY0044164
Agency Interest No. 2935

On behalf of Bluegrass Water Utility Operating Company, LLC, we are submitting this letter to address the current Corrective Action Plan status that was approved February 17, 2020. We are continuing to work to effluent compliance for this facility.

Per the original CAP, Bluegrass Water UOC continues to make improvements stipulated on the submitted construction permit. Due to the effect of COVID-19, our contractors have encountered delays on supplies and materials on common goods & services. With uncertainty of material deliveries and unexpected changes to our timeframe for completion, Bluegrass Water Utility Operating Company, LLS determined the repairs at Golden Acres will be completed by October 1, 2022. Following the improvements included in the construction permit the facility should be able to consistently comply with permitted limits.

Please let me know if this letter meets the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Bluegrass Water Utility Operating Company, LLC
Utility Project Manager

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility

January 28, 2022

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

Bluegrass Water Utility Operating Company, Inc.
Great Oaks WWTF
KYPDES Permit No. KY0080845
Agency Interest No. 3041

On behalf of Bluegrass Water Utility Operating Company, LLC, we are submitting this letter to address the current Corrective Action Plan status that was approved February 17, 2020. We are continuing to work to effluent compliance for this facility.

Per the original CAP, Bluegrass Water UOC continues to make improvements stipulated on the submitted construction permit. Due to the effect of COVID-19, our contractors have encountered delays on supplies and materials on common goods & services. With uncertainty of material deliveries and unexpected changes to our timeframe for completion, Bluegrass Water Utility Operating Company, LLS determined the repairs at Great Oaks will be completed by October 1, 2022. Following the improvements included in the construction permit the facility should be able to consistently comply with permitted limits.

Please let me know if this letter meets the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Bluegrass Water Utility Operating Company, LLC
Utility Project Manager

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility

January 28, 2022

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

Bluegrass Water Utility Operating Company, Inc.
Timberland Subdivision WWTF
KYPDES Permit No. KY0083755
Agency Interest No. 3070

On behalf of Bluegrass Water Utility Operating Company, LLC, we are submitting this letter to address the current Corrective Action Plan status that was approved August 10, 2020. We are continuing to work to effluent compliance for this facility.

Per the original CAP, Bluegrass Water UOC continues to make improvements stipulated on the submitted construction permit. Due to the effect of COVID-19, our contractors have encountered delays on supplies and materials on common goods & services. With uncertainty of material deliveries and unexpected changes to our timeframe for completion, Bluegrass Water Utility Operating Company, LLS determined the repairs at Timberland Subdivision will be completed by October 1, 2022. Following the improvements included in the construction permit the facility should be able to consistently comply with permitted limits.

Please let me know if this letter meets the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Bluegrass Water Utility Operating Company, LLC
Utility Project Manager

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility

Attn: Wes Dement
Energy and Environment Cabinet,
Department for Environmental Protection
Division of Enforcement
300 Sower Blvd 3rd floor
Frankfort, KY 40601

Mr. Wes Dement,

In accordance with the Corrective Action Plan for Brocklyn WWTF (KY0081299) submitted to the EEC on 12/13/2019 and approved by the Department on 1/28/2020 I hereby submit this status report concerning improvements made to the facility and next steps.

In the original CAP documents, it was conveyed that an analysis of the system implied that the wastewater treatment facility appeared to be in extremely poor condition and reaching the end of the useful life of the plant. It was believed that with operational improvements and repairs, the facility may be capable of meeting limits, however the poor condition of various components may fore replacement beyond basic repairs to prevent total failure of the plant. The CAP plan details the poor condition of the site including stormwater washing in-between plant components, washing gravel into the contact chamber, deteriorating tankage of the plant itself, aeration and drop pipes in poor condition, the contact chamber in poor condition, the polishing lagoon cell being full of sludge, and the need of flow monitoring and remote monitoring to properly evaluate I&I issues at the facility.

The CAP laid out milestones for repairs, evaluation, and basic improvements at the facilities. The milestones included replacement and repair of aeration drop pipes, diffusers, the contact chamber, the tablet feeders for chlorination and dechlorination, cleaning and jetting of the collection system, installation of a remote monitoring system and flow meter, and attempted repair of the tankage. The projected milestones were completed in the schedule laid out by the CAP plan. Following the period of repairs and operational improvement, it has been determined that the tankage condition is too poor to be adequately repaired. Some portions of the tank are so rusted that the wastewater is in contact with soil surrounding the tank. Repairs would require extensive excavation and likely result in the total collapse of the tank. Therefore, to ensure the facility will be able to function, a complete overhaul and replacement is necessary.

Bluegrass Water has submitted plans and construction permits for review by the EEC/DEP and KYPSC. The facility design includes installation of an influent lift station, MBBR activated sludge system, clarifier, and a new contact chamber for peroxyacetic acid disinfection system and post aeration. The new plant is designed reliably meet limits.

Please feel free to reach out for any additional information or with any questions.

Thanks,

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

Attn: Wes Dement
Energy and Environment Cabinet,
Department for Environmental Protection
Division of Enforcement
300 Sower Blvd 3rd floor
Frankfort, KY 40601

Mr. Wes Dement,

In accordance with the Corrective Action Plan for Golden Acres WWTF (KY0086967) submitted to the EEC on 12/26/2019 and approved by the Department on 2/17/2020 I hereby submit this status report concerning improvements made to the facility and next steps.

In the original CAP documents, it was conveyed that an analysis of the system implied that the wastewater treatment facility needed repairs and operational improvement to properly function. It was indicated that with operational improvements and repairs, the facility may be capable of meeting limits, but it was not clear if further improvements would be needed.

The CAP laid out milestones for repairs, evaluation, and basic improvements at the facilities. The milestones included repair and replacement of blowers, aeration piping, and diffusers, repair of sludge return piping, installation of a flow meter and remote monitoring system, spot welding of corroded portions of the aeration tank, evaluation of the disinfection system, and cleaning and jetting of the collection system. These activities were all completed within the timeline outlined in the CAP. The facility has continued to struggle to meet limits.

The primary issue with this plant appears to be an overwhelming amount of I&I causing flow through the facility that exceeds is treatment capacity. To further complicate matters, there is very little space for expanding the plant or for flow EQ. Additionally, the current effluent pipe is struggling to handle the high flow and needs to be reworked to handle the flow. Easement negotiations are underway with the neighboring property owner and the results of the negotiation will determine the best course of action for the improved effluent pipe. To address the excessive I&I, BWUOC will be installing as much flow EQ as we have room for at the plant site and improving/repairing the collection system. Lines will be camera inspected to determine where the most significant sources of I&I are, and pipes and structures will be repaired with liners. This should eliminate a bulk of the I&I and allow the facility to meet limits. Additionally, we are evaluating switching from chlorine and dechlorination to peroxyacetic acid and post aeration for disinfection at some point in the future to reduce operational costs.

Please feel free to reach out for any additional information or with any questions.

Thanks,

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

Attn: Wes Dement
Energy and Environment Cabinet
Department for Environmental Protection
Division of Enforcement
300 Sower Blvd 3rd floor
Frankfort, KY 40601

Mr. Wes Dement,

In accordance with the Corrective Action Plan for Great Oaks WWTF (KY0080845) submitted to the EEC on 12/26/2019 and approved by the Department on 2/17/2020 I hereby submit this status report concerning improvements made to the facility and next steps.

In the original CAP documents, it was conveyed that an analysis of the system implied that the wastewater treatment facility appeared to be in decent condition and adequate to meet the permitted limits following operational improvements and basic repairs. Exceedances of permitted limits in the past (TSS, CBOD, Ammonia, E.Coli, TRC, and DO) appear to be the result of operational shortcomings and lack of reinvestment/maintenance under the previous ownership. We stated that we believed under our operations and with repairs, the facility would begin to consistently meet limits. At the time the CAP was submitted, our preliminary repairs and operational improvements had already caused the plant to more consistently meet limits, and it was clear failed aeration headers and an undersized blower for the facility were a large part of the problem. The CAP also laid out basic repairs that would be completed at the facility, with anticipated dates of completion for replacement of existing underperforming blower and repairs to the aeration piping and diffusers, repairs to the lift station and replacement of the redundant pump at the lift station, returning the sludge holding tank to operational service, installation of a flow meter and remote monitoring, and spot welding repairs to corroded areas on the plant. All these improvements were completed by the anticipated schedule laid out in the CAP.

In the status report submitted 6/30/2020 BWUOC notified that two additional issues had been identified, relating to flow through the clarifier and to the sludge holding/digestor leaking into the contact chamber. The clarifier was drained and cleared and is now functioning properly. It was determined that the digestor could not be repaired and would need to be replaced. BWUOC is currently preparing a construction permit application to install two stand alone tanks to replace the damaged digestor and prevent further leaking of partially treated wastes into the contact chamber. Following this improvement, the facility should consistently meet limits. Additionally, we are evaluating switching from chlorine and dechlorination to peroxyacetic acid and post aeration for disinfection at some point in the future to reduce operational costs.

Please feel free to reach out for any additional information or with any questions.

Thanks,

JON MEANY
Utility Engineer

(314) 380-8537 Ext. 215
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(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

Attn: Wes Dement
Energy and Environment Cabinet
Department for Environmental Protection
Division of Enforcement
300 Sower Blvd 3rd floor
Frankfort, KY 40601

Mr. Wes Dement,

In accordance with the Corrective Action Plan for Airview WWTF (KY0045390) submitted to the EEC on 12/17/2019 and approved by the Department on 1/28/2020 I hereby submit this status report concerning improvements made to the facility and next steps.

In the original CAP plan documents, it was conveyed that an analysis of the system implied that the wastewater treatment facility appeared to be in decent condition and adequate to meet the permitted limits, and that exceedances of permitted limits in the past (pH, TSS, E.Coli, TRC, and DO) were the result of operational shortcomings under the previous ownership. We stated that we believed under our operations, the facility would begin to consistently meet limits. At the time the CAP was submitted the plant had begun to meet limits more consistently. The CAP also laid out basic repairs that would be completed at the facility, with anticipated dates of completion for pump repairs for the lift station, installation of remote monitoring and flow monitoring equipment, and spot welding repairs to the aeration tank. All improvements were completed by the anticipated schedule laid out in the CAP.

Throughout the CAP period, testing has been completed at an increased frequency in order to gain more data on the function of the facility. In the last several months the facility has been meeting all limits, with one exception for an E.Coli test which exceeded the weekly average limit, but came into compliance in resampling during the same week and therefore did not result in a violation. Other exceedances during the CAP period were found to be related to cleanout of the plant causing an E.Coli exceedance in March which did not result in a violation after retesting, and an exceedance of the monthly average limit for TSS resulting from the plant being shut off to complete the welding repairs May which did not result in a violation of limits after retesting. Now the general cleanup and operational improvements have been implemented and the plant appears to be capable of consistently meeting limits.

At this time, BWUOC does not believe any process changes will be necessary for the Airview WWTF to continue to meet permitted limits and comply with EEC regulations. However, BWUOC is considering the addition of Flow EQ, and repairs to the lagoon to make the plant more operationally reliable. The department will be informed when and if this work proceeds.

Please feel free to reach out for any additional information or with any questions.

Thanks,

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

Attn: Wes Dement
Energy and Environment Cabinet
Department for Environmental Protection
Division of Enforcement
300 Sower Blvd 3rd floor
Frankfort, KY 40601

Mr. Wes Dement,

In accordance with the Corrective Action Plan for Great Oaks WWTF (KY0080845) submitted to the EEC on 12/26/2019 and approved by the Department on 2/17/2020 I hereby submit this status report concerning improvements made to the facility and next steps.

In the original CAP plan documents, it was conveyed that an analysis of the system implied that the wastewater treatment facility appeared to be in decent condition and adequate to meet the permitted limits following operational improvements and basic repairs. Exceedances of permitted limits in the past (TSS, CBOD, Ammonia, E.Coli, TRC, and DO) appear to be the result of operational shortcomings and lack of reinvestment/maintenance under the previous ownership. We stated that we believed under our operations and with repairs, the facility would begin to consistently meet limits. Even at the time the CAP was submitted, our preliminary repairs and operational improvements had caused the plant to begin to more consistently meet limits, and it had become clear a significant issue for the plat meeting limits appeared to be failed aeration headers and an undersized blower for the facility. The CAP also laid out basic repairs that would be completed at the facility, with anticipated dates of completion for replacement of existing underperforming blower and repairs to the aeration piping and diffusers, repairs to the lift station and replacement of the redundant pump at the lift station, returning the sludge holding tank to operational service, installation of a flow meter and remote monitoring, and spot welding repairs to corroded areas on the plant. All of these improvements were completed by the anticipated schedule laid out in the CAP.

Throughout the CAP period, there have been several continued exceedances of permitted limits, however we believe that this does not indicate the need for a process change or additional improvements at the facility and instead were the result of the repair work and changes made to the facility and a necessary step in bringing the facility into compliance. In March and April of this year we observed tests exceeding limits for CBOD, TSS, and DO. These occurred at the time the aeration system was repaired, and the deficient blower was replaced. It was determined that the previous blower and diffusers were essentially underpowered and damaged enough that the air was dead-heading in the system and not properly aerating the bottom of the aeration basin. Upon repairing this system, replacing the deficient blower, and repairing the, excessive pin-floc formed and a breaking up of what had been a stagnant layer of sludge in the bottom of the plant. This has since stabilized. Since then, in May, exceedances of TRC and CBOD led to the identification of two additional issues with the plant that are currently being addressed. First, it was identified that flow through the clarifier was not operating as expected. Further investigation showed that the previous operator at some point had dumped a large amount of debris into the clarifier which was interrupting the designed flow pattern of the clarifier. The

clarifier has since been pumped down and the layer of debris removed. This consisted of over 10 pipes of varying lengths, several cell phones, and other miscellaneous debris. There was enough debris in the bottom of the clarifier to seriously compromise the hydraulics of the return and sludge flow in the bottom of the clarifier.

Secondly, evidence of the digestor leaking into the contact chamber was identified. We planned to clean out the digestor, patch the leak(s) and ensure no additional leaking occurs. In a preliminary partial pump down, it became clear that there is more than one leak coming from the digestor. The digestor will need to be completely pumped down to make these repairs or replaced all together to eliminate this leaking. The repairs should be completed with either approach by 7/31/2020 followed by an additional period of operational observation to ensure no other deficiencies are contributing to the plant's issues. We would request to extend the CAP and send an additional update by 8/31/2020 concerning any further necessary repairs at the plant. Please let us know if this course of action is acceptable.

Please feel free to reach out for any additional information or with any questions.

Thanks,

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

September 23, 2022

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

Bluegrass Water Utility Operating Company, Inc.
Airview WWTF
KYPDES Permit No. KY0045390
Agency Interest No. 1643

On behalf of Bluegrass Water Utility Operating Company, LLC, we are submitting this letter to address the current Corrective Action Plan status that was approved January 28, 2020. BWUOC submitted an extension request on January 28, 2022, with a projected completion date of October 1, 2022. We are continuing to work to effluent compliance for this facility.

Per the original CAP, Bluegrass Water UOC continues to make improvements stipulated on the submitted construction permit. BWOUC continues to encounter delays with materials for the on-going capital improvements project for the lagoon rehabilitation. With uncertainty of material deliveries and unexpected changes to our timeframe for completion, Bluegrass Water Utility Operating Company, LLS determined that the repairs at Airview will be completed by March 31, 2023. Following the improvements included in the construction permit the facility should be able to consistently comply with permitted limits.

Please let me know if this letter meets the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Bluegrass Water Utility Operating Company, LLC
Utility Project Manager

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility

September 23, 2022

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

Bluegrass Water Utility Operating Company, Inc.
Brocklyn WWTF
KYPDES Permit No. KY0081299
Agency Interest No. 2809

On behalf of Bluegrass Water Utility Operating Company, LLC, we are submitting this letter to address the current Corrective Action Plan status that was approved January 28, 2020. BGUOC submitted an extension request on January 28, 2022, with a projected completion date of October 1, 2022. We are continuing to work to effluent compliance for this facility.

Per the original CAP, Bluegrass Water UOC continues to make improvements stipulated on the submitted construction permit. BWOUC continues to encounter delays with materials for the on-going capital project for the aeration rehabilitation improvements. With uncertainty of material deliveries and unexpected changes to our timeframe for completion, Bluegrass Water Utility Operating Company, LLS determined that the repairs at Brocklyn will be completed by March 31, 2023. Following the improvements included in the construction permit the facility should be able to consistently comply with permitted limits.

Please let me know if this letter meets the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Bluegrass Water Utility Operating Company, LLC
Utility Project Manager

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility

September 23, 2022

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

Bluegrass Water Utility Operating Company, Inc.
Golden Acres WWTF
KYPDES Permit No. KY0044164
Agency Interest No. 2935

On behalf of Bluegrass Water Utility Operating Company, LLC, we are submitting this letter to address the current Corrective Action Plan status that was approved February 17, 2020. BWUOC submitted an extension request on January 28, 2022, with a projected completion date of October 1, 2022. We are continuing to work to effluent compliance for this facility.

Per the original CAP, Bluegrass Water UOC continues to make improvements stipulated on the submitted construction permit. BWOUC continues to encounter delays with materials for the on-going capital improvements project for the Peracetic Acid Treatment Installation. With uncertainty of material deliveries and unexpected changes to our timeframe for completion, Bluegrass Water Utility Operating Company, LLS determined that the repairs at Golden Acres will be completed by March 31, 2023. Following the improvements included in the construction permit the facility should be able to consistently comply with permitted limits.

Please let me know if this letter meets the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Bluegrass Water Utility Operating Company, LLC
Utility Project Manager

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility

September 23, 2022

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

Bluegrass Water Utility Operating Company, Inc.
Great Oaks WWTF
KYPDES Permit No. KY0080845
Agency Interest No. 3041

On behalf of Bluegrass Water Utility Operating Company, LLC, we are submitting this letter to address the current Corrective Action Plan status that was approved February 17, 2020. BWUOC submitted an extension request on January 28, 2022, with a projected completion date of October 1, 2022. We are continuing to work to effluent compliance for this facility.

Per the original CAP, Bluegrass Water UOC continues to make improvements stipulated on the submitted construction permit. BWOUC continues to encounter delays with materials for the on-going capital improvements project for the electric upgrades. With uncertainty of material deliveries and unexpected changes to our timeframe for completion, Bluegrass Water Utility Operating Company, LLS determined that the repairs at Great Oaks will be completed by March 31, 2023. Following the improvements included in the construction permit the facility should be able to consistently comply with permitted limits.

Please let me know if this letter meets the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Bluegrass Water Utility Operating Company, LLC
Utility Project Manager

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility

September 23, 2022

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

Bluegrass Water Utility Operating Company, Inc.
Timberland Subdivision WWTF
KYPDES Permit No. KY0083755
Agency Interest No. 3070

On behalf of Bluegrass Water Utility Operating Company, LLC, we are submitting this letter to address the current Corrective Action Plan status that was approved August 10, 2020. BWUOC submitted an extension request on January 28, 2022, with a projected completion date of October 1, 2022. We are continuing to work to effluent compliance for this facility.

Per the original CAP, Bluegrass Water UOC continues to make improvements stipulated on the submitted construction permit. BWOUC continues to encounter delays with materials for the on-going capital improvements project for the electric upgrades. With uncertainty of material deliveries and unexpected changes to our timeframe for completion, Bluegrass Water Utility Operating Company, LLS determined that the repairs at Timberland Subdivision will be completed by March 31, 2023. Following the improvements included in the construction permit the facility should be able to consistently comply with permitted limits.

Please let me know if this letter meets the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Bluegrass Water Utility Operating Company, LLC
Utility Project Manager

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility

March 14, 2023

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

Bluegrass Water Utility Operating Company, Inc.
Great Oaks WWTF
KYPDES Permit No. KY0080845
Agency Interest No. 3041

On behalf of Bluegrass Water Utility Operating Company, LLC, we are submitting this letter to address the current Corrective Action Plan status that was approved February 17, 2020. BWUOC submitted an extension request on September 23, 2022, with a projected completion date of March 31, 2023. We are continuing to work to effluent compliance for this facility.

Per the original CAP, Bluegrass Water UOC continues to make improvements stipulated on the submitted construction permit. BWOUC continues to encounter delays with supplies, materials and personnel availability for the on-going capital improvements project for the electric upgrades. With uncertainty of material deliveries and unexpected changes to our timeframe for completion, Bluegrass Water Utility Operating Company, LLS determined that the repairs at Great Oaks will be completed by December 31, 2023. Following the improvements included in the construction permit the facility should be able to consistently comply with permitted limits.

Please let me know if this letter meets the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Bluegrass Water Utility Operating Company, LLC
Program & Compliance Manager

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility

March 14, 2023

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

Bluegrass Water Utility Operating Company, Inc.
Timberland Subdivision WWTF
KYPDES Permit No. KY0083755
Agency Interest No. 3070

On behalf of Bluegrass Water Utility Operating Company, LLC, we are submitting this letter to address the current Corrective Action Plan status that was approved August 10, 2020. BWUOC submitted an extension request on September23, 2022, with a projected completion date of March 31, 2023. We are continuing to work to effluent compliance for this facility.

Per the original CAP, Bluegrass Water UOC continues to make improvements stipulated on the submitted construction permit. BWOUC continues to encounter delays with the power company supplying power at this site. BWOUC completed the capital improvements project for the electric upgrades, however, power supply has not been completed as of today. With uncertainty from the power company and unexpected changes to our timeframe for completion, Bluegrass Water Utility Operating Company, LLS determined that the repairs at Timberland Subdivision will be completed by December 31, 2023. Following the improvements included in the construction permit the facility should be able to consistently comply with permitted limits.

Please let me know if this letter meets the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Bluegrass Water Utility Operating Company, LLC
Program & Compliance Manager

Project Herrington Haven WWTP System Upgrades

Engineer Benjamin Kuenzel
1351 Jefferson Street Suite 301
Washington, MO 63090

Reviewer Comments:

Internal discussion with SUPB included Phosphorus effluent limit removal (inadvertent?) from the KPDES permit and location of the effluent monitoring point (see emails).

(1) KIA Water Map shows project lat./long. approx. 4 miles NE of Danvillle and on east shore of Herrington Lał

‹e.

Manhole Diameter	4	feet
Lowest Rim		feet

Manhole	Station	Rim	Invert Out	Invert In	Distance

Diameter	Slope	Storage Manhole	Storage Pipe	
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V. FEES

Construction Permit Fees are listed in **401 KAR 5:005**. The construction permit fe application. The fee must be a check or money order, payable to the **Kentucky State** below. Fees are not applicable if the **applicant** (entity paying for construction) is a areas, school facilities, and regional airport authorities.

Facility for Qualified Non-Profit Organization*:
(Pump station or sewer line or force main)
Small Facility:
(Pump station or sewer line or force main less than 2,500 feet in length)
Intermediate Facility:
(Pump station or sewer line or force main 2,500 to 5,000 feet in length)
Large facility:
(Pump station or sewer line or force main more than 5,000 feet in length)

Enter the category (small, intermediate, or large) and the dollar amount submitted. W lengths of **all** pipe to be installed.

* To qualify for the $50 fee, non-profit organizations must submit proof that they qualif Internal Revenue Code.

e must be submitted with the completed permit
Treasurer, for the applicable amount as indicated
publicly owned facility. Examples are DOT rest

$	**50**
$	**200**
$	**400**
$	**800**

/hen determining the fee category, **add** the total

y for the reduction under Section 501(c)(3) of the

Hazen-Williams Equation for Pressure Loss in Pipes

Imperial Units

Specified Data

l = length of pipe (ft)	
c = Hazen-Williams roughness constant	
q = volume flow (gal/min)	
dh = inside or hydraulic diameter (inches)	

Calculated Pressure Loss

f = friction head loss in feet of water per 100 feet of pipe (ft H20 per 100 ft pipe)	#DIV/0!
f = friction head loss in psi of water per 100 feet of pipe (psi per 100 ft pipe)	#DIV/0!
Head loss (ft H20)	#DIV/0!
Head loss (psi)	#DIV/0!

Calculated Flow Velocity

v = flow velocity (ft/s)	#DIV/0!

SI Units

Specified Data

l = length of pipe (m)	30
c = Hazen-Williams roughness constant	140
q = volume flow (liter/sec)	10
dh = inside or hydraulic diameter (mm)	76

Calculated Pressure Loss

f = friction head loss in mm of water per 100 m of pipe (mm H20 per 100 m pipe)	6406.62
f = friction head loss in kPa per 100 m of pipe (kPa per 100 m pipe)	62.85
Head loss (mm H20)	1921.99
Head loss (kPa)	18.85

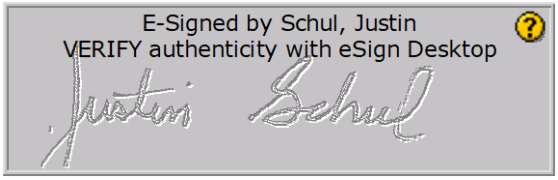
Calculated Flow Velocity

v = flow velocity (m/s)	2.20

MEMORANDUM

TO: Michael Kroeger, Assistant Director Division of Enforcement

THROUGH: Justin Schul, Civil Enforcement Branch Manager



FROM: Philip E. Kejzlar**,** Enforcement Specialist V

DATE: July 9, 2021

SUBJECT: Closure:
AI ID: 1643
AI Name: Airview WWTP
Activity ID: ERF20110001
Case No. DOW-11-3-0150
Permit No. N/A
Hardin County

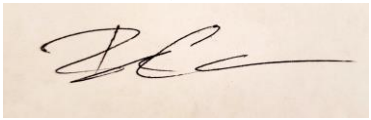
- Airview WWTP was referred for improper O&M and discharges from the treatment plant.
- The case was referred to OLS and an action filed at OAH in 2015.
- During the time the case was at OAH, the facility was sold to Bluegrass Water Operating Company (BWOC), who ultimately became responsible for any outstanding remedial measures.
- After numerous status conference and the threat of an ultimate OAH hearing the Cabinet achieved settlement.
- On June 24, 2021, an Agreed Order was executed at OAH requiring the payment of a $2,000 CP.
- The civil penalty has been paid and no remedial measures remain.
- OLS agrees with this closure.
- With the above-stated facts in mind, and with your initials above, this case will be closed in the Division of Enforcement.

CASE CLOSURE MEMORANDUM

TO: Natalie Bruner**,** Director
Division of Enforcement

THROUGH: Justin T. Schul, Branch Manager
Division of Enforcement

Beth Clemons, Team Leader, for Justin Schul



FROM: Nicholas Fields**,** Enforcement Specialist
Division of Enforcement

DATE: April 18, 2023

SUBJECT: Closure: Golden Acres WWTP (Bluegrass)
AI ID: 2935
AI Name: Golden Acres WWTP
Activity ID: ERF20190002
Case No.: DOW 19-3-0156

- The Golden Acres Subdivision in Calvert City has a small package plant on-site to handle their wastewater. This plant had begun to fail and was in need of major renovations to regain compliance. The plant was owned by Marshall County Environmental Services, who wished to be rid of the failing WWTP. This led them to sell the plant to the Bluegrass Water Utility Operating Company (BWUOC).

- As the sale began to fall into place, BWUOC reached out to the Cabinet to enter into a friendly Agreed Order to allow them to renovate the ailing WWTP.

- This friendly Agreed Order was executed on September 3, 2019, and required BWUOC to submit a CAP once they were the official owners of the WWTP.

- This CAP was submitted to the Cabinet on December 26, 2019, and had a final compliance date of August 31, 2020.

- Several CAP revisions were submitted and approved by DENF due to the COVID-19 Pandemic, and the role it played in affecting the supply chain while BWUOC was rehabbing the WWTP.

- The CAP was finally completed on March 31, 2023, and the discharges for the WWTP have been in compliance since June of 2022.

- The Compliance & Operations Branch agrees with the closure of this case.

- With the above-stated facts in mind, and with your initials above, this case will be closed in the DENF.

Andy Beshear
GOVERNOR

ENERGY AND ENVIRONMENT
CABINET

Rebecca W. Goodman
SECRETARY

DEPARTMENT FOR ENVIRONMENTAL PROTECTION
Anthony R. Hatton
COMMISSIONER

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

April 26, 2023

<NO_DATA_FOUND>
Herrington Haven Subd
<NO_DATA_FOUND>
<NO_DATA_FOUND>, <NO_DATA_FOUND> <NO_DATA_FOUND>

Re: KPDES Application Notice of Deficiency
KPDES No.: <NO_DATA_FOUND>
AI ID: 1469
Garrard County, Kentucky

Dear <NO_DATA_FOUND>:

Your Kentucky Pollutant Discharge Elimination System (KPDES) permit application for the above-referenced facility was received by the Division of Water on February 9, 2023,. A completeness review of your permit application has been conducted and your application has been determined to be incomplete. Please complete the deficiencies listed below and return to me at the following address within thirty (30) days of the date of this letter.

Division of Water, Surface Water Permits Branch
ATTN: Krystal Harrod
300 Sower Blvd
Frankfort, Kentucky 40601

1.

2.

Failure to respond within thirty (30) days may result in the Cabinet returning your application to you and retaining fees paid, as per 401 KAR 5:075, Section 15(5). If you have any questions concerning this matter, please contact 502-782-6968 or by email at Krystal.Harrod@ky.gov.

Sincerely,

Krystal Harrod
Surface Water Permits Branch
Division of Water

SITE LOCATION MAP
FOR GOLDEN ACRES SUBDIVISION WWTF
CALVERT CITY, KY

PRELIMINARY

THIS DRAWING IS FOR REVIEW ONLY AND SHALL NOT BE USED FOR CONSTRUCTION

21 DESIGN GROUP INC.
ENGINEERING & SURVEYING
1351 Jefferson, Suite 301 mail@21designgroup.net
Washington, MO 63090 P: 636-432-5029

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.
Airview Subdivision WWTF
KYPDES Permit No. KY0045390
Agency Interest No. 1643

Corrective Action Plan Revision:

I am pleased to submit this update to the Corrective Action Plan for the Airview WWTF approved by EEC/DEP on 1/28/2020. The scope of the original CAP was completed within the projected schedule of the CAP. Triage and repair work has been completed and the main aeration plant is in much better shape than it was at acquisition. Vegetation has been cleared, handrails installed, and walkways repaired, the bar screen has been repaired, aeration system improvements have been implemented, the effluent line has been repaired, and tanks have been patched and painted. Plant performance has improved significantly and DMR data shows reduced pollutant loading since acquisition.

Per the original CAP, our evaluation following triage improvements has determined that the facility does require a construction permit to complete improvements. A construction permit application was submitted in September of 2020 for these additional improvements. The permit application includes conversion of the abandoned lagoon into wet weather storage, including pumping equipment and clearing and repairing the lagoon berms, as well as removal of the deteriorated concrete tank in the creek. The construction permit has been issued and we have begun to order parts and materials. We believe that work will proceed fairly quickly expect to complete the improvements at Airview by February 18, 2022. Following the improvements included in the construction permit 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

March 14, 2023

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

Bluegrass Water Utility Operating Company, Inc.
Airview WWTF
KYPDES Permit No. KY0045390
Agency Interest No. 1643

On behalf of Bluegrass Water Utility Operating Company, LLC, we are submitting this letter to address the current Corrective Action Plan status that was approved January 28, 2020. BWUOC submitted an extension request on September 23, 2022, with a projected completion date of March 31, 2023.

Construction was recently completed at this facility including all the repairs and upgrades proposed by our third-party engineering firm. The facility effluent will be complaint with the operating permit on March 31, 2023

Please let me know if this letter meets the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Bluegrass Water Utility Operating Company, LLC
Program & Compliance Manager

COMMONWEALTH OF KENTUCKY
ENERGY AND ENVIRONMENT CABINET
OFFICE OF ADMINISTRATIVE HEARINGS
FILE NO. DOW-34206
AI NO. 1643
ENVIRONMENTAL ADMIN. HEARING OFFICER JOHN KEVIN WELCH

ENERGY AND ENVIRONMENT CABINET — PETITIONER

vs.

AIRVIEW UTILITIES, LLC — RESPONDENT

ORDER SCHEDULING STATUS CONFERENCE

This matter came before the undersigned Hearing Officer for a Status Conference on February 8, 2021. Hon. Kathleen M. Saunier appeared telephonically on behalf of the Petitioner, Energy and Environment Cabinet ("Cabinet"). Mr. Philip Kejzlar of the Cabinet's Division of Enforcement participated telephonically in the conference. Hon. Robert Moore appeared telephonically on behalf of the Respondent, Airview Utilities, LLC. The conference was electronically recorded.

The parties reported that they reached agreement to resolve this matter. An Agreed Order, which would resolve all remaining issues, is currently circulating. It was decided to schedule a Status Conference in July 2021, with the hope that the conference will be unnecessary. The parties agreed regarding a date and time for the conference, as set forth below.

Having consulted with counsel, and being otherwise duly advised, the Hearing Officer hereby Orders:

(1) The parties shall appear telephonically for a Status Conference on July 6, 2021 at 10:00AM prevailing Eastern Time. The parties shall not appear in person for the conference. Parties shall participate in the conference by calling the Office of Administrative Hearings at **1-866-830-9434** at the time and on the date set for the conference. After the prompt for the conference code, enter **9312209#**. If a party experiences any problems with the conference line during the conference, please contact the Office of Administrative Hearings directly at 502-564-7312 and report the problem immediately.

(2) If a document, which completely resolves this matter is signed by all Parties and filed in the Office of Administrative Hearings on or before the next Status Conference, then that Status Conference shall be automatically canceled and the Hearing Officer will take appropriate action on the document filed.

So ORDERED on February 15, 2021.

John Kevin Welch

Hon. John Kevin Welch
Environmental Administrative Hearing Officer
Office of Administrative Hearings
Energy and Environment Cabinet
211 Sower Boulevard
Frankfort, Kentucky 40601
Telephone: 502-564-7312
Facsimile: 502-564-4973

CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing Order, was served on February 15, 2021 by electronic mail, upon the following:

Mr. Robert C. Moore
Airview Utilites, LLC
421 West Main Street
P.O. Box 676
Frankfort, KY 40601
rmoore@stites.com

Hon. Kathleen M. Saunier
Hon. Daniel Cleveland
Office of Legal Services
Energy and Environment Cabinet
300 Sower Blvd., 3rd Floor
Frankfort, KY 40601
Kathleen.saunier@ky.gov
Daniel.cleveland@ky.gov

Lisa Booth
Docket Coordinator

Distribution:
DOW
John Kevin Welch, E.A. Hearing Officer
Tara Lewis: E-mail

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 11, 2020

Jacob Freeman
1650 Des Peres Rd Ste 303
Saint Louis, MO 63131

Re: Airview WWTP Improvements
Hardin County, Kentucky
Airview WWTP
Activity ID #: 1643, APE20200001
Receiving Treatment Plant KPDES #: KY0045390

Dear Mr. Freeman:

We have reviewed the plans and specifications for the above referenced project. The plans include the construction of one (1) duplex pump station capable of 25 gpm at 30 feet TDH, 35 LF 1 1/2-inch PVC force main, 120 LF 8-inch PVC gravity sewer line, and a flow control structure. 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 David Coe at (502)782-6296.

Sincerely,

Terry Humphries, P.E.
Supervisor, Engineering Section
Water Infrastructure Branch
Division of Water

TH / DC
Enclosures
c: Hardin County Health Department
21 Design Group
Division of Plumbing
Bluegrass Water Utility Operating Company LLC

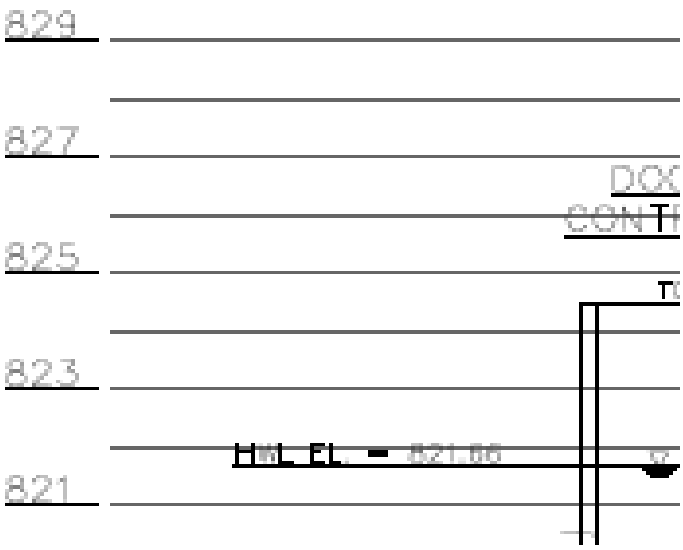
Project Name:	Airview WW		
County:	H		
Location:	**Latitude**	37 45 18	N
	Longitude	-85 53 30	W
	HUC 11 #		
	HUC 11 Name		

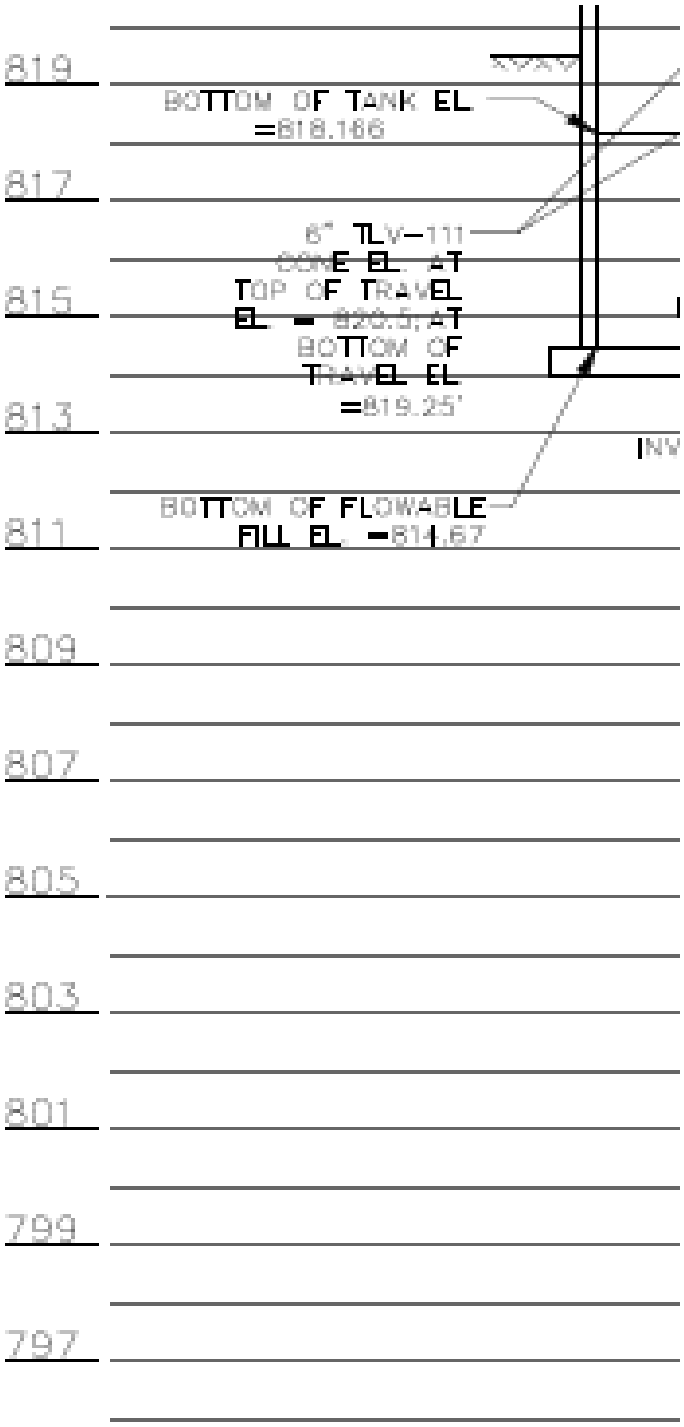
Treatment Plant:	Airview WWTP	
KPDES #	KY0045390	
On Sanctions?	No	
Plant Capacity:	0.0550	**MGD**
Current Flow:	**0.0458**	**MGD**
Additional Flow:	0.0000	**gpd**
Total Flow:	**0.0458**	**MGD**

Applicant Name:	Bluegrass Water Utilit
Company:	Jfreemann@
Phone Number:	Jacob Freem
	Central States Water Resources
Owner Name:	
Company:	
Phone Number:	

Engineer Name:	Benjan
Firm:	21 De
Phone Number:	(636)
Email Address:	Ben@21D

Jeremy Elay




819
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803
801
799
797
BOTTOM OF TANK EL.
=818.166
6" TLV-111
CONE EL. AT
TOP OF TRAVEL
EL. = 820.5; AT
BOTTOM OF
TRAVEL EL.
=819.25'
INV
BOTTOM OF FLOWABLE
FILL EL. =814.67

TP Improvements

ıardin

51100011003

#N/A

AI #: 1643
Project Type:
Fee Required: Yes
Fee Amount: 200
Fee Received: Yes

Reviewer: David Coe
Date Received: 10/1/2020
Date Approved:
Technical NOD:

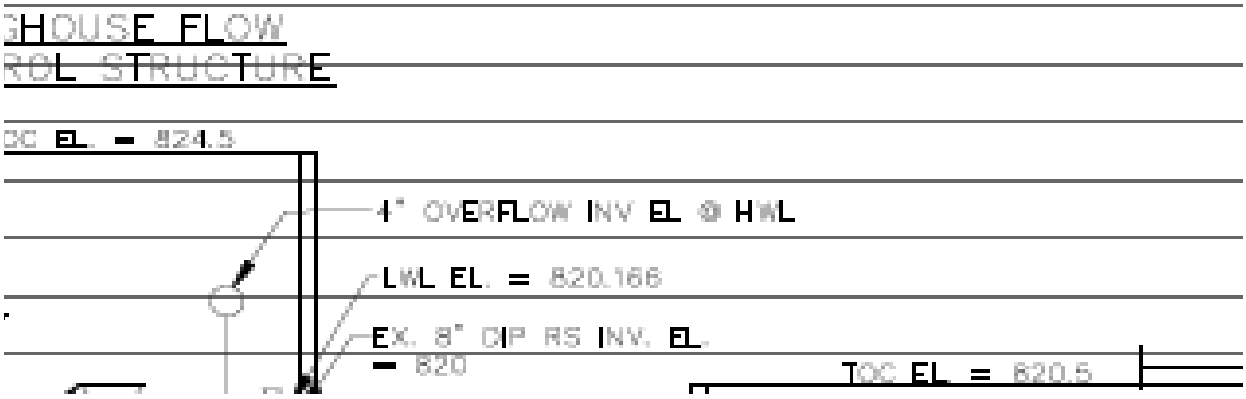
$299,000

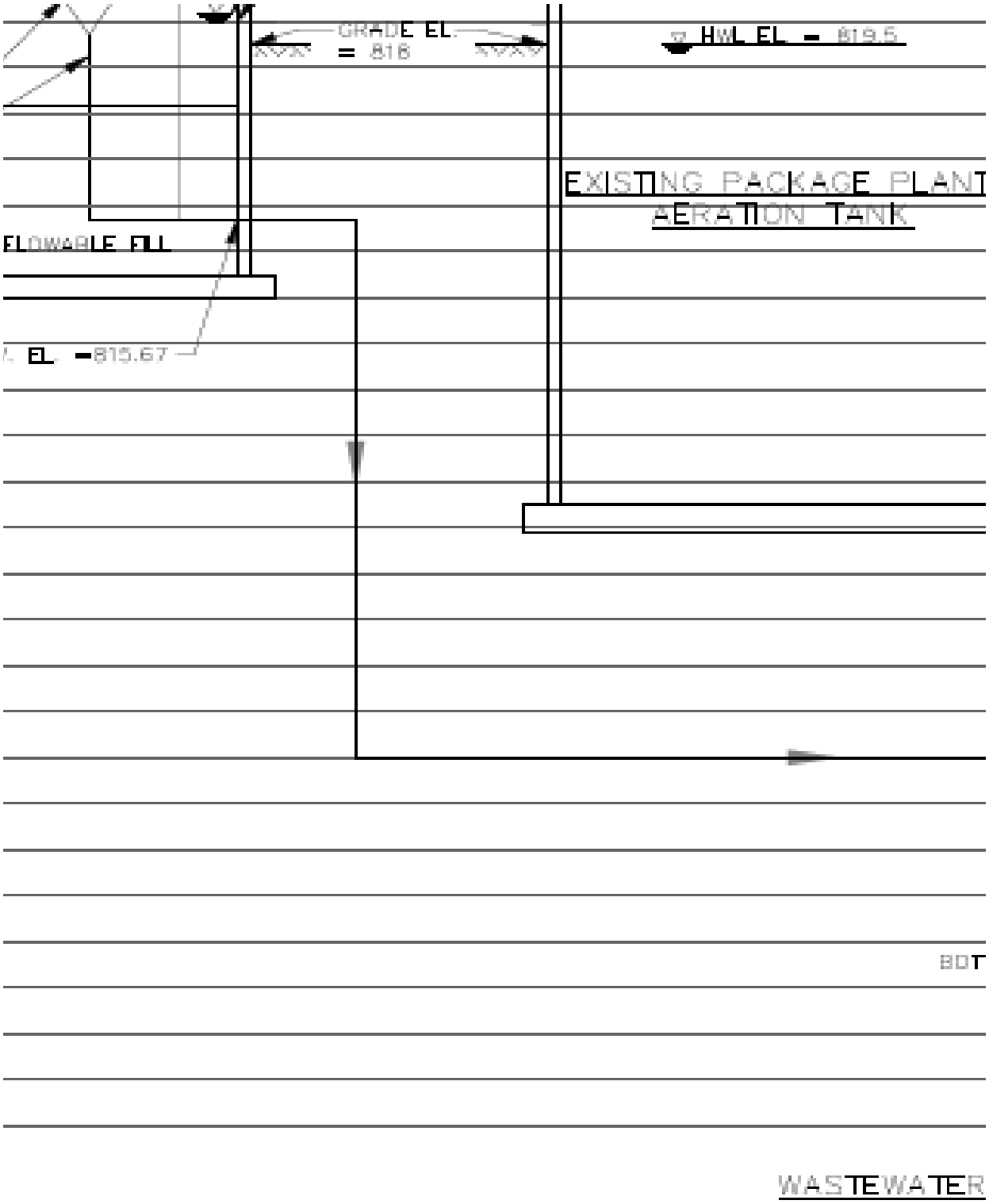
plant flow improvement project

ty Operating Company LLC
CSWRGroup.com
an (314)550-1167

nin Kuenzel
sign Group
)432-5029
esignGroup.net
636-222-7341

New Overflow Structu
Existing poliishing lag
12" diameter cone (te
New EQ Lagoon Dupl
New 2-inch magnetic
Grade A Reliability ?
Transfer Switch and B
Capable of 24 GPM @




GRADE EL.
= 816
HWL EL = 819.5
EXISTING PACKAGE PLANT
AERATION TANK
FLOWABLE FILL
EL =815.67
BDT
WASTEWATER

Received: _____

ure (Dog House Structure with Telescoping valve for flow control allowing lagonon use a EQ basin

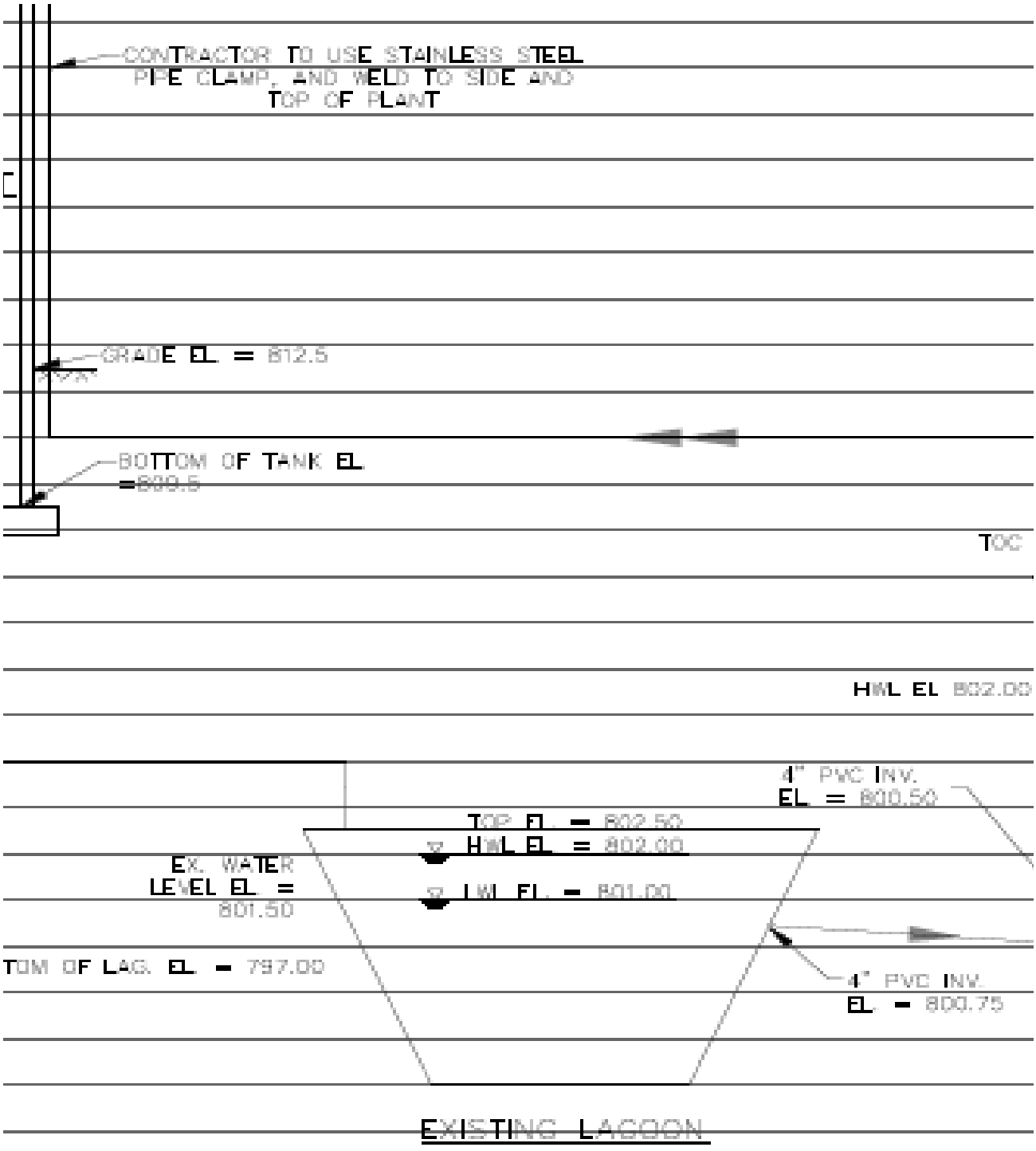
oon being converted into equalization lagoon

elescope valve) acting as weir

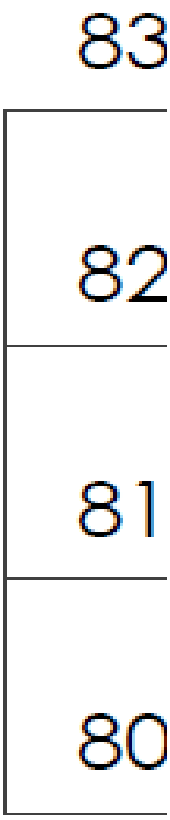
ex Pump Station will pump directly into the existing Extended Aeration — 24 GPM pe
flow meter on downstream of chlorine contact chamber — 1 1/2 inch f

819.5 feet
ackup Generator — 799 ft
21 ft static head

30 TDH



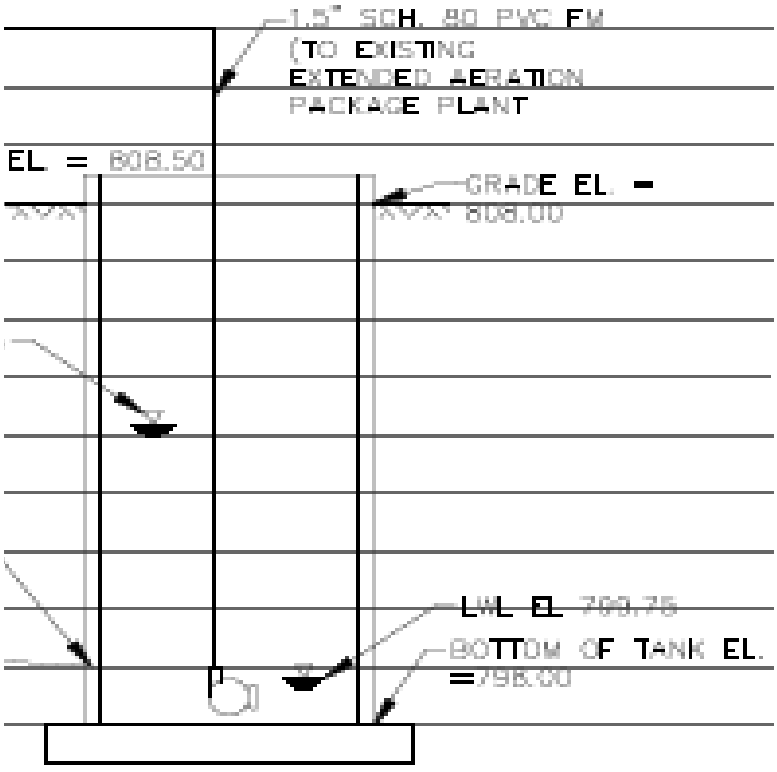
HYDRAULIC PROFILE



r pump
orce main = 31 ft

Design Flov

Number of Res
Number of Per
Design Peak W



Design Averag
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Design Peak Fl
Design Equaliz
Design Equaliz

Station and

Number or Pun
Flow Rate Per
Diameter of Fo
Length of Force
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Diameter of We
Flowline Elevat
Floor Elevation
Wetwell Opera

Lea
Lag
Higl
Pun

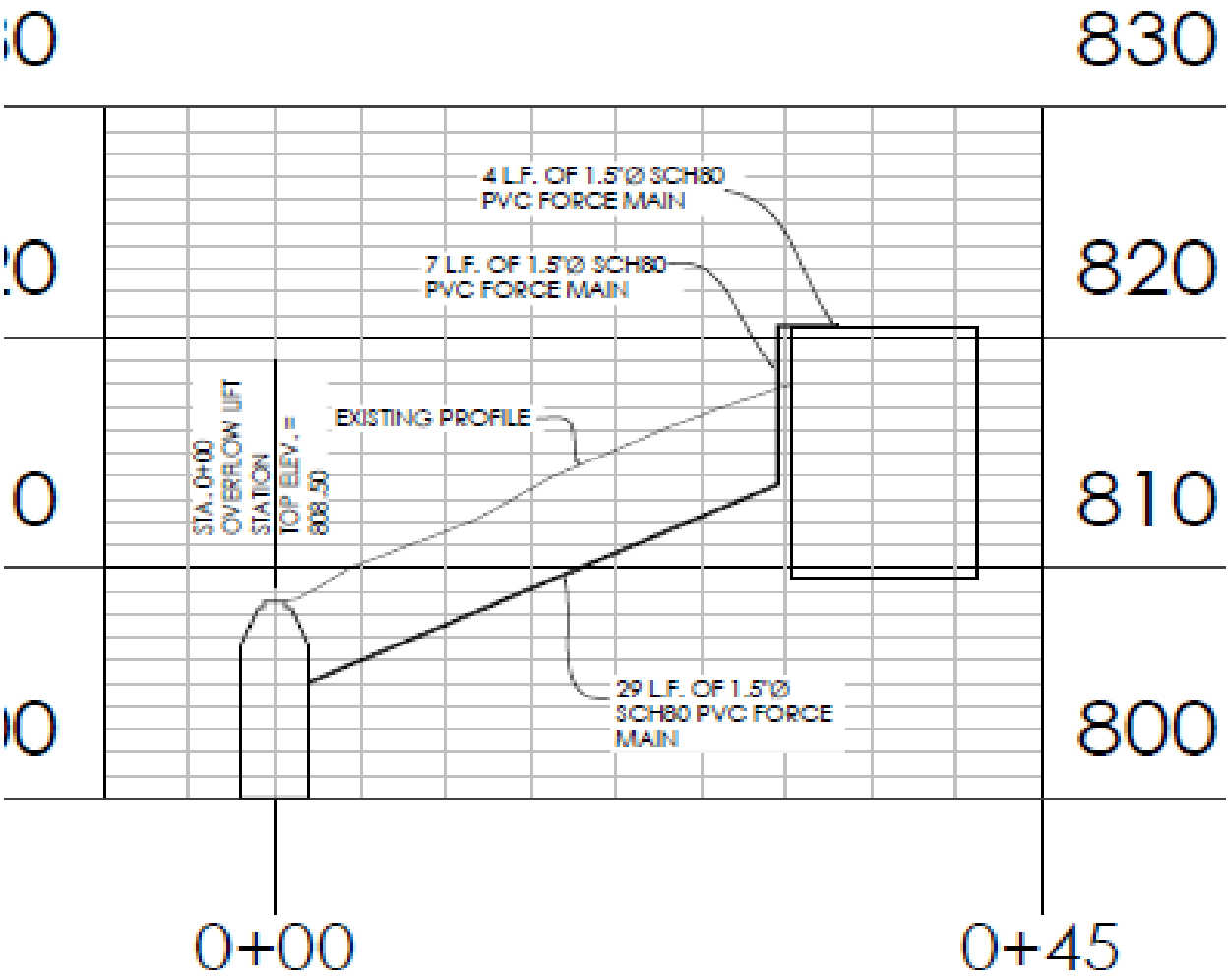
Equations U

Hazen-Williams

Design Con

Flow Rate:
Static Head:
Total Dynamic

Capable of



FORCE MAIN FROM LAGOON LIFT STATION TO PACKAGE PLANT PROFILE

v:

idences Served By Plant:	190	
sons Per Residence:	3	
Vastewater Flow Rate Per Resident:	100	gpcpd

e Daily Flow	57,000	gpcpd
low Rate To Overflow Structure	228,000	gal./day
Lagoon for Equalization	142,500	gal./day
low to Plant	85,500	gal./day
ation Return Pumping Rate (50% ADF)	28,500	gal./day
ation Return Pumping Rate (50% ADF)	19.8	gpm

Force Main Properties:

nps	2	
Pump	19.8	gpm
rce Main:	1.5	in.
e Main:	31	ft.
on of Force Main Discharge:	820.5	ft.
etwell	4	ft.
tion of Wetwell Influent:	800.50	ft.
of Wetwell:	798.00	ft.
ting Levels:		

id Pump On:	801.00	ft. Assumed
Pump On:	801.83	ft. Assumed
h Level Alarm:	802.00	ft. Assumed
nps Off:	799.75	ft. Assumed

Jsed:

s

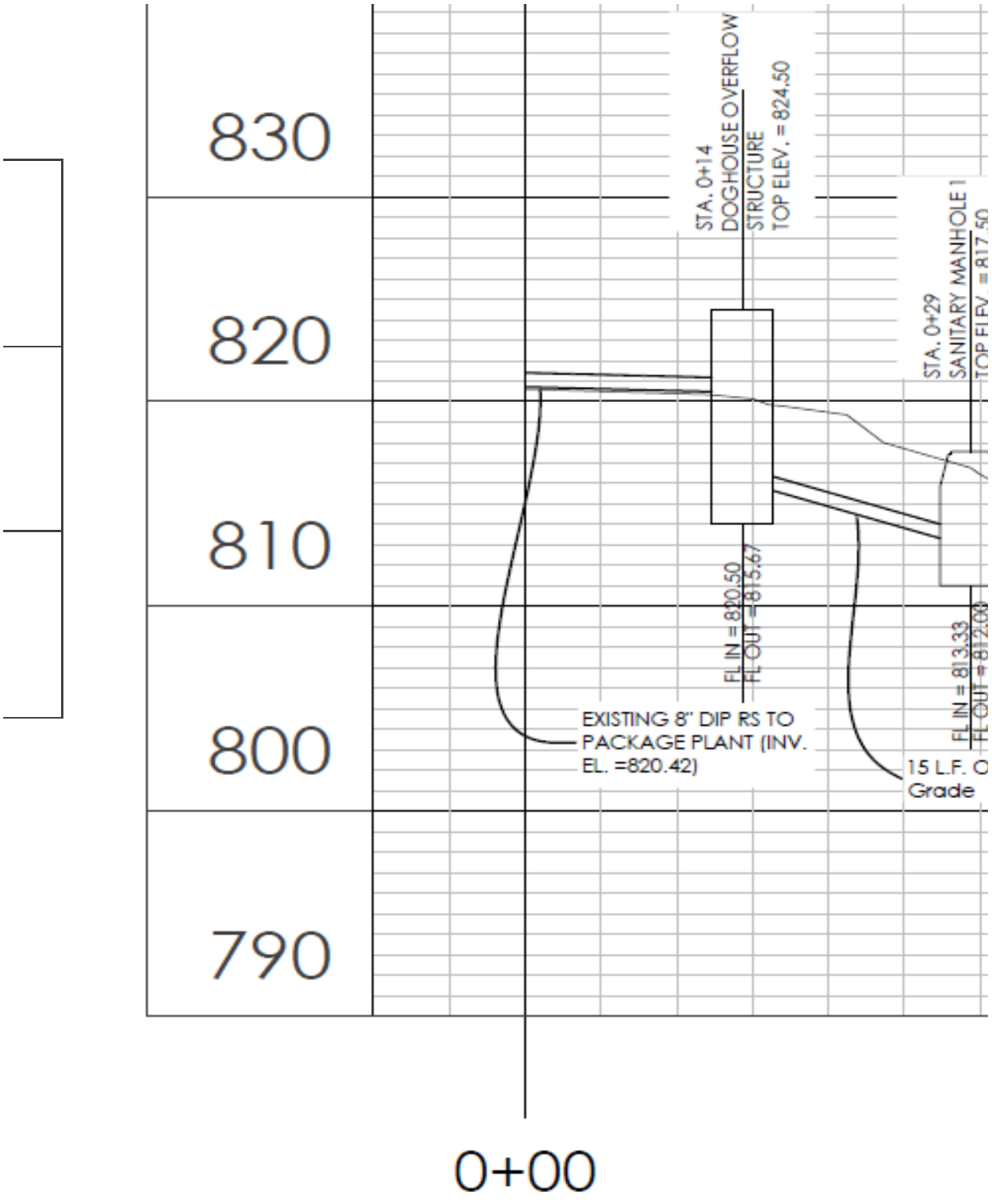
$$h_{friction} = \frac{3.02\,L}{d^{1.167}}\left(\frac{V}{C_h}\right)^{1.85}$$

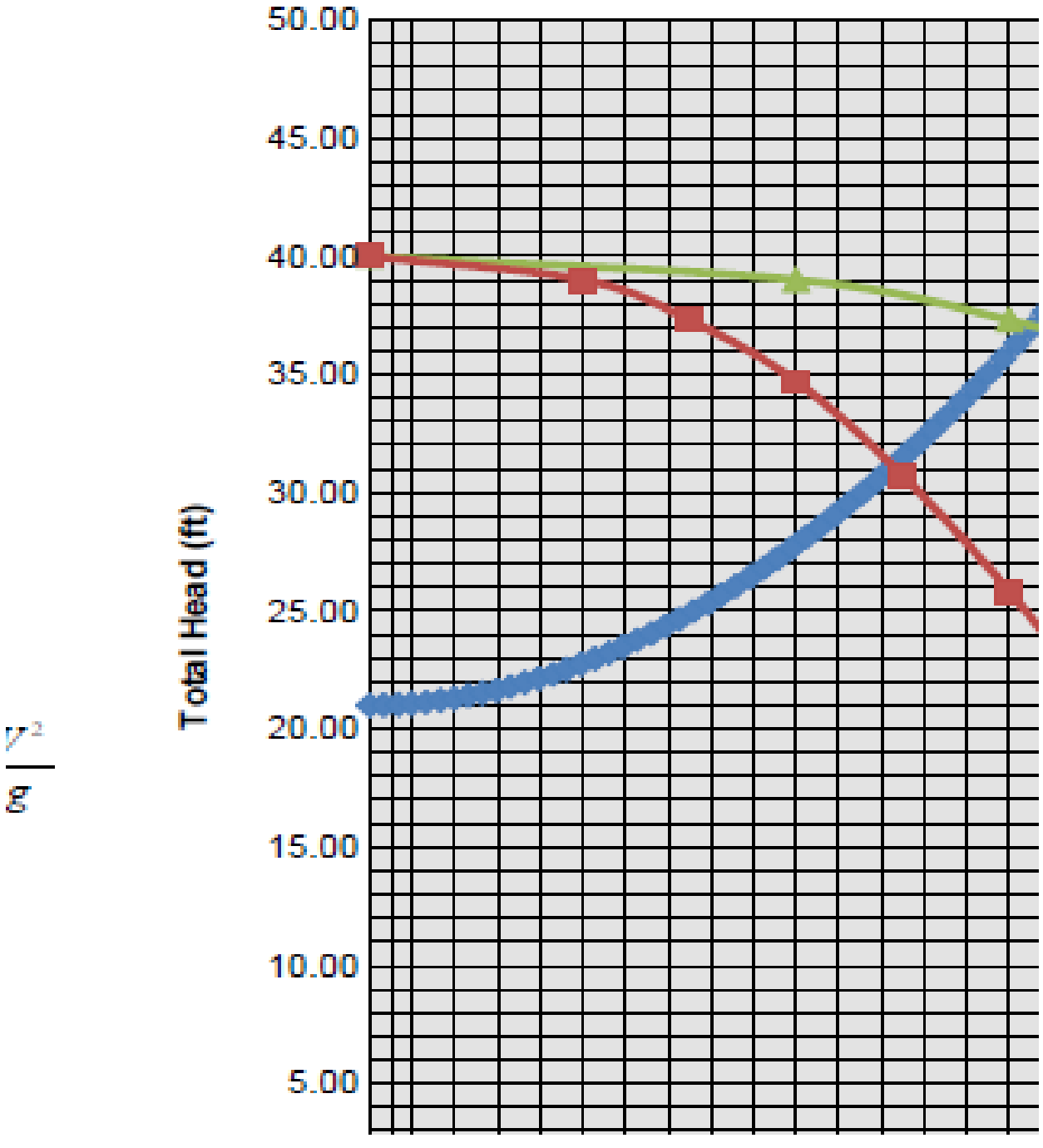
$$h_{minor\ losses} = \frac{KV}{2}$$

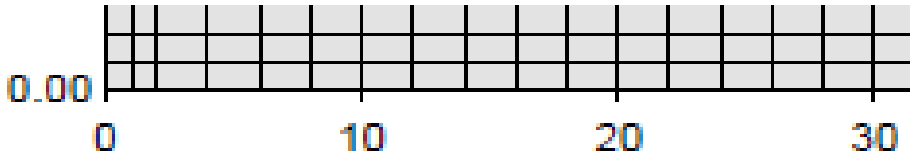
ditions:

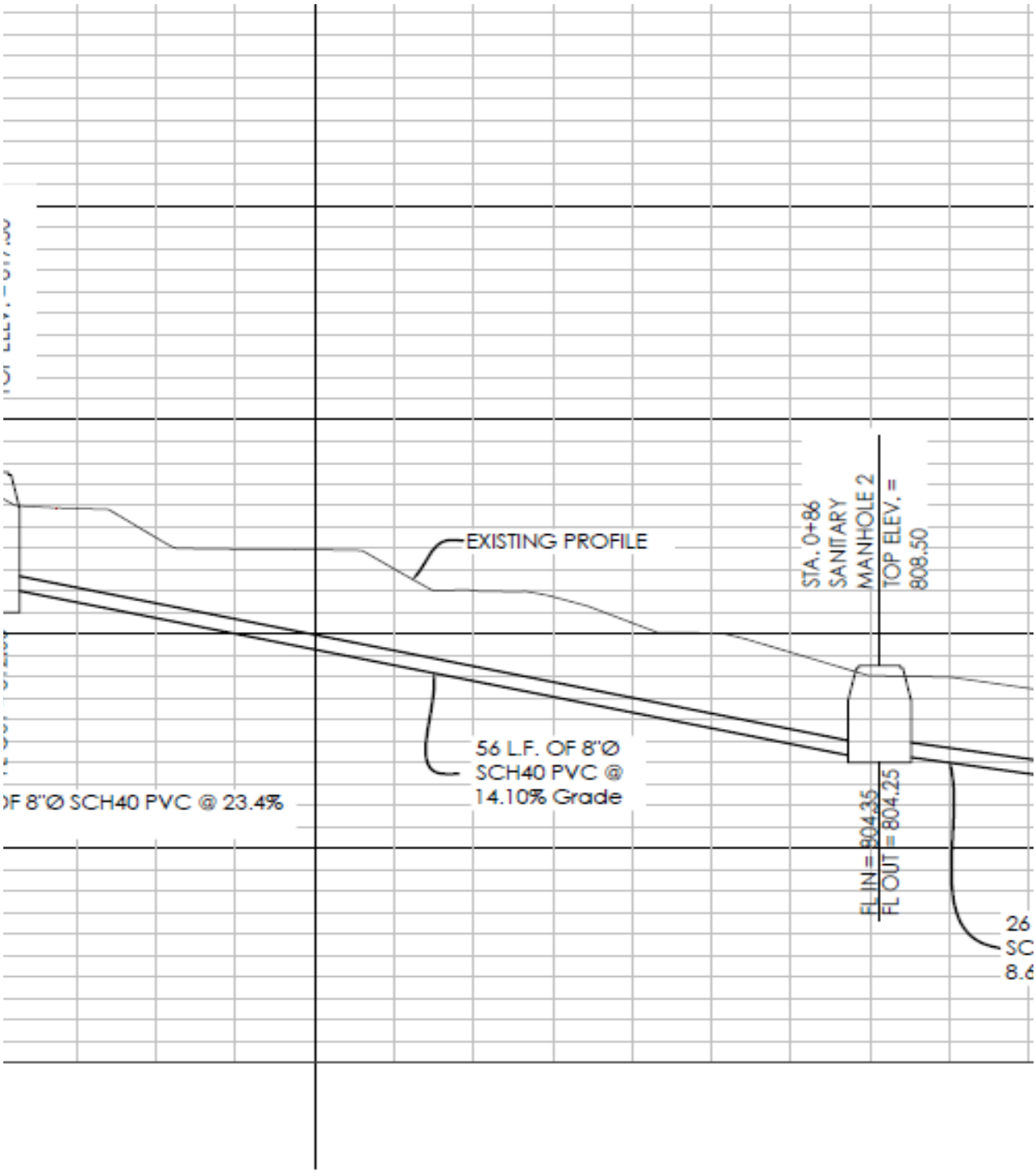
	19.8	gpm
	21.0	ft.
Head:	27.7	ft.

24 GPM @ 30 TDH


830
820
810
800
790
STA. 0+14
DOGHOUSE OVERFLOW
STRUCTURE
TOP ELEV. = 824.50
STA. 0+29
SANITARY MANHOLE 1
FL IN = 820.50
FL OUT = 815.67
EXISTING 8" DIP RS TO
PACKAGE PLANT (INV.
EL. =820.42)
FL IN = 813.33
15 L.F. O
Grade
0+00

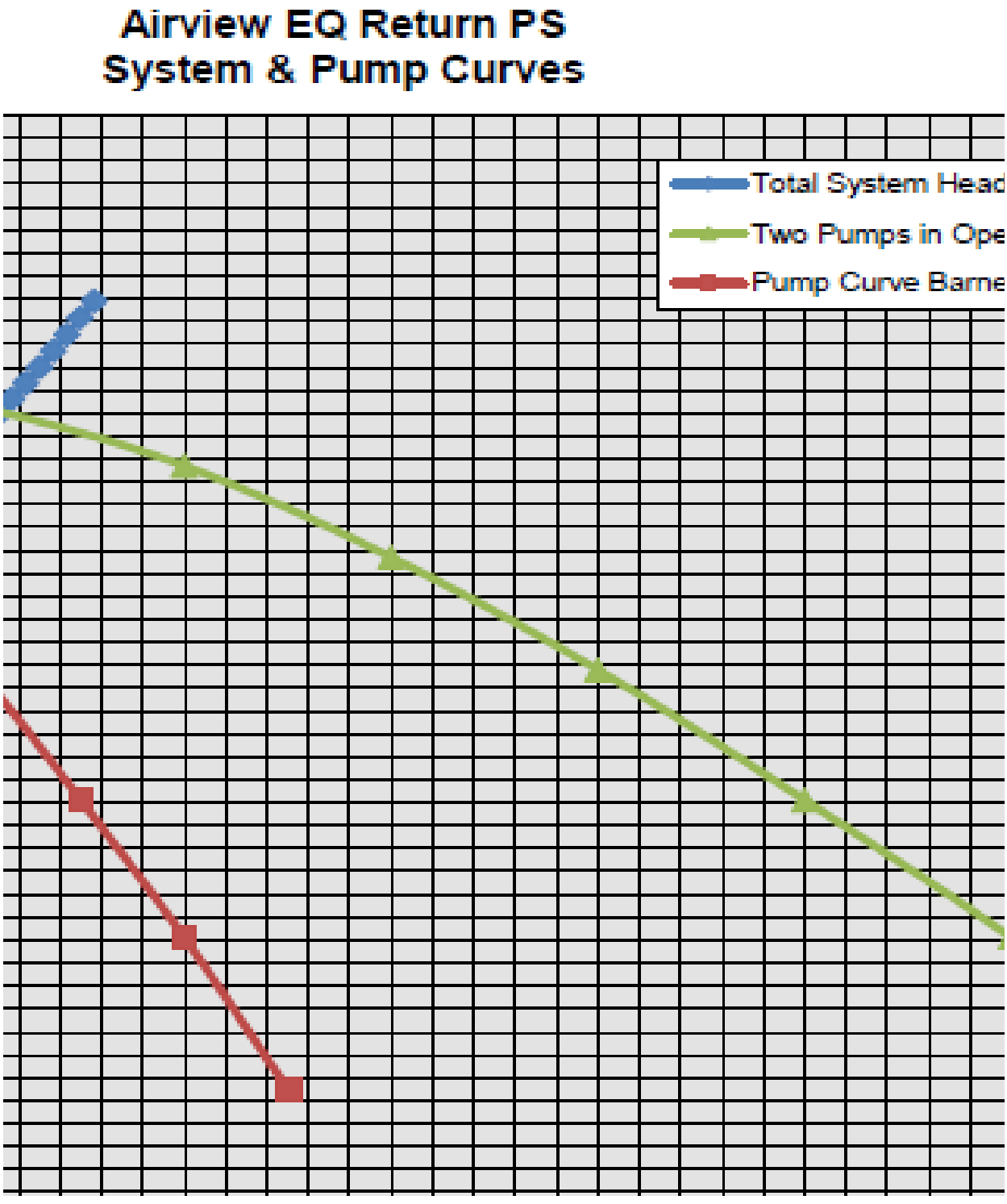

50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
Total Head (ft)
$\frac{V^2}{g}$

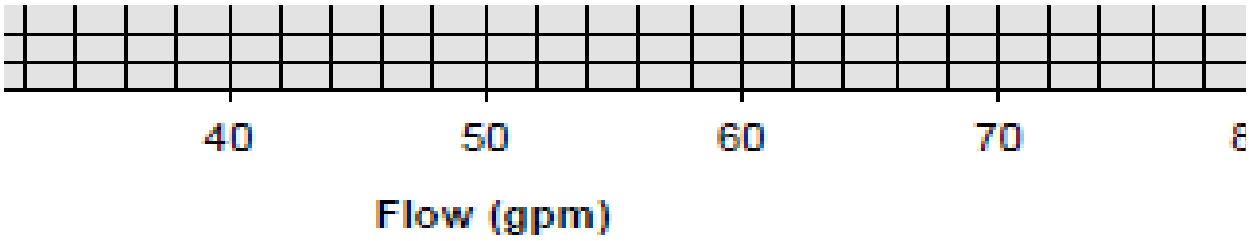

0.00
0
10
20
30

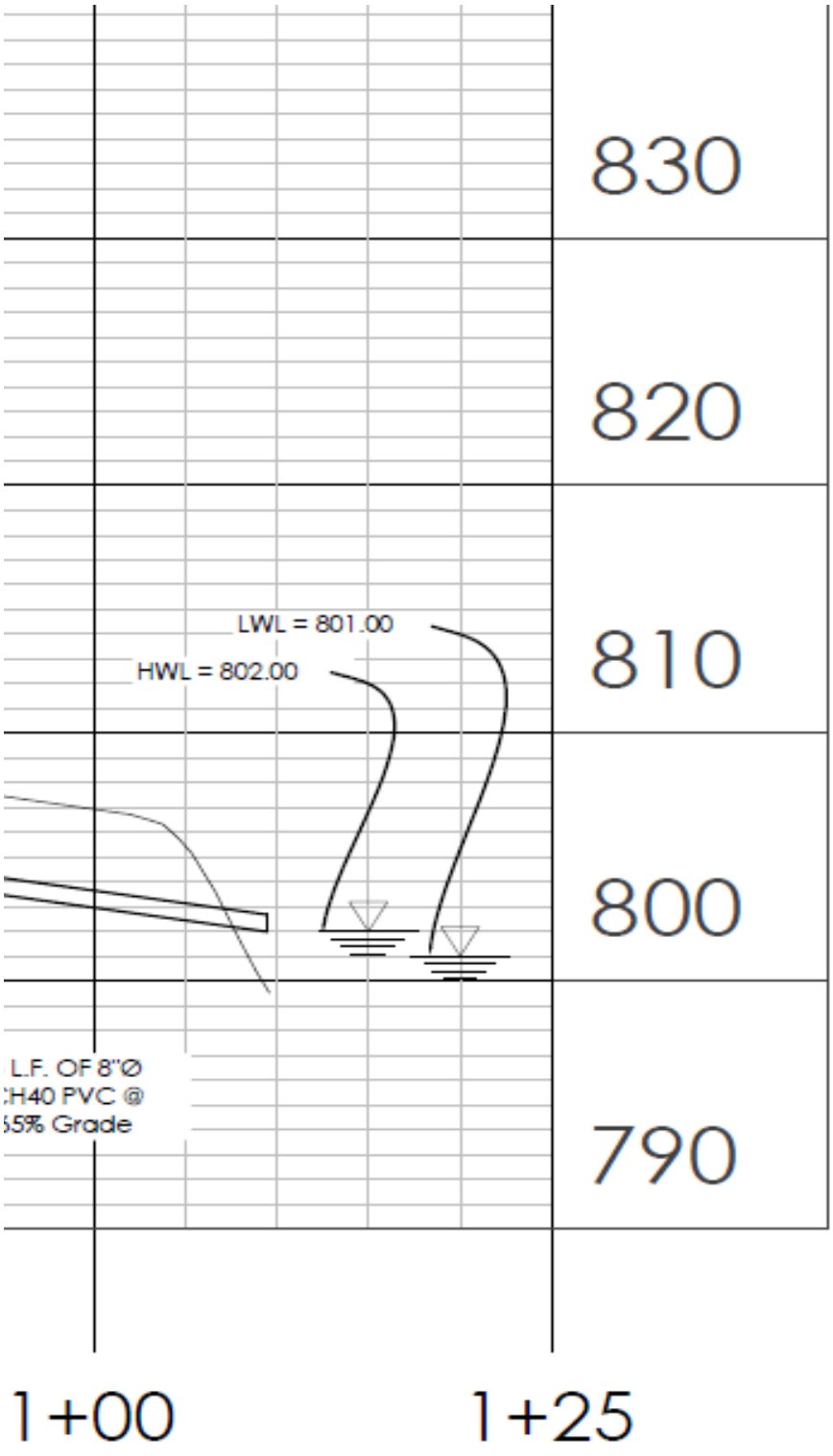

EXISTING PROFILE
STA. 0+86
SANITARY
MANHOLE 2
TOP ELEV. =
808.50
56 L.F. OF 8"Ø
SCH40 PVC @
14.10% Grade
OF 8"Ø SCH40 PVC @ 23.4%
FL IN = 804.35
FL OUT = 804.25

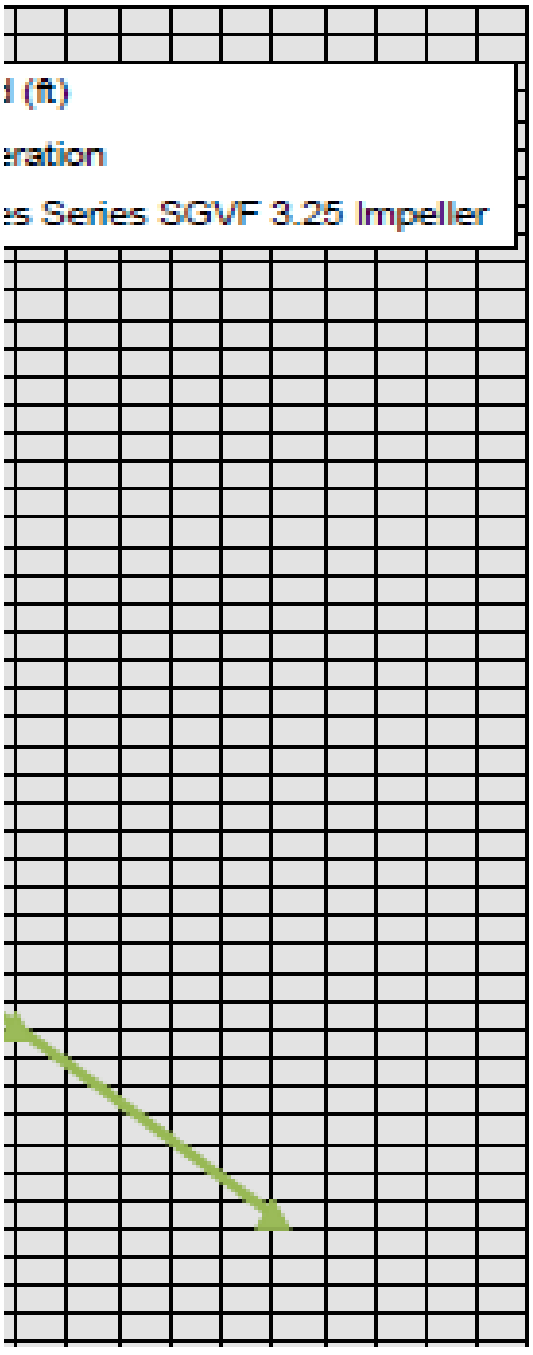
0+50

DOGHOUSE OVERFLOW
STRUCTURE SANITARY PROFILE




40
50
60
70
Flow (gpm)


830
820
LWL = 801.00
HWL = 802.00
810
800
L.F. OF 8"Ø
:H40 PVC @
55% Grade
790
1+00
1+25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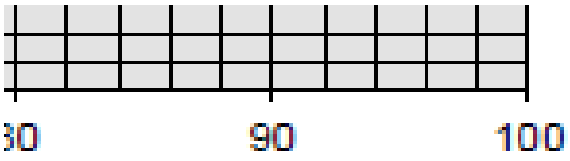
es Series SGVF 3.25 Impeller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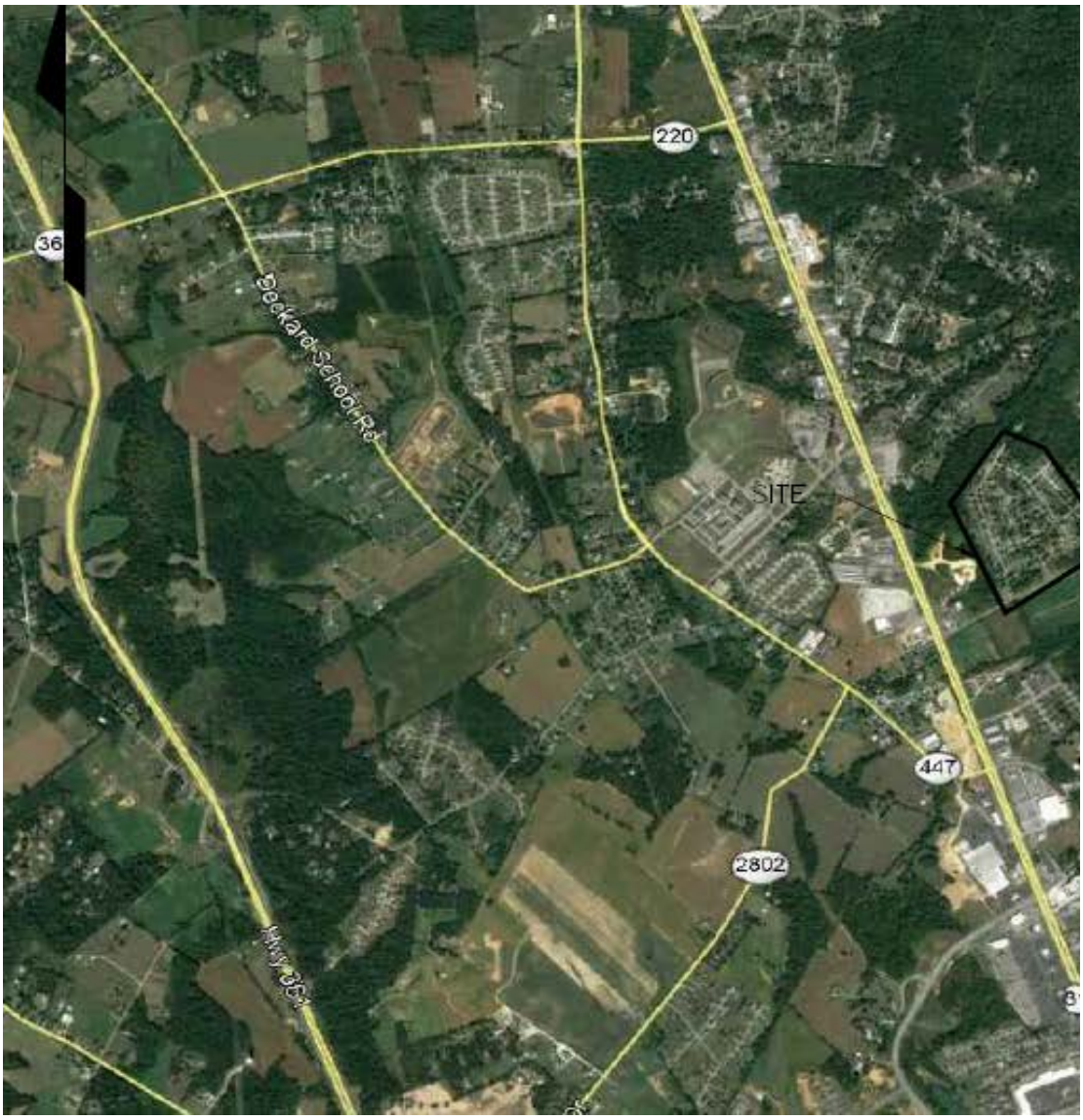
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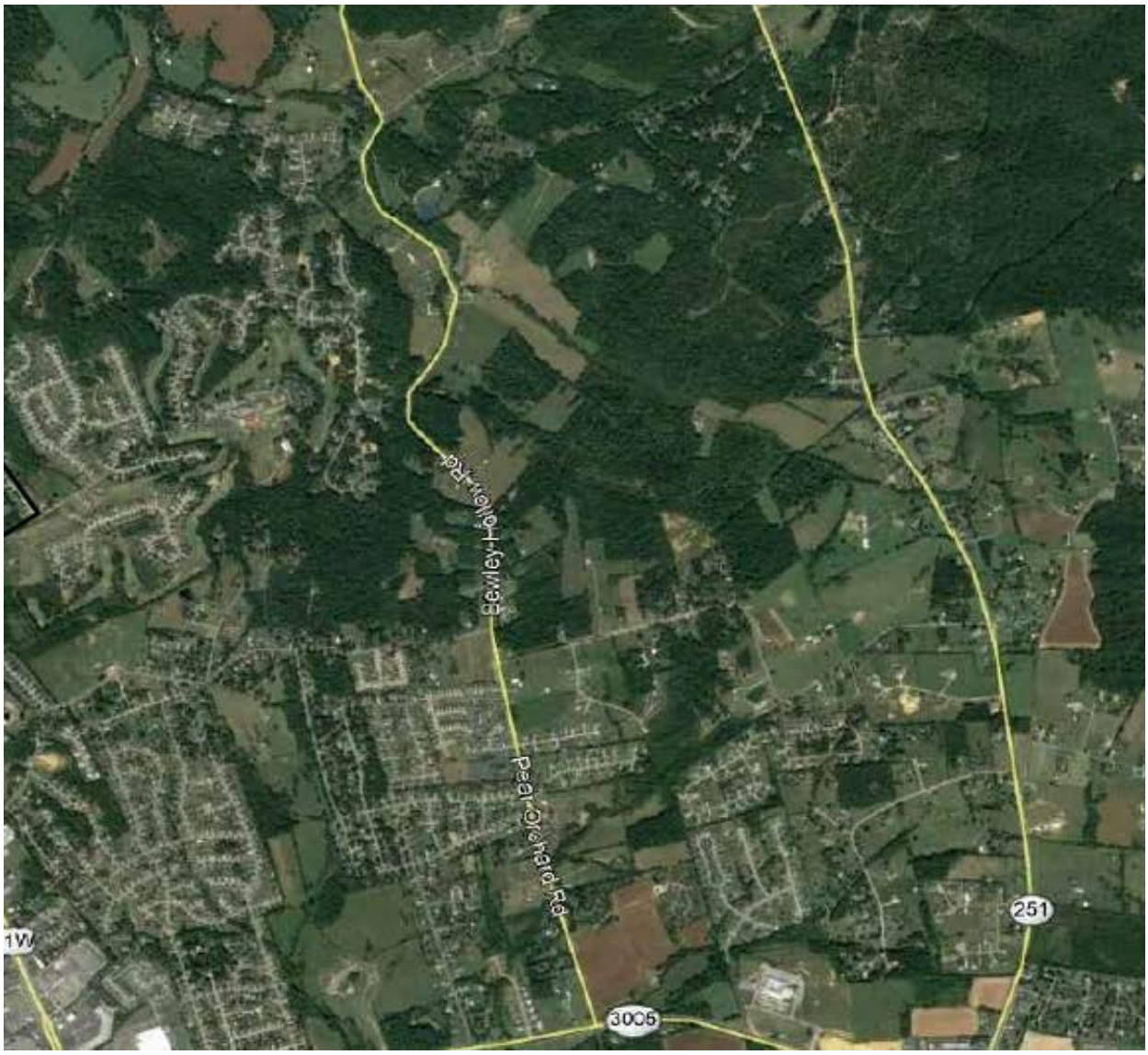
Sewley Hollow Rd
Pea Ridge Rd
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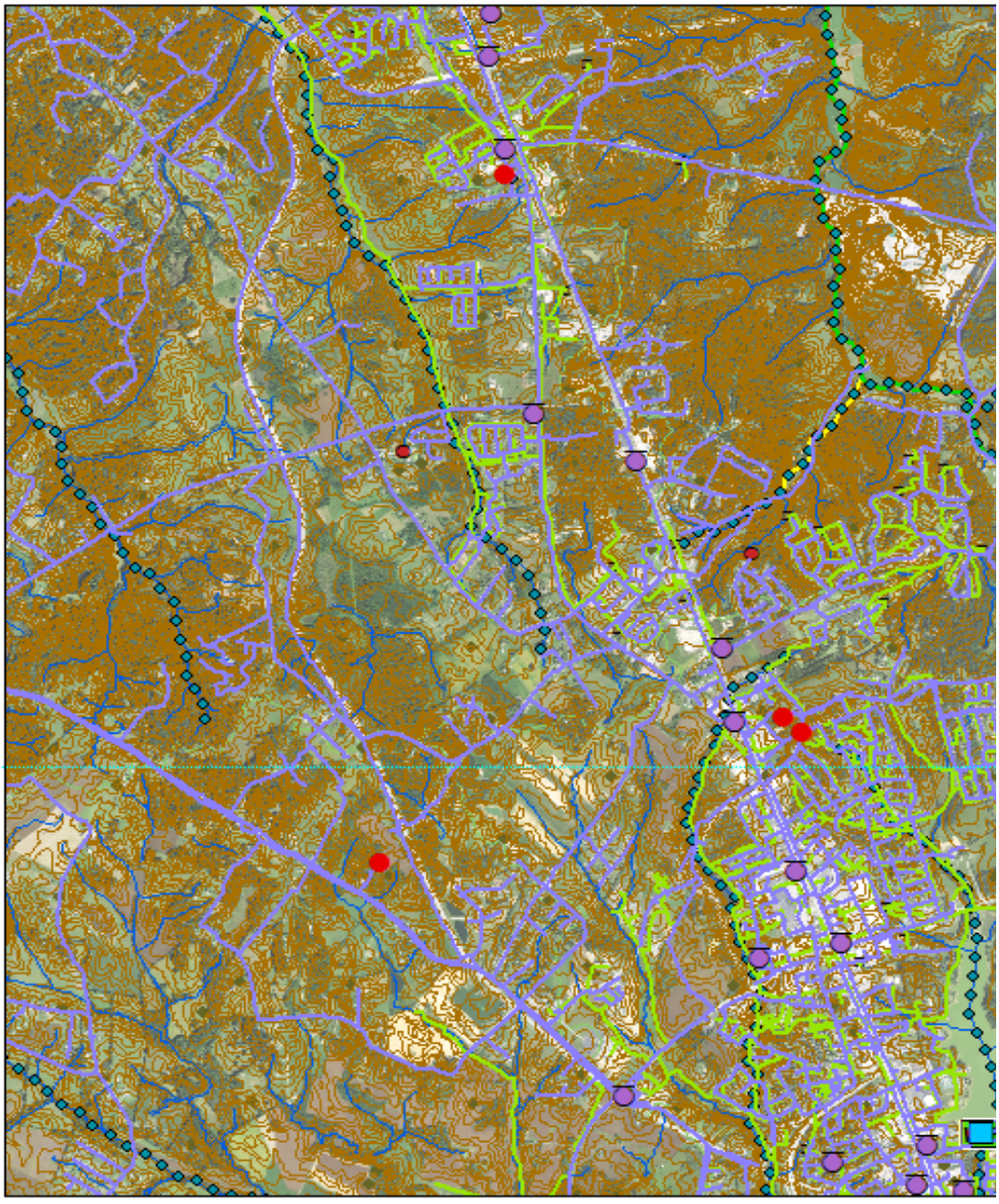
3005

Airview WWTP Impro



This data is distributed by the Commonwealth of Kentucky, Division of Geographic Information (DGI), located in Frankfort KY
The data are available at http://kygeonet.ky.gov

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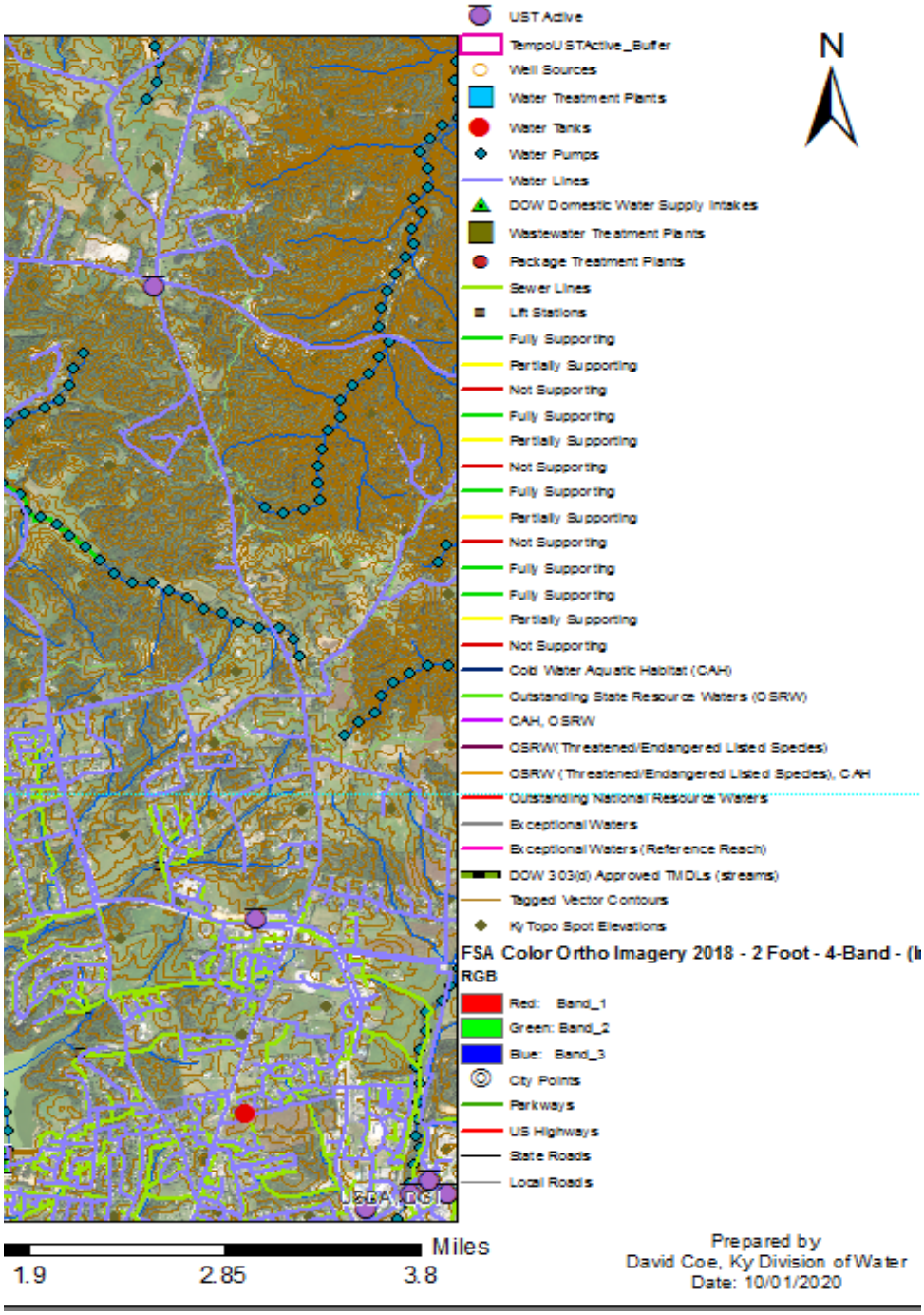
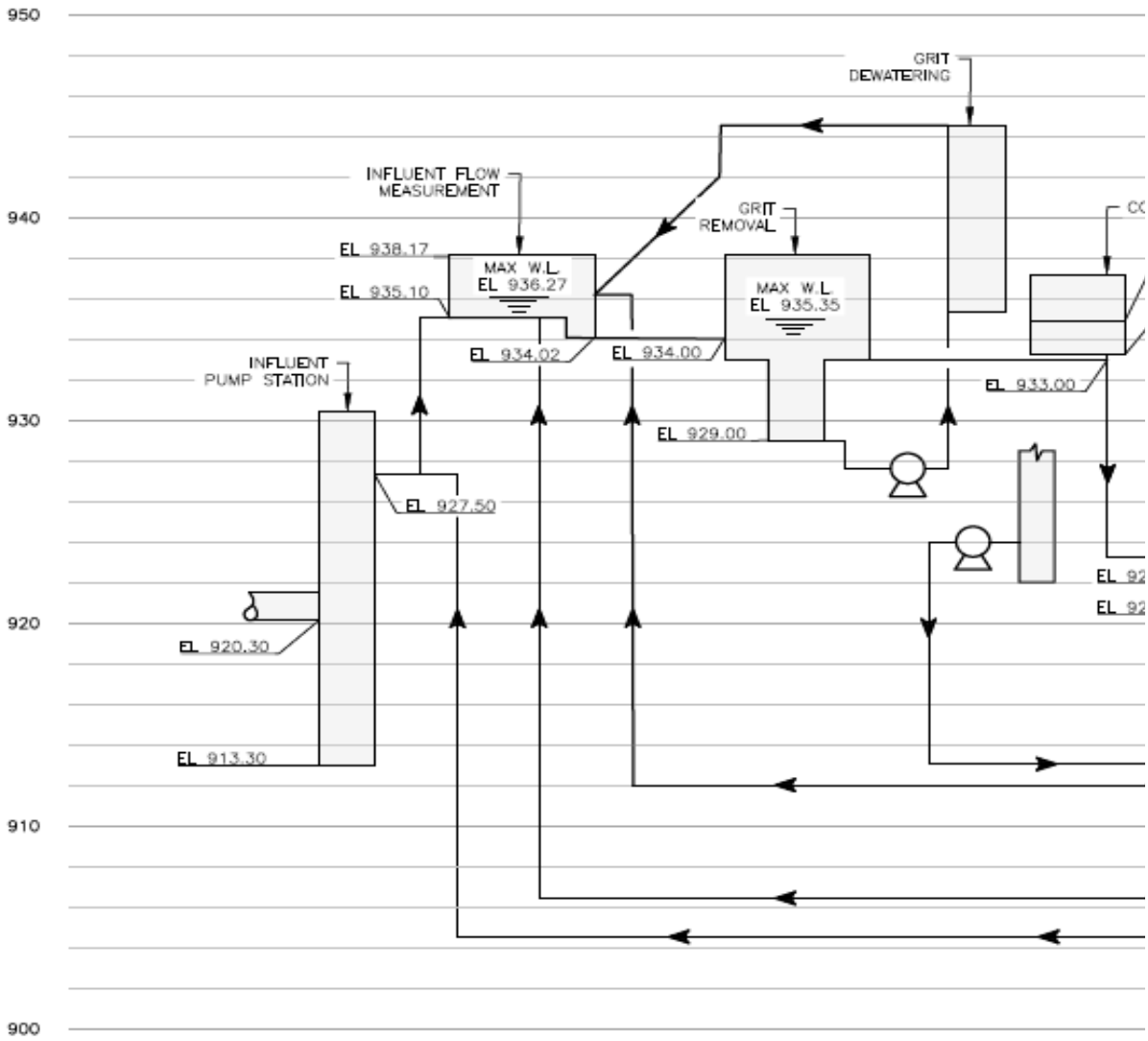
ovements



Prepared by
David Coe, Ky Division of Water
Date: 10/01/2020

Head Loss Calculation for Water Lines using Hazen-Williams Formula
Velocity and Reynold's Number Calculation

Flowrate (gallons per minute)	**1736.0**	**Number of Lots**	**0**
Flowrate (gallons per day)	750.0	Customer Demand (gallons per day)	0.0
C-Factor	**130.0**	Customer Demand (gallons per minute)	0.0
Diameter (inches)	**16.00**	Peak Flow (gallons per minute)	0.0
Diameter (millimeters)	406.4		
Length (feet)	**300.0**		
Length (meters)	91.4	929.67 - 913.33 = 16.34 ft elev clar eff	
Viscosity (centipoise)	**1.0**	918	
Viscosity (lbm / foot * sec)	6.720E-04		
Density (lbm / cubic foot)	**62.428**		
Head Loss (feet of water)	0.51	16.3 + 1 = 17.1	
Head Loss (psig)	0.22		
Velocity	2.77		
Reynold's Number	343312.0		
Flowrate (gallons per minute)	**940.0**		
Flowrate (gallons per day)	750.0		
C-Factor	**130.0**		
Diameter (inches)	**8.00**	939.18 - 913.19 = 25.99	
Diameter (millimeters)	203.2		
Length (feet)	**517.0**		
Length (meters)	157.6		
Viscosity (centipoise)	**1.0**		
Viscosity (lbm / foot * sec)	6.720E-04		
Density (lbm / cubic foot)	**62.428**		
Head Loss (feet of water)	8.21	=26+8.2 = 34.2 Good	
Head Loss (psig)	3.56		
Velocity	6.00		
Reynold's Number	371789.5		
Flowrate (gallons per minute)	**615.0**		
Flowrate (gallons per day)	750.0		
C-Factor	**130.0**		
Diameter (inches)	**8.00**	936.27 - 913.19 = 23.08	
Diameter (millimeters)	203.2		
Length (feet)	**517.0**		
Length (meters)	157.6		
Viscosity (centipoise)	**1.0**		
Viscosity (lbm / foot * sec)	6.720E-04		
Density (lbm / cubic foot)	**62.428**		
Head Loss (feet of water)	3.75	23 + 4 = 27	
Head Loss (psig)	1.62		
Velocity	3.93		
Reynold's Number	243245.3		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GRIT
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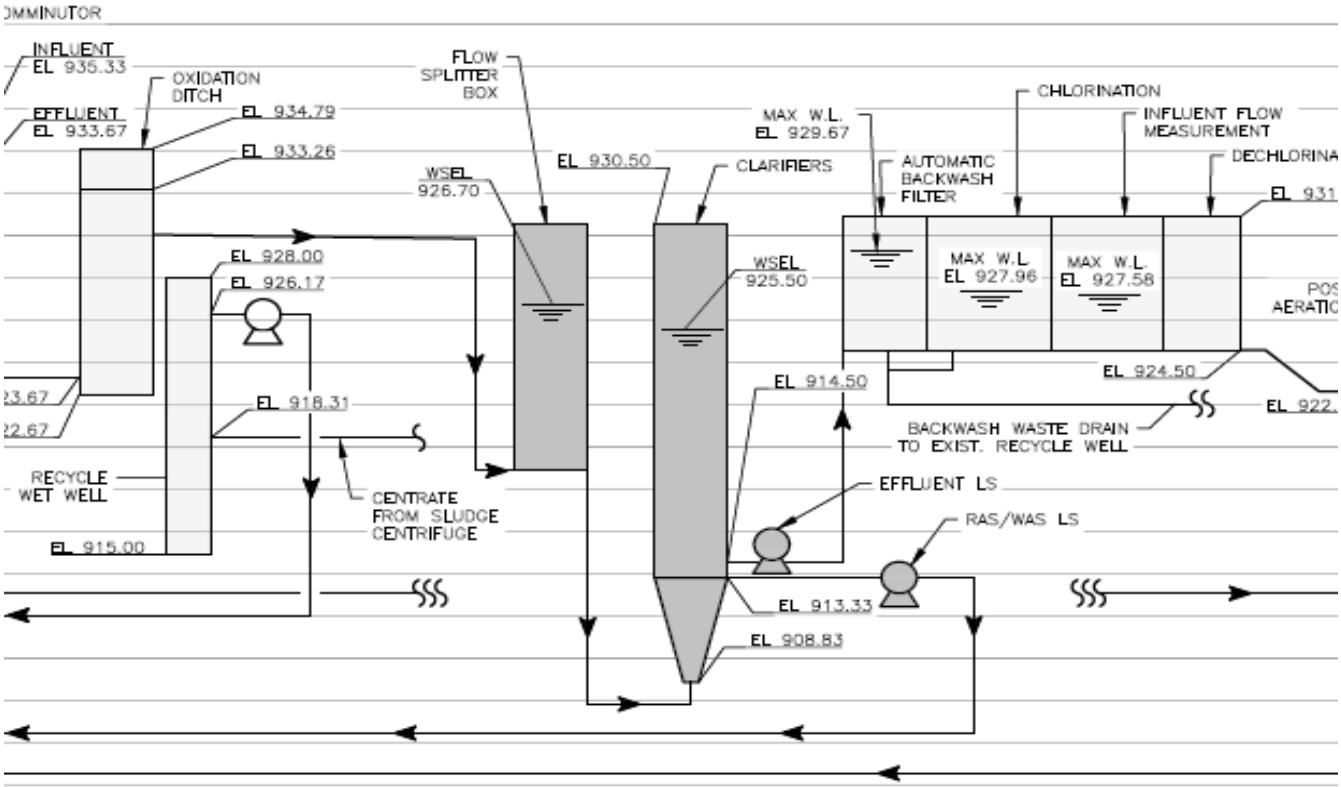
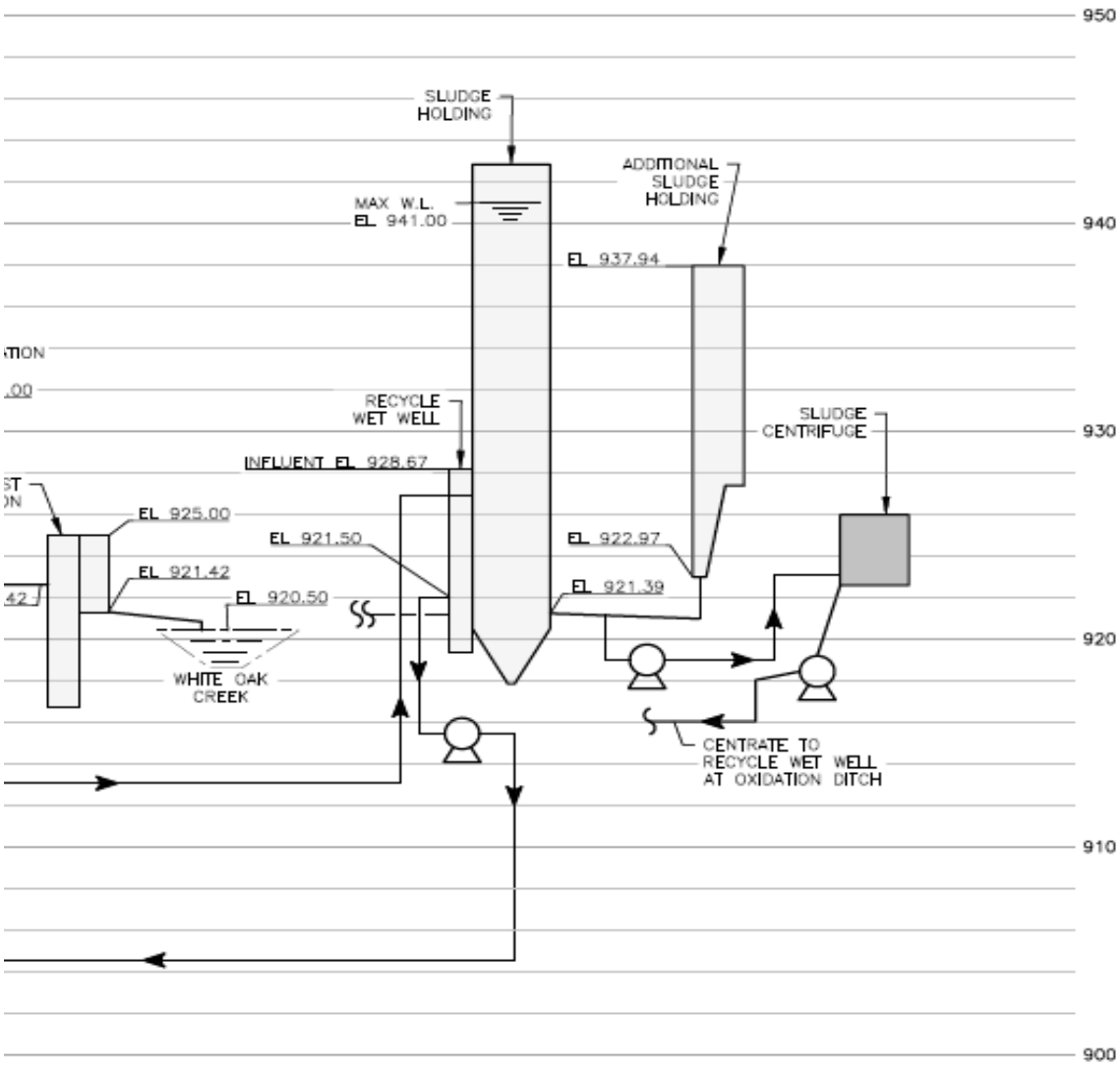
REMOVAL
EL 938.17
MAX W.L.
EL 936.27
EL 935.10
MAX W.L.
EL 935.35
EL 934.02
EL 934.00
INFLUENT
PUMP STATION
EL 933.00
EL 929.00
EL 927.50
EL 920.30
EL 913.30



PROCESS HYDRAULIC PROFILE


950
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SLUDGE HOLDING
ADDITIONAL SLUDGE HOLDING
MAX W.L. EL 941.00
EL 937.94
RECYCLE WET WELL
SLUDGE CENTRIFUGE
INFLUENT EL 928.67
EL 925.00
EL 921.50
EL 922.97
EL 921.42
EL 921.39
EL 920.50
WHITE OAK CREEK
CENTRATE TO RECYCLE WET WELL AT OXIDATION DITCH

Manning Formula

$$Q = \frac{A * 1.486 * R^{2/3} * S^{1/2}}{n}$$

Hydraulic Radius
R=A/P

Q	Discharge (ft3/s)
A	Cross-sectional Area of flow (ft^2)
n	Coefficient of Roughness
R	Hydraulic Radius (ft)
S	Slope of Pipe (ft/ft)

R	Hydraulic Radius (ft)
A	Cross-sectional area of
P	Wetted Perimeter (ft)

Assuming full flowing pipe

Pipe Diameter	36	inches	
Slope	0.004	ft/ft	
n	0.013		
Pipe Area	7.06858	ft^2	
Wetted Perimeter	9.42478	ft	
R	0.75000	ft	
Q	42.18377	ft^3/s	
Q	27,262,187.0	gpd	
Q	18,932.1	gpm	
V	5.97	ft/s	>2.0 ft/s required

Manning Coefficient

0.013 Required

0.011 Plastic Pipe

flow (ft^2)

Gravity Mains

X	Minimum Slopes Met
X	Max. Manhole spacing ok
X	Drop Manholes Required?
X	Adequate Cover

Valve Pit

X	Separate Valve Pit
X	Adequate Valving
X	Drain for Pit
X	Quick Disconnect

Wet Well

X	Duplex Pumps
X	Access to Pumps
X	Vent
X	Audio/Visual Alarm
X	Quick Disconnect
X	Storage Above Alarm
X	Grout in Corners
No	Located in Floodplain

Force Mains

X	Adequate Velocity (2.0 fps)
X	Air Release valves
X	Adequate Cover
X	Thrust Blocks
X	Adequate Waterline Separation

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility
1650 Des Peres Road, Suite 303 St. Louis, MO 63131

Groundwater Protection Plan For

AIRVIEW WWTP - NPDES# KY0045390

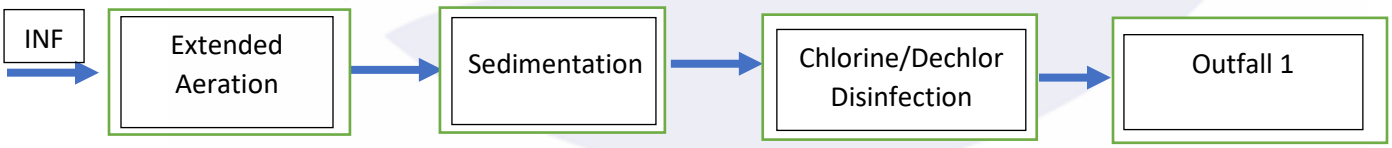
Section A. GENERAL INFORMATION

1. Name and address of facility
    a. Name of Facility: Airview WWTP
    b. Address: 178 West Airview Drive, Elizabethtown, KY
    c. County: Hardin County
    d. Lat/Long: 37.758396, -85.89186
    e. Mailing address: 1650 Des Peres Road, Suite 303, St. Louis. MO 63131

2. Person Developing GPP
    a. Alica Alexander, Environmental Compliance Officer
    b. Address: 1650 Des Peres Road, Suite 303, St. Louis, MO 63131
    c. Telephone number: (314) 736-4672
    d. Email: aalexander@cswrgroup.com

3. Person Responsible for Implementing GPP
    a. Christopher Carroll
    b. Address: 398 East Gap Hill Road, Cub Run, KY 42729
    c. Telephone number: (502) 509-8583
    d. Email: ccarroll@midwestwaterop.com

4. Brief Description of Facility Operation
    a. Type of treatment: activated sludge utilizing an extended aeration basin
    b. Treatment capacity of plant (GPD): 0.055 MGD
    c. Brief description of treatment process:



Section B. ACTIVITIES THAT HAVE THE POTENTIL TO POLLUTE GROUNDWATER

- Treating residential wastewater by an activated sludge process through an extended aeration system.
- Sludge pumped and hauled away to landfill.

Section C. PRACTICES SELECTED TO PROTECT GROUNWATER FROM POLLUTION

- Two certified operators run the plant:
  - Kathy Carey – Cert# 31241, 31228
  - James Smith – Cert# 26214
- The treatment basins are undergoing renovations, maintenance, and have been recently repainted to ensure integrity.
- Sludge is pumped and disposed of through a contractor.

Section D. IMPLEMENTATION SCHEDULE

- This GPP is in effect as of November 24, 2020.
- All protective practices are being implemented.

Section E. EMPLOYEE TRAINING

- Employees shall be trained on the GPP initially on hire and will go through a refresher training annually.

Section F. INSPECTION SCHEDULE

- Facility operators are on site conducting inspections a minimum of five days per week to monitor the operation of the facility.
- Central States Water Resources staff will conduct annual site audits which include reviewing the implementation of the facility GPP.
  - Inspection checklist is included in Attachment 1.

Section G. CERTIFICATION STATEMENT

I Jay Favor certify that this Groundwater Protection Plan complies with the requirements of 401 KAR 5:037. I have read the terms of the plan and will implement its provisions.

Signature: _____ Date: 11/24/2020

Enclosures: GPP Checklist

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility
1650 Des Peres Road, Suite 303 St. Louis, MO 63131
www.centralstateswaterresources.com/bluegrass-water/

Facility Name:	Inspector:	Date:
Components to Inspect	Results/Comments	
Collection System (evidence of overflow, pumps functioning, etc.)		
Aeration Basin (blower unit, air lines, recirculation lines, etc.)		
Sedimentation (clarifier, weir, are solids present, water quality,etc.)		
Chlorination/Dechlor Treatment (are chlorine/dechlor tablets present, condition of units, etc.)		
Outfall (marked, clear path, debris discharge, evidence of overflow, etc.)		
Security (gate locked, opening in fencing, WWTP signage on all sides, etc.)		
Actions to be taken:		
Signature:		Date:

FORM W-1

Commonwealth of Kentucky
Energy and Environment Cabinet
Division of Water

CONSTRUCTION PERMIT APPLICATION for WASTEWATER TREATMENT PLANT

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: Herrington Haven WWTP System Upgrades

Project City/County: Bryantsville, Garrard County, Kentucky

Name of WWTP: Herrington Haven Subdivision WWTP

KPDES Number of WWTP, if known (for modifications to an existing plant): **KY** 0053431

Estimated cost of WWTP improvements and sewer line extension: $ 227,550

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): Bluegrass Water Utility Operating Company LLC E-mail: jfreeman@cswrgroup.com

Street Address: 1650 Des Peres Road, Suite 303

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

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.

N/A A. A copy of a 7½ minute USGS topographic map, with the WWTP, any proposed sewer lines, service area, and discharge location identified.

N/A 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.

N/A C. For a WWTP located within a planning area, a demonstration that a connection to the regional facility is not available.

N/A 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".

4 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: Benjamin Kuenzel Firm: 21 Design Group

Street Address: 1351 Jefferson Street Suite 301

City, State, Zip: Washington, MO 63090

Phone: 636-432-5029 Fax: N/A E-mail: ben@21designgroup.net

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: Benjamin Kuenzel Firm: 21 Design Group

Street Address: 1351 Jefferson Street Suite 301

City, State, Zip: Washington, MO 63090

Phone: 636-432-5029 Fax: N/A E-mail: ben@21designgroup.net

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 NH_3-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.

N/A 1. A schematic drawing of the facility layout and explanation of the proposed facility and method of operation. **[Section 3]**

N/A 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.

N/A 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]**

N/A 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]**

N/A 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]**

N/A 2. A Sludge Management Plan for WWTPs, including the sludge processing method and how sludge will be ultimately disposed. **[Section 3]**

N/A 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]**

N/A 4. A description of and detailed specifications for the flow measuring device. **[Section 7]**

N/A 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.

N/A A. If the project includes a pump station, the pump performance curve. **[Section 8]**

N/A B. If the project includes gravity sewer lines or force mains, a plan view and profile view for each. **[Section 6]**

N/A 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]**

N/A 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: Minor Modification to a WWTP — Amount: $ 200

Sewer Line Category: N/A — Amount: $ 0

Total Amount: $ 200

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)	**Phone Number (Include area code)**
Jacob Freeman	(314)-550-1167
Signature 	**Date** 2/11/22

FORM W-1

Commonwealth of Kentucky
Energy and Environment Cabinet
Division of Water

CONSTRUCTION PERMIT APPLICATION for WASTEWATER TREATMENT PLANT

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.

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Project City/County: Bryantsville, Garrard County, Kentucky

Name of WWTP: Herrington Haven Subdivision WWTP

KPDES Number of WWTP, if known (for modifications to an existing plant): **KY** 0053431

Estimated cost of WWTP improvements and sewer line extension: $ 227,550

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): Bluegrass Water Utility Operating Company LLC E-mail: jfreeman@cswrgroup.com

Street Address: 1650 Des Peres Road, Suite 303

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

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.

N/A A. A copy of a 7½ minute USGS topographic map, with the WWTP, any proposed sewer lines, service area, and discharge location identified.

N/A 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.

N/A C. For a WWTP located within a planning area, a demonstration that a connection to the regional facility is not available.

N/A 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: Benjamin Kuenzel Firm: 21 Design Group

Street Address: 1351 Jefferson Street Suite 301

City, State, Zip: Washington, MO 63090

Phone: 636-432-5029 Fax: N/A E-mail: ben@21designgroup.net

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: Benjamin Kuenzel Firm: 21 Design Group

Street Address: 1351 Jefferson Street Suite 301

City, State, Zip: Washington, MO 63090

Phone: 636-432-5029 Fax: N/A E-mail: ben@21designgroup.net

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 NH_3-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.

N/A 1. A schematic drawing of the facility layout and explanation of the proposed facility and method of operation. **[Section 3]**

N/A 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.

N/A 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]**

N/A 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]**

N/A 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]**

N/A 2. A Sludge Management Plan for WWTPs, including the sludge processing method and how sludge will be ultimately disposed. **[Section 3]**

N/A 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]**

N/A 4. A description of and detailed specifications for the flow measuring device. **[Section 7]**

N/A 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.

N/A A. If the project includes a pump station, the pump performance curve. **[Section 8]**

N/A B. If the project includes gravity sewer lines or force mains, a plan view and profile view for each. **[Section 6]**

N/A 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]**

N/A 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: Minor Modification to a WWTP — Amount: $ 200

Sewer Line Category: N/A — Amount: $ 0

Total Amount: $ 200

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)	**Phone Number (Include area code)**
Jacob Freeman	(314)-550-1167
Signature 	**Date** 09/28/2020

FORM W-1

Commonwealth of Kentucky
Energy and Environment Cabinet
Division of Water

CONSTRUCTION PERMIT APPLICATION for WASTEWATER TREATMENT PLANT

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: Golden Acres WWTF Improvements

Project City/County: Calvert City, Marshall County

Name of WWTP: Golden Acres Subdivision WWTF

KPDES Number of WWTP, if known (for modifications to an existing plant): **KY** 0044164

Estimated cost of WWTP improvements and sewer line extension: $ $210,000.00

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): Bluegrass Water Utility Operating Company LLC E-mail: jfreemann@cswrgroup.com

Street Address: 1650 Des Peres Rd, Suite 303

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

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.

N/A A. A copy of a 7½ minute USGS topographic map, with the WWTP, any proposed sewer lines, service area, and discharge location identified.

N/A 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.

N/A C. For a WWTP located within a planning area, a demonstration that a connection to the regional facility is not available.

N/A 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".

4 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: Benjamin Kuenzel Firm: 21 Design Group

Street Address: 1351 Jefferson Street Suite 301

City, State, Zip: Washington, MO 63090

Phone: 636-432-5029 Fax: N/A E-mail: ben@21designgroup.net

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: Benjamin Kuenzel Firm: 21 Design Group

Street Address: 1351 Jefferson Street Suite 301

City, State, Zip: Washington, MO 63090

Phone: 636-432-5029 Fax: N/A E-mail: ben@21designgroup.net

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 NH_3-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.

N/A 1. A schematic drawing of the facility layout and explanation of the proposed facility and method of operation. **[Section 3]**

N/A 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.

N/A 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]**

N/A 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]**

N/A 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]**

N/A 2. A Sludge Management Plan for WWTPs, including the sludge processing method and how sludge will be ultimately disposed. **[Section 3]**

N/A 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]**

N/A 4. A description of and detailed specifications for the flow measuring device. **[Section 7]**

N/A 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.

N/A 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]**

N/A 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]**

N/A 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: Minor Modification to a WWTP Amount: $ 200

Sewer Line Category: _____ Amount: $ _____

Total Amount: $ 200

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)	**Phone Number (Include area code)**
Jacob Freeman	(314)-550-1167
Signature 	**Date** 12/21/2020

FORM W-1

Commonwealth of Kentucky
Energy and Environment Cabinet
Division of Water

CONSTRUCTION PERMIT APPLICATION for WASTEWATER TREATMENT PLANT

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: Great Oaks Wastewater Facility Improvements

Project City/County: Paducah/McCracken County

Name of WWTP: Great Oaks Subdivision WWTP

KPDES Number of WWTP, if known (for modifications to an existing plant): **KY** 0080845

Estimated cost of WWTP improvements and sewer line extension: $ 183,500.00

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): Bluegrass Water Utility Operating Company LLC E-mail: jfreeman@cswrgroup.com

Street Address: 1650 Des Peres Road, Suite 303

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

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.

N/A A. A copy of a 7½ minute USGS topographic map, with the WWTP, any proposed sewer lines, service area, and discharge location identified.

N/A 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.

N/A C. For a WWTP located within a planning area, a demonstration that a connection to the regional facility is not available.

N/A 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".

4 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: Benjamin Kuenzel Firm: 21 Design Group

Street Address: 1351 Jefferson St. Suite 301

City, State, Zip: Washington, MO 63090

Phone: 636-432-5029 Fax: N/A E-mail: ben@21designgroup.net

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: Benjamin Kuenzel Firm: 21 Design Group

Street Address: 1351 Jefferson St. Suite 301

City, State, Zip: Washington, MO 63090

Phone: 636-432-5029 Fax: N/A E-mail: ben@21designgroup.net

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 NH_3-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.

N/A 1. A schematic drawing of the facility layout and explanation of the proposed facility and method of operation. **[Section 3]**

N/A 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.

N/A 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]**

N/A 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]**

N/A 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]**

N/A 2. A Sludge Management Plan for WWTPs, including the sludge processing method and how sludge will be ultimately disposed. **[Section 3]**

N/A 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]**

N/A 4. A description of and detailed specifications for the flow measuring device. **[Section 7]**

N/A 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.

N/A A. If the project includes a pump station, the pump performance curve. **[Section 8]**

N/A B. If the project includes gravity sewer lines or force mains, a plan view and profile view for each. **[Section 6]**

N/A 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]**

N/A 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: Minor Modification to a WWTP — Amount: $ 200.00

Sewer Line Category: N/A — Amount: $

Total Amount: $ 200.00

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)	**Phone Number (Include area code)**
Jacob Freeman	(314)-550-1167
Signature 	**Date** 09/29/2020

FORM W-1

Commonwealth of Kentucky
Energy and Environment Cabinet
Division of Water

CONSTRUCTION PERMIT APPLICATION for WASTEWATER TREATMENT PLANT

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: Herrington Haven WWTP System Upgrades

Project City/County: Bryantsville, Garrard County, Kentucky

Name of WWTP: Herrington Haven Subdivision WWTP

KPDES Number of WWTP, if known (for modifications to an existing plant): **KY** 0053431

Estimated cost of WWTP improvements and sewer line extension: $ 227,550

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): Bluegrass Water Utility Operating Company LLC E-mail: jfreeman@cswrgroup.com

Street Address: 1650 Des Peres Road, Suite 303

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

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.

N/A A. A copy of a 7½ minute USGS topographic map, with the WWTP, any proposed sewer lines, service area, and discharge location identified.

N/A 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.

N/A C. For a WWTP located within a planning area, a demonstration that a connection to the regional facility is not available.

N/A 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: Benjamin Kuenzel Firm: 21 Design Group

Street Address: 1351 Jefferson Street Suite 301

City, State, Zip: Washington, MO 63090

Phone: 636-432-5029 Fax: N/A E-mail: ben@21designgroup.net

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: Benjamin Kuenzel Firm: 21 Design Group

Street Address: 1351 Jefferson Street Suite 301

City, State, Zip: Washington, MO 63090

Phone: 636-432-5029 Fax: N/A E-mail: ben@21designgroup.net

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 NH_3-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.

N/A 1. A schematic drawing of the facility layout and explanation of the proposed facility and method of operation. **[Section 3]**

N/A 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.

N/A 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]**

N/A 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]**

N/A 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]**

N/A 2. A Sludge Management Plan for WWTPs, including the sludge processing method and how sludge will be ultimately disposed. **[Section 3]**

N/A 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]**

N/A 4. A description of and detailed specifications for the flow measuring device. **[Section 7]**

N/A 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.

N/A A. If the project includes a pump station, the pump performance curve. **[Section 8]**

N/A B. If the project includes gravity sewer lines or force mains, a plan view and profile view for each. **[Section 6]**

N/A 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]**

N/A 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: Minor Modification to a WWTP — Amount: $ 200

Sewer Line Category: N/A — Amount: $ 0

Total Amount: $ 200

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)	**Phone Number (Include area code)**
Jacob Freeman	(314)-550-1167
Signature 	**Date** 09/28/2020

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.
Brocklyn WWTF
KYPDES Permit No. KY0081299
Agency Interest No. 2809

Corrective Action Plan Revision:

I am pleased to submit this update to the Corrective Action Plan for the Brocklyn WWTF approved by EEC/DEP on 1/28/2020. 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. Basic cleanup of the site, repairs to the contact chamber (including extending the walls to prevent continued overflows, installation of riprap in the drainage ditch to prevent further erosion, and a full cleanout of the lagoon cell have been completed since acquisition. As discussed previously, the tankage of the Brocklyn extended aeration plant is severely deteriorated with wastewater coming in direct contact with soils in the basin where walls are deteriorating. It has been determined that attempting to excavate around the outside and repair the tank or draining the tanks to make repairs would result in the tank collapsing completely and therefore the plant needs to be replaced. Construction permits for a MBBR extended aeration plant have been submitted and are in the permit approval process, KYDEP is currently having Bluegrass explore the possibility of connecting to a nearby POTW. As part of this process, we recently conducted flow monitoring and submitted actively monitored flow data to the POTW to evaluate feasibility of connecting. Until it is determined if the plant will be replaced or a connection made to the POTW the plant will continue to operate as is. It is currently consistently meeting limits, but the deteriorating condition of the plant still requires action.

Whether the solution is replacing the plant, or connecting to the POTW, Bluegrass hopes to proceed quickly with improvements following permit approval. We believe that work will proceed quickly following approval of the permit and expect to complete the improvements at Brocklyn by July 18, 2022, assuming the permit is issued in the near future. Following the improvements included in the construction permit 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

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Brocklyn Utilities LLC WWTP
Josiah Cox
500 Northwest Plaza Dr Ste 500

Saint Ann, MO 63074

63074$2220 C015

DEC 22 2020

AI: 2809

DP

AI: 2809

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Kentucky
UNBRIDLED SPIRIT

ENERGY AND ENVIRONMENT CABINET

Department for Environmental Protection
300 Sower Boulevard
Frankfort, KY 40601

09/21/20

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Brocklyn Utilities LLC WWTP
Josiah Cox
500 Northwest Plaza Dr Ste 500

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DP

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

April 28, 2022

Jacob Freeman
Bluegrass Water Utility Operating Company, LLC
1650 Des Peres Rd Ste 303
Saint Louis, MO 63131

Re: Brocklyn Utilities WW Facility Improvements
Madison County, Kentucky
Brocklyn Utilities LLC WWTP
Activity ID #: 2809, APE20200001
Receiving Treatment Plant KPDES #: KY0081299

Dear Jacob Freeman:

Upon your request, the Division of Water is withdrawing your plans and specifications from our review process. If you have any questions on this correspondence, please contact Daniel Kulik at 502-782-6998.

Sincerely,

Terry Humphries, P.E.
Supervisor, Engineering Section
Water Infrastructure Branch
Division of Water

TH / DK
Enclosures
c: 21 Design Group

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 17, 2020

Jake Freeman
Central States Water Resources
500 Northwest Plaza Dr., Suite 500
St. Ann, MO 63074

Re: AI Name: Great Oaks WWTP
AI No. 3041
Case No. DOW-19-3-0148
Activity No. ERF20190001
Facility ID: KY0080845
McCracken County

Dear Mr. Freeman:

Thank you for your submission of a Corrective Action Plan ("CAP") dated December 26, 2019, for the facility listed above, which the Cabinet has reviewed and accepted. The Division of Water has no comments regarding this CAP. Feel free to contact me at 502-782-8638 or wesley.dement@ky.gov should you have any questions or concerns

Sincerely,

BLUEGRASS WATER
Utility Operating Company
A CSWR Managed Utility

May 20, 2022

Nicholas Fields
Kentucky Department of Environmental Protection
Division of Enforcement
300 Sower Blvd., 3rd Floor
Frankfort, KY 40601

RE: Bluegrass Water Utility Operating Company, LLC
Herrington Haven WWTP
KYPDES Permit No. KY0053431
Agency No. 1469

On behalf of Bluegrass Water Utility Operating Company, Inc., we are submitting this letter per the EEC's requirement consistent with the current CAO plan that was approved on October 24, 2021. We are continuing to work to meet effluent compliance for this facility.

BWUOC is currently waiting for CPCN approval for construction and KDOW has not approve our construction permit for this facility. KDOW requested additional information, with regards to the construction plan submitted by 21 Design Group. The assigned engineering firm responded to all questions presented by KDOW and feedback for scope of work continues to be on-hold.

Construction equipment has been ordered. Construction materials have started to arrive, and improvements will begin as soon as construction permit approval is confirmed by Div. of Water. However, some of the main equipment materials have been delayed on delivery due to shortages and/or limited production. Some of the construction can be started but we are working closely with the manufacturers to ensure all goods and materials are available once approval is confirmed.

Please let us know if this letter does not meet the status report requirements of achieving system compliance.

Sincerely,

Enrique Chavez Jr.
Utility Project Manager
Email: echavez@cswrgroup.com
Office: (314) 380-8043
Mobile: (314) 437-5714

CSWR
Central States Water Resources

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

April 18, 2023

Enrique Chavez
500 NW Plaza Drive, Suite 500
Saint Ann, MO 63074

Re: AI Name: Golden Acres WWTP
AI No. 2935
Case No. DOW-19-3-0156
Activity No. ERF20190002
Marshall County

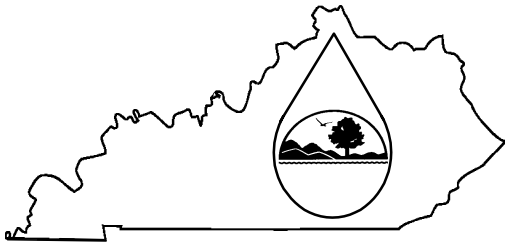
Dear Mr. Chavez:

The Division of Enforcement has determined that the Bluegrass Water Utility Company has complied with the terms and conditions of the Agreed Order, executed on September 3, 2019. The Division considers Case No. DOW 19-3-0156 resolved and closed. Please contact me at 502-782-5273 or nicholas.fields@ky.gov if you have any questions.

Sincerely,

Nicholas Fields
Environmental Enforcement Specialist
Division of Enforcement

Form DW-2



Commonwealth of Kentucky
Energy and Environment Cabinet
Division of Water

Construction Application
For Drinking Water Treatment

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, by e-mail at WIBEngineering@ky.gov or visit our website at http://water.ky.gov for more information.

I. Treatment Project Information

Project Name: Herrington Haven WWTP System Upgrades

Project County: Calloway Estimated Project Cost: _____

Project Latitude/Longitude (DMS): _____

Is this a federally funded project:

- ☐ DWSRF
- ☐ SPAP
- ☑ Other: Private Funds

If yes, has an Environmental Information Document (EID) been reviewed and approved? _____

If the project has been submitted to the State Clearinghouse for review, provide the SAI number: _____

Identify all other funding sources: Private Funds

Does this project modify an existing water treatment plant? Yes

Provide a DETAILED description of work to be performed for this project. Attach additional sheets as necessary:

The project will consist of converting District 1, District 2A, District 2B and District 3 wells to a pitless well head.

Identify how the sanitary wastewater produced as a result of this project will be handled:

- ☐ Sanitary Sewer WWTP: _____
- ☐ Septic Tank
- ☑ Other: N/A

II. Utility Information

Utility Name: Bluegrass Water Utility Operating Company LLC PWSID: KY0180509

Street Address: 1351 Jefferson Street Suite 301 County: St. Louis

City, State, Zip: Washington, MO 63090

Phone #: 636-432-5029 Fax #: N/A Email: _____

Is the system currently under any type of waterline sanctions or Agreed Orders? Not that we are aware of

If yes, will this project satisfy the terms of or alleviate an agreed order, water budget or any other form of sanction? _____

If yes, describe: _____

_____

III. Design Considerations

A. Plans and Specifications

Plans and specifications shall comply with **401 KAR 8:100** and **"Recommended Standards for Water Works" 2012 Edition (Ten States' Standards)**. All plans must contain a P.E. seal, signature and date of signature with at least one set having an original seal and signature. Provide detailed plans **(no larger than 24" X 36")** which must comply with **401 KAR 8:100**. See the instructions for additional details.

B. Design Engineer

Name: Benjamin Kuenzel Firm: 21 Design Group

Street Address: 1351 Jefferson Street Suite 301

City, State, Zip: Washington, MO 63090

Phone #: 636-432-5029 Fax #: N/A Email: ben@21designgroup.net

C. Design Capacities

Communities Served: _____

Identify the number of connections in the service area: District 1 has 51, District 2 has 127, District 3 has 70.

Current Treatment Plant Design Capacity: _____ Proposed Treatment Plant Design Capacity: _____

Has a Preliminary Engineering Report been submitted and approved? _____

Have Water Withdrawal and KPDES permits been updated? _____

KPDES Permit # _____ Water Withdrawal Permit # _____

What type of treatment is/will be used:

- ☐ Conventional
- ☐ Ballasted Flocculation
- ☐ Membrane
- ☐ Dissolved Air Flotation
- ☐ Other: _____

Is pilot study data provided? _____

D. Other Information to be Submitted with Project

1. Site

☐ *Provide a copy of the U.S.G.S. 7 ½ minute topographic map with the location(s) of the proposed project.*

What is the 100 year flood elevation for the project site? _____

What is the 500 year flood elevation or flood of record for the project site? _____

2. Intake and Raw Water Transmission

Provide the Latitude and Longitude (DMS) of the intake and River Mile Index if known:

Latitude: _____ Longitude: _____ River Mile Index: _____

What is the raw water source? _____

Provide water level elevations for surface water sources:

Low Level: _____

Normal Level: _____

Flood Level: _____

For surface water sources, what type of intake will be used?

☐ Floating

☐ Screened

☐ Wet Well

☐ Other: _____

Does the intake have the capability to draw from multiple levels? No If yes, explain: _____
N/A

Is the intake screened? _____

Is a method for cleaning provided? _____ If yes, describe: _____
N/A

Where is the raw water sample tap located? In Well House

Are any chemicals fed at the intake? Yes If yes, list: 12% Sodium Hypochlorite
N/A

Is the intake more than 5 miles downstream or 1,000 ft upstream of any sewage outfall? No

What is the flow rate into the intake? _____

If a groundwater source is used:

Number of Wells: D1-1, D2-2, D3-2 Well Capacities: 35 GPM each

☐ *Provide water quality and quantity data for test wells.*

Raw Water Pump Data:

Number of Pumps	Capacity (GPM)	TDH	Power (HP)

Are variable frequency drives (VFD) to be used? _____

☐ *Provide proposed pump's characteristic curve along with the efficiency, horsepower and NPSHR data.*

Raw Water Transmission Main Data:

Waterline Material	Waterline Size	Linear Feet

Are any chemicals fed in the raw water transmission main or wet-well? _____

If yes, list: _____

3. Pretreatment/Equalization

Basin Volume: N/A Dimensions: _____

Purpose: _____

Are any chemicals fed here? _____ List the chemicals fed along with the feed locations: _____

N/A

Is aeration used? _____ If yes, purpose and type: _____

N/A

Are provisions to feed carbon provided? _____ Rate: _____

4. Rapid Mix

Type of Rapid Mix:

- ☐ Static Mixer
- ☐ Conventional Rapid Mix
- ☐ Other: N/A

Number of Mixing Basins: _____ Volume: _____ Dimension: _____

Retention Time: _____ Velocity Gradient (G): _____

5. Flocculation

Number of trains: N/A Number of Stages: _____

Basin Volume: _____ Dimensions: _____

Detention Time: _____ Flow through Rate: _____

Mixer Speed (sec): _____ Is the flocculation speed tapered through the process? _____

6. Sedimentation

Flow Velocity from Flocculation to Sedimentation: N/A

Volume: _____ Dimensions: _____

Flow Through Velocity: _____ Detention Time: _____

Overflow Rate (gpm/ft^2): _____ Weir Loading Rate (gpd/ft): _____

Are tube settlers to be used? _____ Dimensions: _____

Are Plate Settlers Used? _____ Dimensions: _____

What percentage of the projected horizontal plate area is the overflow rate for plate settlers based? _____

Is a sludge collection system provided? _____ Describe: _____

N/A

Is Ballasted Flocculation used? _____

If yes, provide the following:

Number of trains: _____ Capacity: _____ Basin Volumes: _____

Basin Dimensions: _____ Retention Time: _____

Number of Hydrocyclones: _____ Hydrocyclone Capacity (GPM): _____

Number of Recycle Pumps: _____ Recycle Pump Capacity (GPM): _____

Overflow Rate (GPM/ft^2): _____ Number of Contact Basins: _____

Contact Basin Volume: _____ Contact Basin Dimensions: _____

Contact Time: _____

7. Filtration

Granular Media

Type of Filtration: N/A Number of Filters: _____

Filter Area: _____ Total Filter Box Depth: _____

Media	Depth	Effective Size	Uniformity Coefficient

Filtration Rate at Design Capacity: _____

Number of Backwash Pumps	Capacity	TDH	Power (HP)

Backwash Rate: _____

What is the source of the wash water supply? _____

Is air scouring or surface wash utilized? _____ Which? _____

Number of Backwash Troughs: _____ Dimensions: _____

Design Flow (gpm): _____ Distance from media surface to bottom of backwash trough: _____

Are rate of flow controllers provided for backwashing? _____

Is filter-to-waste capability provided? _____

Turbidimeter Locations:

- ☐ Raw Water
- ☐ Top of Filter
- ☐ Individual Filter Effluent (prior to filter-to-waste)
- ☐ Combined Filter Effluent
- ☐ Other: _____

Membranes

Type of membrane: _____ Capacity: _____ # of Skids: _____

Water Flux Rate (gpd/ft^2): _____ Permeate Recovery (%): _____

Operating Pressure (psi): _____ Design Temperature (^{o}F): _____

What cleaning agent will be used? _____ Cleaning Frequency: _____

☐ *Provide capacity calculations used to size membrane filters.*

8. Clearwell

Number of Clearwells	Capacity	Dimensions	Baffled (yes/no)
N/A			

If an offsite tank is used as a clearwell, provide location, coordinates and capacity: _____

_____

☐ *Provide Contact Time (CT) Calculations.*

9. High Service Pumps

Number of Pumps	Capacity (GPM)	TDH	Power (HP)

Are variable frequency drives (VFD) to be used? _____

☐ *Provide proposed pump's characteristic curve along with the efficiency, horsepower and NPSHR data.*

10. Disinfection

Check all forms of disinfection to be used:

- ☐ Chlorine Gas
- ☑ Hypochlorite
- ☐ Chloramines
- ☐ UV
- ☐ Other: _____

List the locations of all disinfectant injection points: _____

~~N/A~~

_____

Chlorine Room Information:

Exhaust Fan Capacity (cfm): _____ Air Exchange Rate: _____

Are air inlet louvers near the ceiling? _____ Do ventilation fans take suction near the floor? _____

Is the chlorine room equipped with panic hardware and alarms? _____

Is a bottle of Ammonium Hydroxide provided? _____

Does the chlorine room have a shatterproof inspection window? _____

Is SCBA equipment meeting NIOSH requirements located outside of the chlorine room? Yes

Are separate switches for fans and lights provided outside of the chlorine room? _____

Is a gas scrubber provided? _____

UV Information:

UV Wavelength: _____ Dosage (MJ/cm^2): _____

Are the bulbs protected? _____

Is the UV assembly accessible for cleaning and replacement of the bulbs, jackets, etc? _____

Is a sensor provided to ensure UV light is being delivered at the appropriate wavelength and dosage? _____

Ammonia Information:

Exhaust Fan Motor Capacity (cfm): _____ Air Exchange Rate: _____

Is ammonia room equipped with panic hardware and alarms? _____

Does the ammonia room have a shatterproof inspection window? _____

Are separate switches for fans and lights provided outside of the room? _____

Is a gas scrubber provided? _____

11. Other Chemicals

Provide information about chemicals to be used in the treatment process below:

Chemical	Purpose	Feed Location	Bulk Tank (gal)	Day Tank (gal)	Feed Rate at Design Capacity
N/A					

Will Carbon be added as a premixed slurry or dry feed? _____

If dry feed, what is the hopper capacity? _____

Are fireproof/explosion proof precautions provided? _____ Describe: _____
N/A

Are floor drains and containment provided? _____

Chemical	Containment Capacity

12. Treatment Wastewater

Disposal Method for Treatment Wastewater:

- ☐ Lagoons
- ☐ Dewatering
- ☑ Other: N/A

How much treatment wastewater does the water treatment plant produce? _____

Lagoon capacity: _____

Where does the decant water discharge? _____

13. General

- ☐ *Provide a process flow schematic.*
- ☐ *Provide a signed letter of acceptance from the utility, which states that the utility has reviewed and approved the plans and specifications.*
- ☐ *If the project is funded by a State Revolving Fund Loan (SRF) provide a completed SRF Plans and Specifications Checklist along with 1 complete printed copy of the project specifications.*

IV. Fees

Check or money order must be made payable to "Kentucky State Treasurer" for the total amount. Fees do not apply to projects FUNDED by a municipality, water district, or other publicly owned utility.

Project Category: Disinfection Only Total Amount: $ 250