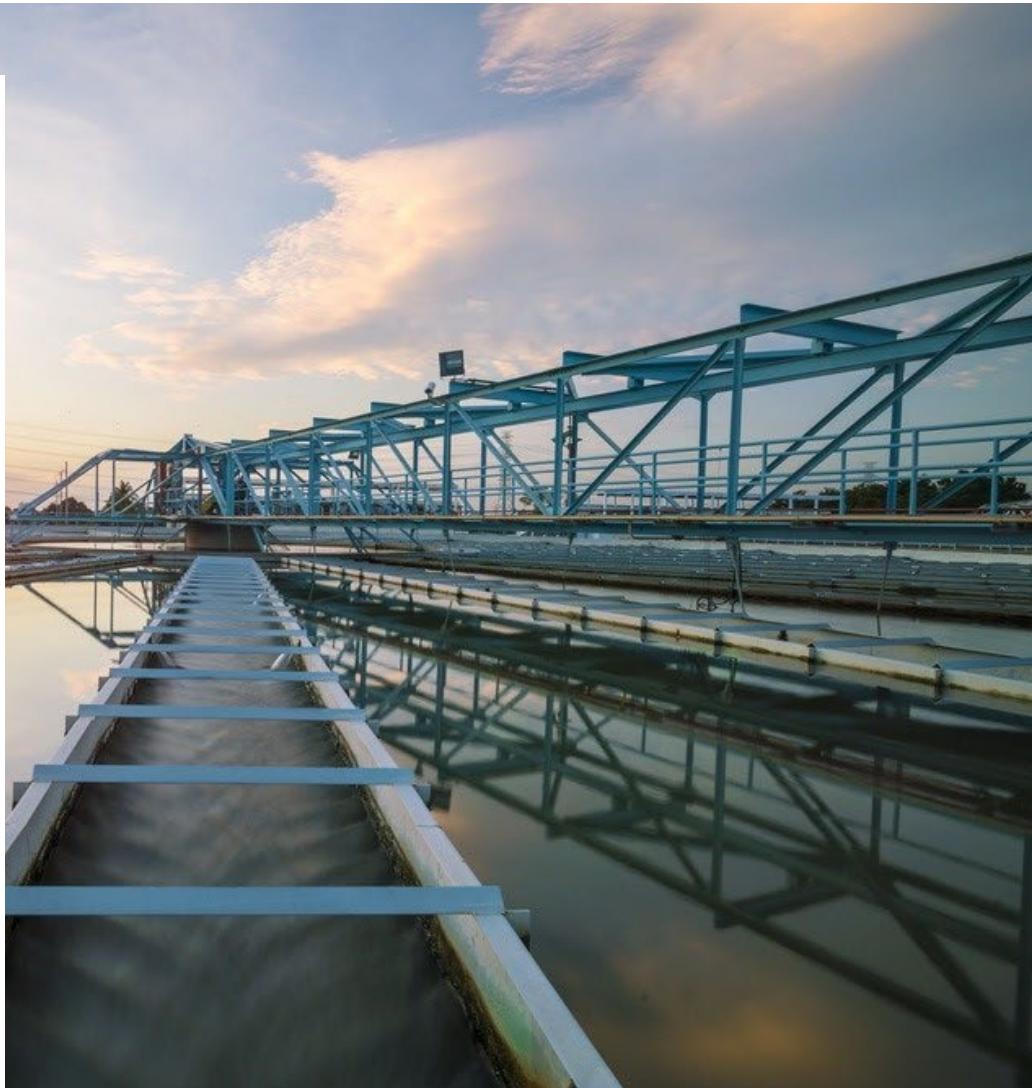


UTILITY REPORT



OCTOBER 2024

King George County
Service Authority

Authored by:
Inboden Environmental
Services, Inc.



INTRODUCTION

This Utility Report provides information on operations, facility performance, equipment issues, and regulatory compliance for the month prior. Information includes items related to water facility productions and wastewater effluent discharge volumes, laboratory analytical data, operations notes, and compliance auditing.

WATER

Operational Notes:

- KGM replaced the faulty starting capacitor on Circle 2.
- Bac Ts collected; all passed.
- Continuing to backwash green sand filters.
- Effectively dosing sodium hypochlorite to maintain disinfection.
- IES found that the air release valve on Filter 2 at Fairview Water Plant had become stuck open, allowing water to leak. KGM cleaned and restored the area to normal operations.

Canterbury Subdivision – PWSID 6099085

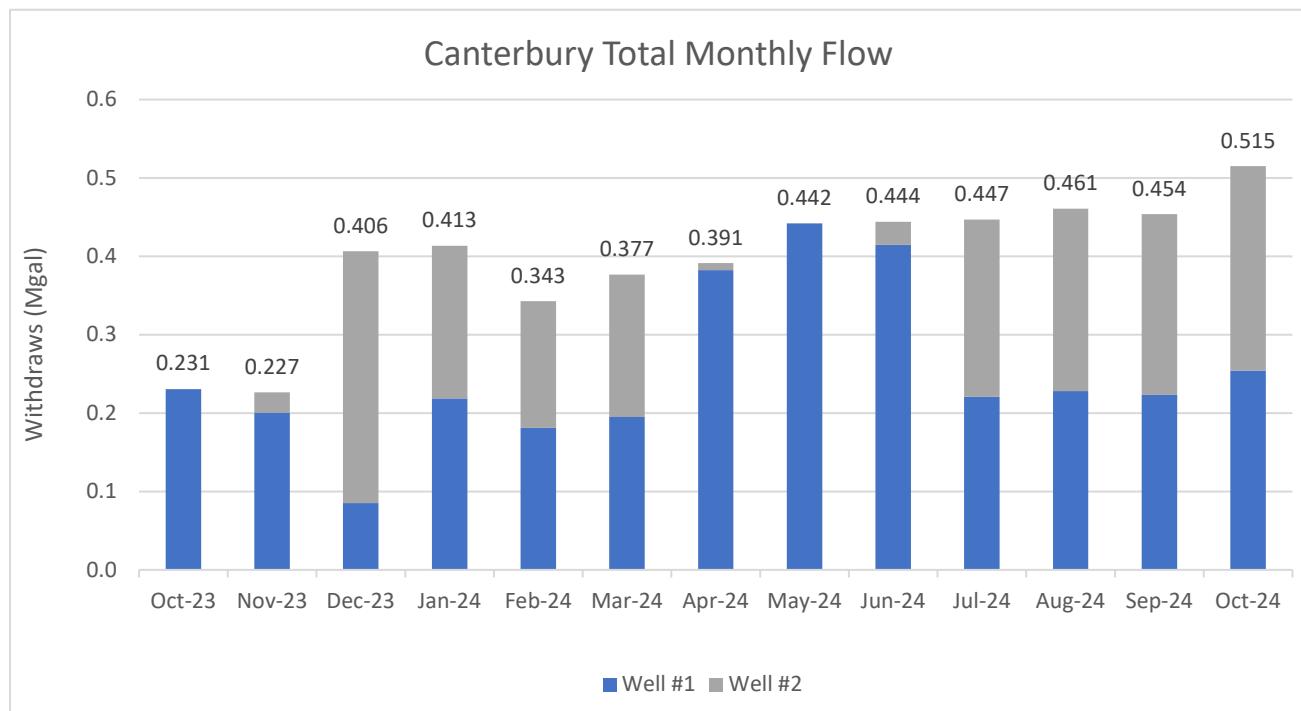
Water Quality:

The Water Treatment facility and distribution system maintained compliance with all required sampling. Routine bacteriological sample results are shown in the table below.

Bacteriological Analysis:

Location Code	Location Address	Date	Result
020	12343 Kent Road	10/11/2024	Absent

System Production:



Circle – PWSID 6099100

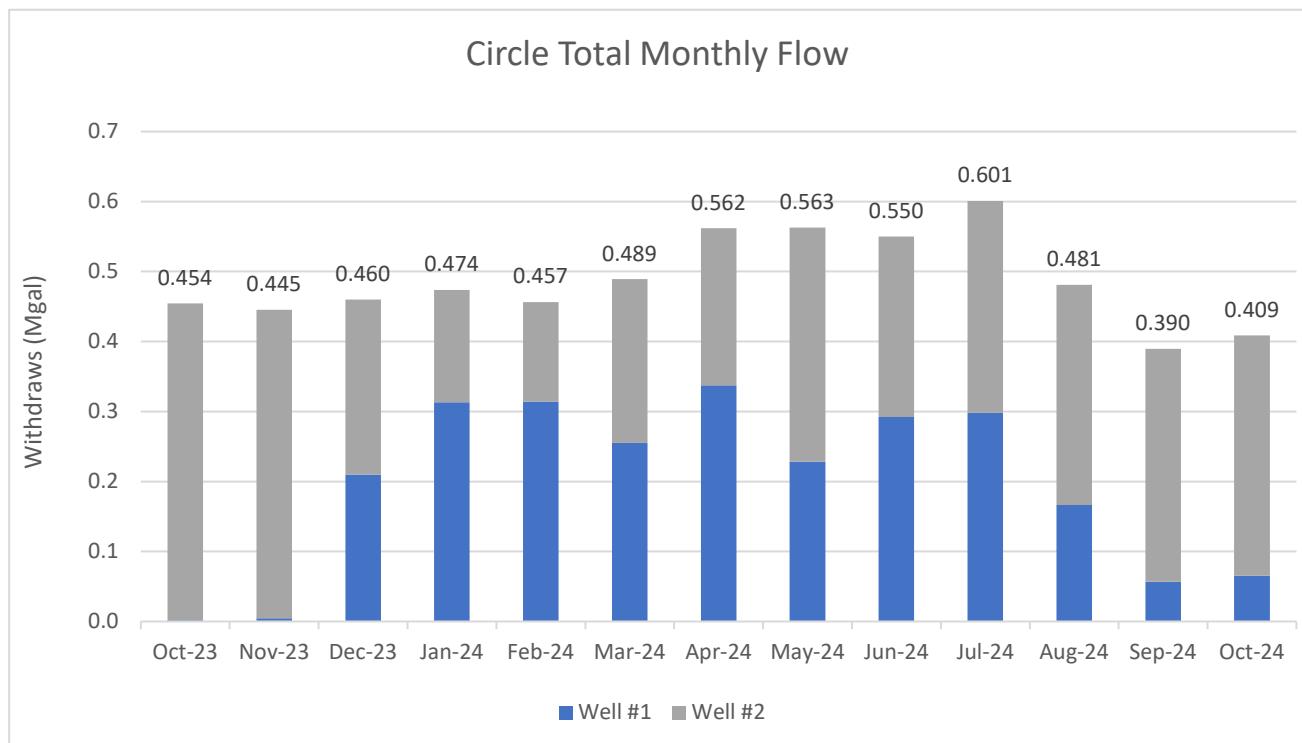
Water Quality:

The Water Treatment facility and distribution system maintained compliance with all required sampling. Routine bacteriological sample results are shown in the table below.

Bacteriological Analysis:

Location Code	Location Address	Date	Result
020	12013 Ridge Road	10/11/2024	Absent

System Production:



KGC Courthouse – PWSID 6099050

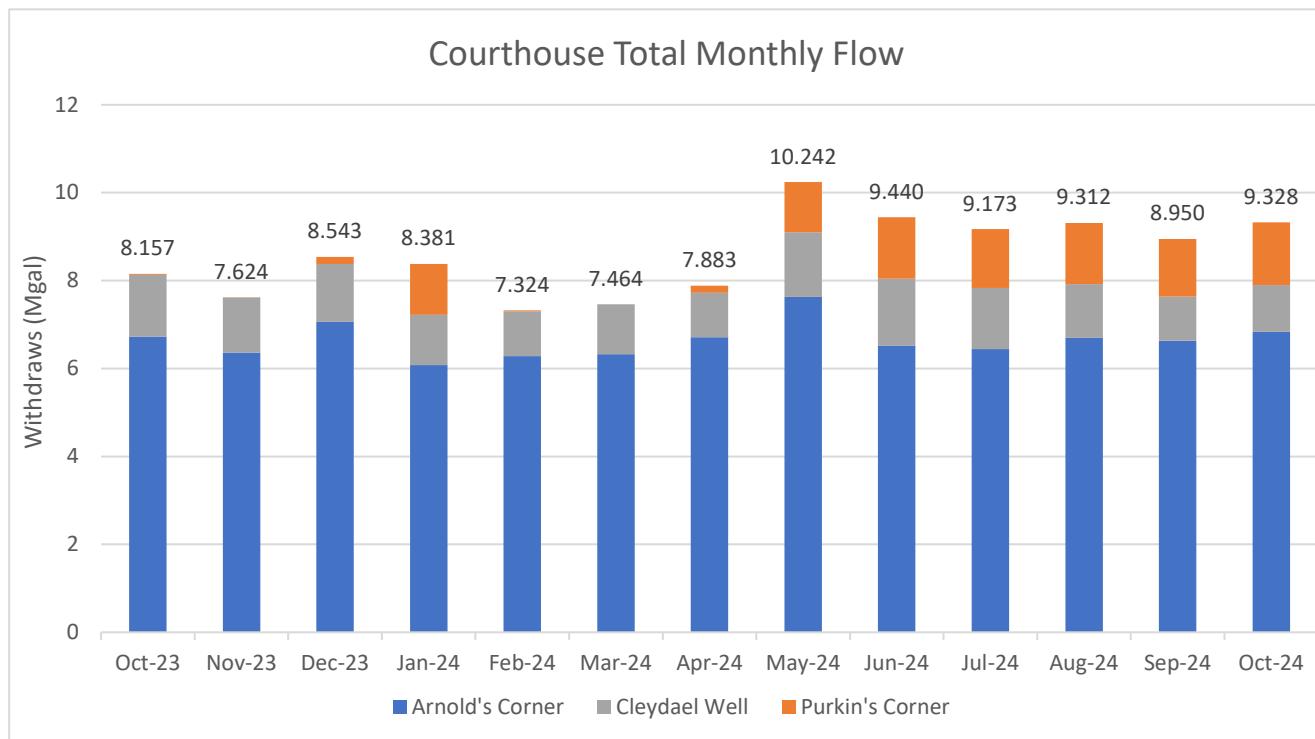
Water Quality:

The Water Treatment facility and distribution system maintained compliance with all required sampling. Routine bacteriological sample results are shown in the table below.

Bacteriological Analysis:

Location Code	Location Address	Date	Result
07	12128 Cleydael Boulevard	10/9/2024	Absent
010	10404 Eisenhower Drive	10/9/2024	Absent
03D	9245 Kings Highway	10/9/2024	Absent
013	8095 Washington Drive	10/9/2024	Absent
02U	8117 Kings Highway	10/16/2024	Absent

System Production:



Dahlgren – PWSID 6099295

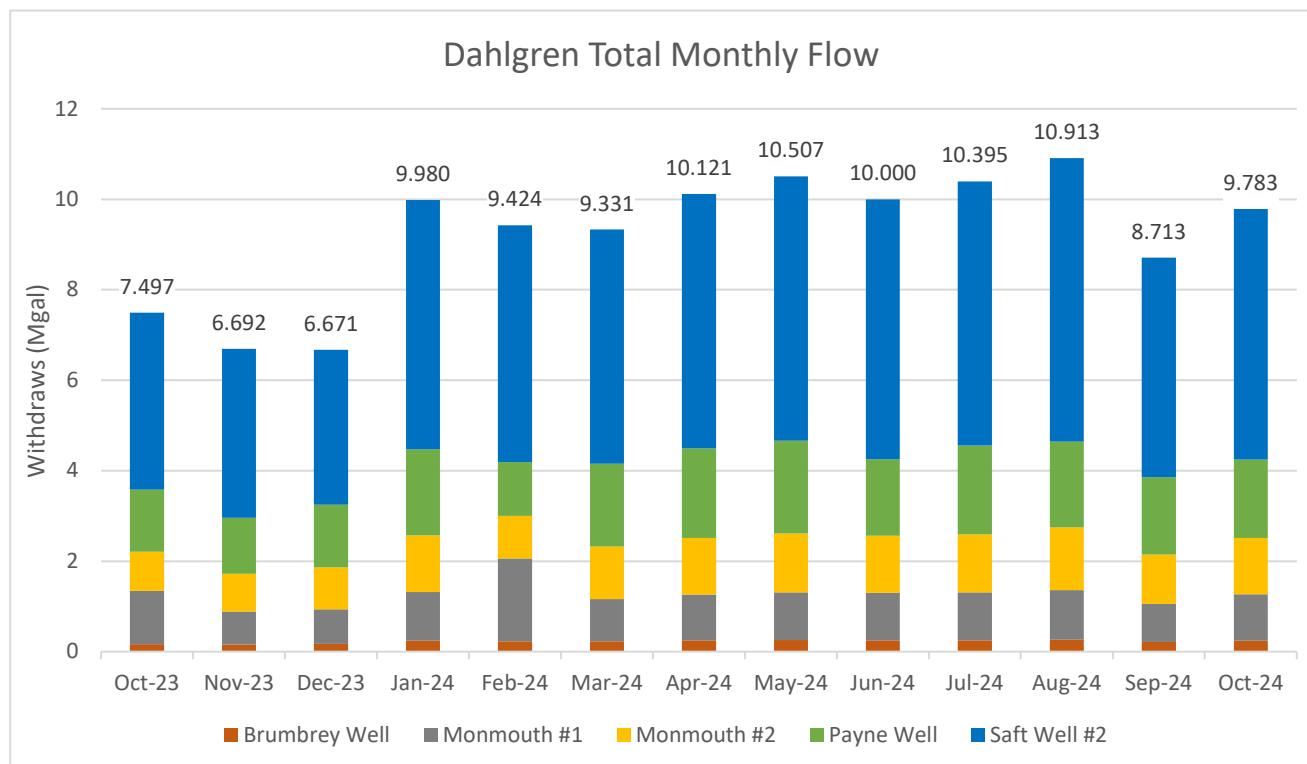
Water Quality:

The Water Treatment facility and distribution system maintained compliance with all required sampling. Routine bacteriological sample results are shown in the table below.

Bacteriological Analysis:

Location Code	Location Address	Date	Result
03	5394 Gordon Drive	10/16/2024	Absent
01	15375 Dahlgren Road	10/16/2024	Absent
04U	17065 Twelfth Street	10/16/2024	Absent

System Production:



Fairview Beach – PWSID 6099250

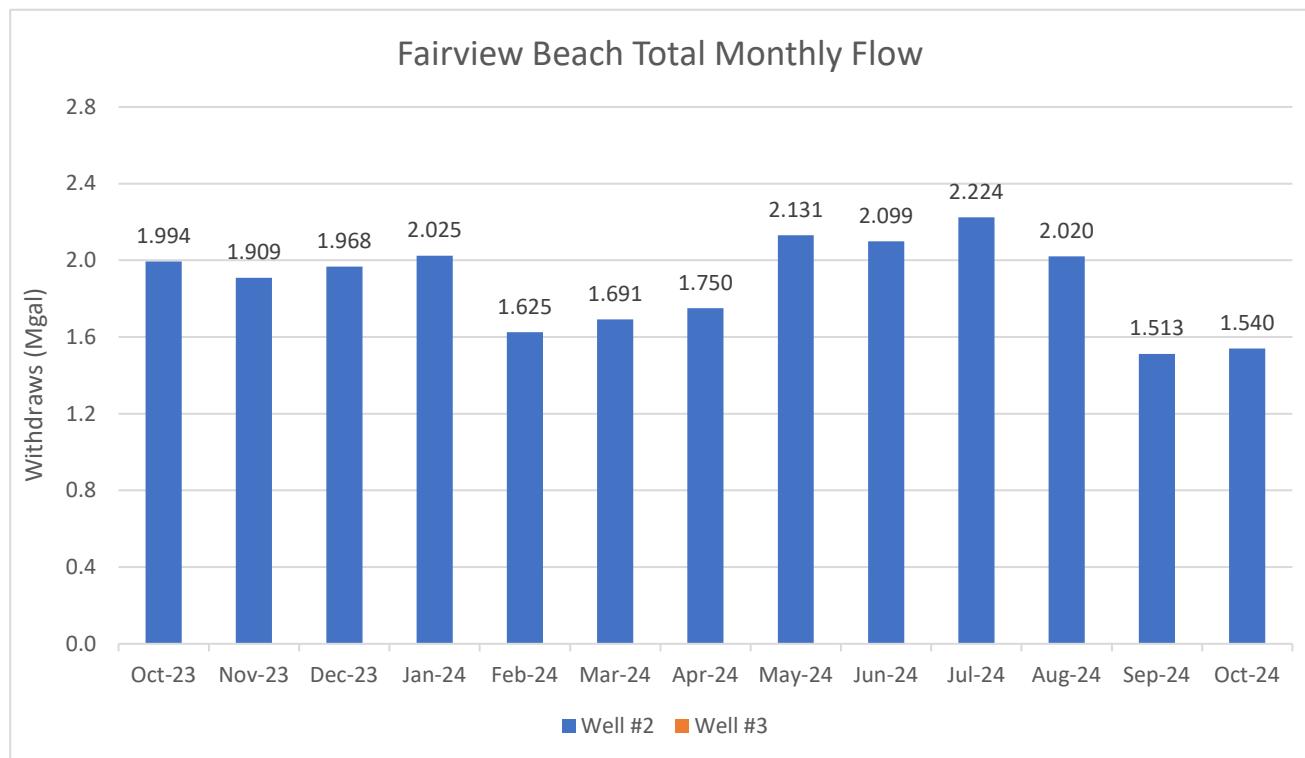
Water Quality:

The Water Treatment facility and distribution system maintained compliance with all required sampling. Routine bacteriological sample results are shown in the table below.

Bacteriological Analysis:

Location Code	Location Address	Date	Result
030	6338 Riverview Drive	10/9/2024	Absent

System Production:



Hopyard Farm – PWSID 6099283

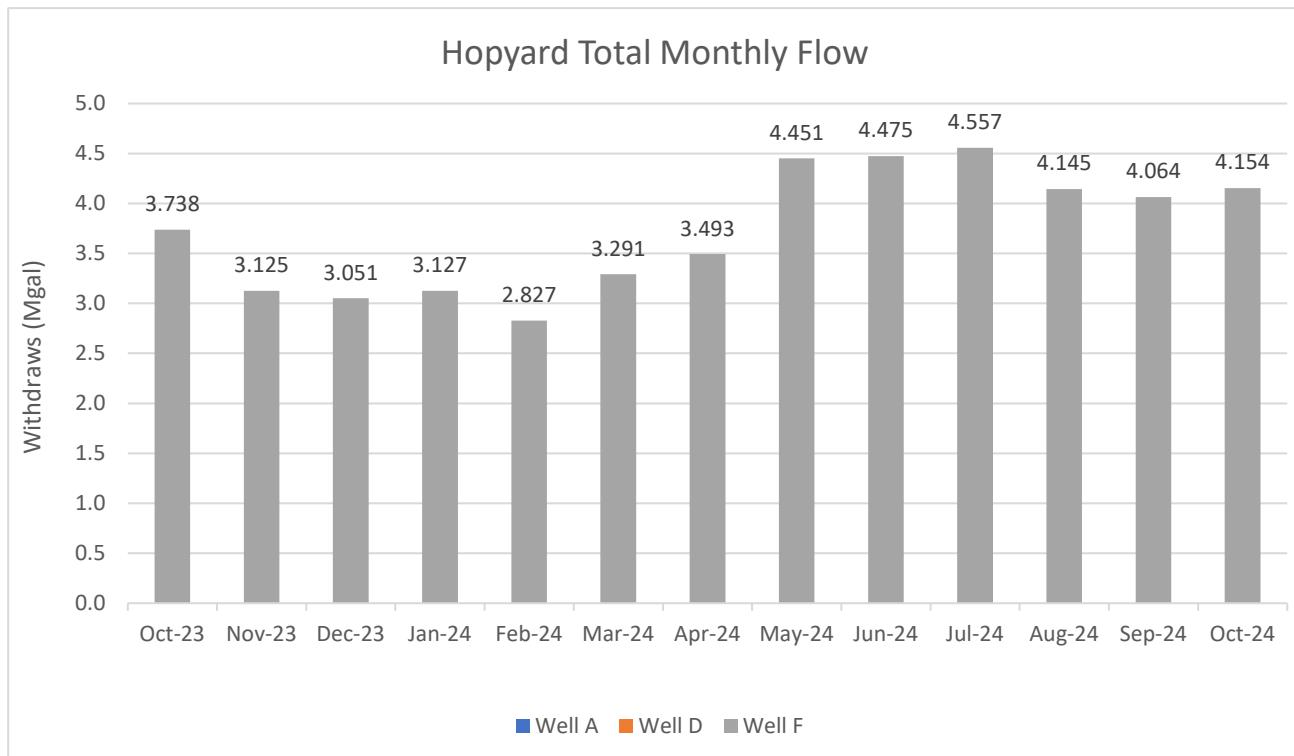
Water Quality:

The Water Treatment facility and distribution system maintained compliance with all required sampling. Routine bacteriological sample results are shown in the table below.

Bacteriological Analysis:

Location Code	Location Address	Date	Result
040	5759 Coakley Drive	10/4/2024	Absent
010	5964 Parsons Lane	10/4/2024	Absent

System Production:



KGC School Board Office – PWSID 6099296

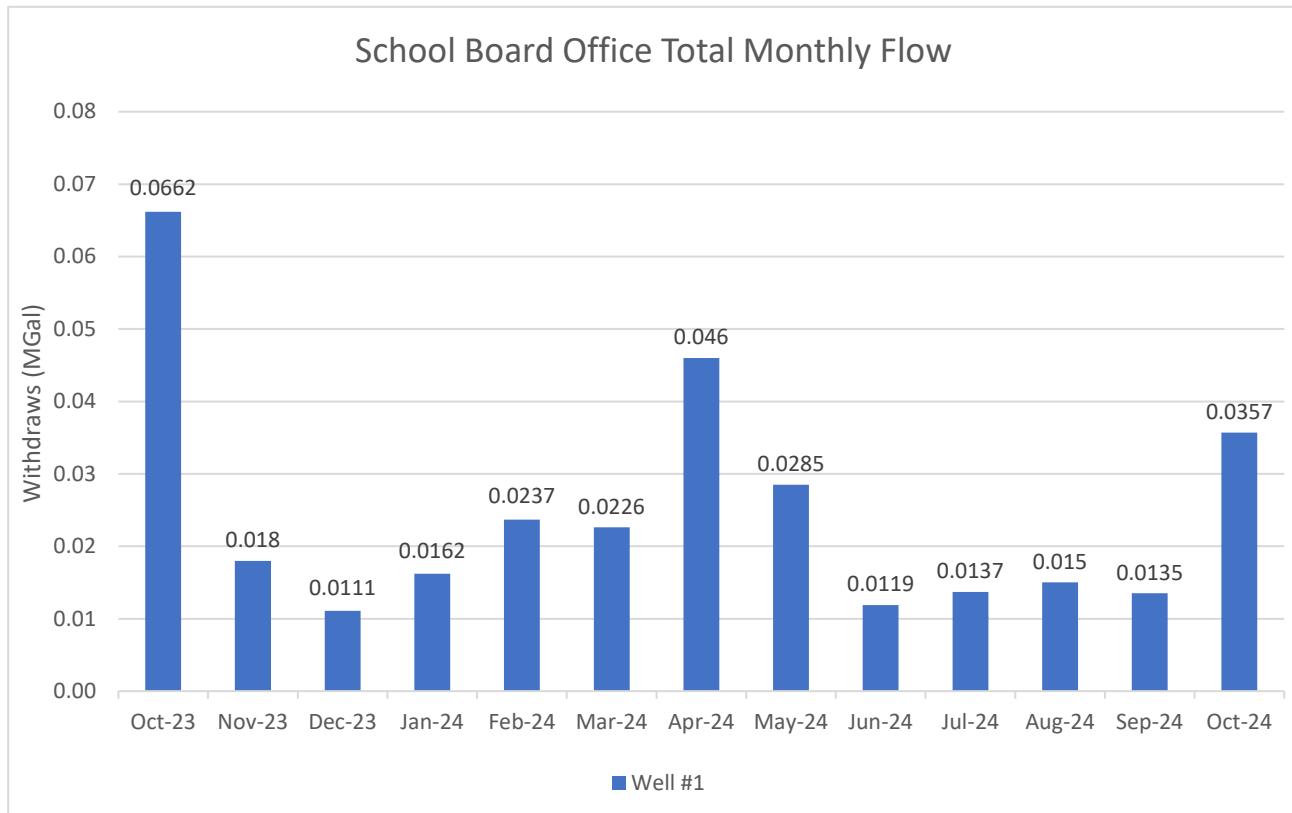
Water Quality:

The Water Treatment facility and distribution system maintained compliance with all required sampling. Routine bacteriological sample results are shown in the table below.

Bacteriological Analysis:

Location Code	Location Address	Date	Result
020	9100 St. Anthony's Road Teacher's Bathroom 2 nd Floor	10/11/2024	Absent

System Production:



Ninde's Store – PWSID 6099300

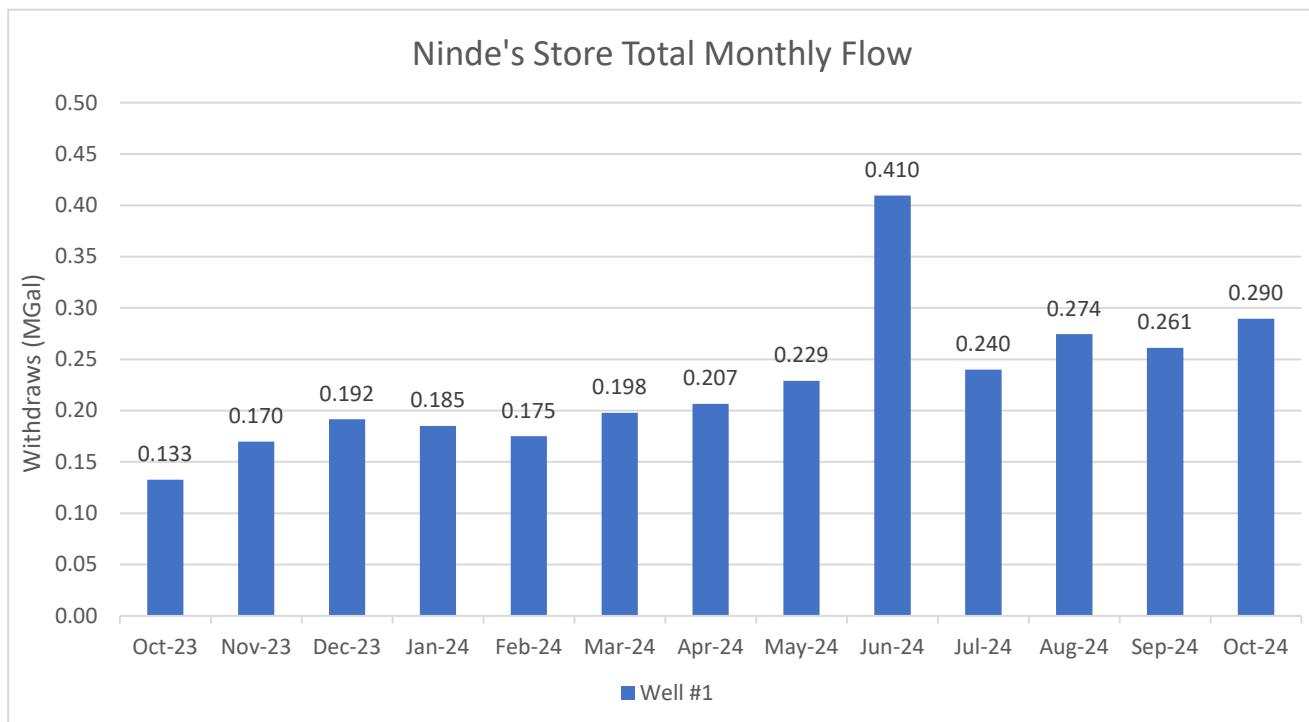
Water Quality:

The Water Treatment facility and distribution system maintained compliance with all required sampling. Routine bacteriological sample results are shown in the table below.

Bacteriological Analysis:

Location Code	Location Address	Date	Result
020	16156 Ridge Road	10/11/2024	Absent

System Production:



Oakland Park – PWSID 6099350

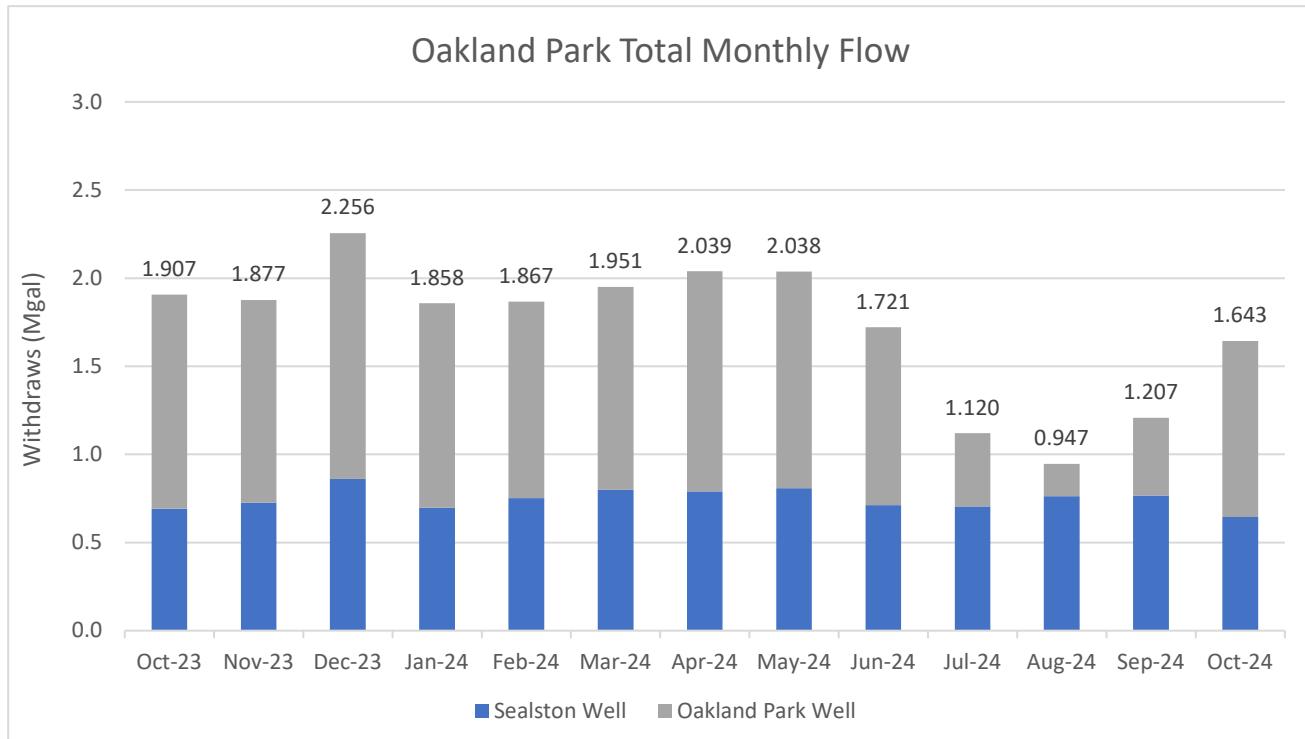
Water Quality:

The Water Treatment facility and distribution system maintained compliance with all required sampling. Routine bacteriological sample results are shown in the table below.

Bacteriological Analysis:

Location Code	Location Address	Date	Result
03	9121 Covington Street	10/9/2024	Absent
01	11084 Dennis W Kerns	10/9/2024	Absent

System Production:



St. Paul's/Owens – PWSID 6099550

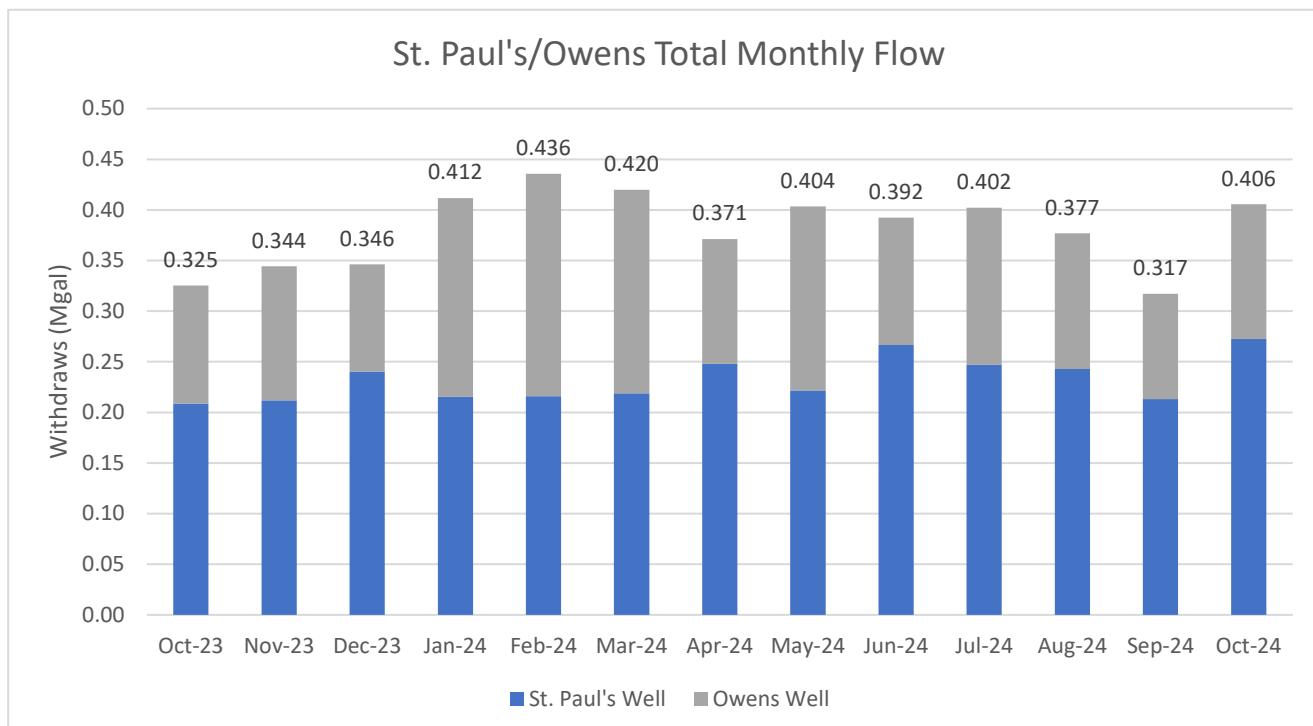
Water Quality:

The Water Treatment facility and distribution system maintained compliance with all required sampling. Routine bacteriological sample results are shown in the table below.

Bacteriological Analysis:

Location Code	Location Address	Date	Result
010	5486 St. Paul's Road	10/11/2024	Absent

System Production:



WASTEWATER

Dahlgren WWTP

Effluent Quality:

The wastewater treatment facility maintained compliance with all permit-required sampling.

Wastewater Treatment:

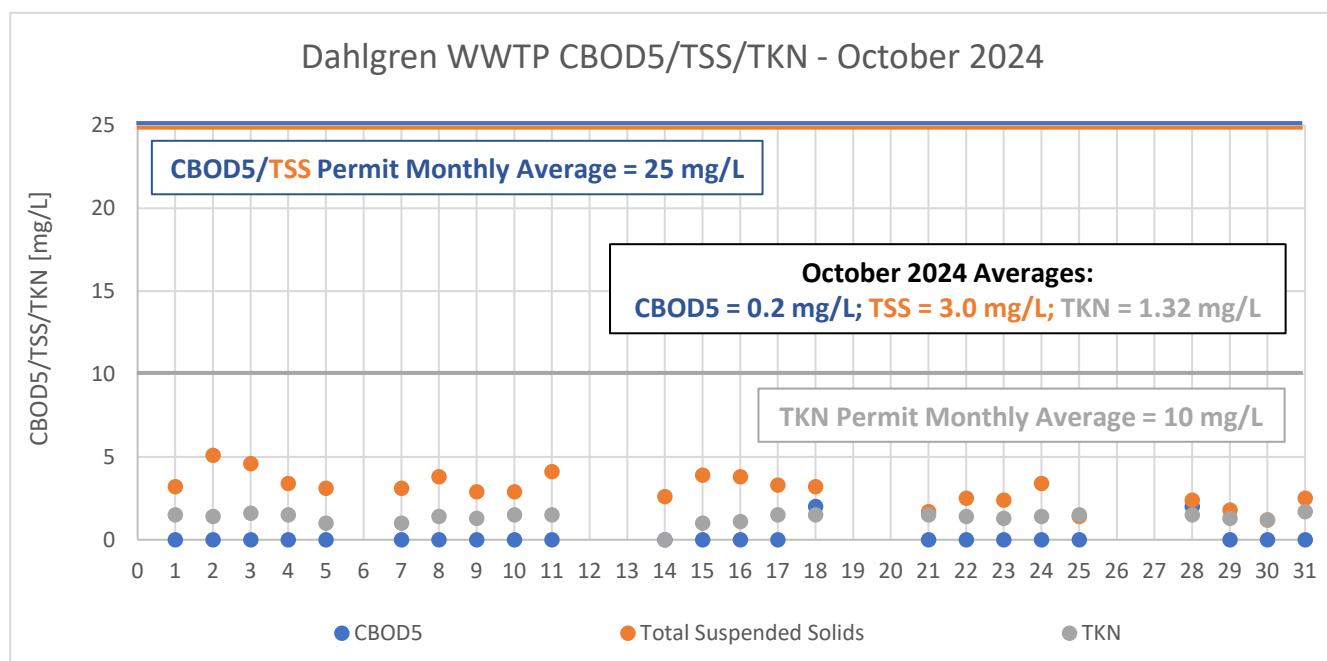
The Dahlgren WWTP met the sewer service area's sanitation demand with an average daily discharge of 0.398 MGD for a total monthly discharge of 12.352 MG.

Operational Notes:

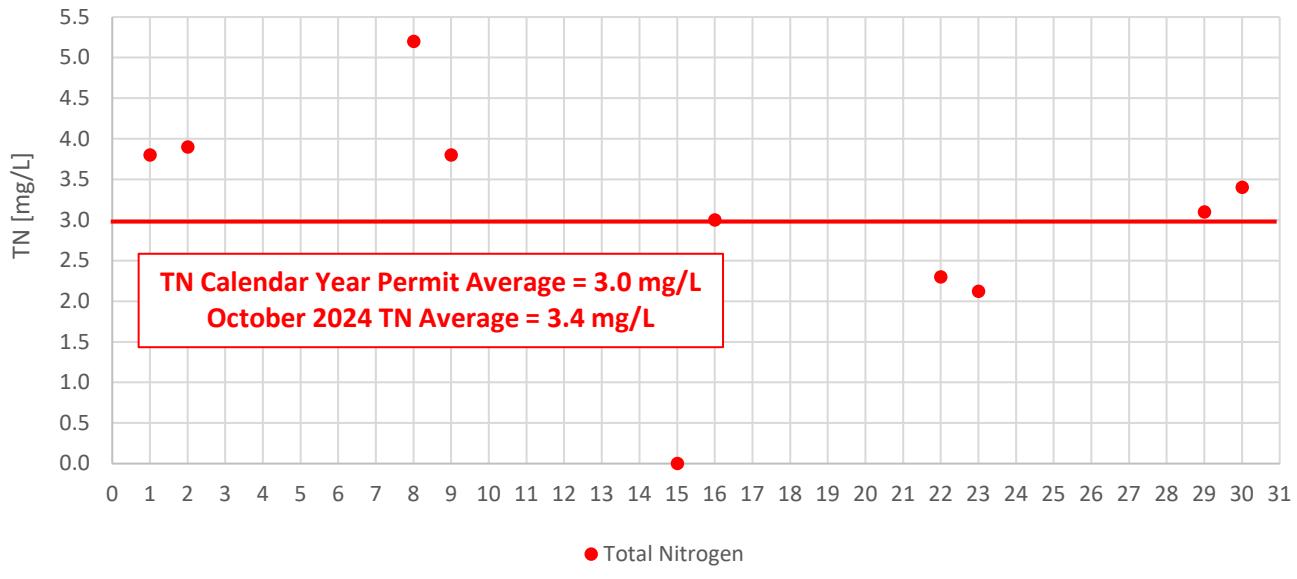
- Drained, pressure washed, and used green clean pro (algaecide) on the post aeration chamber.
- KGM replaced WAS meter; still needs to be programmed.
- Replaced the roller assembly on the BioCarb feed pump.
- KGM installed a new eye wash and emergency shower station in the chemical feed building.

Data Trending:

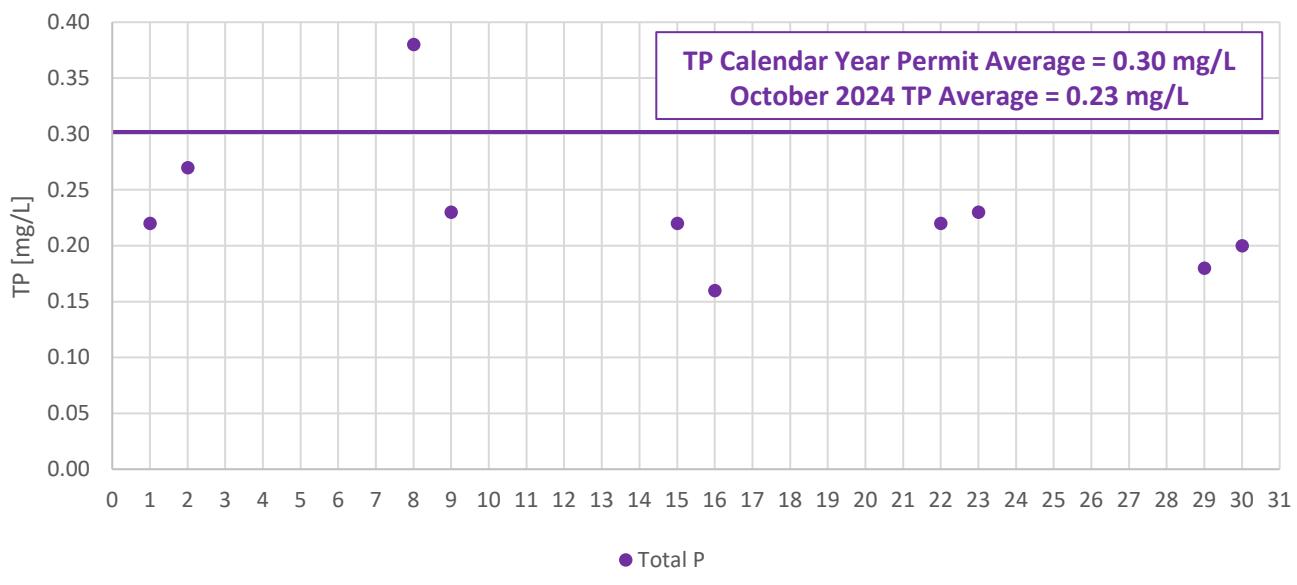
The following charts depict a graphical analysis of effluent quality monitoring and treatment plant daily and total monthly flows.

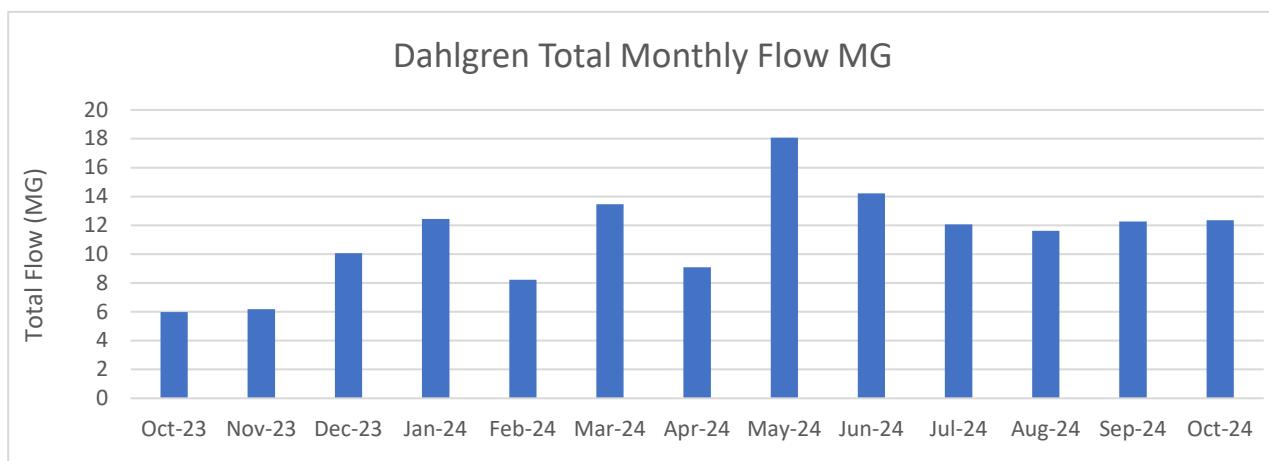
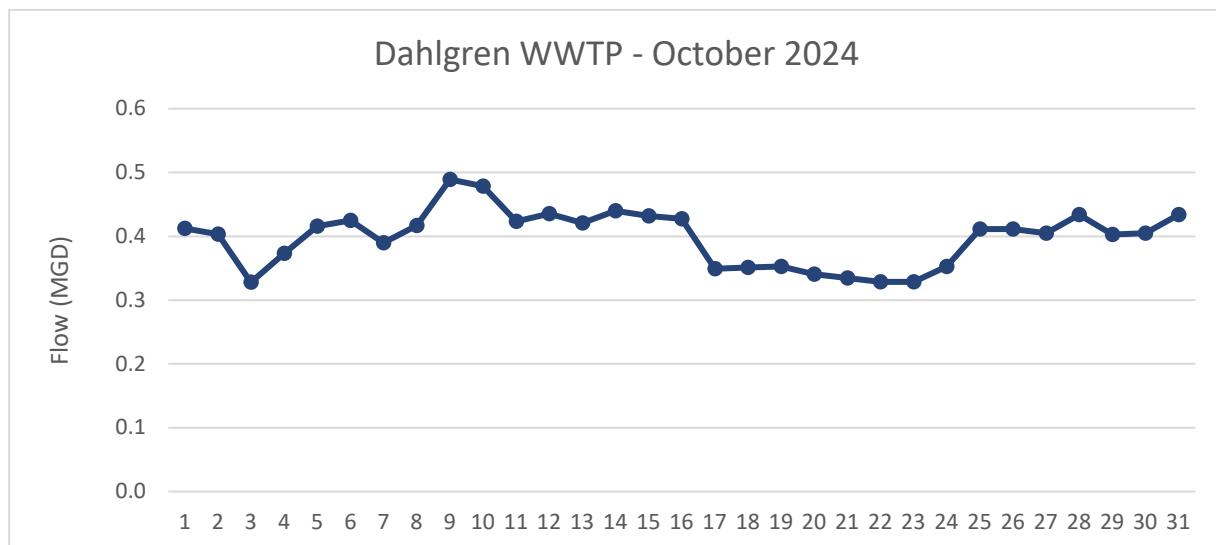


Dahlgren WWTP Total Nitrogen - October 2024



Dahlgren WWTP Total Phosphorus - October 2024





Hopyard Farms WWTP

Effluent Quality:

The wastewater treatment facility maintained compliance with all permit-required sampling.

Wastewater Treatment:

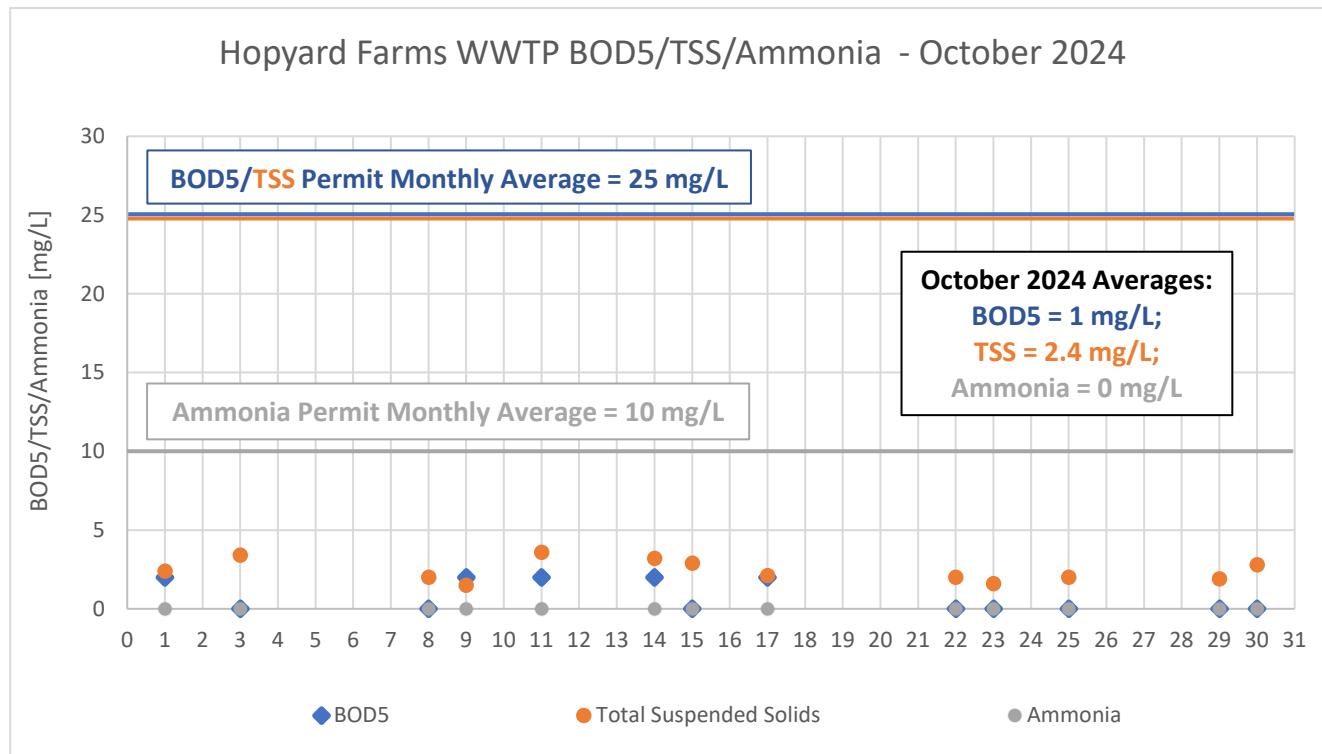
The Hopyard Farms WWTP met the sewer service area's sanitation demand with an average daily discharge of 0.095 MGD for a total monthly discharge of 2.568 MG (27 days with flow).

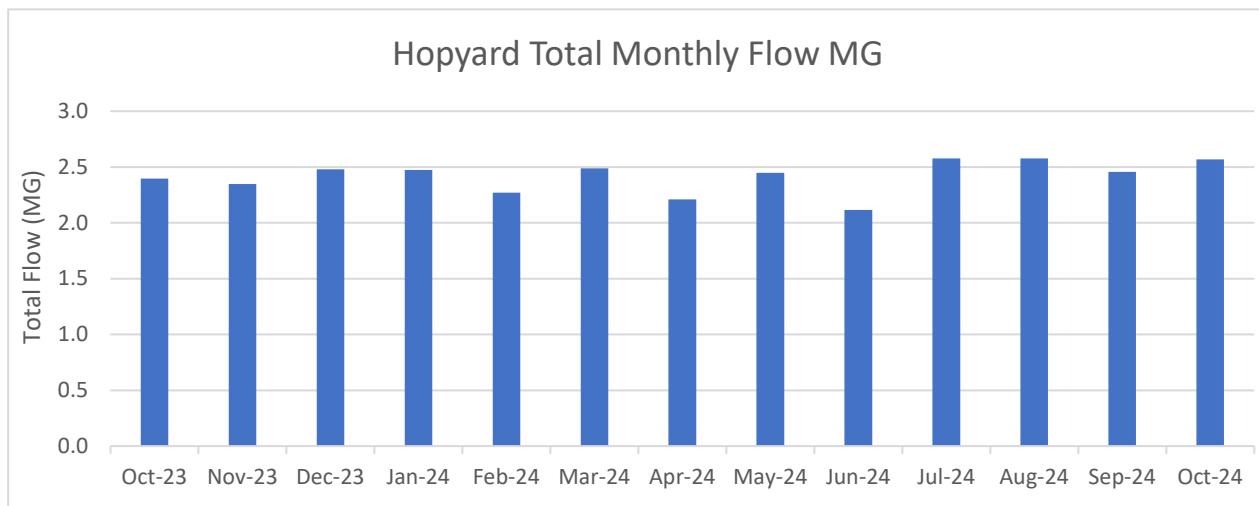
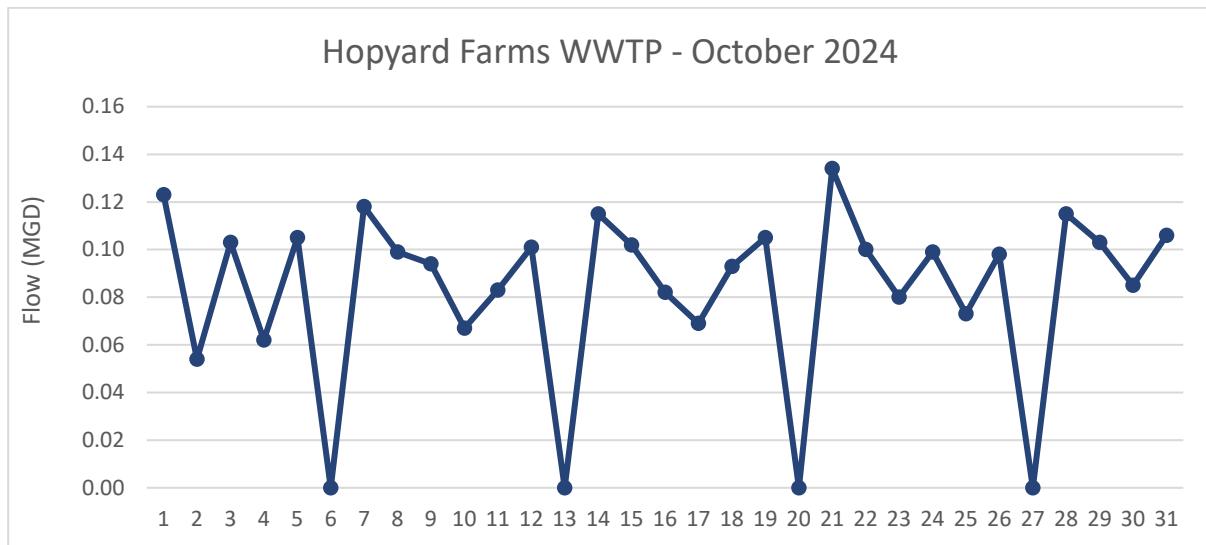
Operational Notes:

- Drained and pressure washed the post aeration chamber.
- KGM changed the fluorescent bulbs to LED bulbs in the control building.

Data Trending:

The following charts depict a graphical analysis of effluent quality monitoring and treatment plant daily and total monthly flows.





Purkins Corner WWTP

Effluent Quality:

The wastewater treatment facility maintained compliance with all permit-required sampling. TKN exceedances were noted as explained below.

Wastewater Treatment:

The Purkins Corner WWTP met the sewer service area's sanitation demand with an average daily discharge of 0.072 MGD for a total monthly discharge of 2.22 MG.

Operational Notes:

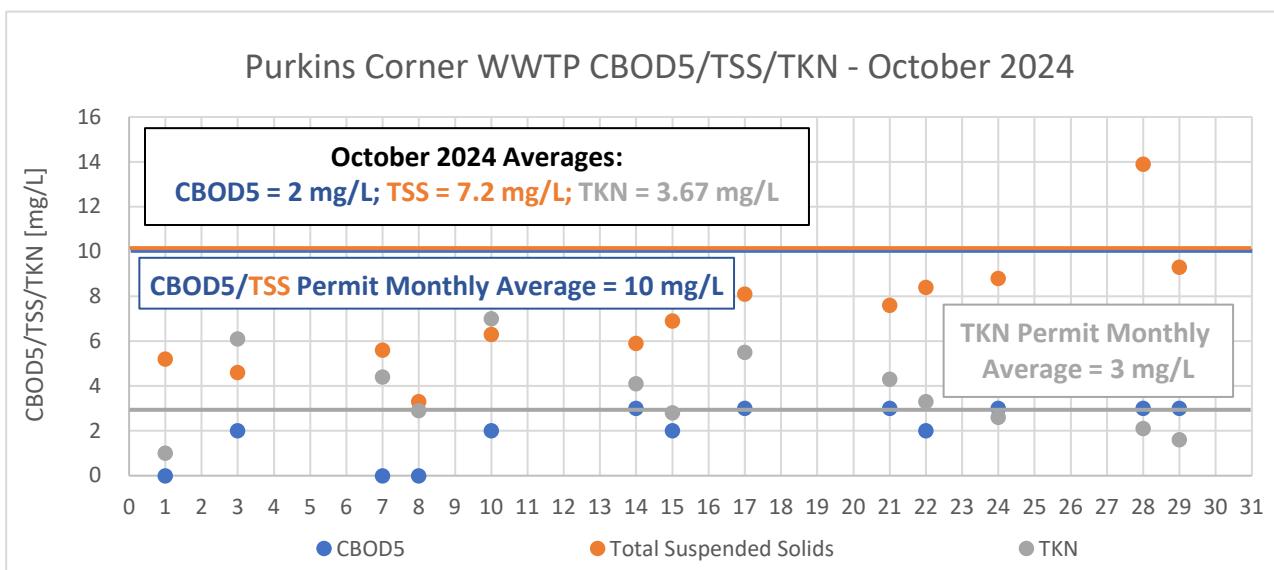
- Operations ran normally.

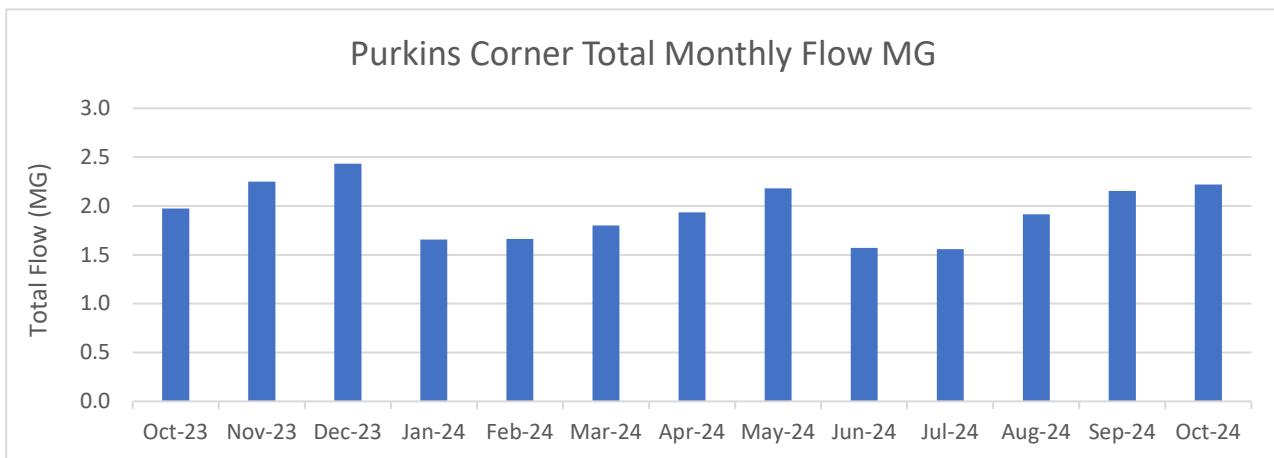
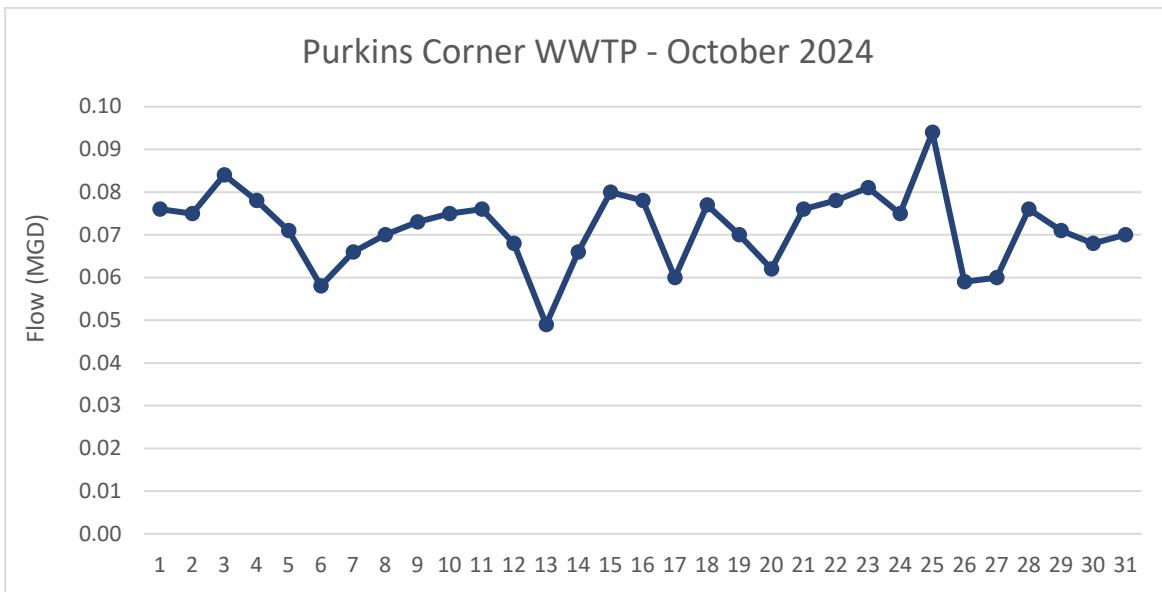
Exceedance Details:

- During the October monitoring period, TKN exceeded the weekly permit limit (4.5 mg/L) at 4.77 mg/L, and the monthly permit limit (3.0 mg/L) at 3.67 mg/L. The elevated TKN concentrations were due to a failed anoxic tank mixer on the B side of the plant. A temporary mixer was put in place, but it was not as effective as the original. This required the WWTP staff to feed influent into the aeration zone, limiting denitrification. A replacement mixer was delivered and installed on November 4th.

Data Trending:

The following charts depict a graphical analysis of effluent quality monitoring and treatment plant daily and total monthly flows.





Oakland Park WWTP

Effluent Quality:

The wastewater treatment facility maintained compliance with all permit-required sampling. TKN exceedances were noted as explained below.

Wastewater Treatment:

The Oakland Park WWTP met the sewer service area's sanitation demand with an average daily discharge of 0.040 MGD for a total monthly discharge of 1.244 MG.

Operational Notes:

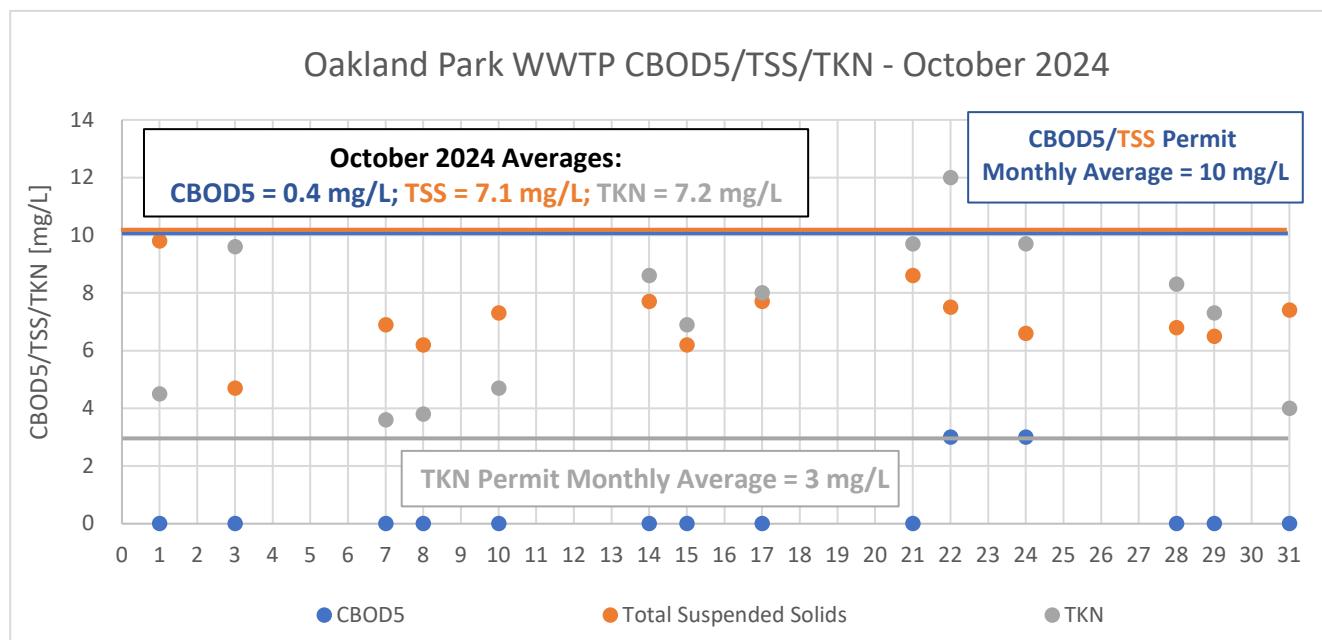
- Maintenance delivered sand and anthracite to the wastewater plant.

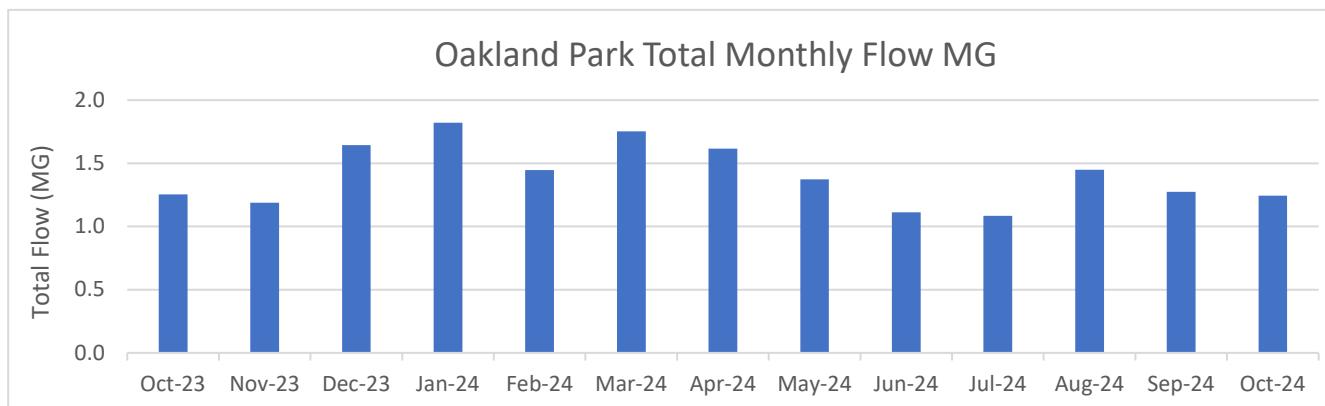
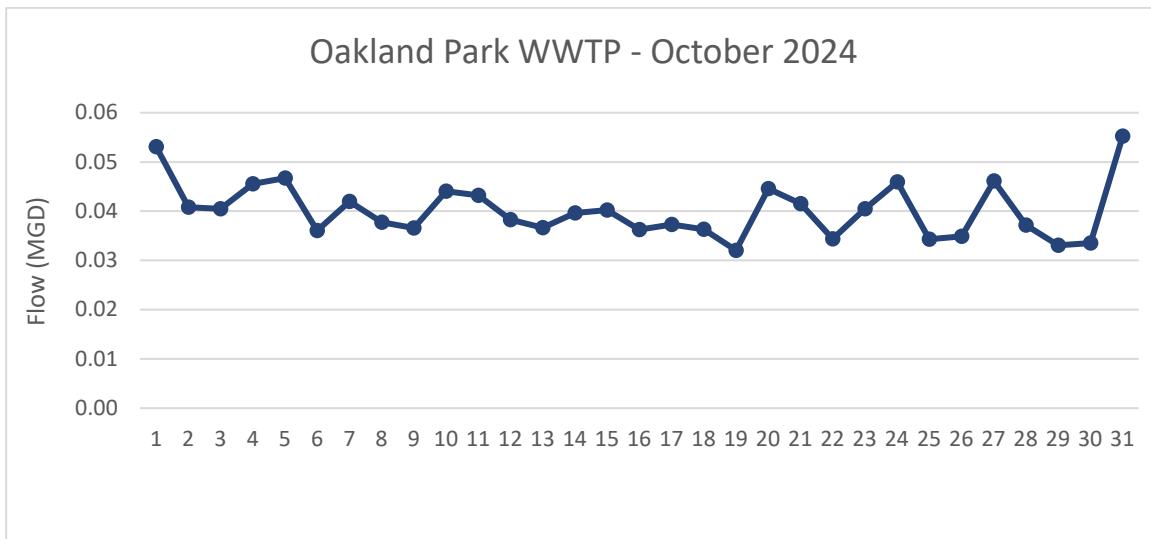
Exceedance Details:

- During the October monitoring period, TKN exceeded the weekly permit limit (4.5 mg/L) twice at 7.83 and 10.47 mg/L, and the monthly permit limit (3.0 mg/L) at 7.19 mg/L. The elevated TKN was due to a clogged RAS line in Plant A and a ruptured BioCarb feed line. Both lines have since been unclogged/repaired.

Data Trending:

The following charts depict a graphical analysis of effluent quality monitoring and treatment plant daily and total monthly flows.





Fairview Beach WWTP

Effluent Quality:

The wastewater treatment facility maintained compliance with all permit-required sampling.

Wastewater Treatment:

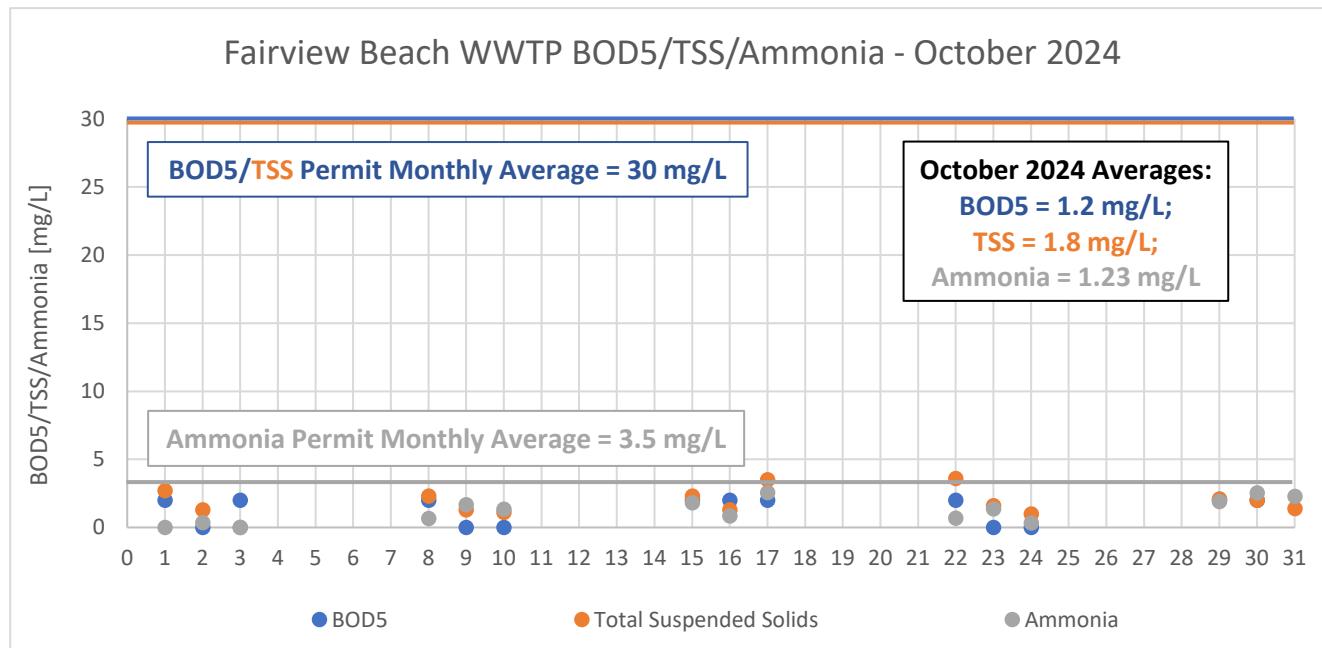
The Fairview Beach WWTP met the sewer service area's sanitation demand with an average daily discharge of 0.052 MGD for a total monthly discharge of 1.392 MG (27 days with flow).

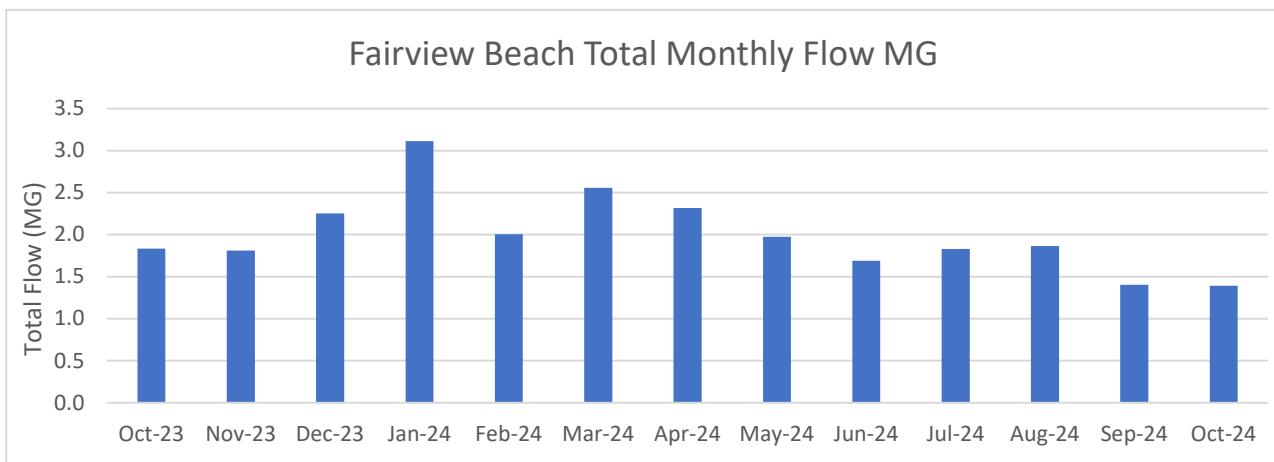
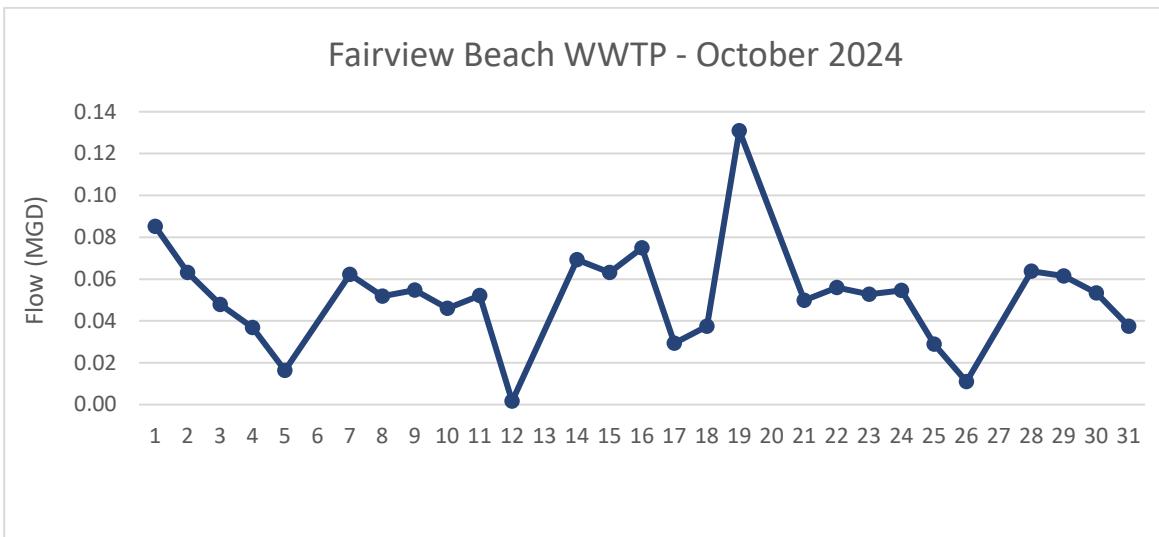
Operational Notes:

- Maintenance replaced the contactor for #1 pre-EQ blowers (contactor was sticking on).
- KGM fixed and adjusted the level indicator for the pre-EQ.
- Cleaned UV lights as part of preventive maintenance.
- IES cleaned and calibrated DO probes.

Data Trending:

The following charts depict a graphical analysis of effluent quality monitoring and treatment plant daily and total monthly flows.





Glossary

Bacteria	E.coli and/or Total Coliform
BOD5	5-day Biochemical Oxygen Demand
CBOD	Carbonaceous Biochemical Oxygen Demand
cfu	colony forming unit
CIP	Capital Improvement Plan or Cast/cleaned-in-place
Cl	Chloride Ion
Cl2	Chlorine
CMF	Continuous Membrane Filtration?
D.O.	Dissolved Oxygen
F/M ratio	Food to Microorganism ratio
FOG	Fats, Oil and Grease
GST	Ground Storage Tank
HWTP	Harmony Water Treatment Plant
I&I	Infiltration and Inflow
Inorganic Nitrogen	Nitrate + Nitrite
LS	Lift Station
mg/L	Milligrams per Liter
MGD	Million Gallons Per Day
mL	Milliliters
MLSS	Mixed Liquor Suspended Solids
MLVSS	Mixed Liquor Volatile Suspended Solids
MPN	Most Probable Number -bacteriological well sample
MW	Monitoring Well
N/N	Nitrate/Nitrite
Organic Nitrogen	TKN
P/A	Presence/Absence- bacteriological samples for drinking water
PFAS	polyfluoroalkyl substances
PLC	Programmable Logic Controller
POE	Point of Entry
RAS	Return Activated Sludge
SCADA	Supervisory Control and Data Acquisition
STEP	Septic Tank Effluent Pump
TKN	Total Kjeldahl Nitrogen
TN	Total Nitrogen
TP	Total Phosphorous
TR-6	Copper sequestering chemical for wastewater
TSS	Total Suspended Solids
UV	Ultraviolet Light
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant