

PUMP STATION		196					
Jan-22		PS 196					
		METER	24 HOUR				
		READING	FLOW				
SAT	1	95001050	0.304450				
SUN	2	95305500	0.421772				
MON	3	95727272	0.152416	W			
TUE	4	95879688	0.104012	turned 196 to Lewes			
WED	5	95983700	0.152470	off 1/3 at 1:00pm			
THU	6	96136170	0.174480	turned back on 1/4			
FRI	7	96310650	0.192260	at 12:15 pm			
SAT	8	96502910	0.173080				
SUN	9	96675990	0.205110				
MON	10	96881100	0.192080				
TUE	11	97073180	0.209710				
WED	12	97282890	0.215810				
THU	13	97498700	0.193200				
FRI	14	97691900	0.212840				
SAT	15	97904740	0.219310				
SUN	16	98124050	0.253130				
MON	17	98377180	0.213140				
TUE	18	98590320	0.197180				
WED	19	98787500	0.206340				
THU	20	98993840	0.210150				
FRI	21	99203990	0.198550				
SAT	22	99402540	0.218220				
SUN	23	99620760	0.225310				
MON	24	99846070	0.205118				
TUE	25	51188	0.210436				
WED	26	261624	0.202199				
THU	27	463823	0.203399				
FRI	28	667222	0.201539				
SAT	29	868761	0.195231				
SUN	30	1063992	0.205921				
MON	31	1269913	0.210698				
		1480611		flow back to Wolfe Neck			
TOTAL			6.479561	156,416 gals.			
COUNT			31	flow to Lewes			
AVERAGE			0.209018	6,323,145 gals.			
MINIMUM			0.104012				
MAXIMUM			0.421772				

Submission Receipt

Copy of Record: 72173 Confirmation ID: r202212872173

Site: Howard Seymour Water Reclamation
Plant

Site ID: DE0021512

Submission: Discharge Monitoring Report for DE0021512 Howard Seymour
Water Reclamation Plant Outfall: 001, December, 2021

File Name: 202112-3214-60749445

File Type: .pdf

Report: DMR

Status: Signed

Hash of Data Document:

6747618818c602c64a7529191b418b32ec618377c3117d428587edacf2da74cb

Data Entry Completed: 1/28/2022
5:35 PM

By: Richard Plack (richardplack)

E-Mail of Submitter: Richard.Plack@Inframark.com

From: 172.31.25.193

Signed: 1/28/2022 5:36 PM

By: Richard Plack (richardplack)

E-Mail of Signator: Richard.Plack@Inframark.com

From: 172.31.25.193

Token Used When Signed:

gRRbUm2dG8vOWWBhnQQORFZDmOnRPDrIdDyiktmMm94=



NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (include Facility Name/Location if different):
 Howard Seymour Water Reclamation Plant
 116 American Legion Road, Lewes, DE 19958 US
DE0021512
PERMIT NUMBER 001
DISCHARGE NUMBER
REPORT DESIGNATOR A
DATA ENTRY COMPLETE 1/28/2022
MONITORING PERIOD FROM 2021 12 01 TO 2021 12 31
REPORT SUBMITTED BY rrichardpack
STATUS OF SUBMISSION Submitted for Signature

#	PARAMETER	SAMPLING MEASUREMENT	NDI	QUANTITY OR LOADING			QUALITY OR CONCENTRATION			UNITS	NO. EX. OF ANALYSIS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
				AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM				
1/1	Flow	SAMPLE MEASUREMENT	-	0.756	0.834	Gal/Day	No Monitoring Required	No Monitoring Required	No Monitoring Required	-	0	99/99	RCOTOT
	Gross Effluent (50050)	PERMIT REQUIREMENT	-	No Limit Monitoring Req'd	No Limit Monitoring Req'd	Gal/Day	No Monitoring Required	No Monitoring Required	No Monitoring Required	-	-	99/99	RCOTOT
1/2	Dissolved oxygen (DO)	SAMPLE MEASUREMENT	-	5.31	5.31	mg/l	5.31	9.41	9.41	mg/l	0	99/99	Imersion
	Gross Effluent (00300)	PERMIT REQUIREMENT	-	No Monitoring Required	No Monitoring Required	mg/l	No Limit Monitoring Req'd	No Limit Monitoring Req'd	No Limit Monitoring Req'd	mg/l	0	99/99	Imersion
1/3	pH	SAMPLE MEASUREMENT	-	7	7	Std pH Units	7	7.4	7.4	Std pH Units	0	01/01	Grab
	Gross Effluent (00400)	PERMIT REQUIREMENT	-	No Monitoring Required	No Monitoring Required	Std pH Units	6	No Monitoring Required	No Monitoring Required	Std pH Units	-	01/01	Grab
1/4	Enterococcus	SAMPLE MEASUREMENT	-	<1	<1	CFU/100 ML	<1	<1	<1	CFU/100 ML	0	01/07	Grab
	Gross Effluent (31639)	PERMIT REQUIREMENT	-	No Monitoring Required	No Monitoring Required	CFU/100 ML	10	104	104	CFU/100 ML	-	01/07	Grab
1/5	BOD5	SAMPLE MEASUREMENT	-	<15	<16	lbs/Day	<2.4	<2.4	<2.4	mg/l	0	01/07	Composite 24
	Gross Effluent (00310)	PERMIT REQUIREMENT	-	188	288	lbs/Day	No Monitoring Required	No Monitoring Required	No Monitoring Required	mg/l	-	01/07	Composite 24
1/6	BOD5	SAMPLE MEASUREMENT	-	246	246	mg/l	246	246	246	mg/l	0	01/30	Composite 24
	Raw Sewage (00310)	PERMIT REQUIREMENT	-	No Monitoring Required	No Monitoring Required	mg/l	No Monitoring Required	No Monitoring Required	No Monitoring Required	mg/l	-	01/30	Composite 24
1/7	TSS	SAMPLE MEASUREMENT	-	<5	7	lbs/Day	<0.8	1	1	mg/l	0	01/07	Composite 24
	Gross Effluent (00530)	PERMIT REQUIREMENT	-	188	288	lbs/Day	No Monitoring Required	No Monitoring Required	No Monitoring Required	mg/l	-	01/07	Composite 24

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
 [Signature Line]
ATTACH DIGITAL SIGNATURE RECEIPT FROM [Signature Line]
TELEPHONE [] **DATE** [] [] []
YEAR [] **MO** [] **DAY** []



NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

PERMITTEE NAME/ADDRESS (include Facility Name/location if different):

NAME: Howard Seymour Water Reclamation Plant
 ADDRESS: 116 American Legion Road, Lewes, DE 19958 US
 FACILITY: Howard Seymour Water Reclamation Plant
 LOCATION: 116 American Legion Road, Lewes, DE 19958 US

DISCHARGE MONITORING REPORT (DMR)

DE0021512 PERMIT NUMBER
 001 DISCHARGE NUMBER
 2021 12 01 MONITORING PERIOD FROM
 2021 12 31 TO
 REPORT DESIGNATOR: A
 DATA ENTRY COMPLETE: 1/28/2022
 REPORT SUBMITTED BY: richardaplack
 STATUS OF SUBMISSION: Submitted for Signature

#	PARAMETER	NDI	QUANTITY OR LOADING			QUALITY OR CONCENTRATION			UNITS	NO. EX. OF ANALYSIS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
			AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM				
2/1	TSS	SAMPLE MEASUREMENT			--			236	236	0	01/30	Composite 24
	Raw Sewage (00530)	PERMIT REQUIREMENT	No Monitoring Required	No Monitoring Required	--	No Monitoring Required	No Limit Monitoring Req'd	No Limit Monitoring Req'd	No Limit Monitoring Req'd	--	01/30	Composite 24
2/2	Total Nitrogen	SAMPLE MEASUREMENT	21.9	21.9	lbs/Day	No Monitoring Required	3.63	3.63	3.63	0	01/30	Composite 24
	Gross Effluent (00600)	PERMIT REQUIREMENT	100	No Limit Monitoring Req'd	lbs/Day	No Monitoring Required	8	No Limit Monitoring Req'd	No Limit Monitoring Req'd	--	01/30	Composite 24
2/3	Phosphorus, Total	SAMPLE MEASUREMENT	<0.3	<0.3	lbs/Day	<0.05	<0.05	<0.05	<0.05	0	01/30	Composite 24
	Gross Effluent (00665)	PERMIT REQUIREMENT	25	No Limit Monitoring Req'd	lbs/Day	No Monitoring Required	2	No Limit Monitoring Req'd	No Limit Monitoring Req'd	--	01/30	Composite 24

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER: _____

TYPED OR PRINTED: _____

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY KNOWLEDGE OF THE PERSON OR PERSONS WHO PREPARED THE INFORMATION SUBMITTED, I BELIEVE THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

ATTACH/DIGITAL SIGNATURE RECEIPT FROM: _____

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT: _____

TELEPHONE: _____ DATE: _____

YEAR: _____ MO: _____ DAY: _____

Monthly Operations Report: December 2021

Site: LEWES WWTP

FINAL EFFLUENT OUTFALL 001																	
DATE	DAY	Flow MGD	BOD		TSS		Enteroc. col/100ml	Total P		Total N		Ammonia as N		TKN			
			mg/L	lbs	mg/L	lbs		mg/L	lbs	mg/L	lbs	mg/L	lbs				
1	Wed.	0.489					<1.0										
2	Thu.	0.707															
3	Fri.	0.746															
4	Sat.	0.770															
5	Sun.	0.812															
6	Mon.	0.757															
7	Tue.	0.724	<2.4	<15	<0.5	<3		<0.1	<0.30	3.6	21.92	0.2	1	3.0	18	0.6	4
8	Wed.	0.725					<1.0										
9	Thu.	0.760															
10	Fri.	0.735															
11	Sat.	0.829															
12	Sun.	0.743															
13	Mon.	0.747															
14	Tue.	0.728	<2.4	<15	1.0	6											
15	Wed.	0.739					<1.0										
16	Thu.	0.756															
17	Fri.	0.738															
18	Sat.	0.751															
19	Sun.	0.751															
20	Mon.	0.764															
21	Tue.	0.760	<2.4	<15	<0.5	<3											
22	Wed.	0.781					<1.0										
23	Thu.	0.802															
24	Fri.	0.804															
25	Sat.	0.725															
26	Sun.	0.779															
27	Mon.	0.773															
28	Tue.	0.776	<2.4	<16	1.0	7											
29	Wed.	0.800					<1.0										
30	Thu.	0.822															
31	Fri.	0.843															
TOTAL		23.4460															
AVERAGE		0.7563	<2.40	<14.95	<0.75	<4.70	1.0	<0.05	<0.30	3.63	21.92	0.21	1.27	2.99	18.05	0.64	3.86
MAXIMUM		0.8430	<2.40	<15.50	1.00	6.50	<1.00	<0.05	<0.30	3.63	21.92	0.21	1.27	2.99	18.05	0.64	3.86
MINIMUM		0.4990	<2.40	<14.50	<0.50	<3.00	<1.00	<0.05	<0.30	3.63	21.92	0.21	1.27	2.99	18.05	0.64	3.86
Removal (%)			99.0		99.7												

INFLUENT						
DATE	DAY	Flow MGD	BOD		TSS	
			mg/L	lbs	mg/L	lbs
1	Wed.	0.456				
2	Thu.	0.588				
3	Fri.	0.729				
4	Sat.	0.753				
5	Sun.	0.738				
6	Mon.	0.705				
7	Tue.	0.698	246.0	1407	236.0	1350
8	Wed.	0.690				
9	Thu.	0.706				
10	Fri.	0.706				
11	Sat.	0.748				
12	Sun.	0.736				
13	Mon.	0.728				
14	Tue.	0.672				
15	Wed.	0.685				
16	Thu.	0.437				
17	Fri.	0.576				
18	Sat.	0.703				
19	Sun.	0.707				
20	Mon.	0.712				
21	Tue.	0.702				
22	Wed.	0.724				
23	Thu.	0.733				
24	Fri.	0.747				
25	Sat.	0.695				
26	Sun.	0.738				
27	Mon.	0.762				
28	Tue.	0.769				
29	Wed.	0.770				
30	Thu.	0.783				
31	Fri.	0.812				
TOTAL		21.6940				
AVERAGE		0.70	246	1,407	236	1,350
MAXIMUM		0.81	246	1,407	236	1,350
MINIMUM		0.44	246	1,407	236	1,350
Removal (%)						

LEWES WWTF

NUTRIENT OFFSET REPORT 2021

Month	Days	Average Monthly Flow	Monthly Average TN	Total Monthly TN Discharged	TN Based 16.9 lbs Manure Offset Required	Monthly Average TP	Total Monthly TP Discharged	TP Based 285 lbs Manure Offset Required	Max Manure Equivalent	Poultry Manure Relocated	Poultry Manure Offset Balance
		MGD	mg/L	lbs	Tons	mg/L	lbs	Tons	Tons	Tons	Tons
Carry Over											773.51
January	31	0.7158	5.95	1,101.12	9.30	0.21	38.86	5.41	9.30	-	9.30
February	28	1.0566	7.70	1,899.88	16.05	0.35	86.36	12.31	16.05	-	16.05
March	31	1.0056	6.06	1,575.53	13.31	0.32	83.20	11.86	13.31	-	13.31
April	30	0.8386	4.09	858.15	7.25	0.27	56.65	8.07	8.07	-	7.25
May	31	0.8335	6.23	1,342.52	11.34	1.97	424.52	60.50	60.50	-	11.34
June	30	0.9106	3.52	801.97	6.78	1.52	346.30	49.35	49.35	-	6.78
July	31	0.8902	5.60	1,288.85	10.89	0.30	69.05	9.84	10.89	-	10.89
August	31	0.7576	7.69	1,506.24	12.73	1.66	325.14	46.34	46.34	-	12.73
September	30	0.6797	3.87	658.14	5.56	0.05	8.50	1.21	5.56	-	5.56
October	31	0.7129	3.16	582.43	4.92	<0.05	9.22	1.31	4.92	-	4.92
November	30	0.5932	2.44	362.14	3.06	0.12	17.81	2.54	3.06	-	3.06
December	31	0.7563	3.63	709.79	6.00	<0.05	9.78	1.39	6.00	-	6.00
Year Balance											540.16

Comments:

Authorized Signatory

Date



1/28/22

LEWES BPW WWTP Biweekly InSight Report

Date: 2/9/2022

From: Erin Horocholyn - Suez Water Technologies & Solutions
 To: Austin Calaman BPW, Inframark
 cc: Matt Stapleford - Suez Water Technologies & Solutions

System Equipment

4 × ZW trains, each train consists of 4 - 500D cassettes, 120 modules x 370 sq. ft. per train (surface area 44,400 sq. ft. per train)

Replacement membranes installed Q1 2020 on trains UF3 and UF4

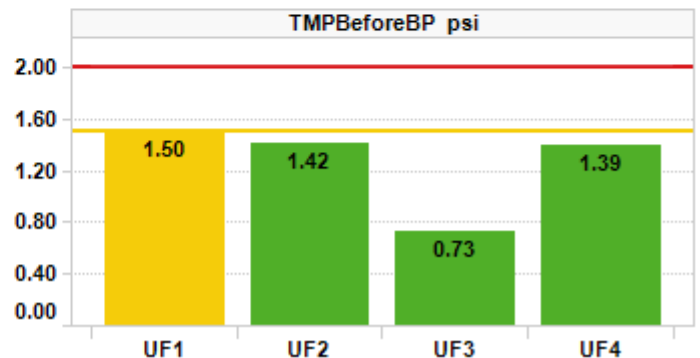
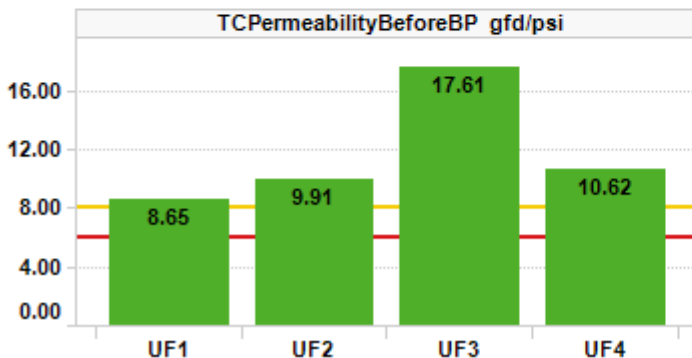
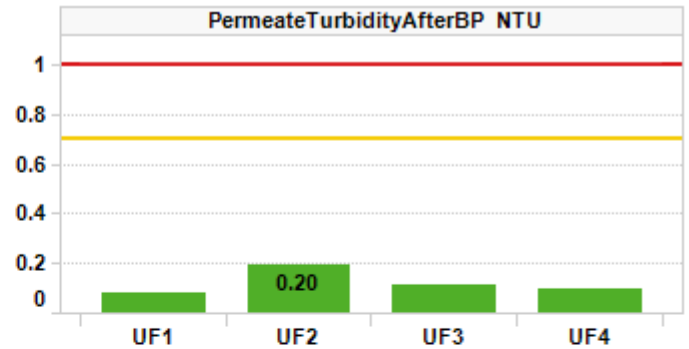
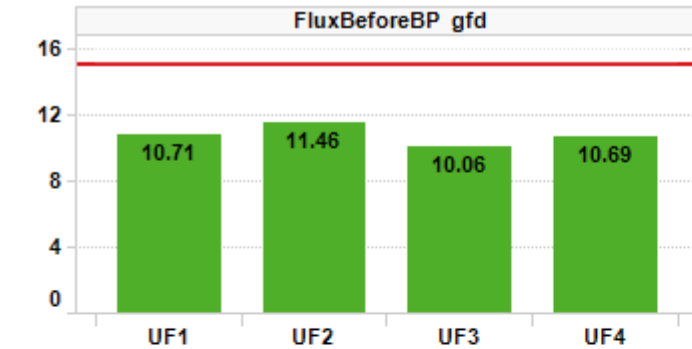
Cleaning Strategy

Recovery cleaning - 2 NaOCl @ 2000 ppm dose/1000 ppm soak per year, 1 Citric acid @ 2000 ppm per year

Maintenance cleaning - 1 NaOCl per week @ 200 ppm, 1 Citric acid per week @ 2000 ppm

KPI Dashboard – Avg values through reporting period

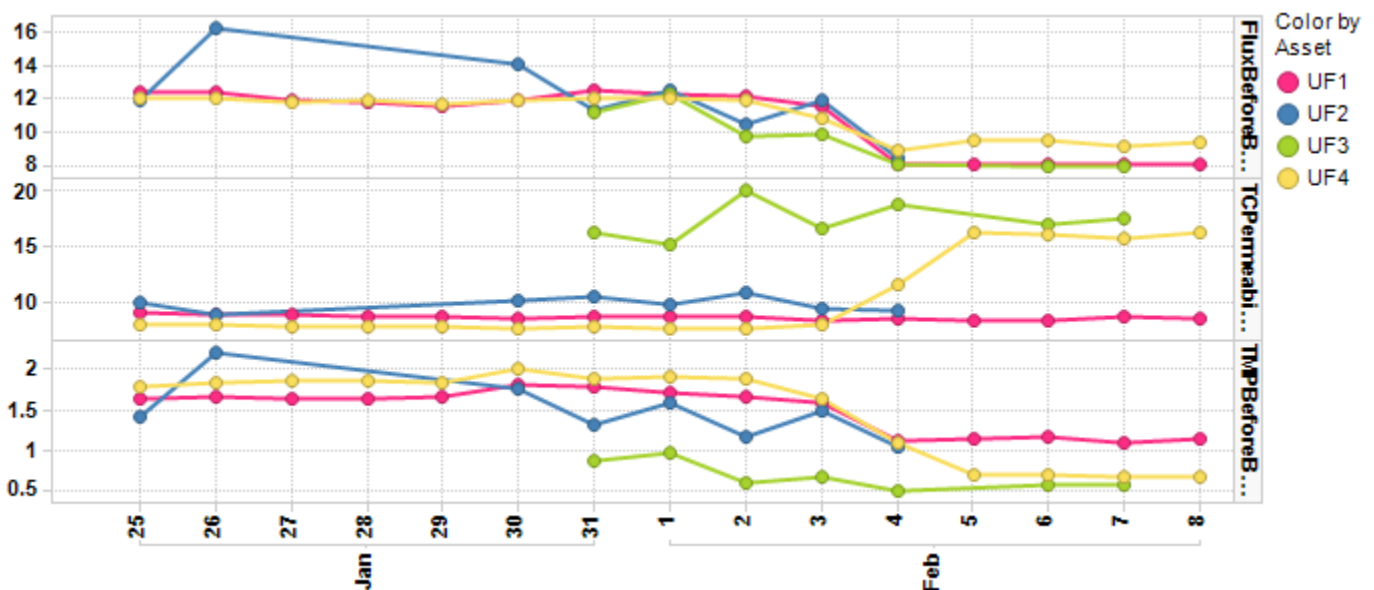
■ Action Required
■ Caution
■ No Limits
■ Normal



Plant Summary

Trains UF1,2,3 are operating well overall. UF4’s performance increased by +7 gfd/psi with the decrease in flux on Feb 3. Permeability remains >8.0 gfd/psi on all trains.

- Daily permeate production averaged 0.70 MGD. UF1 and UF4 produced the majority of permeate in this report. UF2 and UF3 produced <10% of daily permeate except over Feb 3 – 4. Permeate temperature averaged 55F (-1°F). All online trains are in Backpulse with constant LEAP Hi aeration
- Flux decreased on Feb 3 for UF1 and UF4, correlated with a decrease in TMPs and increase in permeabilities on these trains. TMP BBP averaged 1.6, 1.3, 0.8, and 1.7 psi on UF1,2,3,4 before Feb 3, and averaged 1.3, 1.4, 0.6, and 0.8 psi after (-0.3 psi on UF1, and -0.9 psi on UF4)
- TC permeability BBP averages were >8 gfd/psi on all trains. Permeability increased on UF4 after flux was lowered on Feb 3, averaging 8.1 gfd/psi before, and 15.1 gfd/psi after. TCP on UF1,2,3 averaged 8.7, 9.9, and 17.6 gfd/psi overall. The plots below display daily median averages



- The cause of UF4’s performance decline has been identified. A cassette within UF4 when being replaced after cleaning was not seated correctly and there was an issue with the riser tube connection which contributed to solids intrusion. A new Straub fitting may help fix the connection issue. If installing a new Straub, it’s best practice to mark the depth and orientation of the fitting and pipes with a grease pencil to ensure on reinstallation of the cassette a good seal is maintained
- Permeate turbidity ABP averages ranged from 0.08 – 0.20 NTU with higher values on Feb 4 on all trains, peaking at 2.1 NTU. UF2 had the higher average turbidity at 0.20 NTU, but was online less frequently so spiking values dominated its average value

Table 1. Record of maintenance cleans (MCs) run.

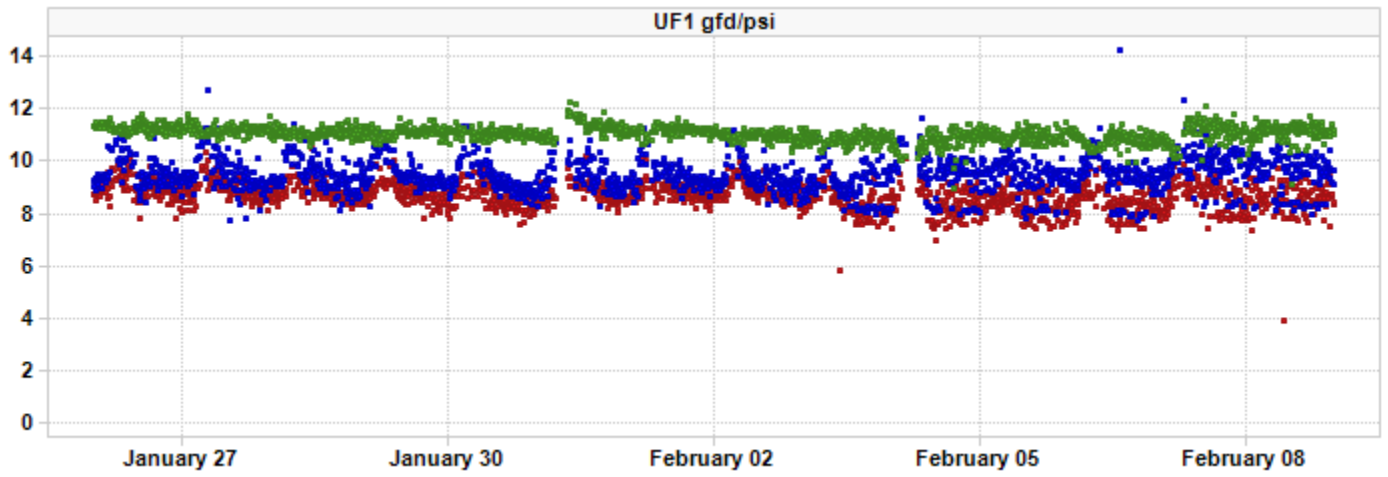
Train	UF1	UF2	UF3	UF4
# of Hypochlorite MCs	2	1	1	2
# of Citric Acid MCs	3	3	3	2

- Aerobic tank 1 dissolved oxygen averaged 1.55 ppm. Tank 2 averaged 1.28 ppm (-0.69 ppm). The pre-anoxic zone’s DO averages were 1.22 ppm (+0.23 ppm) in tank 1, and 1.28 ppm in tank 2 which is high for nitrification

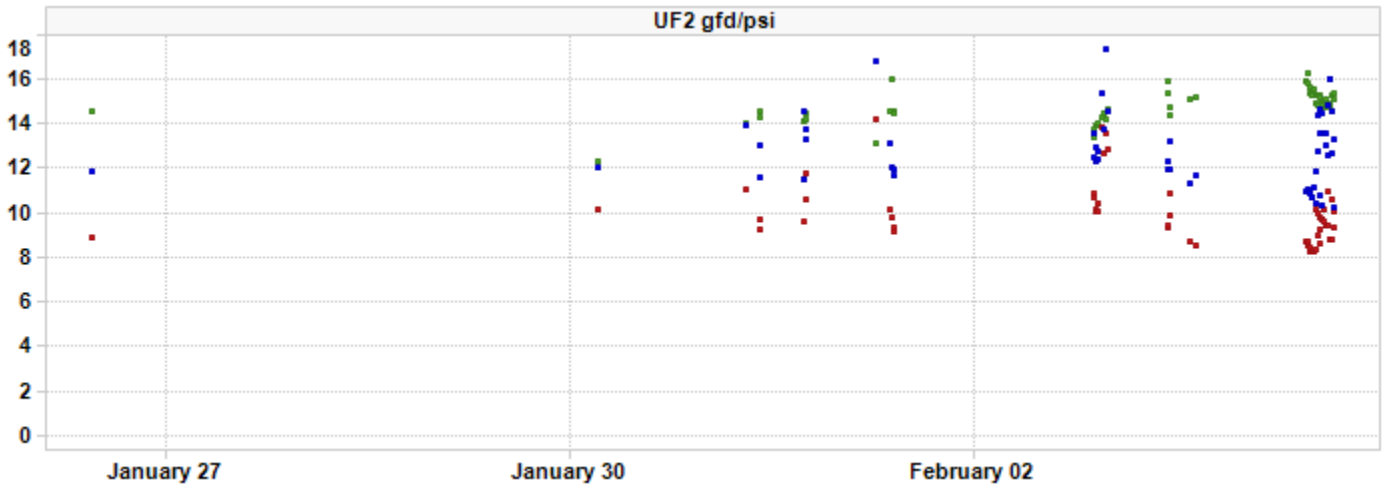


TC Permeability Trends By Train

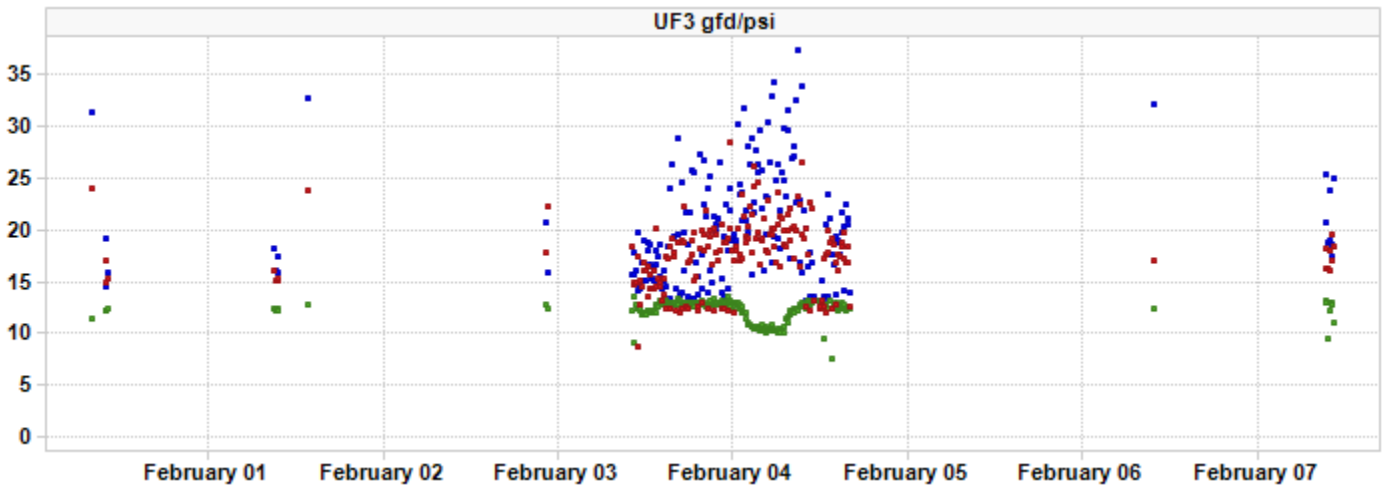
■ TcPermeabilityAfterBP
■ TcPermeabilityBeforeBP
■ TcPermeabilityDuringBP

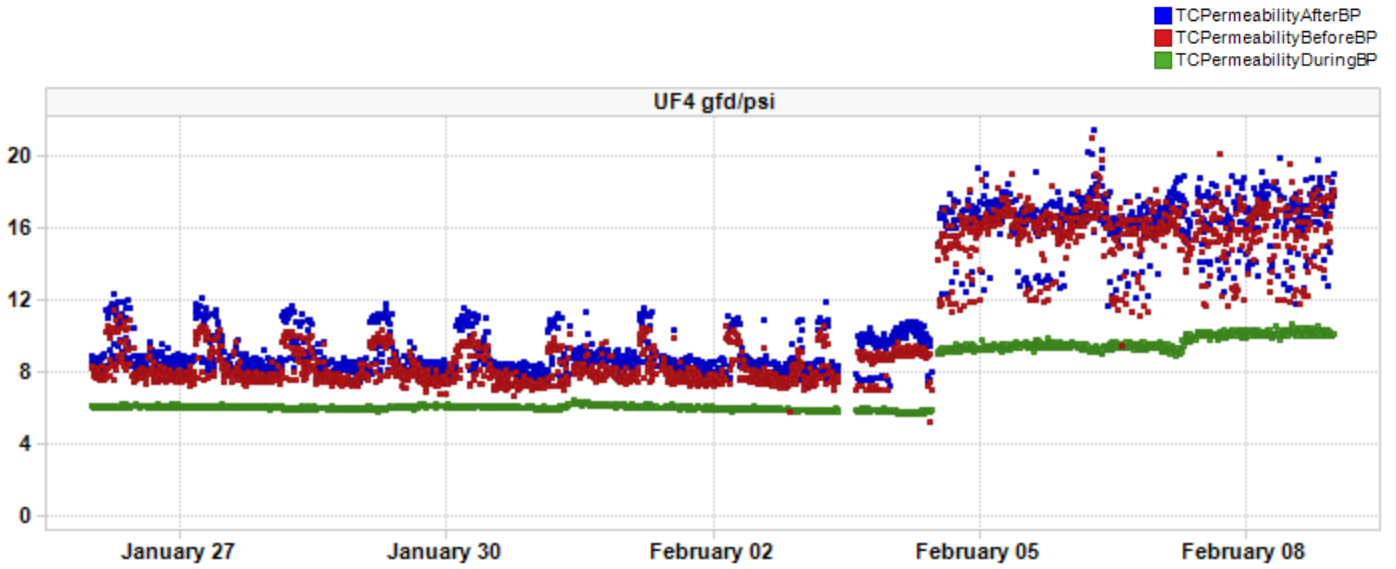


■ TcPermeabilityAfterBP
■ TcPermeabilityBeforeBP
■ TcPermeabilityDuringBP

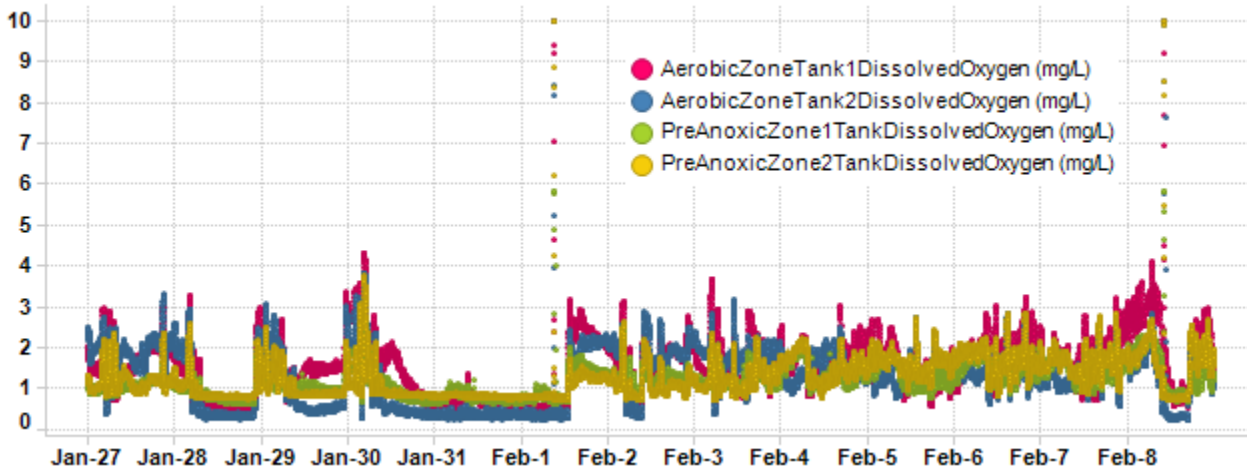


■ TcPermeabilityAfterBP
■ TcPermeabilityBeforeBP
■ TcPermeabilityDuringBP

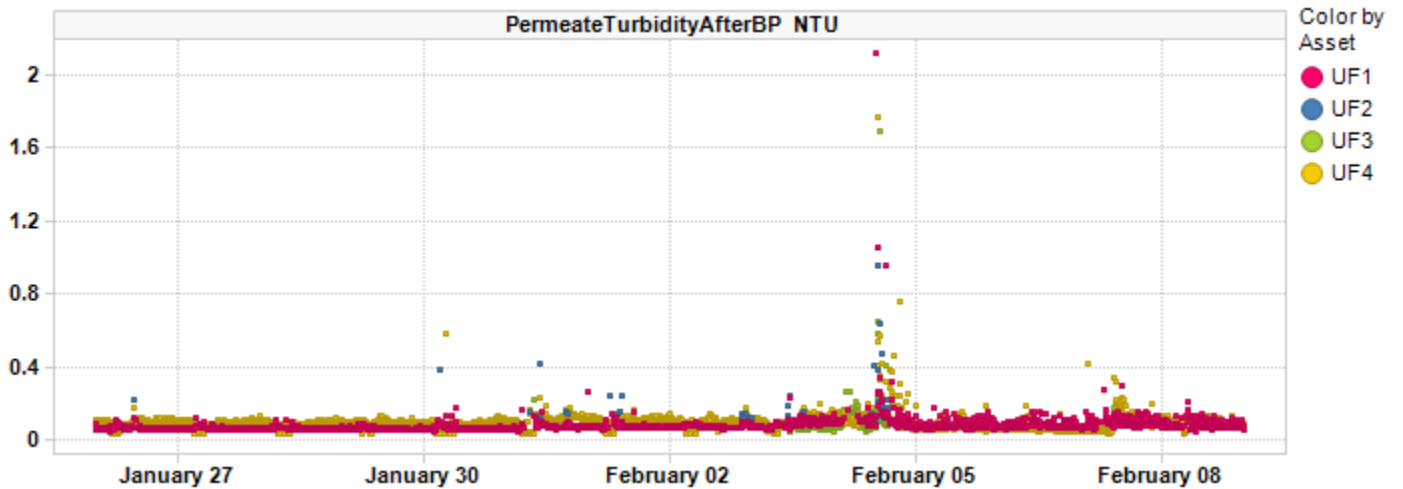




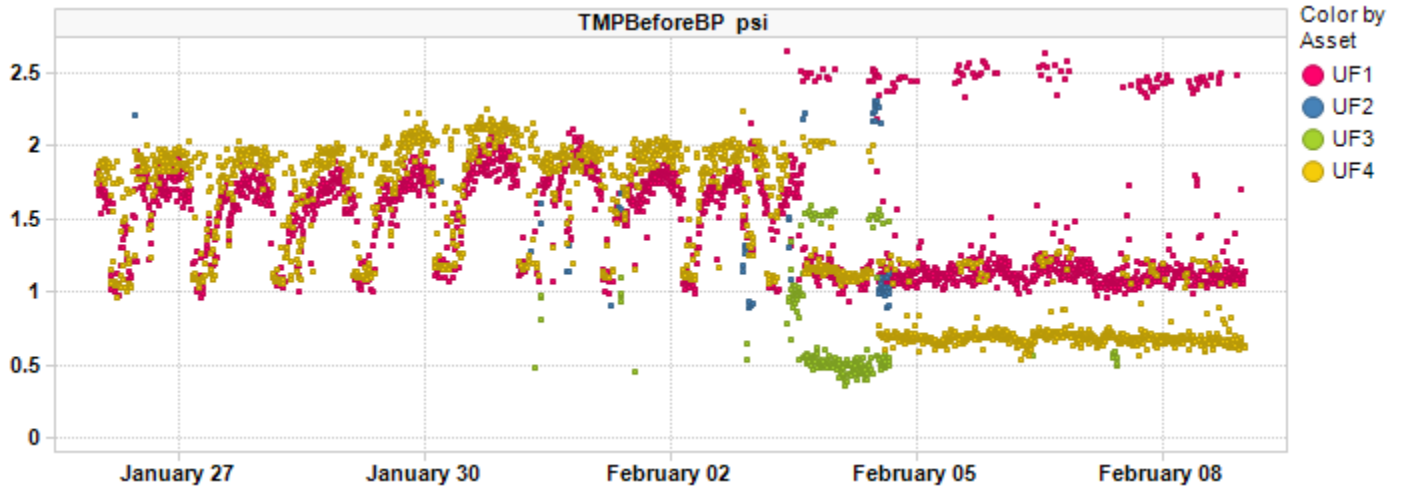
Bioreactor Dissolved Oxygen



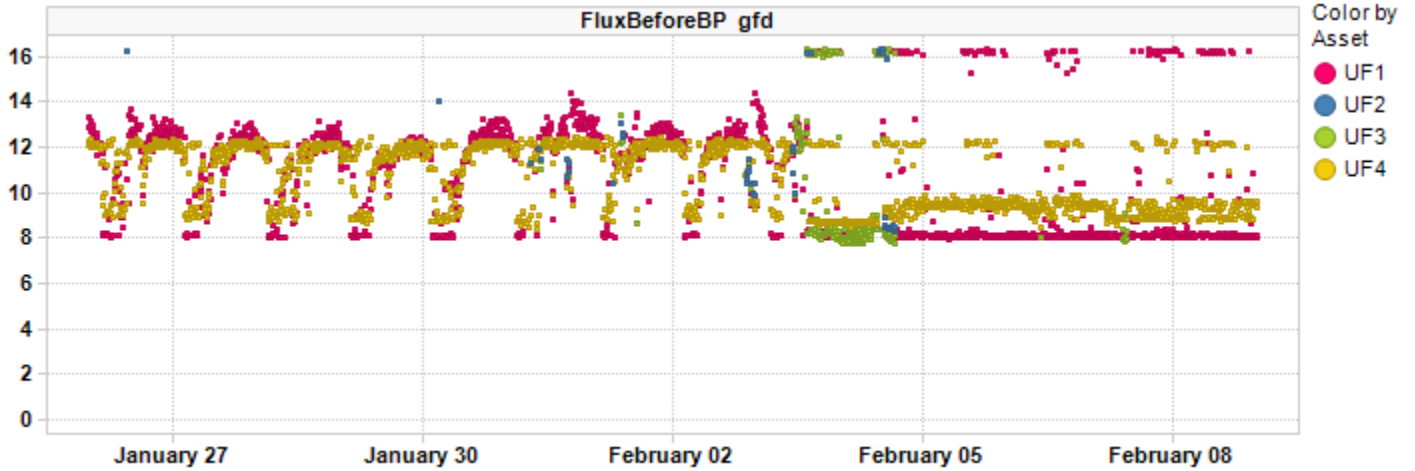
Permeate Turbidity Trend



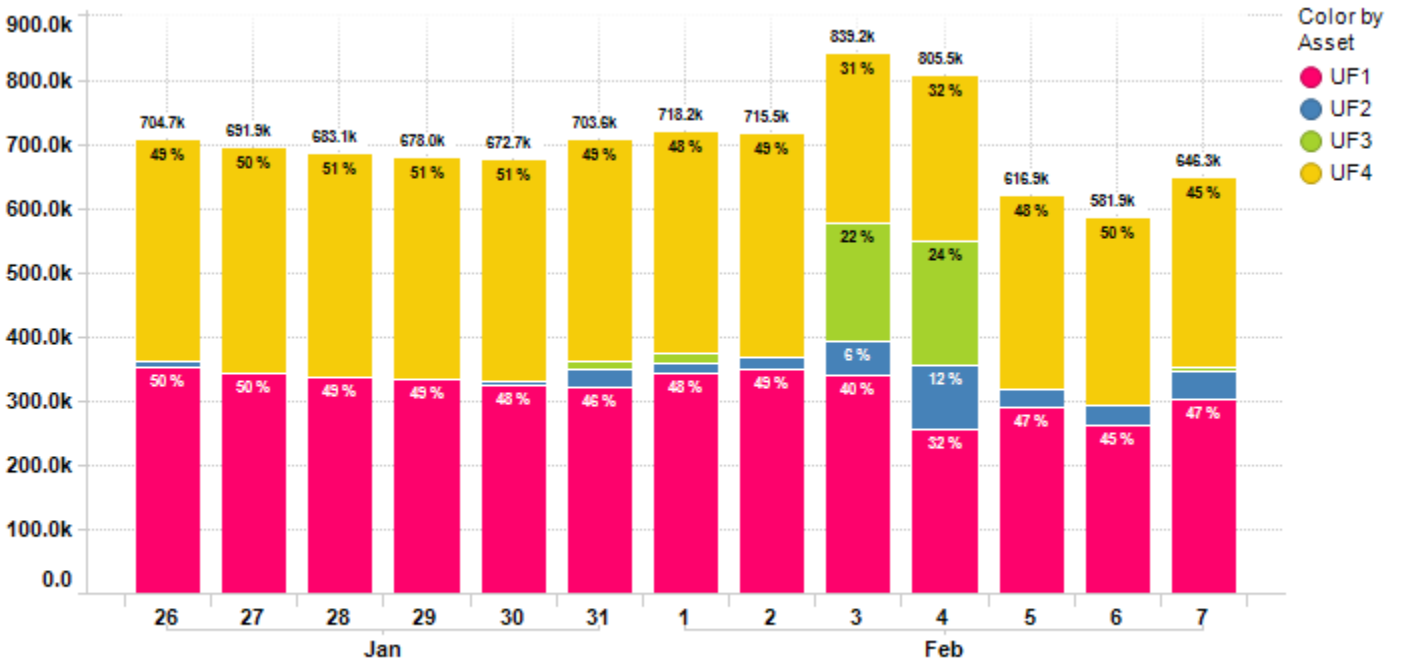
Before BPTMP Trend



Before BP Flux Trend



Daily Permeate Flow



Average Daily permeate flow from 1/26/2022 to 2/8/2022 is 696.7k gal with a maximum daily flow of 839.2k gal.



Asset Summary

KPI Parameters	Value/Change	UF1	UF2	UF3	UF4
FluxBeforeBP gfd	Value	10.71	11.46	10.06	10.69
	Change	-9.85 %	3.11 %	-11.37 %	-7.00 %
FluxDuringBP gfd	Value	18.68	18.52	18.56	18.67
	Change	-0.25 %	0.37 %	0.21 %	0.21 %
PermeateTurbidityAfterBP NTU	Value	0.08	0.20	0.11	0.10
	Change	25.56 %	33.08 %	31.81 %	4.99 %
TCPermeabilityBeforeBP gfd/psi	Value	8.65	9.91	17.61	10.62
	Change	-7.53 %	-3.46 %	2.16 %	18.25 %
TMPBeforeBP psi	Value	1.50	1.42	0.73	1.39
	Change	-0.56 %	7.52 %	-8.06 %	-14.43 %
TotalPermeateFlowDaily gal	Value	319.53k	27.16k	41.86k	319.93k
	Change	-10.72 %	-15.08 %	42.76 %	-9.12 %

Plant Summary

KPI Parameters	Value/Change	UF Plant
PermeateTemperature °F	Value	55.08
	Change	-1.61 %
TotalPermeateFlowDaily gal	Value	777.93k
	Change	-6.31 %

Contract Expiry Date : 08/11/2021

For InSight technical assistance please email insight.src@suez.com or please call technical support at 1 866 271 5425 or 905 469 7723 and follow the prompts, if you require after hours assistance please contact the 24/7 Emergency number provided in your plant documentation. This email is a summary of issues identified during a manual review of InSight data from the time period above. This review is an analysis of data that is logged by InSight and identifies key plant performance issues determined from this data. This data review was not focused on minor data issues but on identifying possible existing and/or upcoming critical operational issues.

This review was prepared by SUEZ Water Technologies & Solutions solely to assist water treatment plant owners and/or operators in analyzing and optimizing plant performance and is not intended to be used or relied upon for regulatory compliance or any other purpose. The content of this review is based in whole or in part on operation data obtained from the plant using InSight software. SUEZ Water Technologies & Solutions makes no representations or warranties as to the accuracy of the plant data utilized in the preparation of this review. SUEZ Water Technologies & Solutions accepts no liability for consequences or actions taken in whole or in part by any person on the basis of this review or its contents

LEWES BPW WWTP Biweekly InSight Report

Date: 1/26/2022

From: Erin Horocholyn - Suez Water Technologies & Solutions
 To: Austin Calaman BPW, Inframark
 cc: Matt Stapleford - Suez Water Technologies & Solutions

System Equipment

4 × ZW trains, each train consists of 4 - 500D cassettes, 120 modules x 370 sq. ft. per train (surface area 44,400 sq. ft. per train)

Replacement membranes installed Q1 2020 on trains UF3 and UF4

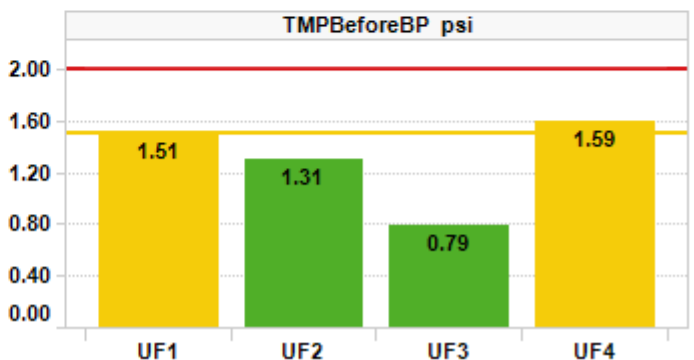
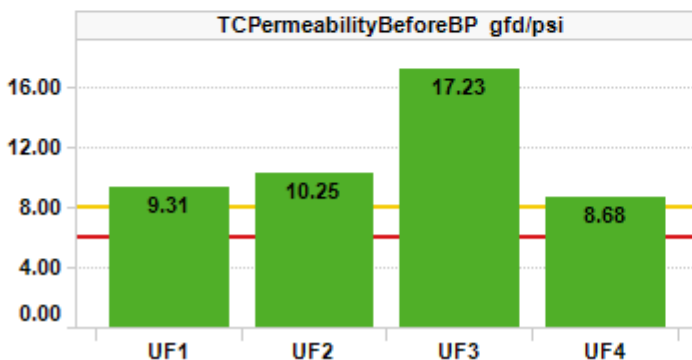
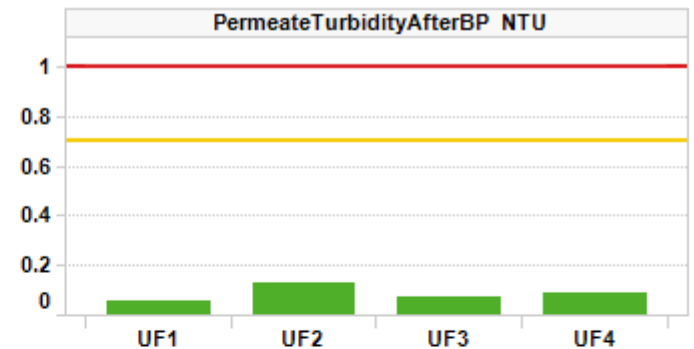
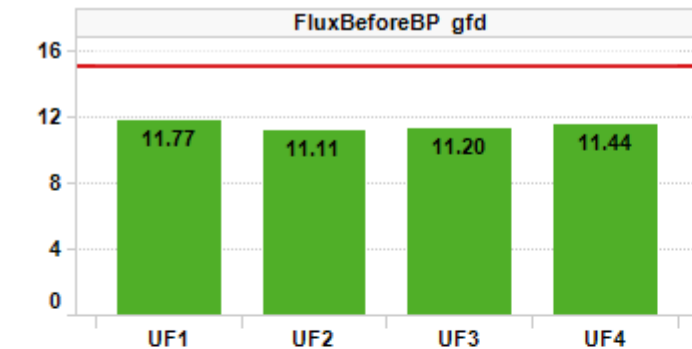
Cleaning Strategy

Recovery cleaning - 2 NaOCl @ 2000 ppm dose/1000 ppm soak per year, 1 Citric acid @ 2000 ppm per year

Maintenance cleaning - 1 NaOCl per week @ 200 ppm, 1 Citric acid per week @ 2000 ppm

KPI Dashboard – Avg values through reporting period

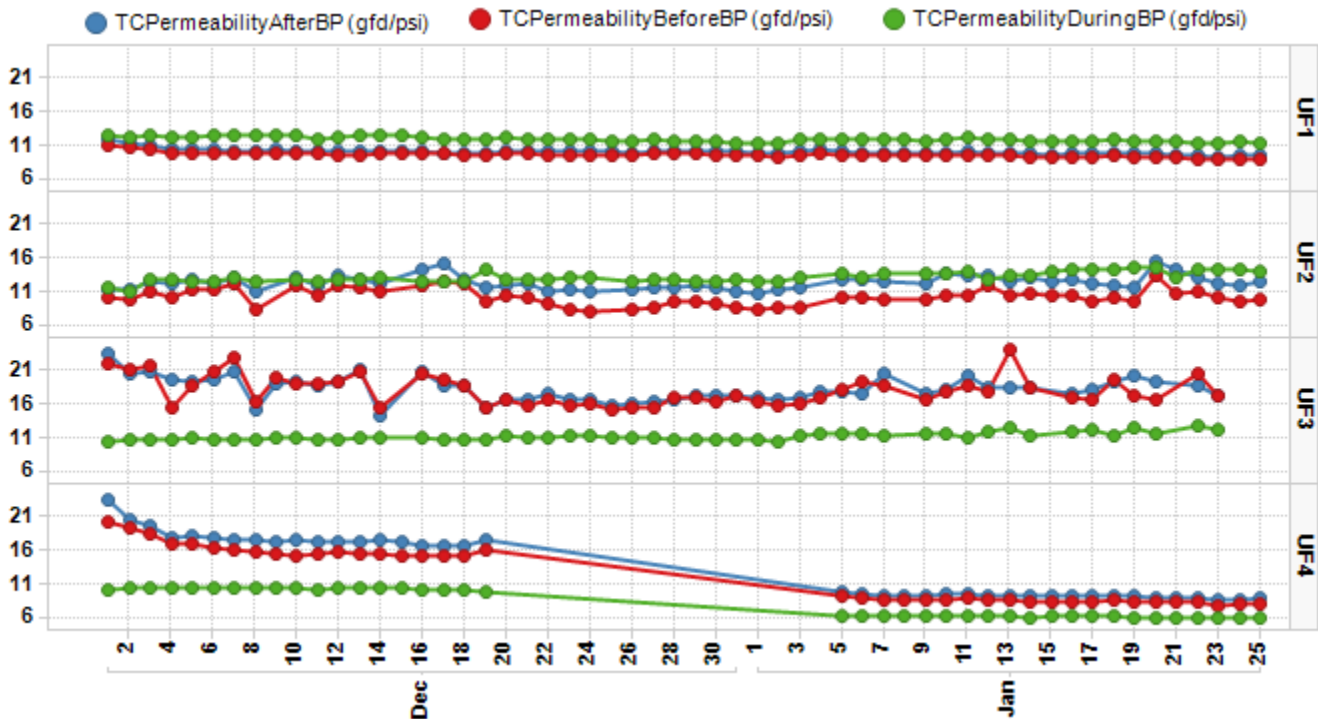
■ Action Required
■ Caution
■ No Limits
■ Normal



Plant Summary

Trains UF1,2,3 are operating well overall. UF4’s decline in performance persists, and the train would benefit from an extended maintenance clean soak in hypochlorite. Permeability remains >8.0 gfd/psi on all trains.

- Daily permeate production averaged 0.76 MGD. UF1 and UF4 produced the majority of permeate in this report. UF2 and UF3 produced <10% of daily permeate except on Jan 16. Permeate temperature averaged 56°F (-3°F). All online trains are in Backpulse with constant LEAP Hi aeration
- TMP BBP was good, averaging <1.0 psi on UF3. UF1, UF2, and UF4’s TMP averaged 1.5, 1.3, and 1.6 psi
- TC permeability BBP averages were excellent and >8 gfd/psi on all trains. UF1, UF2, UF3, and UF4 averaged 9, 10, 17, and 9 gfd/psi respectively. UF4’s permeability remains lower than in December
- The change in UF4’s performance happened after an offline period from Dec 19 – Jan 5. The higher TMPs are not correlated to high flow rates. As During Backpulse permeability has decreased, fouling on the membranes is likely. UF4 may benefit from an extended maintenance clean, leaving the train to soak for 6 – 10 hours to try and restore performance. The plots below display daily median averages.



- Permeate turbidity ABP averages ranged from 0.06 – 0.13 NTU with higher values on Jan 17 on all trains, peaking at 0.37 NTU

Table 1. Record of maintenance cleans (MCs) run.

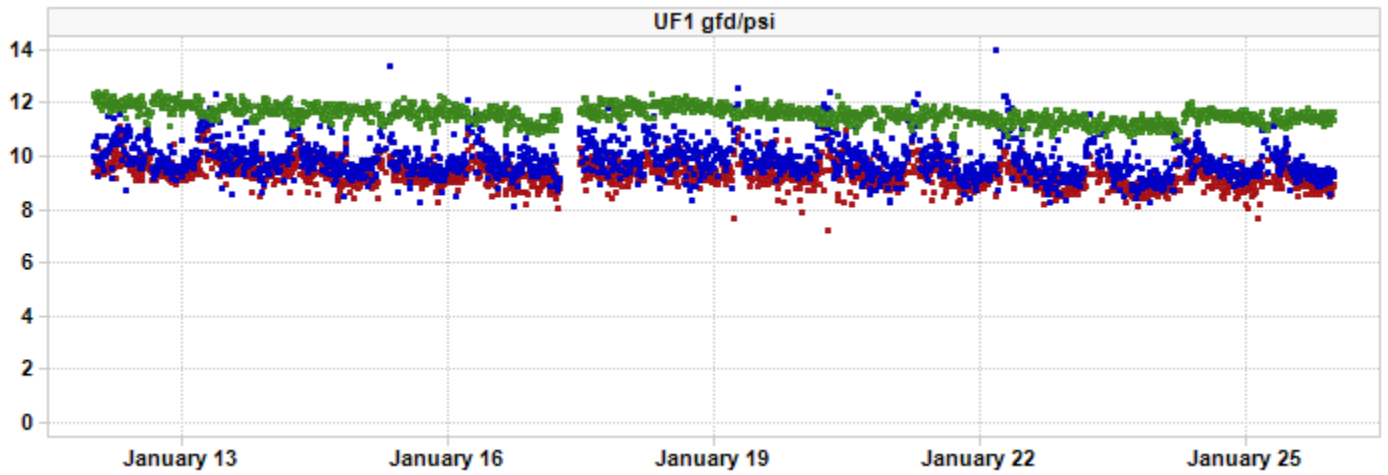
Train	UF1	UF2	UF3	UF4
# of Hypochlorite MCs	2	2	2	2
# of Citric Acid MCs	2	2	2	2

- Aerobic tank 1 dissolved oxygen averaged 1.59 ppm (+0.61 ppm). Tank 2 averaged 1.97 ppm. The pre-anoxic zone’s DO averages were 0.99 ppm (+0.18 ppm) in tank 1, and 1.39 ppm in tank 2 which may be high for nitrification

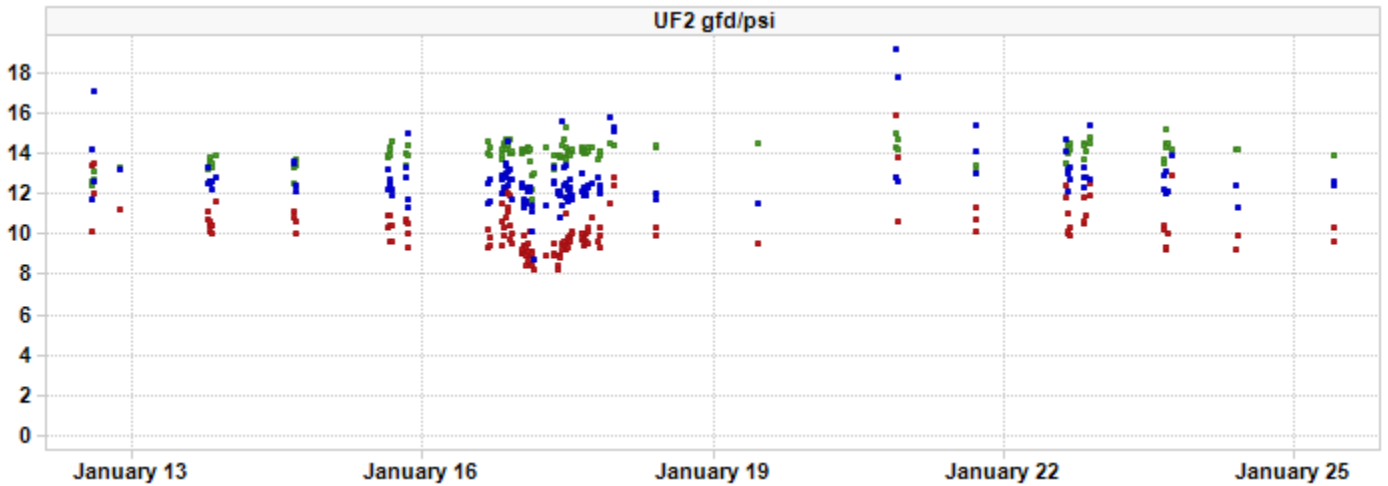


TC Permeability Trends By Train

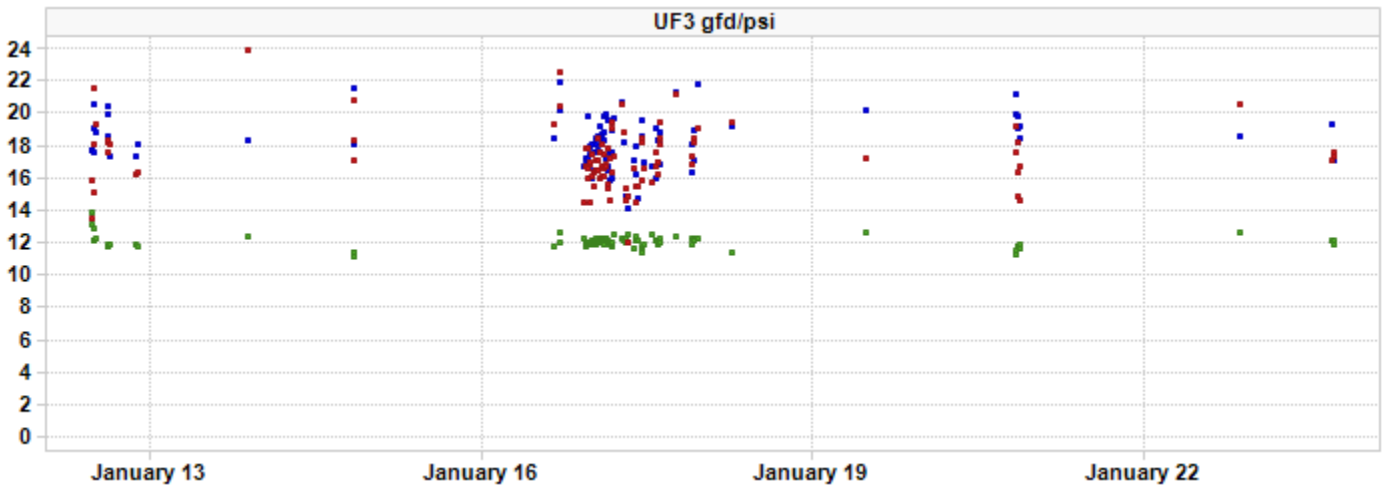
■ TCPermeabilityAfterBP
■ TCPermeabilityBeforeBP
■ TCPermeabilityDuringBP



■ TCPermeabilityAfterBP
■ TCPermeabilityBeforeBP
■ TCPermeabilityDuringBP

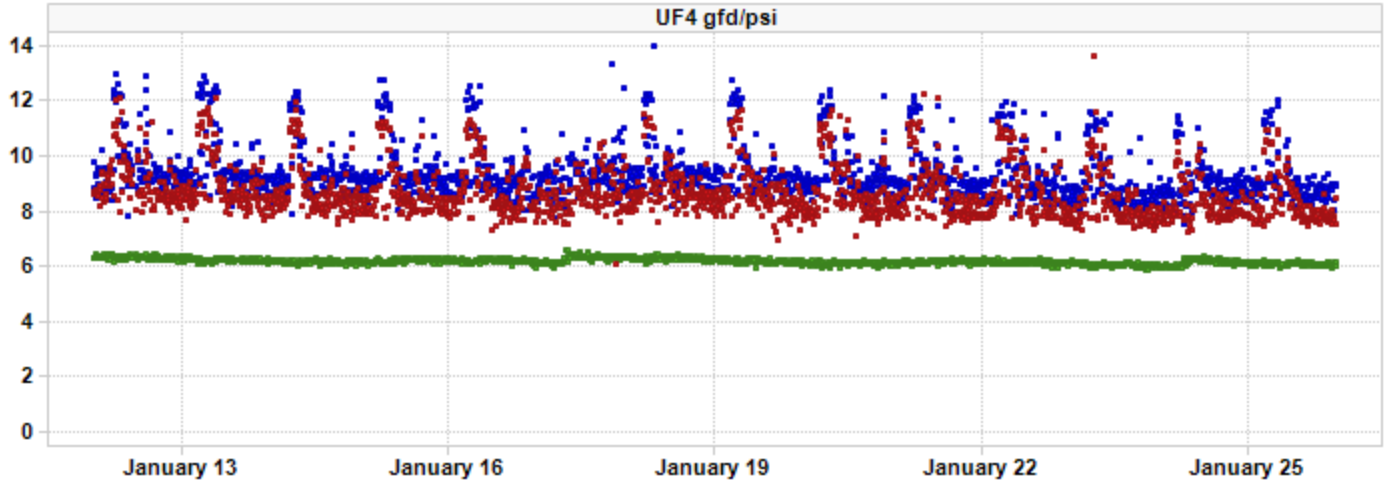


■ TCPermeabilityAfterBP
■ TCPermeabilityBeforeBP
■ TCPermeabilityDuringBP

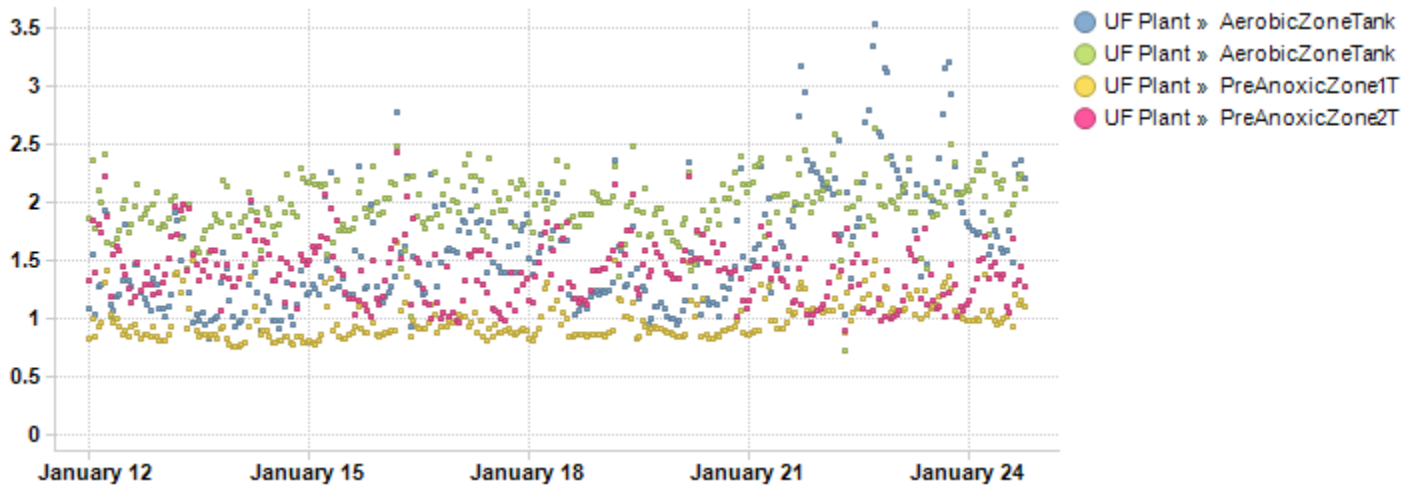




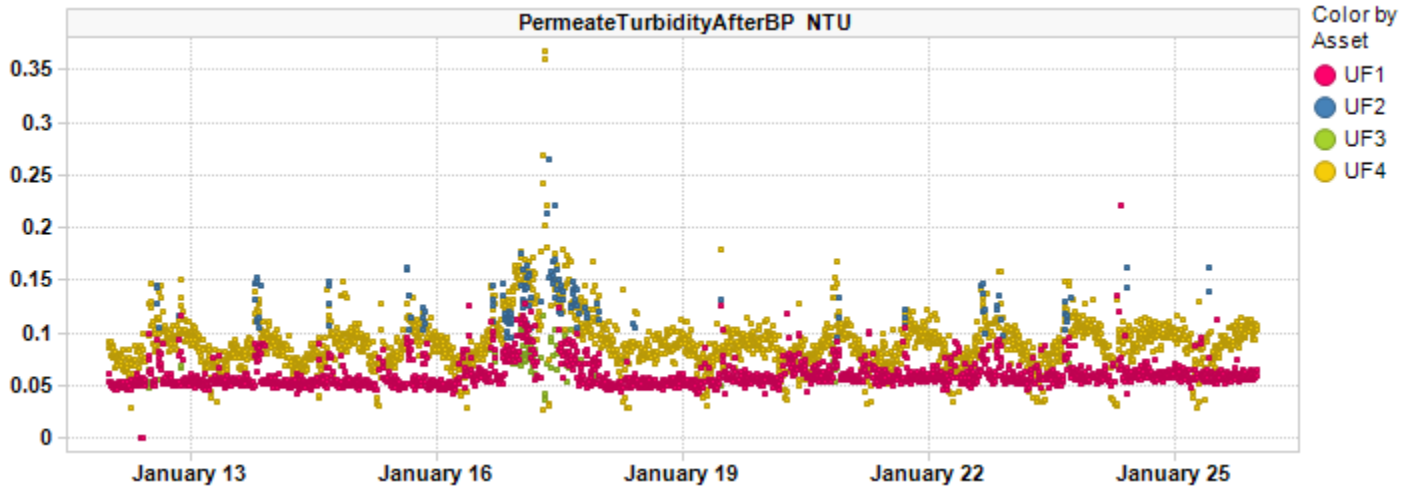
- TCPermeabilityAfterBP
- TCPermeabilityBeforeBP
- TCPermeabilityDuringBP



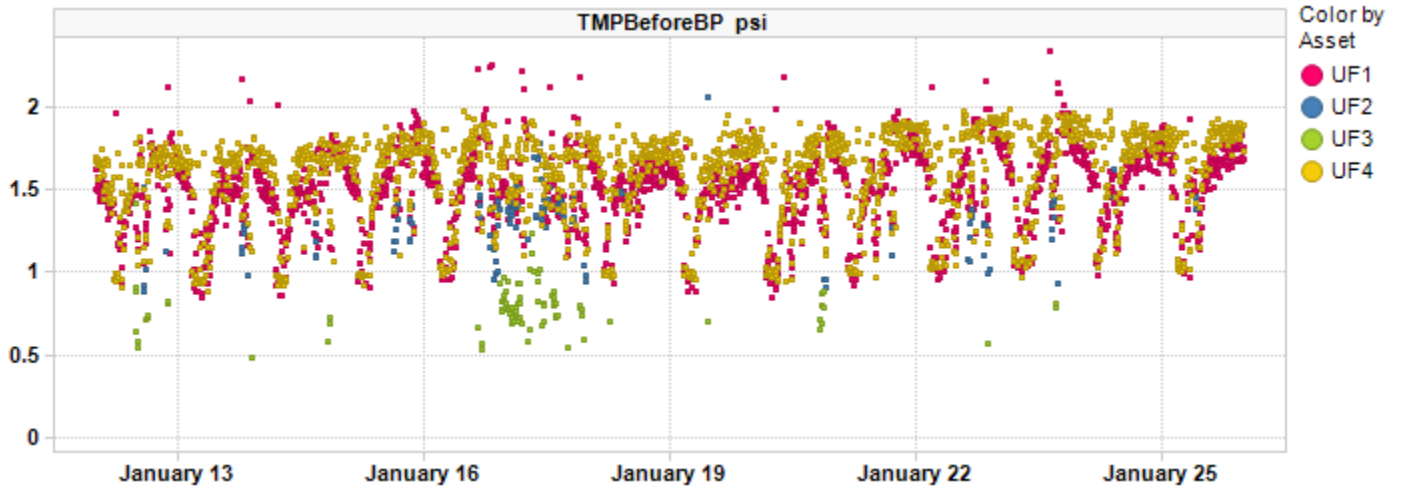
Bioreactor Dissolved Oxygen



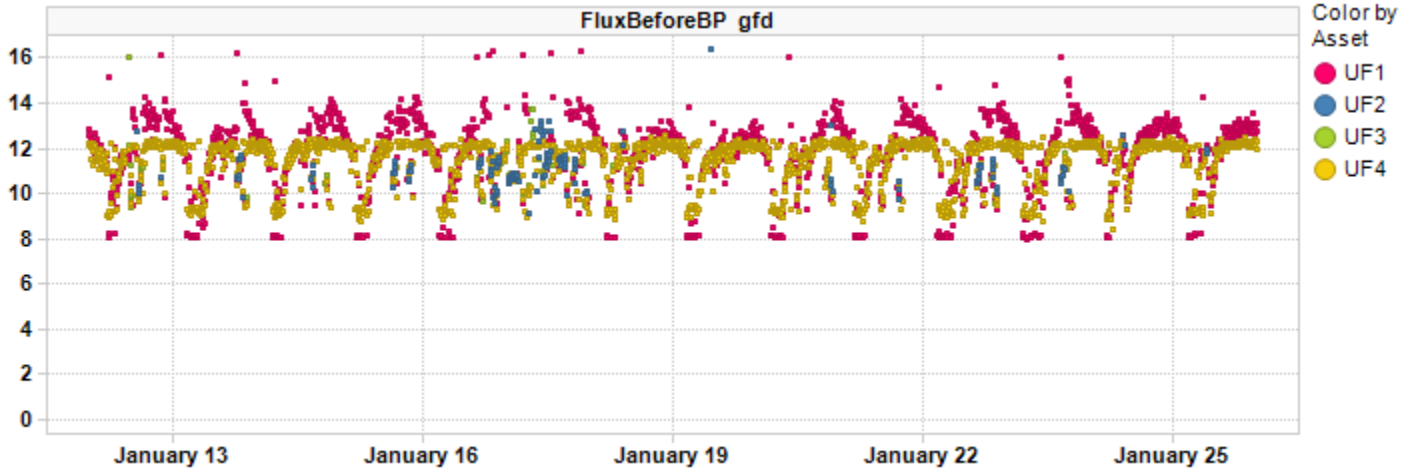
Permeate Turbidity Trend



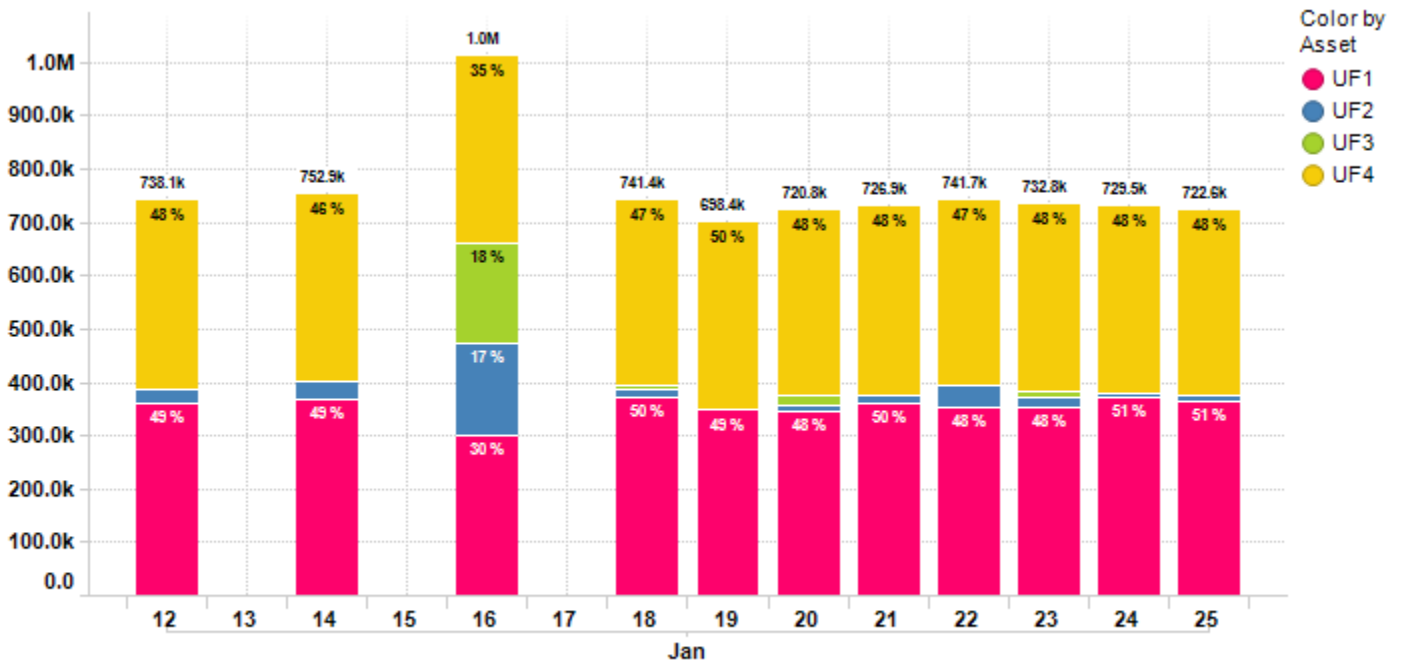
Before BPTMP Trend



Before BP Flux Trend



Daily Permeate Flow



Average Daily permeate flow from 1/12/2022 to 1/25/2022 is 755.9k gal with a maximum daily flow of 1.0M gal.

Asset Summary

KPI Parameters	Value/Change	UF1	UF2	UF3	UF4
FluxBeforeBP gfd	Value	11.77	11.11	11.20	11.44
	Change	0.97 %	-2.85 %	-3.28 %	-0.09 %
FluxDuringBP gfd	Value	18.73	18.45	18.53	18.63
	Change	-0.43 %	-0.72 %	-0.21 %	-0.08 %
PermeateTurbidityAfterBP NTU	Value	0.06	0.13	0.08	0.09
	Change	-5.40 %	-7.30 %	1.29 %	6.90 %
TCPermeabilityBeforeBP gfd/psi	Value	9.31	10.25	17.23	8.68
	Change	-3.36 %	9.83 %	-0.38 %	-4.74 %
TMPBeforeBP psi	Value	1.51	1.31	0.79	1.59
	Change	10.05 %	-3.24 %	3.96 %	7.16 %
TotalPermeateFlowDaily gal	Value	353.79k	31.26k	23.96k	349.11k
	Change	-9.94 %	-151.04 %	-836.08 %	28.17 %

Plant Summary

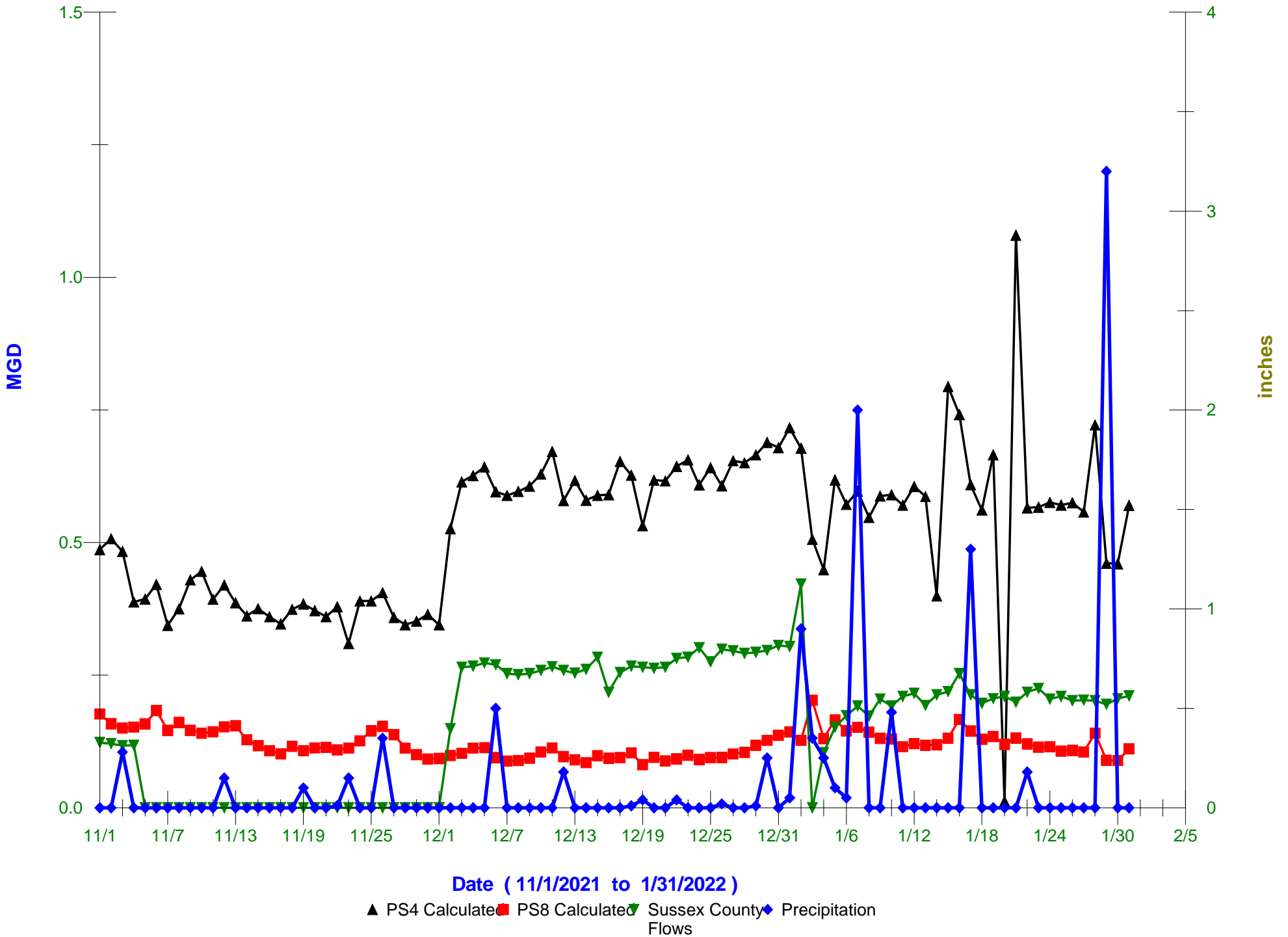
KPI Parameters	Value/Change	UF Plant
PermeateTemperature °F	Value	55.95
	Change	-6.29 %
TotalPermeateFlowDaily gal	Value	827.04k
	Change	-12.15 %

Contract Expiry Date : 08/11/2021

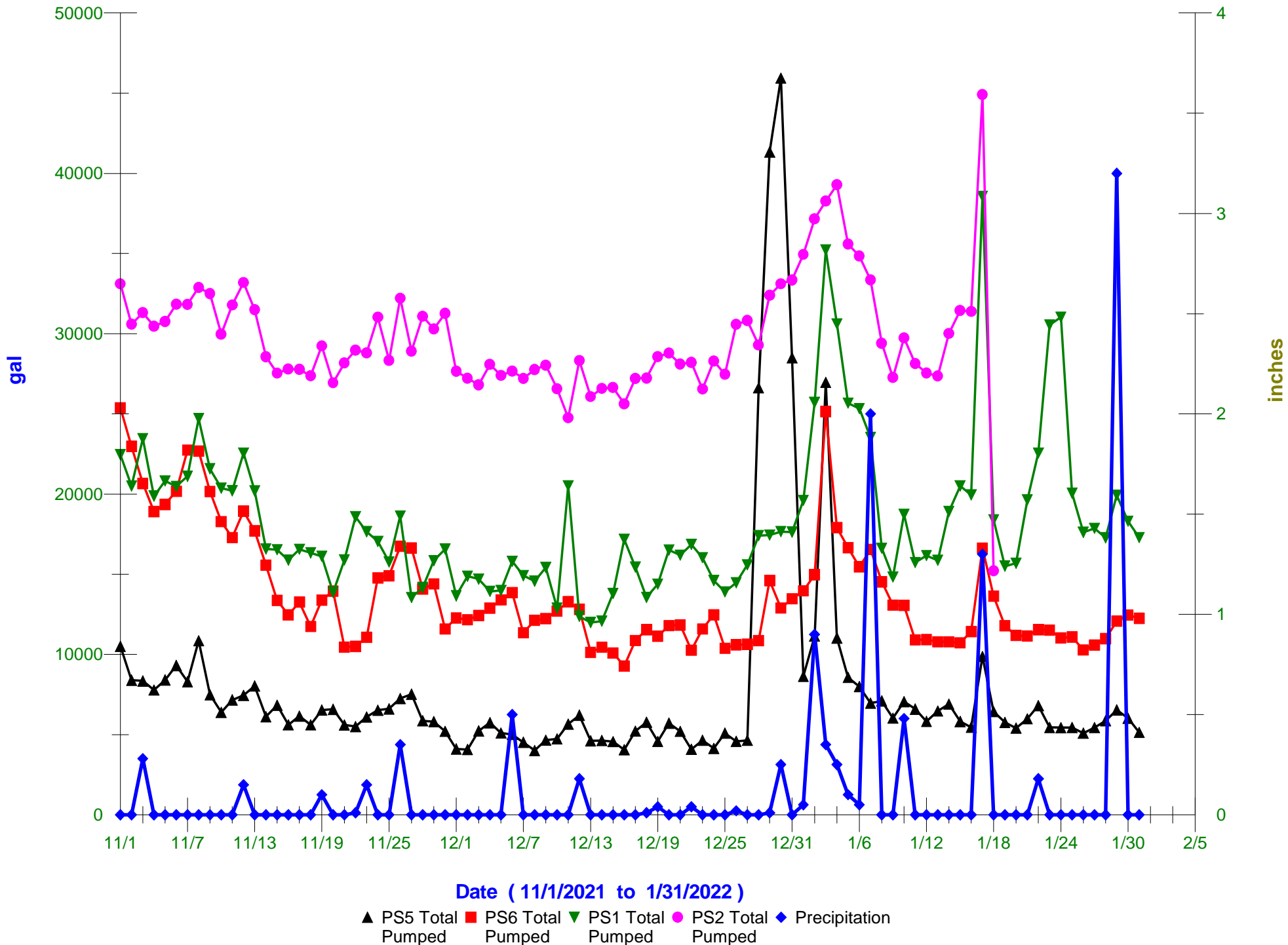
For InSight technical assistance please email insight.src@suez.com or please call technical support at 1 866 271 5425 or 905 469 7723 and follow the prompts, if you require after hours assistance please contact the 24/7 Emergency number provided in your plant documentation. This email is a summary of issues identified during a manual review of InSight data from the time period above. This review is an analysis of data that is logged by InSight and identifies key plant performance issues determined from this data. This data review was not focused on minor data issues but on identifying possible existing and/or upcoming critical operational issues.

This review was prepared by SUEZ Water Technologies & Solutions solely to assist water treatment plant owners and/or operators in analyzing and optimizing plant performance and is not intended to be used or relied upon for regulatory compliance or any other purpose. The content of this review is based in whole or in part on operation data obtained from the plant using InSight software. SUEZ Water Technologies & Solutions makes no representations or warranties as to the accuracy of the plant data utilized in the preparation of this review. SUEZ Water Technologies & Solutions accepts no liability for consequences or actions taken in whole or in part by any person on the basis of this review or its contents

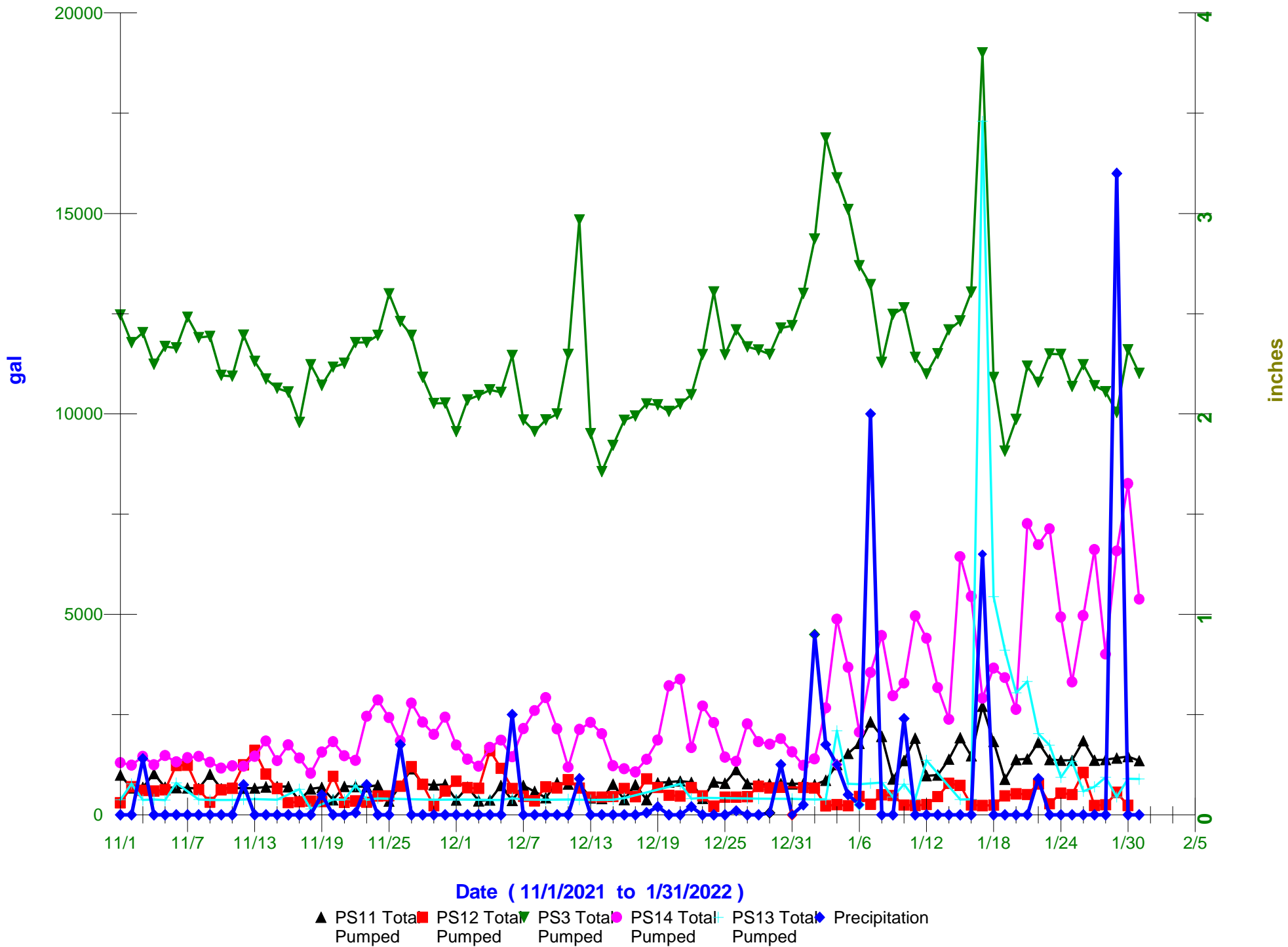
Data Over Time



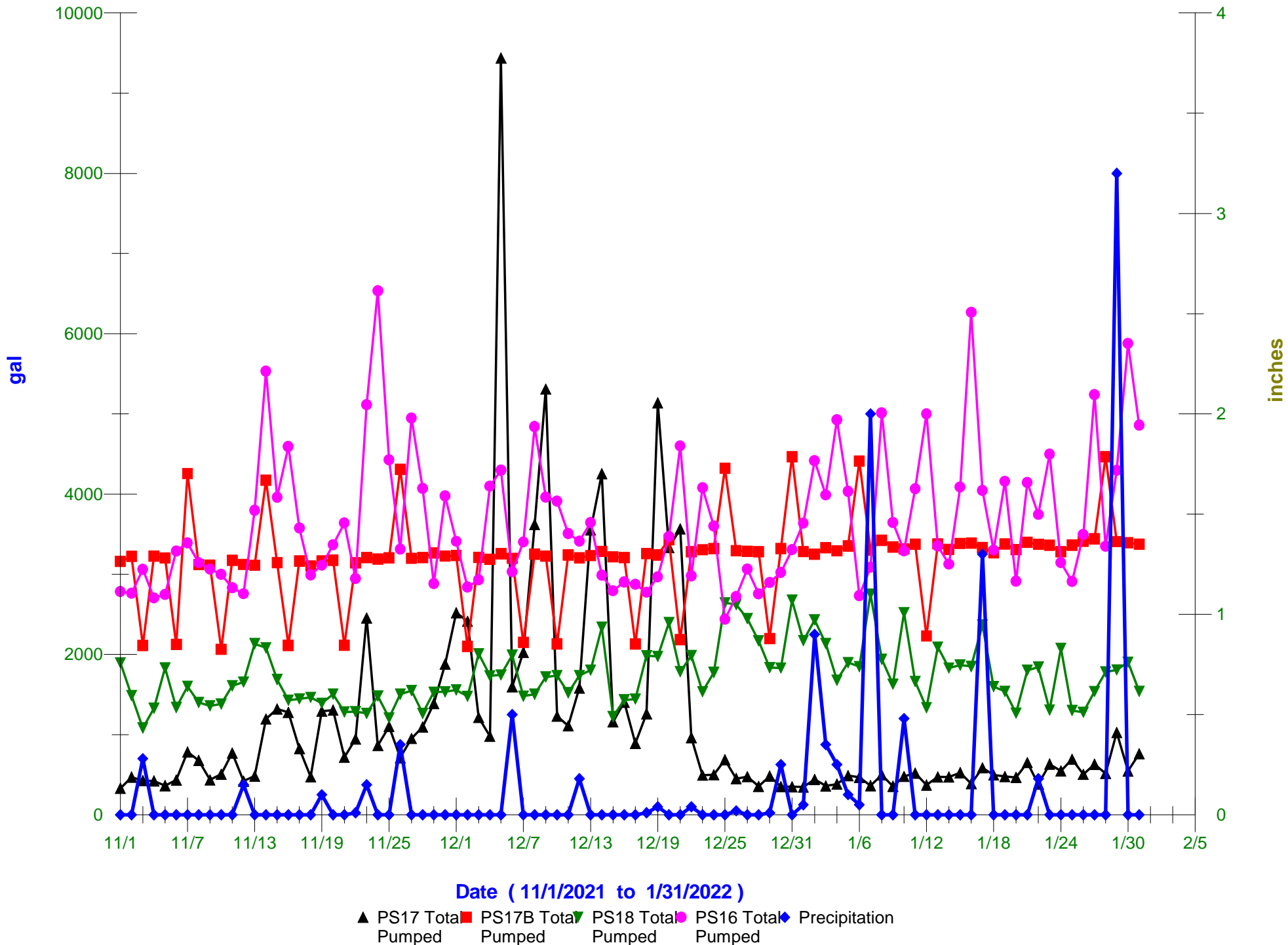
Data Over Time



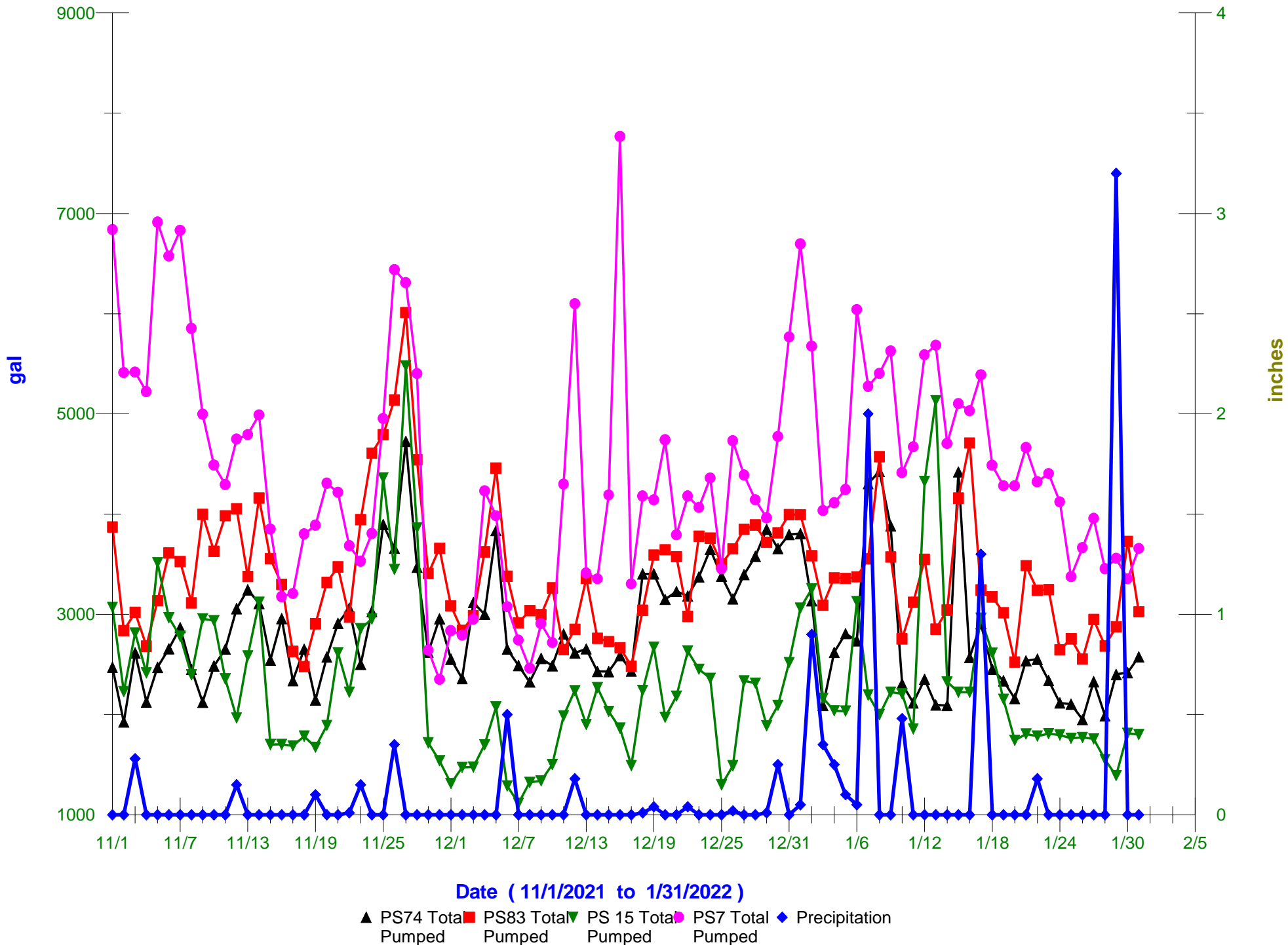
Data Over Time



Data Over Time



Data Over Time



Data Over Time

