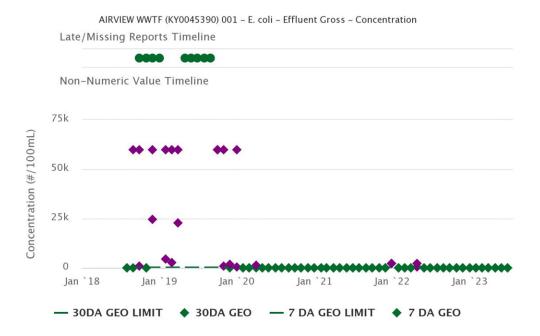
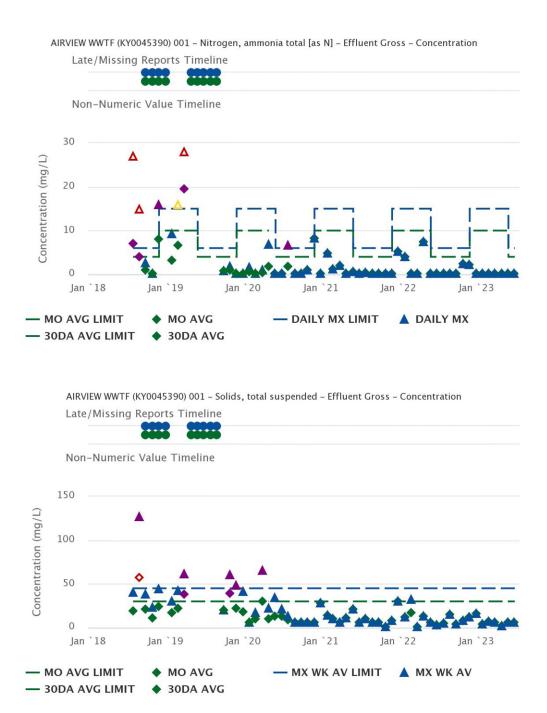
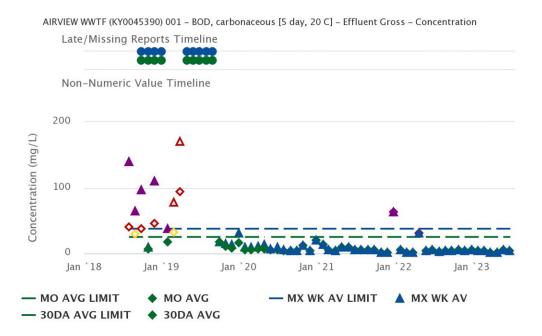
#### Airview:

- NOTE: While the CPCN requested in Case No 2020-00290 was not granted, the PSC did approve
  including the capital improvements described below in rate base, acknowledging the necessity of
  the improvements for proper environmentally compliant system function and reliable service
  which does not represent wasteful duplication.
- (1) The rehabilitation of the Airview system included repairs and replacements of aeration equipment, tankage, clarifier, fencing, power and control systems, disinfection system, and outfall. The improvements also included clearing nuisance vegetation and debris from throughout the site, repairing and installing operator safety equipment, and establishing wet weather flow management, which was accomplished by restoring the function of the previously bypassed onsite lagoon cell with new pumping equipment to handle excessive flow to the facility. Prior to these improvements, the facility was consistently incapable of compliance with permitted limits and environmental regulation, depositing significant quantities of sludge in the receiving creek. Failing to comply with environmental requirements constitutes noncompliance and a general failure of the facility to deliver the service that customers pay for prior to these improvement projects.
- (2) Below are effluent charts from the EPA ECHO (Enforcement and Compliance History Online) system showing the test results for E. Coli, ammonia, total suspended solids, and BOD. These represent the most significant effluent measure to indicate facility function. Note that all effluent parameters were regularly grossly in excess of permit limits prior to early 2020. As the rehabilitation projects were completed the facilities have largely fallen into compliance, empirically demonstrating the necessity of these projects.







The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current rate case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided with Case No. 2020-00290.

(3) The only portion specifically excluded from the Airview project was the installation of the Mission remote monitoring systems, which is still under consideration in the pending CPCN request: Case No. 2022-00216.

# **Brocklyn:**

NOTE: The Brocklyn capital expenses were not included in rate base in Case No. 2020-00290 largely because there was a pending construction permit application, which was later withdrawn for the original project plan for the Brocklyn WWTF.

- (1) While the facility did not violate permit limits as consistently as some other systems acquired by Bluegrass Water, the condition of the system was arguably poorer, with much of the equipment having reached the end of its useful life, and much of the steel equipment and tankage literally was falling apart. This meant the system was at risk for sudden catastrophic treatment failure. In light of the poor condition, total plant replacement was originally planned. However after a period of operation by Bluegrass Water immediately after closing, the construction permit application was withdrawn, and more typical plant rehabilitation was planned to bring the facility into compliance. The rehabilitation of the Brocklyn system included repairs and replacements of aeration equipment, tankage, the clarifier, fencing, the lift station, the collection system, power and control systems, and the disinfection system. The lagoon cell was nearly filled with sludge and was leaking over the levee, so improvements also included the cleanout and repair of the lagoon. Bluegrass Water also repaired or installed operator safety equipment. These improvements have restored the condition of the treatment plant and made total plant replacement unnecessary.
- (2) The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current rate case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided in Case No. 2020-00290.
- (3) As described above, capital improvements at the Brocklyn site were excluded from rate base prior to the shift to a more typical rehabilitation project; thus, the particular expenses incurred, and for which recovery is sought herein, were not excluded from rate base in Case No. 2020-00290. Separate from the other capital improvements, the installation of the Mission remote monitoring systems has been withheld and is still under consideration in the pending CPCN request: Case No. 2022-00216.

# **Carriage Park:**

NOTE: While the CPCN requested in Case No. 2020-00290 was not granted, the PSC did include in rate base costs associated with the capital improvements described below, thereby acknowledging the improvements were needed for proper environmentally compliant system function and to ensure reliable service. These acknowledgements confirm the projects do not constitute wasteful duplication.

- (1) The Carriage Park facility was largely in good condition at acquisition and was operating in compliance with the county health department regulations governing non-discharging system. The only capital expense included was related to installation of an all-weather access road (gravel) to ensure operators can reach the system in any weather condition. This is essential because emergency operations activities are more likely to be required during adverse weather. During adverse weather the facility was inaccessible prior to the access road improvements.
- (2) The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current rate case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided in Case No. 2020-00290.
- (3) No submitted capital improvement at the Carriage Park system was excluded from rate base.

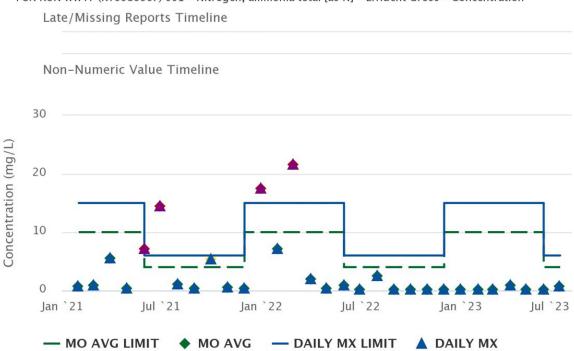
# **Delaplain Disposal:**

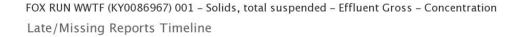
- (1) A majority of the capital improvements planned for the Delaplain disposal plant were approved in CPCN Case No. 2022-00104. Therefore, the only additional items responsive to this data request are an acquisition related item, the replacement of a damaged pump, and the installation of remote monitoring equipment. The pump replacement was necessary for proper function of the facility and the necessity of remote monitoring equipment is discussed in CPCN Case No. 2022-00216.
- (2) The pump replacement was completed in the ordinary course of operations of the facility rather than as part of the engineered improvement project. Otherwise, it would have been included in the CPCN Case No. 2022-00104.
- (3) The costs for the project were not authorized for recovery in Case No. 2020-00290 because the Delaplain acquisition had not been completed at the time that case was filed. The only other capital improvement not yet approved pertains to the installation of the Mission remote monitoring system, which is pending in the CPCN request: Case No. 2022-00216.

#### Fox Run:

NOTE: While the CPCN requested in Case No. 2020-00290 was not granted, the PSC did approve including the capital improvements described below in rate base, thereby acknowledging the need for the improvements to ensure environmentally compliant system function and reliable service. These acknowledgments confirm the projects do not represent wasteful duplication.

- (1) The rehabilitation of the Fox Run system included repairs and replacements of aeration equipment, tankage, the lift station and other pumping equipment, the clarifier, fencing, the access road, the collection piping, power and control systems, the disinfection system, and the outfall. The improvements also included clearing nuisance vegetation and debris throughout the site and installation of a new chemical and equipment shed. Prior to these improvements, the facility was incapable of consistent compliance with permit limits and other environmental regulations, notably exceeding ammonia and total suspended solids limits regularly, depositing significant quantities of sludge in the receiving creek. Failing to comply with environmental requirements constitutes noncompliance and, prior to these improvement projects, a general failure of the facility to deliver the service for which customers pay.
- (2) Below are Effluent charts from the EPA ECHO (Enforcement and Compliance History Online) system showing the test results for Ammonia and total suspended solids. These represent the most significant effluent measure to indicate facility function. Note that all effluent parameters were regularly in gross excess of permit limits prior to mid-2022 as the projects were completed and have largely fallen into compliance since, empirically demonstrating the necessity of these projects.







The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current rate case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided with Case No. 2020-00290.

(3) The only portion specifically excluded from the Fox Run project was the installation of the Mission remote monitoring systems which is still in consideration subject to the outcome of the pending CPCN request: Case No. 2022-00216.

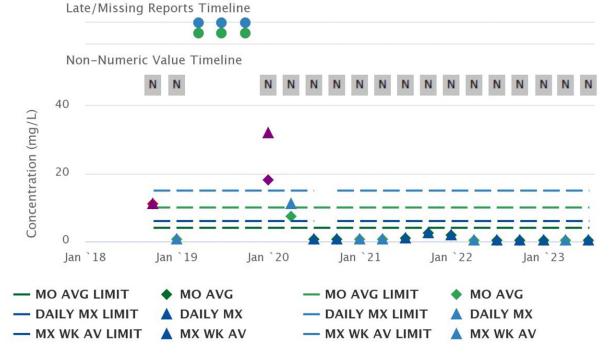
#### **Golden Acres:**

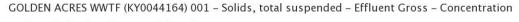
- (1) The rehabilitation of the Golden Acres system, already approved in the first rate case, included repairs and replacements of aeration equipment, tankage, lift station and other pumping equipment, clarifier, access road, power and control systems, disinfection system, outfall. The improvements also included adding an aeration line to the contact chamber to allow for compliance with dissolved oxygen limits, and major modification to the effluent piping. Previously the effluent piping had several greater than 90° turns causing resistance to flow from the facility. During periods of high flow this caused the plant to backup and flood, washing solids into the effluent piping resulting in a feedback loop with backups worsening. This repeatedly caused the plant to wash out, lead to opaque effluent exceeding all significant limits, and caused damage to plant equipment. The line was rerouted and resized to eliminate the turns and prevent further backups. Prior to these improvements, the facility was incapable of consistent compliance with permitted limits and environmental regulation, notably exceeding ammonia, BOD, and total suspended solids limits regularly, depositing significant quantities of sludge in the receiving creek. Failing to comply with environmental requirements constitutes noncompliance and, prior to these improvement projects, a general failure of the facility to deliver the service for which customers pay.
- (2) Below are Effluent charts from the EPA ECHO (Enforcement and Compliance History Online) system showing the test results for BOD, Ammonia, and total suspended solids. These represent the most significant effluent measure to indicate facility function. Note that all effluent parameters were regularly in gross excess of permit limits prior to early 2020 as the projects were completed and have largely fallen into compliance since, empirically demonstrating the necessity of these projects.

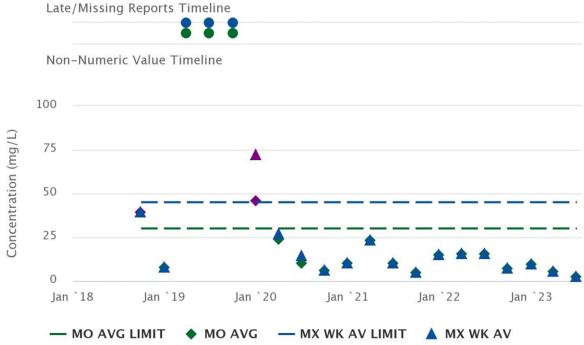
GOLDEN ACRES WWTF (KY0044164) 001 – BOD, carbonaceous [5 day, 20 C] – Effluent Gross – Concentration



GOLDEN ACRES WWTF (KY0044164) 001 – Nitrogen, ammonia total [as N] – Effluent Gross – Concentration





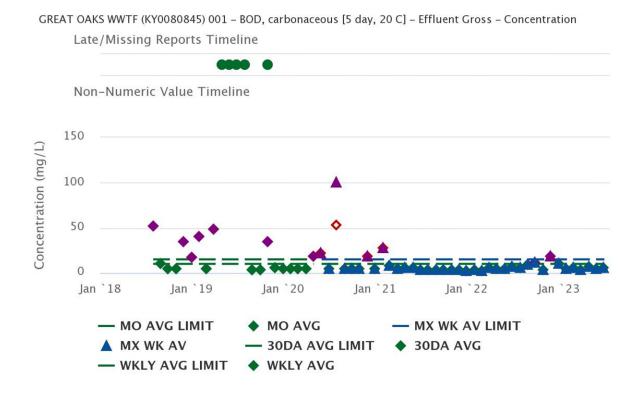


The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current rate case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided with Case No. 2020-00290.

(3) The only portion specifically excluded from the Golden Acres project was the installation of the Mission remote monitoring systems which is still in consideration subject to the outcome of the pending CPCN case: Case No. 2022-00216.

#### **Great Oaks:**

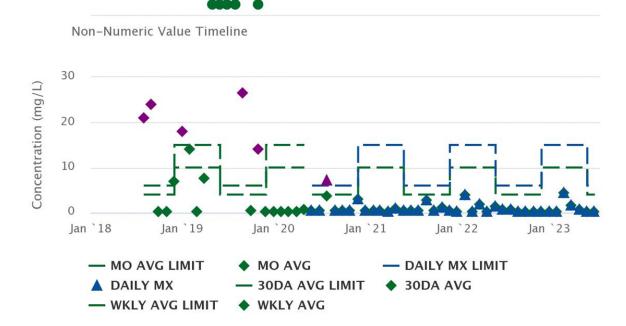
- (1) The rehabilitation of the Great Oaks system, already approved in the first rate case, included repairs and replacements of aeration equipment, tankage, lift station and other pumping equipment, clarifier, power and control systems, disinfection system, outfall. The improvements also included replacement of the existing sludge holding tank. Previously the integrated sludge holding tank had begun to leak sludge into the contact chamber, compromising the facility's ability to consistently meet E.Coli, Ammonia, and BOD limits. Failing to comply with environmental requirements constitutes noncompliance and, prior to these improvement projects, a general failure of the facility to deliver the service for which customers pay.
- (2) Below are Effluent charts from the EPA ECHO (Enforcement and Compliance History Online) system showing the test results for BOD, E.Coli, and Ammonia. These represent the most significant effluent measure to indicate facility function. Note that all effluent parameters were regularly in gross excess of permit limits prior to early 2021 as the projects were completed and have largely fallen into compliance since, empirically demonstrating the necessity of these projects. It is noticeable that Ammonia and E.Coli came into regular compliance earlier than BOD, simply as a result of different phases of the improvements being completed, but this still shows the necessity of the projects.



# $\label{eq:GREAT_OAKS_WWTF} \textbf{(KY0080845) 001 - E. coli - Effluent Gross - Concentration} \\ Late/Missing Reports Timeline$



GREAT OAKS WWTF (KY0080845) 001 – Nitrogen, ammonia total [as N] – Effluent Gross – Concentration Late/Missing Reports Timeline



- (3) The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current rate case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided with Case No. 2020-00290.
- (4) The only portion specifically excluded from the Great Oaks project was the installation of the Mission remote monitoring systems which is still in consideration subject to the outcome of the pending CPCN case: Case No. 2022-00216.

## **Herrington Haven:**

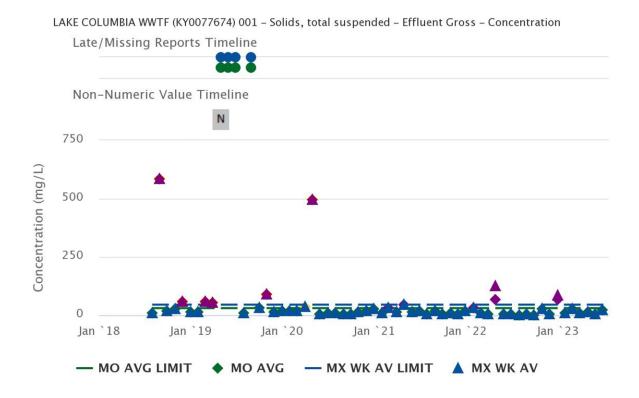
- (1) A majority of the capital improvements planned for the Herrington Haven plant are included in the now approved CPCN, Case No. 2022-00102. The only capital expense included were the installation of gravel to the access road to ensure operators can reach the system in any weather condition, and installation of operator safety equipment (grating and handrails). This is essential as emergency operations activities are more likely to be required during adverse weather which could have made the facility inaccessible prior to the access road improvements, and basic operator safety measures cannot be delayed.
- (2) The access road and safety improvements were completed in the ordinary course of operations of the facility rather than as part of the engineered improvement project, otherwise it would have been included in the request in Case No. 2022-00102.
- (3) The costs for the project were not authorized for recovery in Case No. 2020-00290 because the Herrington Haven acquisition had not been completed at the time that case was filed. The only other capital improvement not yet approved pertains to the installation of the Mission remote monitoring system, which is pending in the CPCN request: Case No. 2022-00216.

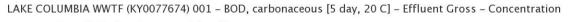
# Kingswood:

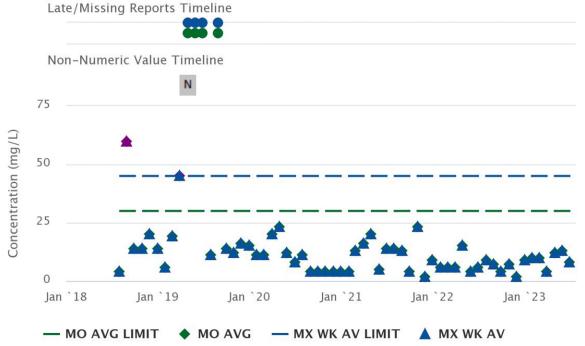
- (1) The rehabilitation of the Kingswood system, already approved in the first rate case, included repairs and replacements of aeration equipment, tankage, lift station and other pumping equipment, clarifier, power and control systems, disinfection system, outfall. While the facility was substantially compliant, many of the components had reached the end of useful life and would require repair or replacement to ensure ongoing function and compliance with permit limits. Failing to comply with environmental requirements constitutes noncompliance and, prior to these improvement projects, a general failure of the facility to deliver the service for which customers pay.
- (2) The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided with Case No.2020-00290.
- (3) The only portion specifically excluded from the Kingswood project was the installation of the Mission remote monitoring systems which is still in consideration subject to the outcome of the pending CPCN request: Case No. 2022-00216.

#### Lake Columbia:

- (1) The rehabilitation of the Lake Columbia system, already approved in the first rate case, included repairs and replacements of aeration equipment, tankage, lift station and other pumping equipment, clarifier, power and control systems, disinfection system, outfall. Previously the integrated sludge holding tank had begun to leak sludge into the contact chamber, compromising the facility's ability to consistently meet BOD, Ammonia, TSS, and E.Coli limits. Failing to comply with environmental requirements constitutes noncompliance and, prior to these improvement projects, a general failure of the facility to deliver the service for which customers pay.
- (2) Below are Effluent charts from the EPA ECHO (Enforcement and Compliance History Online) system showing the test results for TSS, BOD, E.Coli, and Ammonia. These represent the most significant effluent measure to indicate facility function. Note that all effluent parameters were regularly in gross excess of permit limits prior to early 2020 as the projects were completed and have largely fallen into compliance since, empirically demonstrating the necessity of these projects.

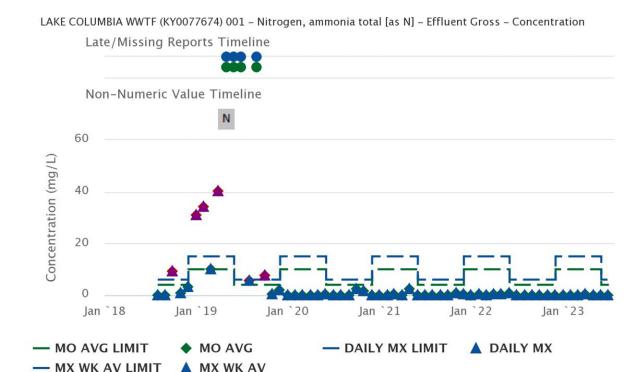












The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current rate case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided with Case No. 2020-00290.

(3) The only portion specifically excluded from the Lake Columbia project was the installation of the Mission remote monitoring systems which is still in consideration subject to the outcome of the pending CPCN request: Case No. 2022-00216.

#### **LH Treatment:**

- (1) The rehabilitation of the LH Treatment system, already approved in the first rate case, included repairs and replacements of safety equipment, disinfection equipment, general site cleanup, and aeration equipment. Additionally, one of the primary issues with the system was accumulation of sludge in the distribution system and digesters. The accumulation led to backups and poor treatment. The system was largely in better condition than many other systems acquired by Bluegrass so the system was largely compliant with permit limits, but required maintenance efforts to ensure continued compliance.
- (2) The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current rate case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided with Case No. 2020-00290.
- (3) The only portion specifically excluded from the Lake Columbia project was the installation of the Mission remote monitoring systems which is still in consideration subject to the outcome of the pending CPCN request: Case No. 2022-00216.

# **Persimmon Ridge:**

- (1) The rehabilitation of the Persimmon Ridge system, already approved in the first rate case, included repairs and replacements of aeration equipment, access road, fencing, lift stations and other pumping equipment, disinfection, lagoon baffles, power and control systems, and collection piping. These improvements were required to restore the full treatment capacity of the Persimmon Ridge system. Even following these improvements, the facility is still failing to meet many permitted limits. This resulted in the preparation and eventual approval of the further improvement projects now approved in the Case No.2022-00046 which will be completed in the future.
- (2) The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current rate case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided with Case No. 2020-00290.
- (3) The only portion specifically excluded from the Persimmon Ridge project was the installation of the Mission remote monitoring systems which is still in consideration subject to the outcome of the pending CPCN request: Case No. 2022-00216.

#### Randview:

- (1) The Randview projects only consisted of restoring the access road, removing vegetation overgrowth, and restoring the function of the lift station essential to the system's function. The system still largely failed to function properly, however further work was delayed first in an effort to connect the system to city treatment, and then when the city expressed its preference to acquire the system. The improvements were needed to halt ongoing sanitary sewage overflows and allow operational access to the facility and provide service to customers.
- (2) The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current rate case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided with Case No. 2020-00290.
- (3) No portions of the Randview capital investments were excluded.

# **River Bluffs:**

- (1) The rehabilitation of the River Bluffs system, was not included in the rate base of the original rate case with a request for further information in a future rate case to justify the costs significantly exceeding the original third party engineering estimate. Ultimately, the original estimate seriously underestimated the amount of steel work required to restore the treatment facility. This is discussed at length in Mr. Freeman's testimony in the current rate case (Case No. 2022-00432) including extensive discussion of why the improvements are not wasteful duplication. Please refer to the testimony for this analysis.
- (2) The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current rate case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided with Case No. 2020-00290, though as discussed before this memorandum underestimated the amount of work required to restore the facility.
- (3) As discussed above all improvements were excluded from rate base in Bluegrass Water's last rate case, with the Commission authorizing Bluegrass Water to seek to recover the costs in its next rate case, which Bluegrass Water does herein.

# **Springcrest:**

- (1) The rehabilitation of the Springcrest system was not included in the rate base of the original rate case as the system had only recently been acquired at the time of the rate case. The only items included was the replacement of a pump for the effluent distribution system and the installation of remote monitoring equipment.
- (2) The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current rate case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided with Case No.2020-00290, though as discussed before this memorandum underestimated the amount of work required to restore the facility.
- (3) The costs for the project were not authorized for recovery in Case No. 2020-00290 because the Springcrest acquisition had not been completed at the time that case was filed. The only other capital improvement not yet approved pertains to the installation of the Mission remote monitoring system, which is pending in the CPCN request: Case No. 2022-00216.

### Timberland:

- (1) The rehabilitation of the Timberland system, already approved in the first rate case, included repairs and replacements of aeration equipment, tankage, lift station and other pumping equipment, clarifier, power and control systems, and disinfection system. The most notable shortcomings of the facility were an influent lift station that splattered influent over the plant so some of it escaped treatment and many leaks in the treatment basin allowing wastewater to leave the facility untreated. The facility rehabilitation was still underway at the end of the test year and was only completed recently so the facility continued to struggle to meet permit limits awaiting the completion of the improvement project.
- (2) The testimony provided by Mr. Freeman in Bluegrass Water's first rate case (Case No. 2020-00290) and the current rate case (Case No. 2022-00432) described these needs and the utility of the recommended improvements. This was also discussed in the engineering memorandum provided with Case No. 2020-00290.
- (3) The only portion specifically excluded from the Timberland project was the installation of the Mission remote monitoring systems which is still in consideration subject to the outcome of the pending CPCN request: Case No. 2022-00216.

#### **Woodland Acres:**

- (1) A majority of the capital improvements planned for the Woodland Acres plant are included in the now approved CPCN, Case No. 2022-00015. The only items included responsive to this data request are an acquisition related item are the installation of grating for operator safety, the reseeding of the plant, and the installation of remote monitoring equipment. These items were required to restore the plant biology for proper treatment, and to ensure operator safety and were essential to complete immediately. As with other systems, the remote monitoring will likely remain excluded from rate base until the resolution of the CPCN request: Case No. 2022-00216.
- (2) These items were normal course of business capital improvements and did not require engineering design. Had they, they would likely have been included in the CPCN request, Case No. 2022-00015
- (3) The costs for the project were not authorized for recovery in Case No. 2020-00290 because the Woodland Acres acquisition had not been completed at the time that case was filed. The only other capital improvement not yet approved pertains to the installation of the Mission remote monitoring system, which is pending in the CPCN request: Case No. 2022-00216.