

UTILITY REPORT



APRIL 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:

- Canterbury entry point experienced a radio communications fault. King George Maintenance installed Missions to address.
- IES collected and passed all required presence-absence (P/A) tests.
- Continuing to backwash all systems to minimize water loss.
- Performing maintenance on mechanical equipment to ensure efficient operation of chemical injection systems.
- IES and King George Maintenance partnering to maintain adequate shelf stock for critical spare parts.
- Most of the 2nd quarter samples have been collected.
- Lead and Copper sample kits have been distributed; it has been challenging getting the kits back from the homeowners.
- King George Maintenance and IES are collaborating on a plan to isolate Arnolds tower from the Courthouse system to ensure the integrity of the water system.

Canterbury Subdivision – PWSID 6099085

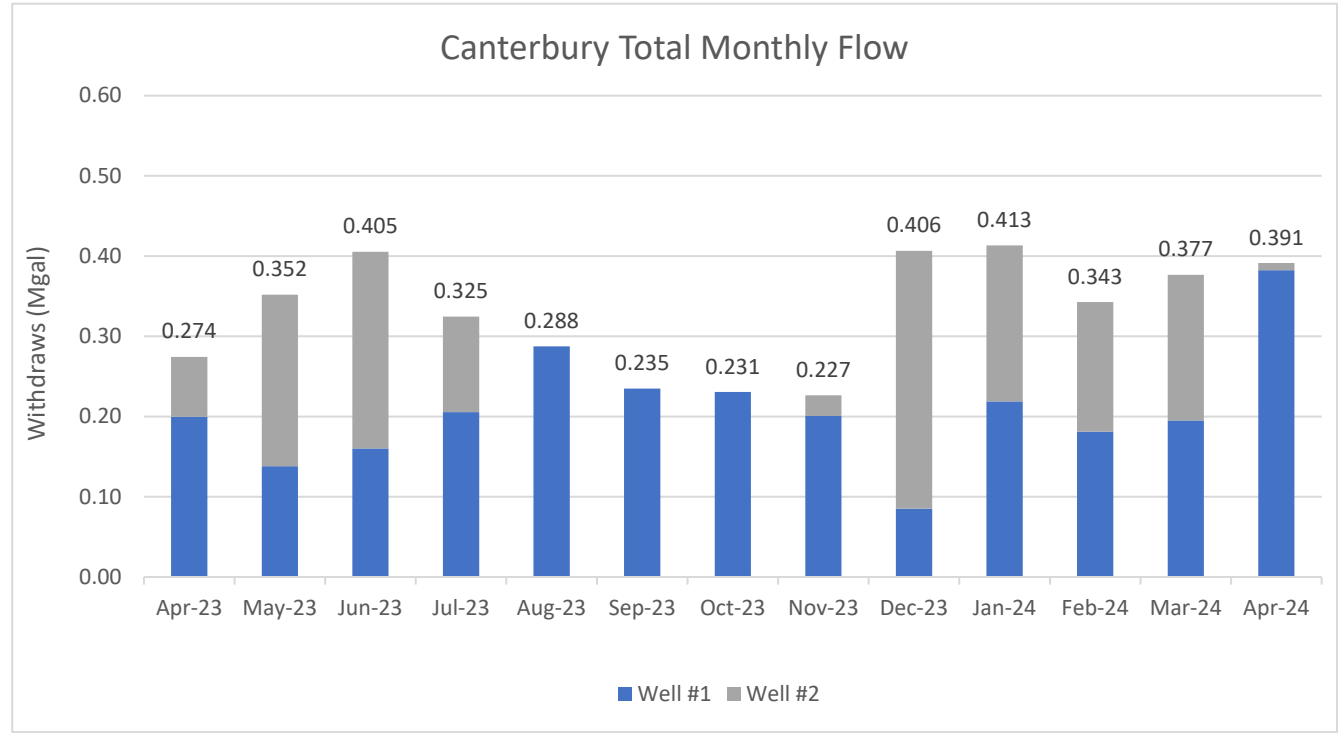
Water Quality:

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	4/18/2024	Absent

System Production:



Circle – PWSID 6099100

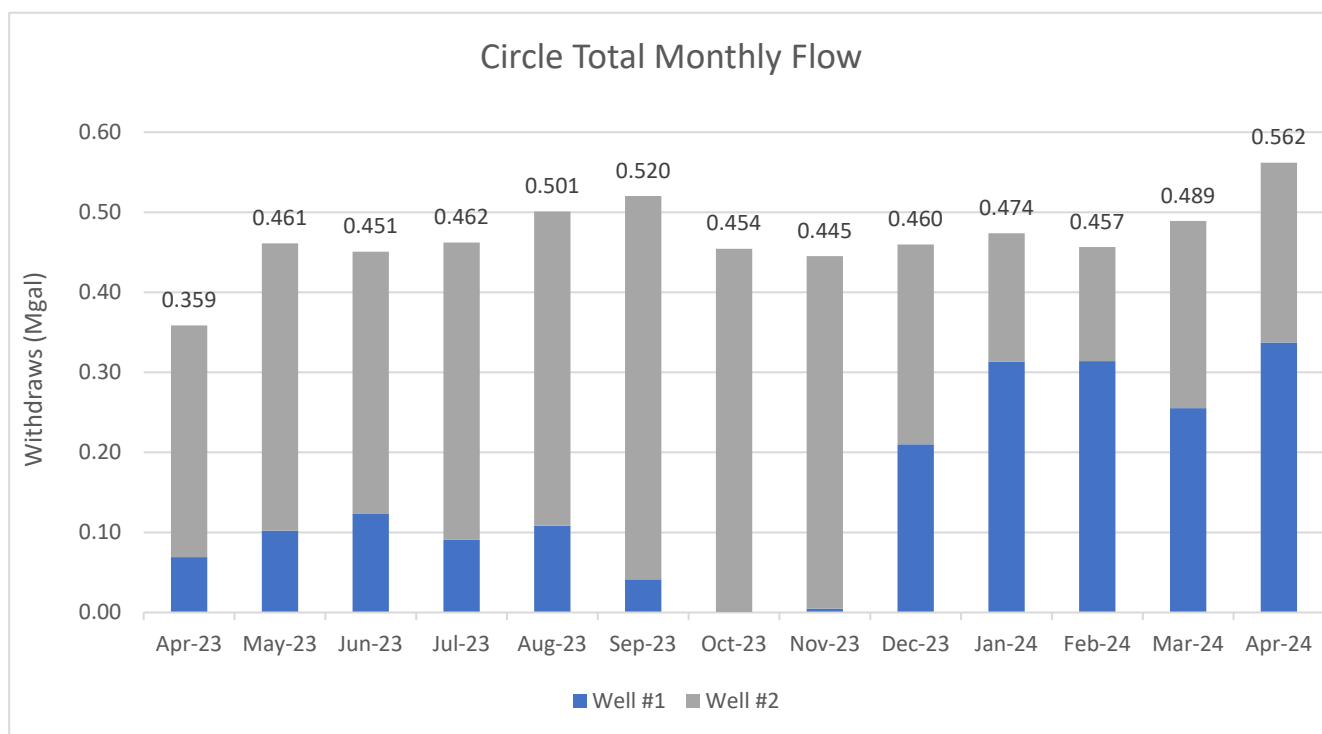
Water Quality:

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	4/24/2024	Absent

System Production:



KGC Courthouse – PWSID 6099050

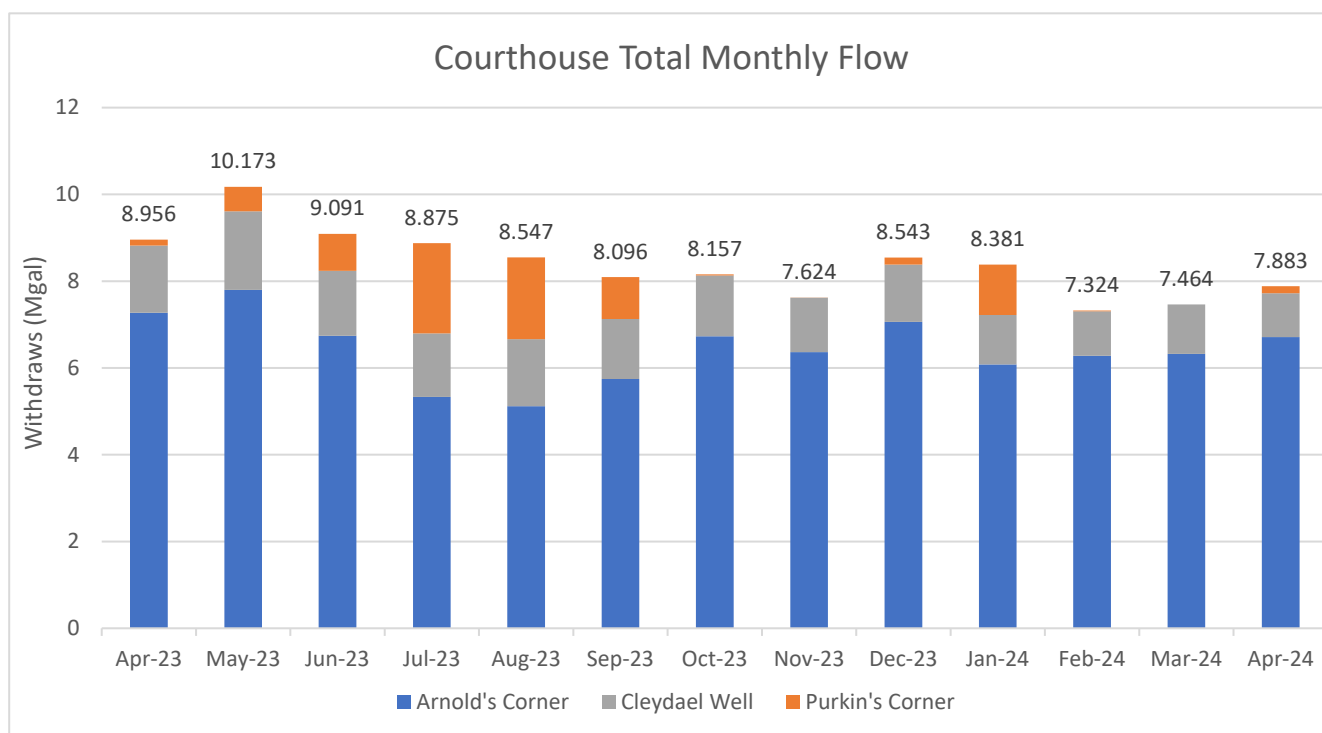
Water Quality:

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
010	10404 Eisenhower Dr.	4/23/2024	Absent
013	8095 Washington Dr.	4/23/2024	Absent
07	12128 Cleydael Blvd.	4/23/2024	Absent
02U	8117 King's Hwy.	4/23/2024	Absent
03D	9245 King's Hwy.	4/23/2024	Absent

System Production:



Dahlgren – PWSID 6099295

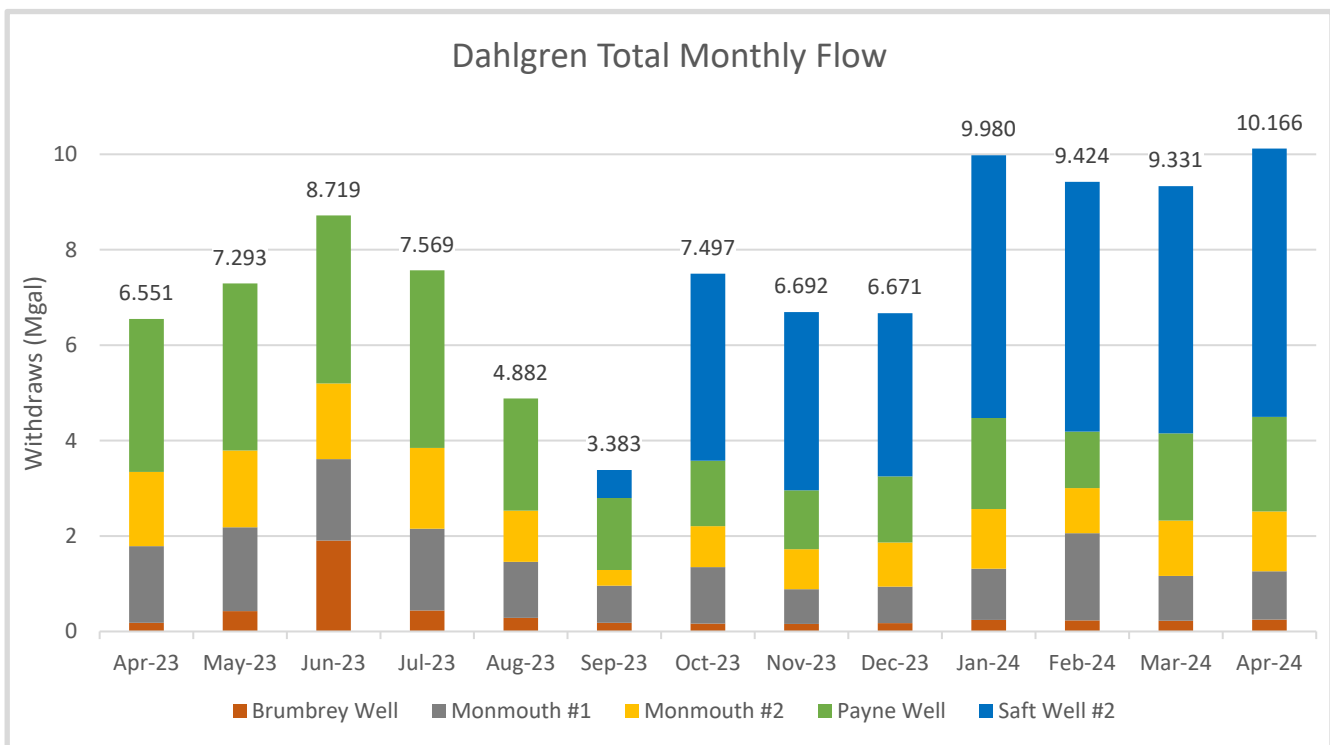
Water Quality:

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 Dr.	4/24/2024	Absent
04D	17110 Twelfth St.	4/18/2024	Absent
01	15375 Dahlgren Rd.	3/21/2024	Absent

System Production:



Fairview Beach – PWSID 6099250

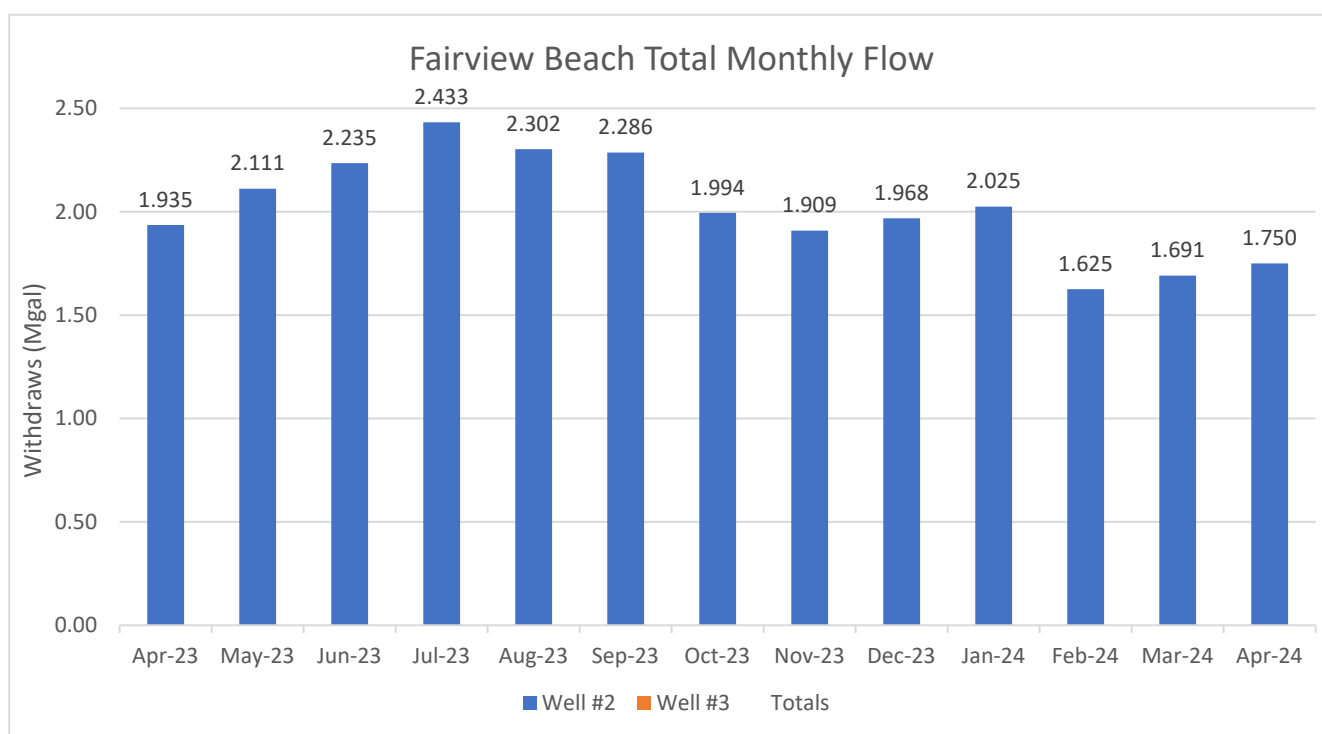
Water Quality:

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 Riverside Dr.	4/10/2024	Absent

System Production:



Hopyard Farm – PWSID 6099283

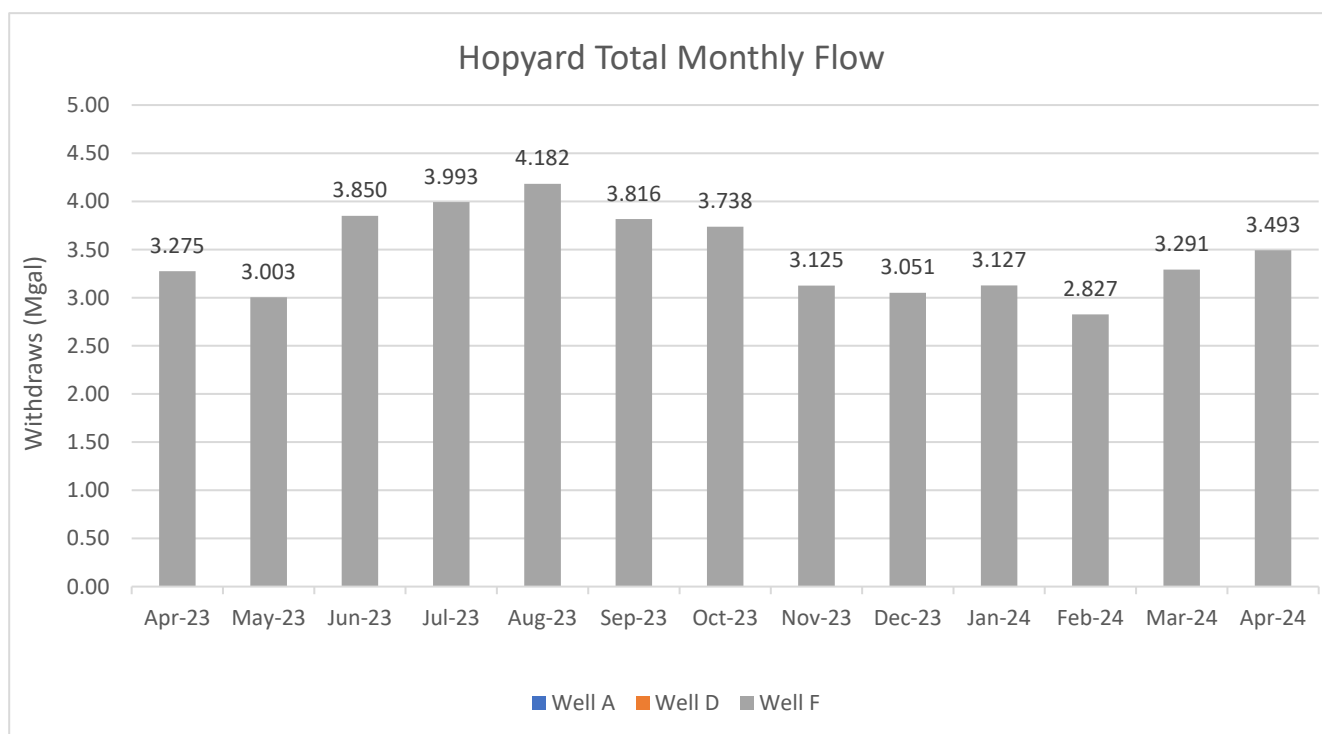
Water Quality:

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
04	5759 Coakley Dr.	4/23/2024	Absent
01U	5968 Parson Lane	4/23/2024	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	Teachers' Bathroom 2 nd Floor	4/10/2024	Absent

System Production:

- Total well yield for April – 46,000 gallons

Ninde's Store – PWSID 6099300

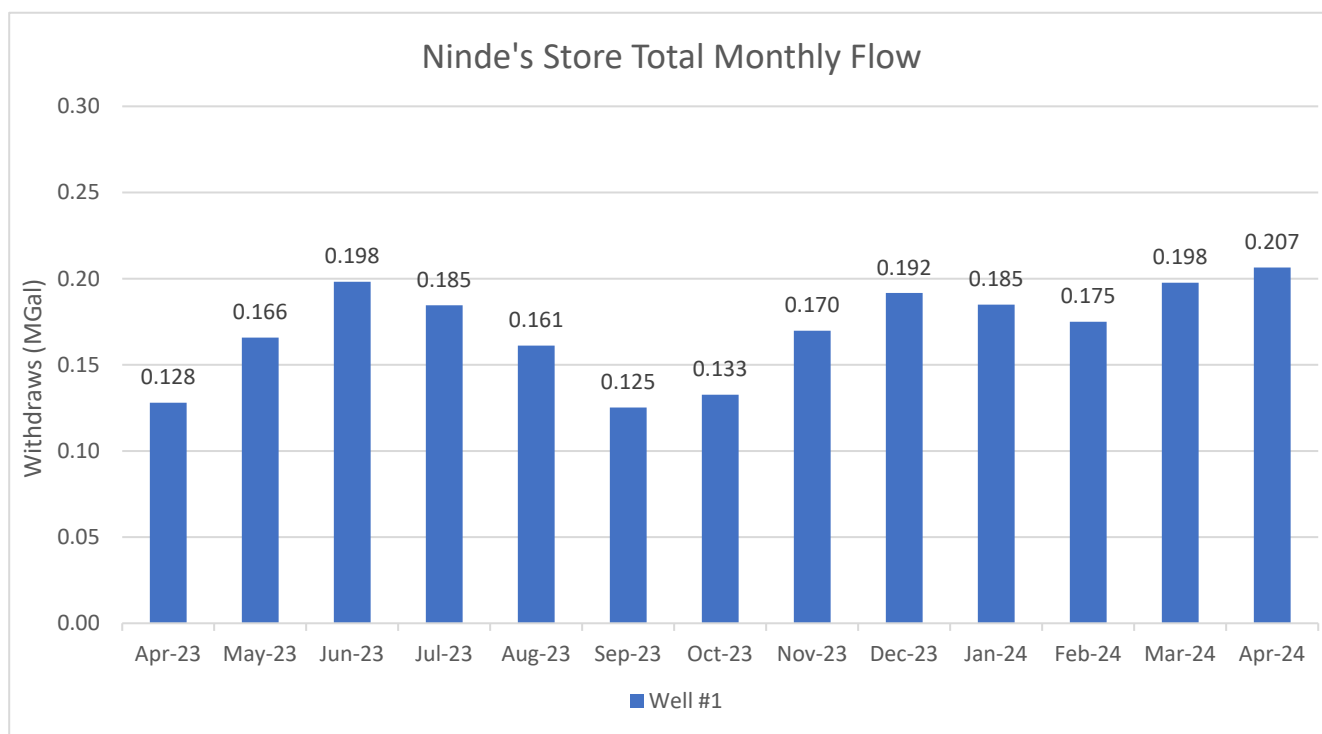
Water Quality:

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 Rd.	4/24/2024	Absent

System Production:



Oakland Park – PWSID 6099350

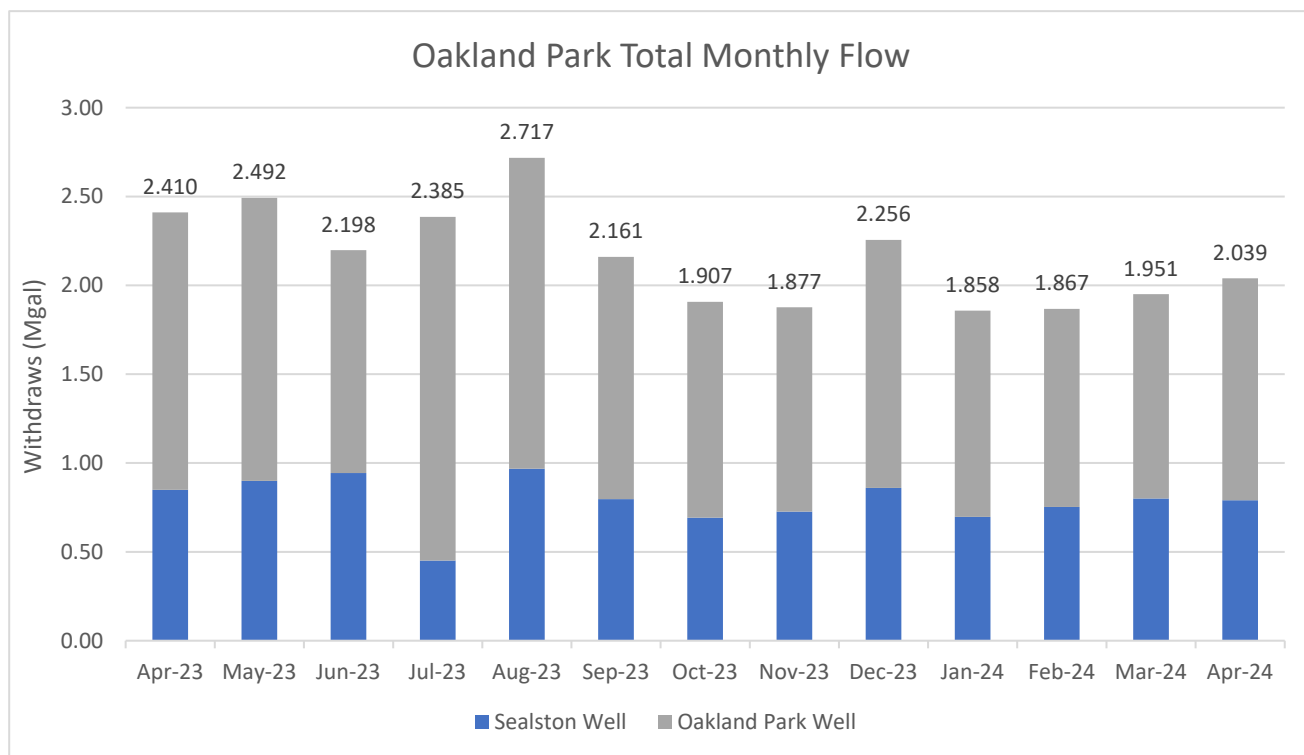
Water Quality:

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
01	11084 Dennis Kerns	4/10/2024	Absent
03	9121 Covington St.	4/10/2024	Absent

System Production:



St. Paul's/Owens – PWSID 6099550

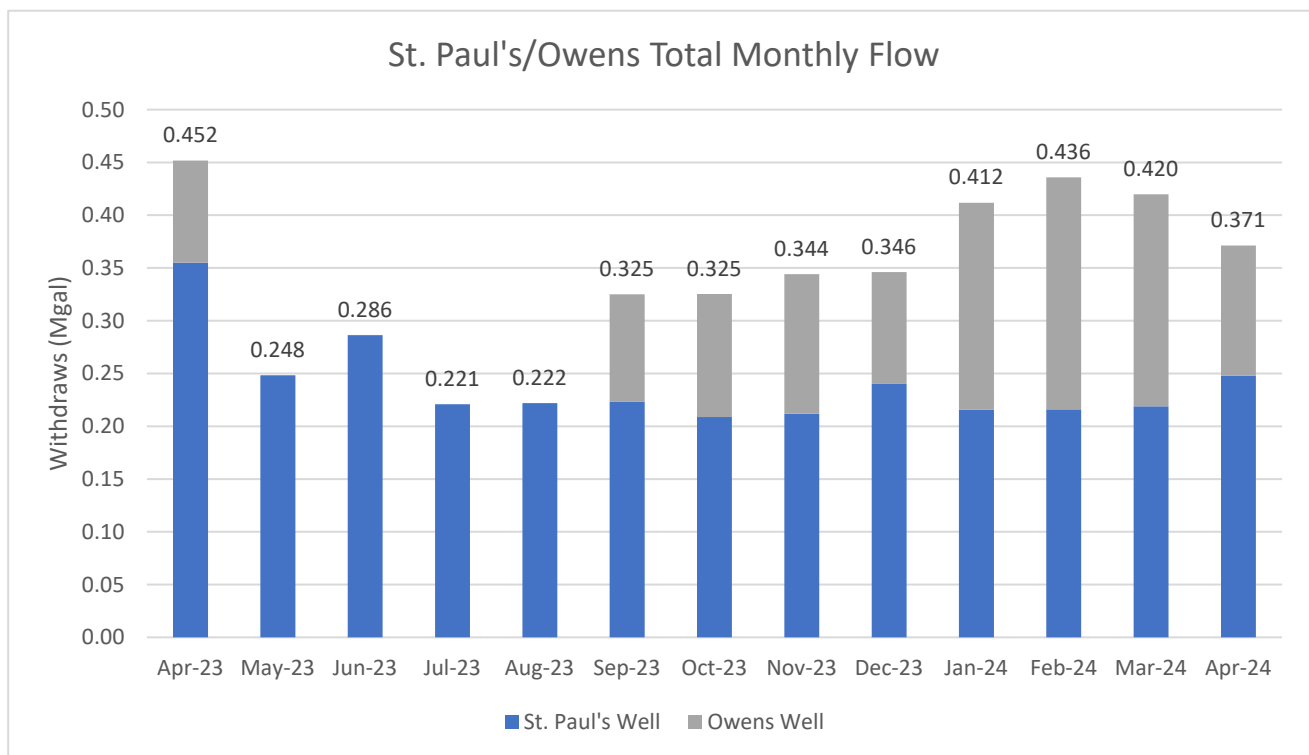
Water Quality:

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
01	5486 St. Paul's Rd.	4/24/2024	Absent

System Production:



WASTEWATER

Items Affecting All WWTP's:

- Continuing with bioaugmentation additions to improve FOG treatment and to build a healthier environment for the microbiological community.

Dahlgren WWTP

Effluent Quality:

The wastewater treatment facility maintained compliance with all permit-required sampling with the exception of TKN (see Operational Note #2 below).

Wastewater Treatment:

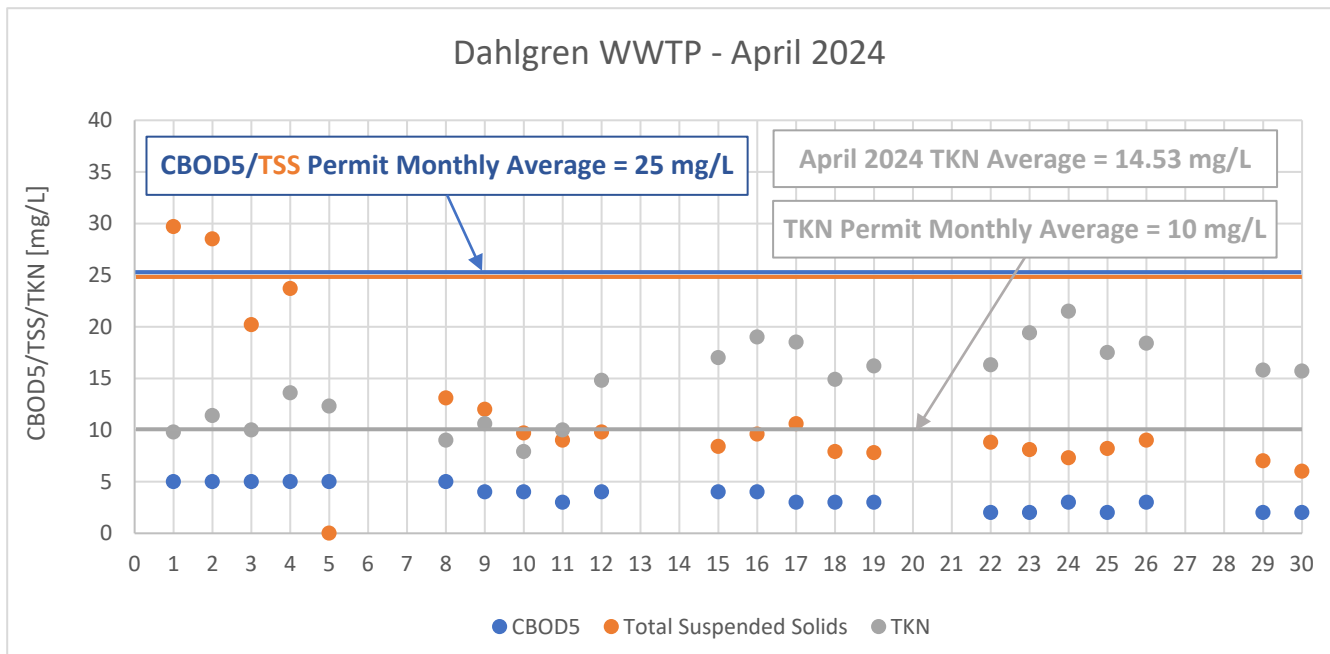
The Dahlgren WWTP met the sewer service area's sanitation demand with an average daily discharge of 0.303 MGD for a total monthly discharge of 9.097 MG.

Operational Notes:

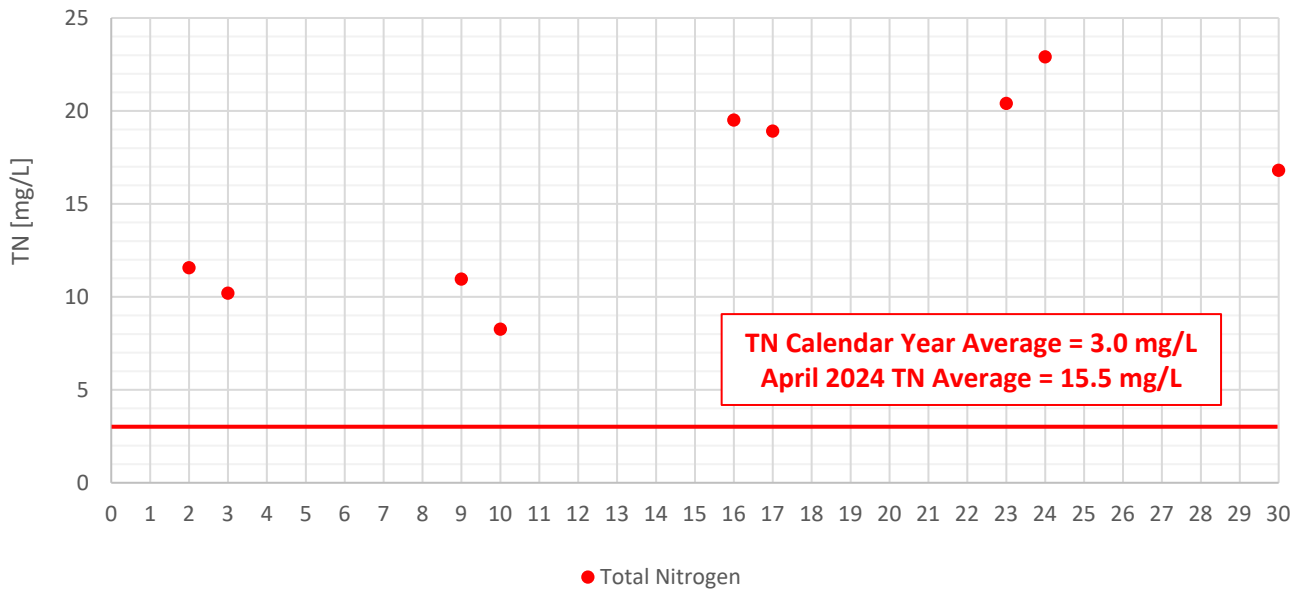
- The chain for the drive unit on Rotor 2 was repaired by the King George Maintenance team and is running much more efficiently.
- Dahlgren has been experiencing elevated TKN values in the effluent. IES is working with the King George Maintenance team to schedule the draining and cleaning of the EQ basin.

Data Trending:

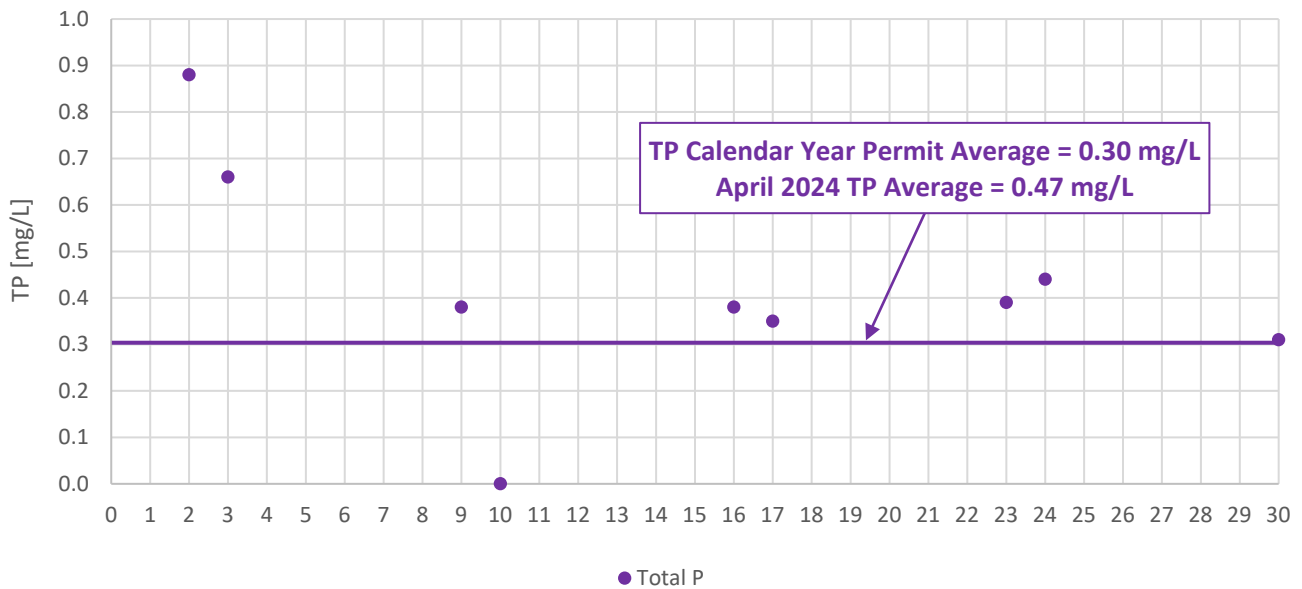
The following charts depict a graphical analysis of effluent quality monitoring and treatment plant daily and total monthly flows.



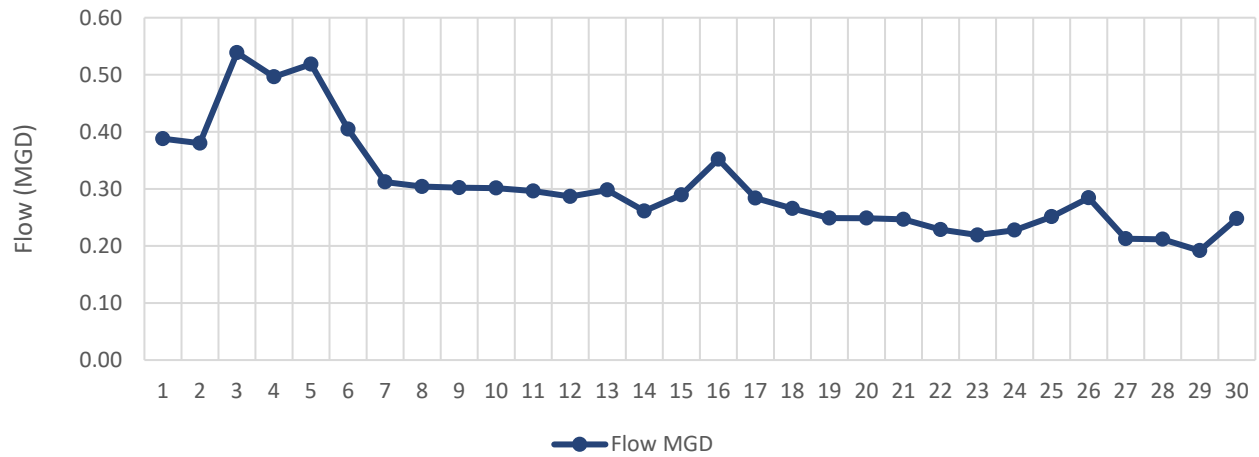
Dahlgren WWTP - April 2024



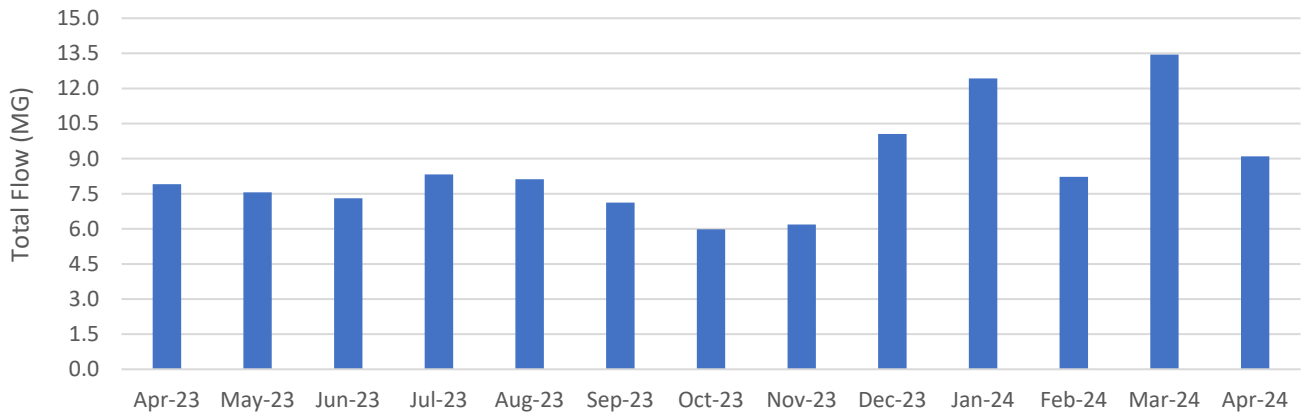
Dahlgren WWTP - April 2024



Dahlgren WWTP - April 2024



Dahlgren Total Monthly Flow MG



Hopyard Farms WWTP

Effluent Quality:

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

Wastewater Treatment:

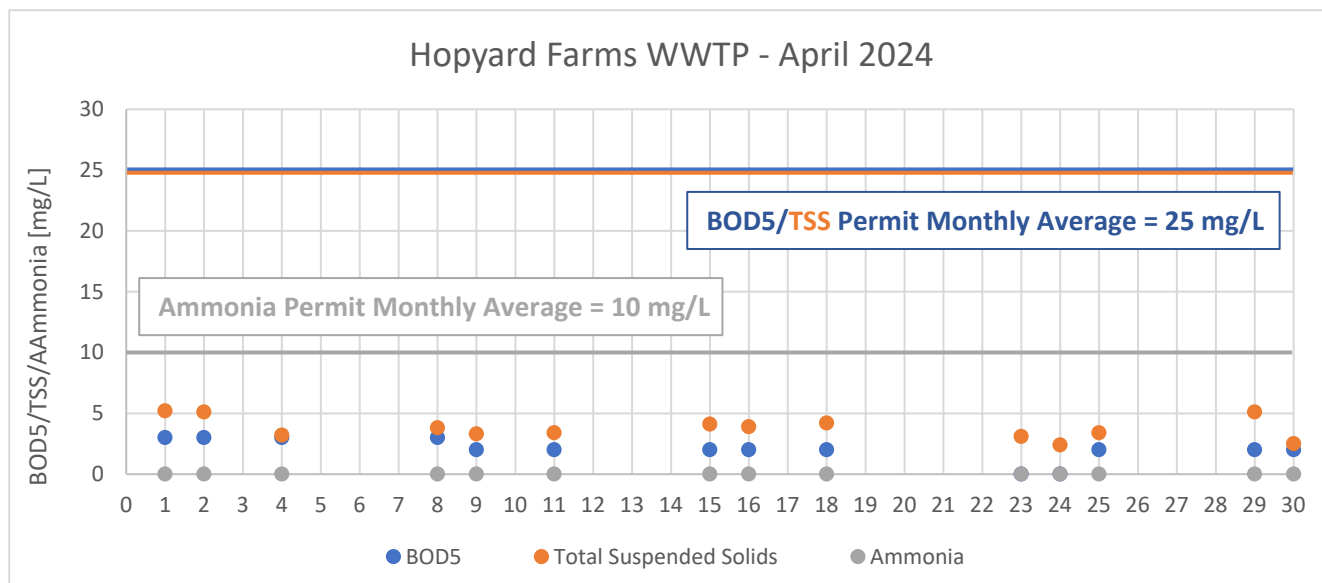
The Hopyard Farms WWTP met the sewer service area's sanitation demand with an average daily discharge of 0.088 MGD for a total monthly discharge of 2.21 MG.

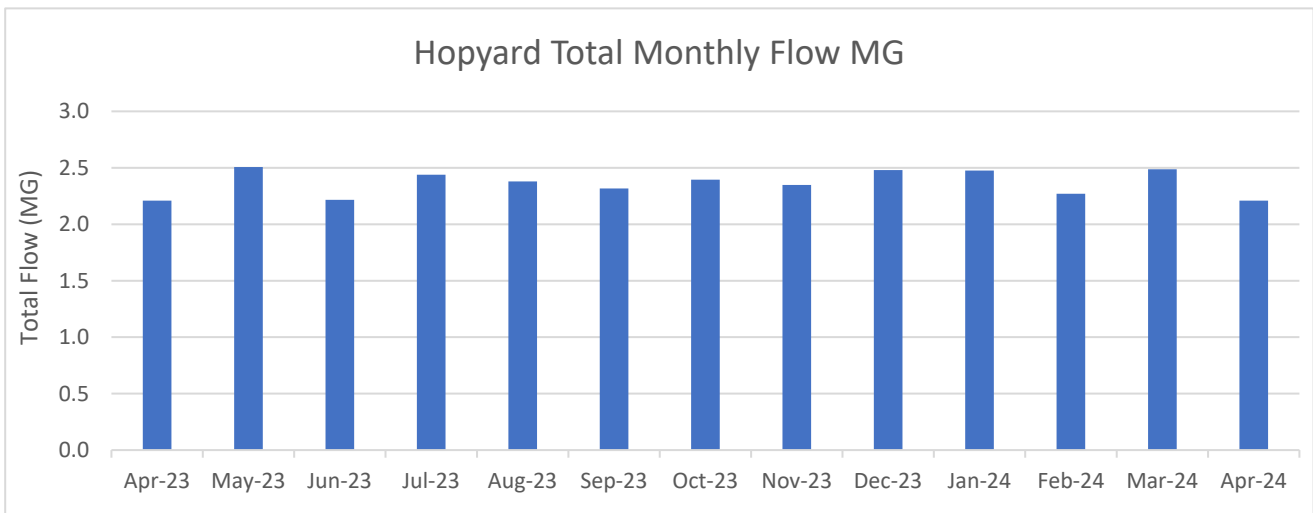
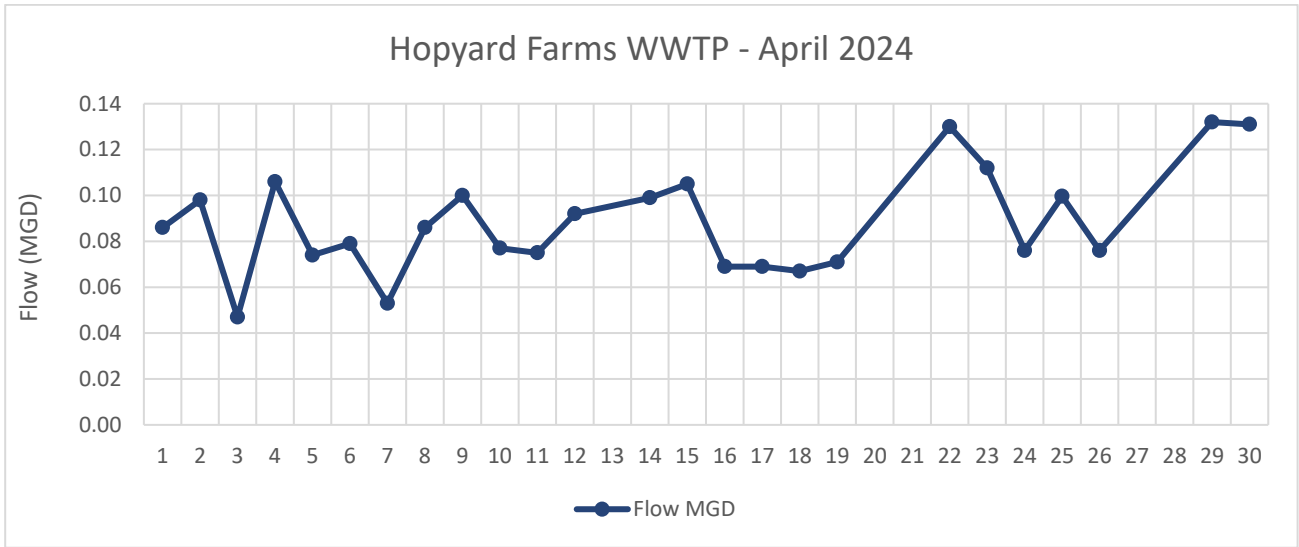
Operational Notes:

- The motor for the influent screen failed and King George Maintenance had the motor rebuilt.
- IES and King George Maintenance are working with RK&K on fielding questions for the engineering team.
- King George Maintenance inspected and repaired a check valve for post-EQ pump #2, which now allows the pump to run at full capacity.

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 permit-required sampling except for TKN. Inundation of FOG (fats/oils/grease) to the plant are being treated utilizing bioaugmentation to restore TKN removal. Treatment is improving.

Wastewater Treatment:

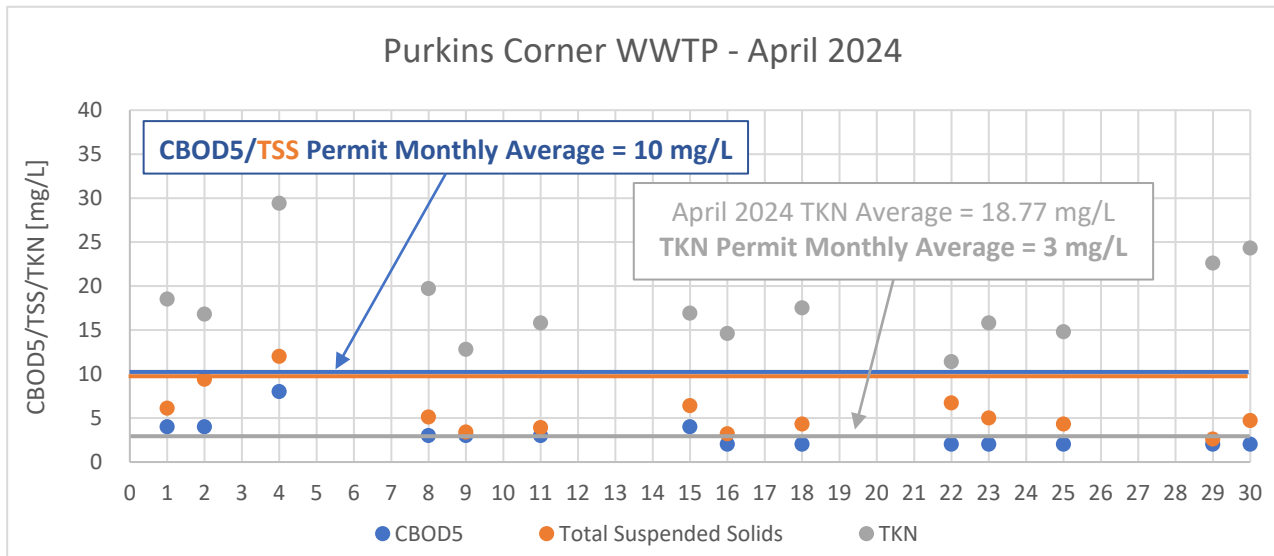
The Purkins Corner WWTP met the sewer service area's sanitation demand with an average daily discharge of 0.065 MGD for a total monthly discharge of 1.935 MG.

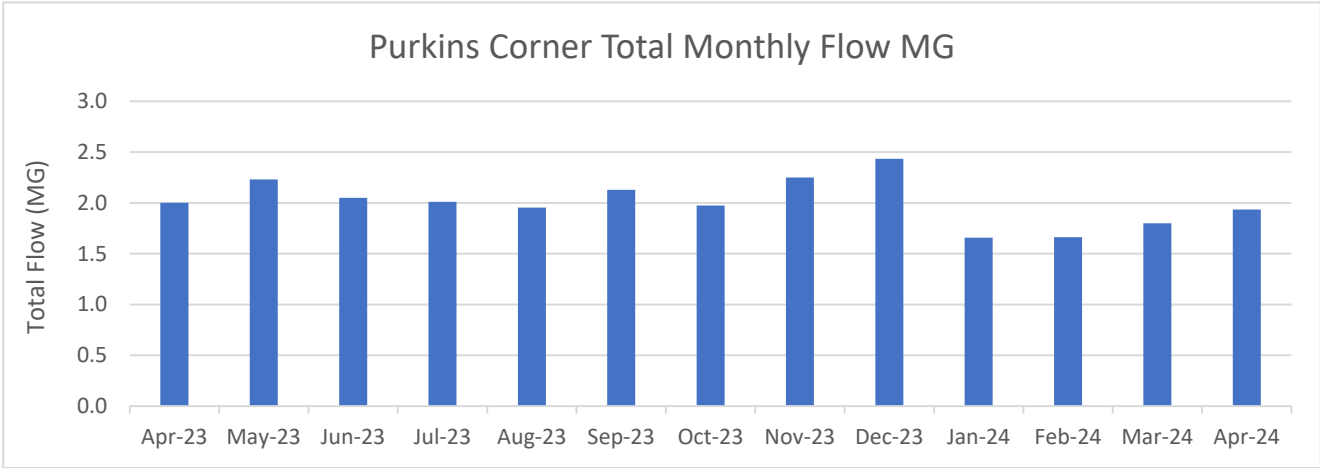
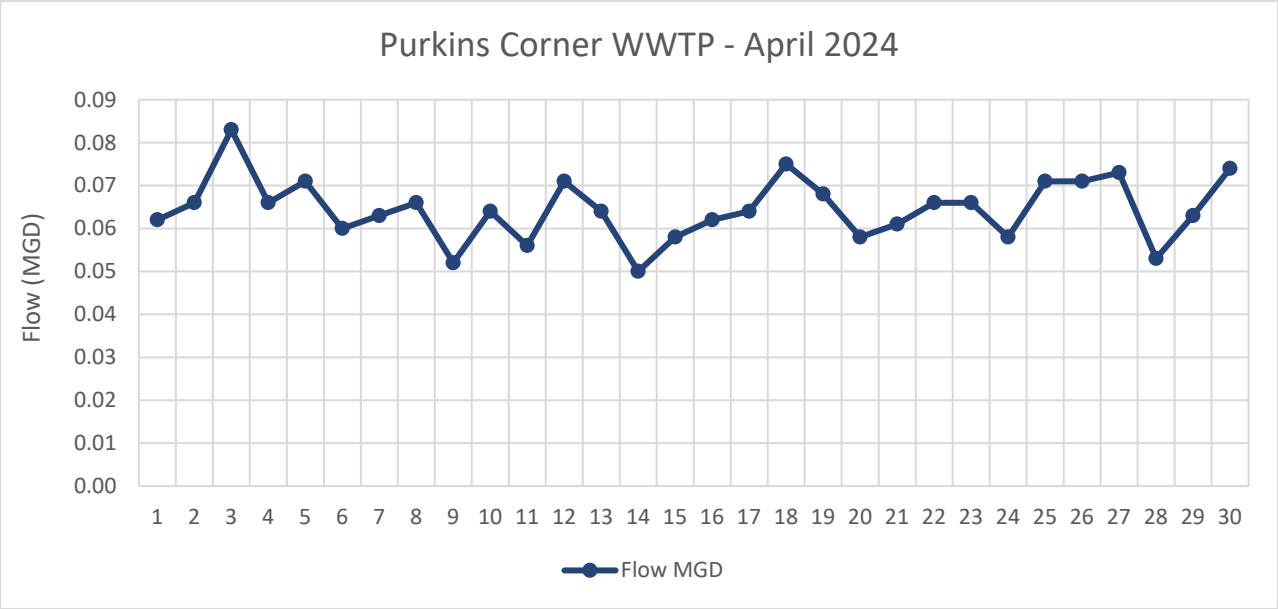
Operational Notes:

- Bioaugmentation is still in place at the sewer lift stations to help with oxidizing FOG.

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 with the exception of TSS and TKN. Operations determined that these minor exceedances were due to the sand filter being out of operation.

Wastewater Treatment:

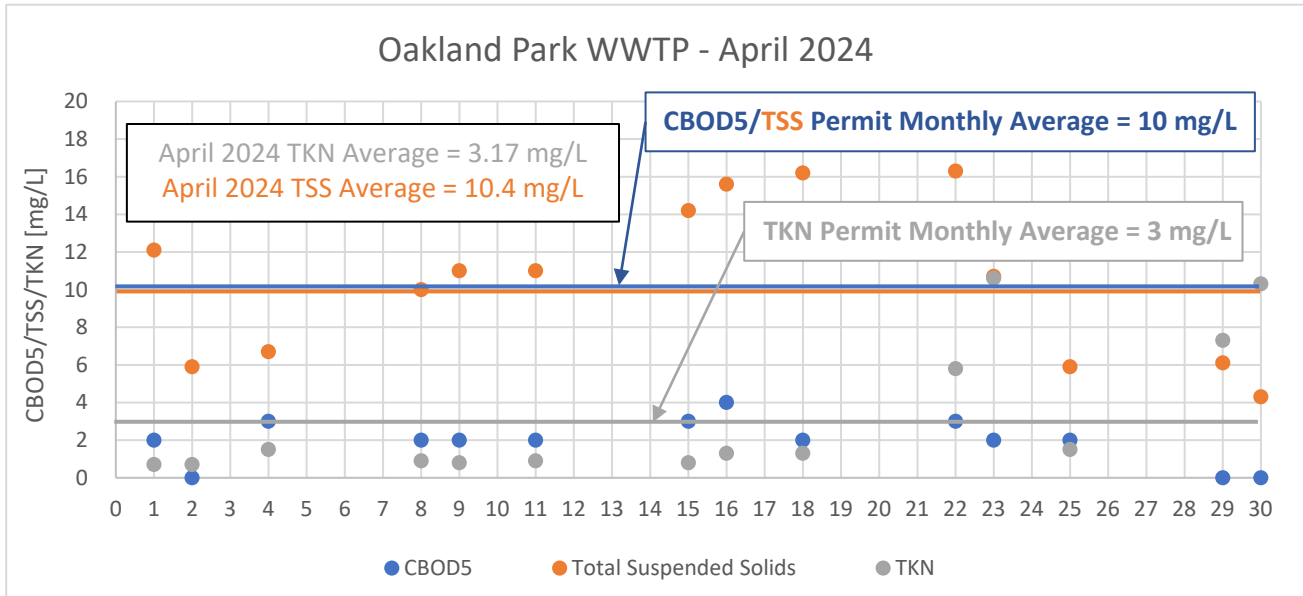
The Oakland Park WWTP met the sewer service area's sanitation demand with an average daily discharge of 0.054 MGD for a total monthly discharge of 1.616 MG.

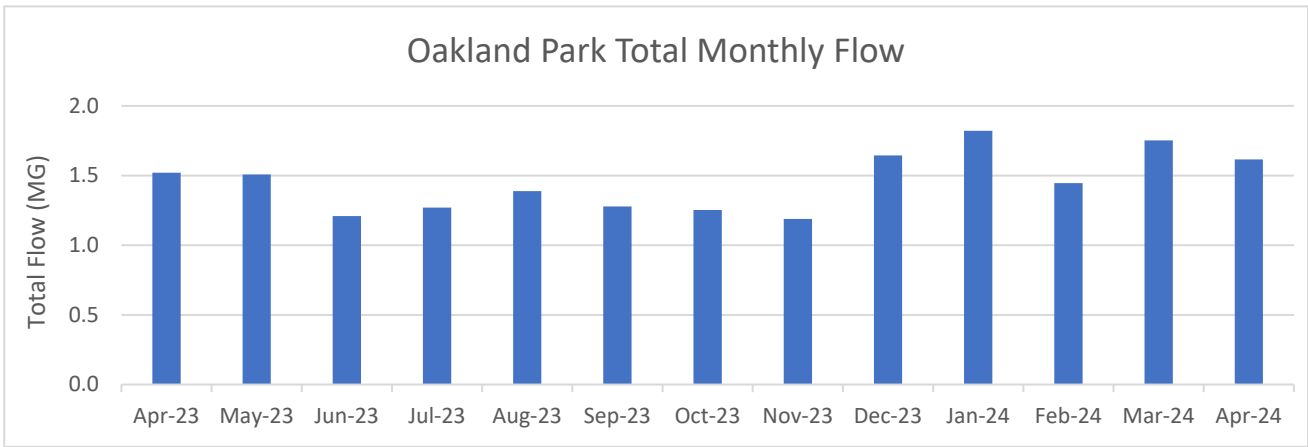
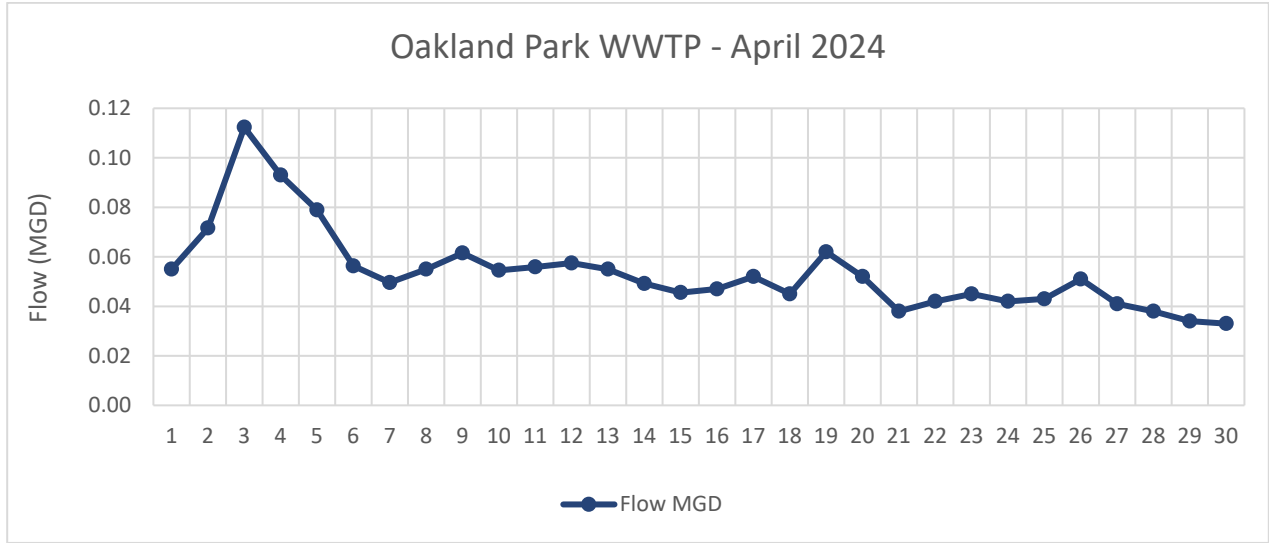
Operational Notes:

- IES has been in communication with several sand filter companies but have yet to receive the necessary support for supplies and technical information.
- A welder visited the site to prepare to work on the EQ basin (structural integrity of the tank).

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:

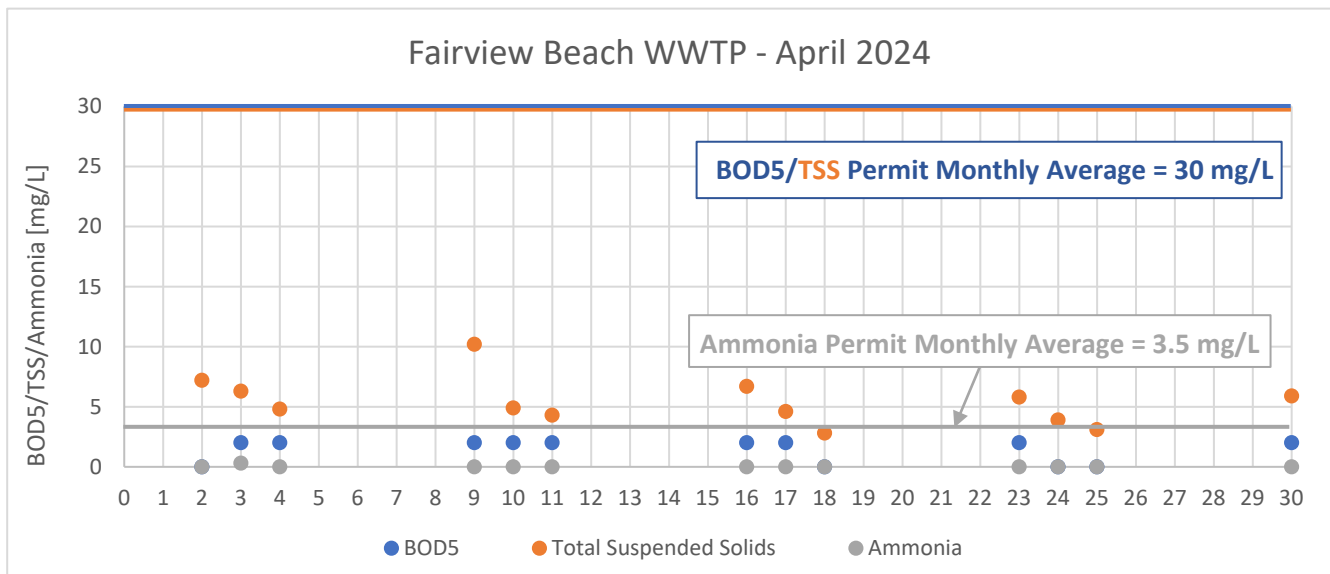
The Fairview Beach WWTP met the sewer service area's sanitation demand with an average daily discharge of 0.089 MGD for a total monthly discharge of 2.317 MG (26 days with flow).

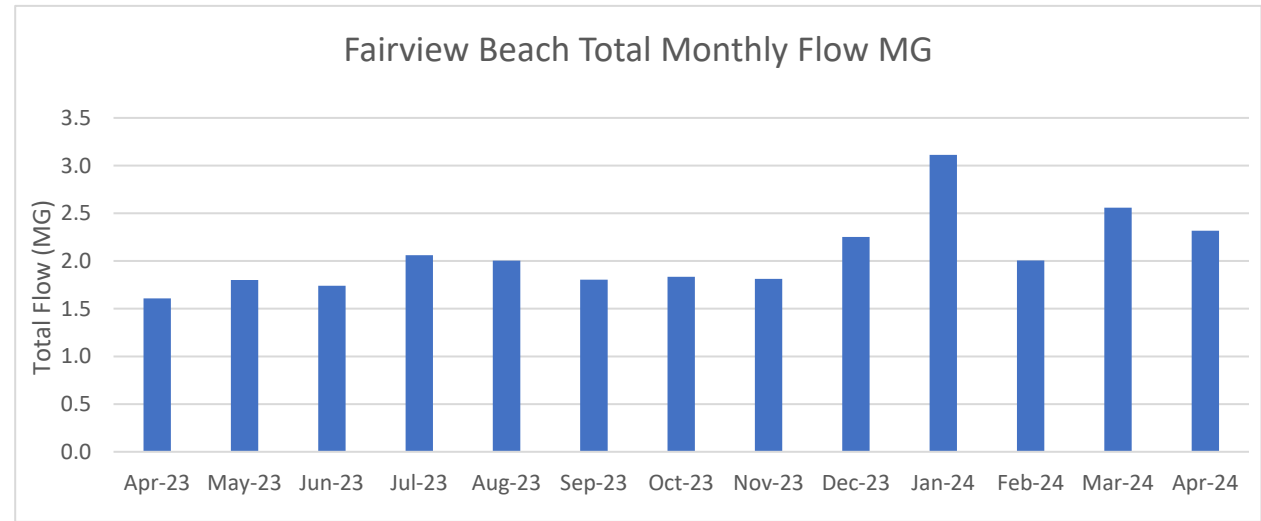
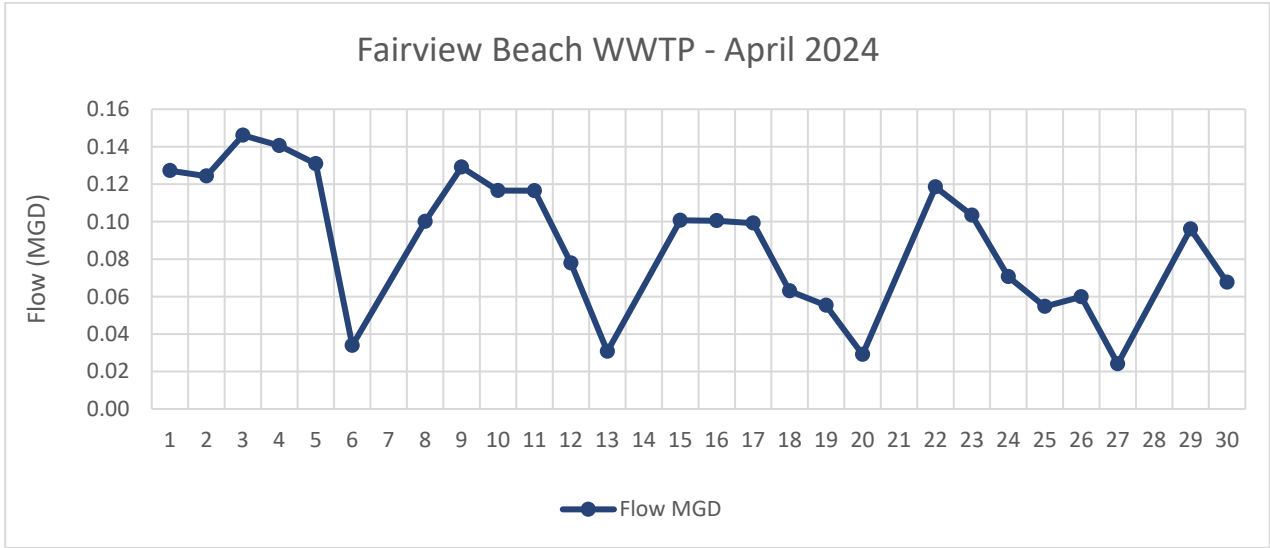
Operational Notes:

- King George Maintenance repaired the 1850 (coagulant) storage tank after a leak was discovered by IES operations staff.
- King George Maintenance replaced the faulty decant valve. IES staff took advantage of this down time to drain and clean the post-EQ tank.

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