

August 2022 As of September 21, 2022 Page 1 of 6

Ensure Financial Stability	
Reconciled Bank Account Balances	Refer to attached Reconciled Bank Account Balances as of 8/31/2022.
Monthly Financial Statements	Provided separately to Board of Directors.
Monthly Financial Dashboard	Provided separately to Board of Directors.
AP Check Reconciliation Register	Provided separately to Board of Directors.
Capital Improvement Projects for Drinking	Provided separately to Board of Directors.
Water	
Capital Improvement Projects for	Provided separately to Board of Directors.
Wastewater	
Grant Management	Refer to attached Grant Management Report.

Ensure Revenues are Consistent with Sy	ystem Usage									
Water Shut-offs	There were 21 water shut-offs for non-payment, 6 were turned back on after payment, and 28 service shut-off requests.									
Repair/Replace Meters/MXUs/Batteries	rinking Water Distribution staff replaced 22 water meters, replaced 30 batteries, and 38 MXUs.									
Reduce Wet Weather Impacts to Infrast	ructure, Community, and Receiving Waters									
Negotiate with PADEP/U.S. EPA/DOJ on	CRW and USDOJ/U.S. EPA/PADEP are finalizing the Draft Partial Consent Decree Modification for public comment.									
Past and Future Practices										
Develop Necessary Planning for	No Update.									
Implementation of Green Infrastructure										
Joint Pollutant Reduction Plan -	No Update.									
Collaborate with Suburban Partners on										
MS4										
Obtain and Comply with Individual MS4	No update.									
Permit										

Permit Compliance	The Drinking Water department met all primary and secondary Safe Drinking Water Act permit parameters for the month.								
	The AWTF had an NPDES permit excursion for the monthly concentration limit of phosphorus. The average exceeded the limit by 0.4 mg/L. Further details on this excursion								
	can be found in the Wastewater Department Monthly Report.								
Notice of Violations (NOVs)	There were no NOVs received by the Drinking Water department in August.								
	There were no NOVs received by the Wastewater department in August.								
Preventative Maintenance	The Drinking Water Maintenance group conducted all scheduled preventative maintenance for the month to the water treatment plant equipment. Specific facility								
	maintenance activities are outlined within the Drinking Water Department Monthly Report.								
	The Wastewater department completed all regularly scheduled preventative maintenance in the month of August.								
CCTV	A total of 12,722.9 feet (2.41 miles) of sewer pipes were assessed by CCTV footage during the month of August. A total of 12,067 feet (2.29 miles) of pipe were flushed as we								
Incident Response	Wastewater responded to seven backup and overflow calls from residents during the month of August. CRW was liable for none.								



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	• Twenty-one (21) Pennsylvania One Call tickets were completed by GIS. Nineteen (19) tickets required a map, and two (2) had no CRW utilities in the request area. • Two (2) meetings were held between the GIS Manager and Field Maintenance Worker (AWTF) to complete complex GIS updates. • GIS Manager and Cityworks Administrator met with Drinking Water department staff to demonstrate a revised work order template that was developed based on their input. Feedback was noted and revisions were implemented to the revised template. Expected go-live date is 9/1/2022. • Operations Challenge practice continues for the GIS Manager. • Bi-weekly meetings were held with KCI Technologies, Inc. Discussions included issues with the new water schema and not continuing on the revised sewer schema until the revised water schema issues are resolved.
Cityworks	
	Task Order 2022-04-01 AM Roadmap Quick Win Activities is complete with receipt on 8/31/2022 of the final deliverable, CRW's Strategic Asset Management Plan (SAMP). Kickoff meetings for Task Order 2022-17-01 AM Roadmap FY22 Phase 1 Activities have been scheduled for Subtask 2.1 Risk Policy on 9/26/2022 and Subtask 2.2 Construction Requirements on 10/4/2022. CRW's Engineering department received risk model training on 8/31/2022. The draft training manual is in review. Prepared 2022 Water Main Condition Assessment project for the September Board Agenda. The field work is tentatively scheduled to begin 10/17/2022. Efforts continue with working group on development of a lead service line inventory. Dashboard development continues with a focused effort to support the SAMP levels of service and performance metrics.
Development Review Summary	For details, see attached Development Stormwater Management Review Summary spreadsheet for September.

rofessional & Contractor Services	ts - Refer to attached Capital Improvement Projects Report Recommend Board approval of the following Task Orders, Change Orders, Agreements and Procurement:								
	Drinking Western								
	Drinking Water:								
	Task Order 2022-18-01: Engineering Services for Automated Meter Reading System Upgrade								
	Change Order No. 3 - Cameron Street Water Main Improvements Phase 3 Project								
	Professional Services Agreement - Contract Technology Vendor for 2022 Water Maiin Condition Assessment Project								
	Procurement of Lime Silo Tank Demolition Services								
	Wastewater:								
	Change Order No. 3 - 2020 Sewer System Improvements Project								
	Engagement of AWTF Building Space Planning								
	Agreement of Sale of Nitrogen Nutrient Credits								
	Procurement of Pollu-Treat 583 Super Sacks								
	Procurement of Dehumidification Units								
	Procurement of Baltimore Aircoil Company Cooling Tower								
	Stormwater:								
	Resolution No. 2022–045 - Joint Pollutant Reduction Plan – Intergovernmental Cooperation Agrmt – Task Order 2020-01 Amendment No. 2 Contribution to PennDOT								
	Task Order 2021-08-03: Engineering Services for CBH2OPP Phase 4 PENNVEST SW Pro-Fi Design with WRT, LLC - Amendment No. 2								
rmwater O&M Agreements	Recommend Board approval of the following:								
	Resolution No. 2022–044 - Operations & Maintenance Agreement for Stormwater Facilities								
TF Primary Digesters Rehabilitation	The general contractor is requesting substantial completion the week of 9/19/2022.								
/TF Energy Recovery Improvements	Permit applications are being reviewed by Swatara Township and PADEP.								



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Front Street Pumping Station	The contractors are addressing punch list items and site cleanup.
Improvements	
WSC Flocculator Equipment Replacement	Delivery of flocculator equipment is expected in October 2022.

Undertake Renewal and Replacement P	rojects							
2020 Sewer System Improvements	Refer to the agenda for the final change order. The project will be closed out after the final change order is approved.							
2021 Sewer System Improvements	oject has been closed out and will be removed from future Management Reports.							
2021 Water System Improvements	The contractor has completed all pipe work. Final paving and punch list work remain.							
2022 Water System Improvements	The engineer is reviewing product submittals in advance of construction.							
Cameron Street Water Main - Phase 3	Refer to the agenda for the final change order. The project will be closed out after the final change order is approved.							
Cameron Street Water Main - Phase 4	The project is in the preliminary design phase.							
Arsenal Boulevard Sewer Improvements	Temporary and construction easements must be acquired before advertising the project.							
Front Street Interceptor Rehabilitation -	The contractor has begun pre-construction activities and will begin work later this Fall.							
Phase 2								
Water Facility Maintenance	Drinking Water Maintenance staff performed repairs to various process units as described in the Drinking Water Department Monthly Report.							
Wastewater Facility Maintenance	The Wastewater Maintenance group completed various repairs throughout the AWTF, pumping stations, and at the North Front Street office building throughout the month							
	of August. A narrative is provided in the Wastewater Department Monthly Report.							
Sinkhole Program	Six (6) sinkholes were investigated by CRW in the month of August. None were due to failure of CRW assets.							
Inlet Cleaning	A total of 254 stormwater inlets were cleaned during the month of August, and 246 stormwater inlet inspections were performed.							

Operate as an Efficient, Sustainab	ole and Resilient Water Utility
DeHart Property Stewardship	Timber harvest to improve regeneration is complete in Management Unit (MU) 22/31 and final site restoration/seeding is pending. In accordance with the DeHart Property Forest Management Plan, a regeneration harvest is underway in MUs 20, 34, 36, and 37 (approximately 155 acres). Harvest will improve forest health and release regeneration of a more desirable understory. A third-party Forest Stewardship Council (FSC) desk audit was completed on 8/31/2022 to ensure compliance with FSC standards. A field audit is scheduled for 9/29/2022.
Sustainability	No update.
Internal Communications	The Intranet site and calendar continue to be utilized.



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Inform and Listen to Customers and Er	courage Stewardship of our Systems								
Media Relations - Press and Social Media	PRESS RELEASES: N/A.								
	SOCIAL MEDIA TOPICS:								
	Facebook: 6 New Organic Followers (1,589 Total). 5 Posts; Highest Engaged Post: (8/9/2022). "Public Feedback Town Hall". (847 Reachs, 3 Reactions, 2 Comments, 1 Share, 5								
	Link Clicks); Other topics: National Night Out, Employee of the Month, Board of Directors Meeting and Pennsylvania Parks and Forest video about Clean Water.								
	Twitter: 1 Tweet; Highest Engaged Tweet: N/A Month Overview: 1,101 Profile Visits; 4 Followers; 1 Mention. "NACWA's Summer 2022 Edition Clean Water Advocates".								
	Instagram: 2 New followers (663 Total), 5 Posts; Highest Engaged Post: (8/29/2022) "Pennsylvania Parks and Forest video about Clean Water," 82 Organic Reachs, 3 likes, 0 comments.								
	2022 Demographics: Most Active Age-range: 25-54; Gender Division: 62% Women / 37% Men; Locations: Harrisburg, Penbrook, Mechanicsburg, Steelton, Linglestown, Camp Hill and Lancaster.								
Community Relations	Community Ambassador Meeting held 8/17/2022: Provided a tour of the Drinking Water facility for community ambassadors and new employees.								
	Community Outreach:								
	• Delivered eight (8) door-to-door notifications regarding water service interruptions, sewer line repairs, sewer maintenance, and boil water advisory notices and lifts.								
	• Five (5) Everbridge alerts for past due balances and water service interruptions.								
	Daily combined sewer overflow (CSO) inspections and Everbridge customer updates.								
	• Two (2) community events regarding wet weather management and public feedback.								
	• Two (2) public meetings/presentations.								
	CSO signage installation completed.								
	One (1) litter clean up.								
	• Everbridge outreach.								
	Harrisburg Young Professional's (HYP) cooler donations.								
	• Four (4) in-person customer complaint follow-ups.								
Public Communications	WHAT'S ON TAP COMMUNICATION: The August monthly bill stuffer was distributed as a bill insert. Topics included: Homeowners' Responsibility Guide and Join the CReW: We're Hiring.								
Diversity	The Business Diversity Manager engaged in capacity building for the purpose of developing relationships and engaging M/W/DBE's for future construction opportunities.								
	Capital Improvement Project event planning with City Beautiful H2O Manager for the purpose of expanding prime and M/W/DBE subcontractor opportunities. On 9/13/2022, the Business Diversity Manager attended the 2023 Sewer System Improvement project prebid conference.								



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Administrative	
Risk Management	No update.
Human Resources	For details, see attached Recruiting Status Report.
Procurement	No update.
Information Technologies (IT)	
Office Management and	Incoming Correspondence Report: Refer to attached Incoming Correspondence Report for August 2022.
Admin Professional Services and	
Construction	Street/Sidewalk-Cut Permits: Three (3) Drinking Water and two (2) Sewer permits were issued. Three (3) Drinking Water and four (4) Sewer permits were successfully
	completed, inspected, and closed by the City of Harrisburg's Engineer.
	Fleet Management (Dispositions):
	Completed: C. 64 (2000 International Vactor) Sold via Municipid for \$73,100. Bide closed 0/8/2023 @ 2/00 BM and valid was nicked up on 0/15/2023 (Board proviously approved)
	• G-64 (2009 International Vactor) Sold via Municibid for \$72,100. Bids closed 9/8/2022 @ 3:00 PM and vehicle was picked up on 9/15/2022. (Board previously approved disposition on 6/26/2019.)
	uisposition 0/1 6/26/2019.)
	



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Right-to-Know Re

CRW has received and responded to two Right-to-Know requests during the period 8/18/2022 through 9/21/2022. Other informational requests were identified as not being formal RTK requests throughout the month and/or were transferred to the Customer Service Center for appropriate response.

OOR Training: No update.

2022-011 - Brianna Dinmore (Conrad O'Brien PC)

Response due: 7/25/2022.

Response provided: 7/22/2022 for 30-day extension until 8/24/2022. Final Response provided 8/24/2022..

2022-013 - Tom Pelton (Environmental Integrity Project) Any and all engineering reports, and other documents that Capital Region Water used as the basis for determining the cost and effectiveness of different CSO system infrastructure improvement alternatives that it considered while formulating its "City Beautiful H2O Plan," submitted to EPA on 3/29/2018. More specifically, in correspondence with EPA about that plan, on 11/9/2018, CRW wrote a letter to EPA and DEP (see attached letter, on page 2) that gave cost estimates for achieving 80%, 85%, 90% and 95% CSO capture rates in Harrisburg using different approaches, including "Decentralized," "Satellite Facilities," and "Expanded Capacity." Also requesting copies of any engineering reports or other documents that explained and examined those different CSO infrastructure alternatives, and were used as the basis for the cost and effectiveness estimates provided to EPA in that 11/9/2018 letter and the related 3/29/2017 "City Beautiful H2O Plan." Response due: 8/29/2022. Response provided: 8/29/2022 for 30-day extension until 9/28/2022. Final Response pending.



DRINKING WATER DEPARTMENT MONTHLY REPORT



Transmission main excavation at Stoney Creek.

August 2022

100 Pine Drive, Harrisburg, PA 17103 | 888-510-0606 capitalregionwater.com



Drinking Water Department Monthly Report

August 2022

Plant Operations

The Capital Region Water (CRW) Drinking Water department met all Federal Safe Drinking Water Act water quality standards for the month of August. Specific water quality results are summarized in Exhibit A. A total of 244.65 MG, averaging 7.89 MGD was withdrawn from the water supply source for treatment. As shown in Exhibit B, a total of 242.84 MG, averaging 7.83 MGD, of finished drinking water was pumped to the distribution system.

The DeHart water source was in service 31 days. The Susquehanna River water source was not in service. The DeHart Watershed had below average rainfall in August (Exhibit C) and the DeHart reservoir water level decreased (Exhibit D). An estimated 275.53 MG of water was released from DeHart reservoir to Clark Creek, averaging 8.89 MGD for the month. This downstream flow, which is received by remote flow monitoring from the weir location and actual staff gauge readings, was in compliance with the flow required by the State Water Allocation Permit (Exhibit E).

Plant Maintenance

The Maintenance team performed approximately 56 preventative maintenance work orders and one corrective maintenance work order for the month of August using the Cityworks maintenance management system for all water treatment plant equipment, pumping stations and fleet vehicles and NFS offices.

- The DeHart Dam watershed was patrolled daily and maintained.
- The Maintenance team repaired 406 backwash valve actuators in the Filter building.
- The Maintenance team painted the existing Hydro Turbine cinder block building.
- The Maintenance team repaired the exhaust fan in the Hydro Turbine building.
- The Maintenance team installed the conduit and wiring to complete the Aluminum Sulfide Chemical Metering System.
- The Maintenance team repaired the Orthophosphate Metering Pump.
- The Maintenance team replaced the old existing exit signs in the pump gallery and the filter building.
- The Maintenance team installed the conduit and wiring for the Backwash actuators 405 and 406.
- The Maintenance team preformed routine maintenance on the zero turn lawn mowers and push mowers (oil and oil filter changes).
- The Maintenance team continues to support the requests and work orders for the NFS offices.
- The Maintenance team continues to cut grass and perform other landscaping duties at the Water Services Center, Pump Houses, DeHart Dam Facility and NFS offices.



Drinking Water Department Monthly Report

August 2022

• The Maintenance team continues to maintain the distribution and maintenance fleet vehicles and equipment.

Distribution

The Distribution group, while keeping up with the COVID-19 pandemic safety requirements, managed to:

- Repair 10 leaking services during the month totaling 181,440 gallons of unmetered water.
- Repair three fire hydrants.
- Replace two fire hydrants.
- Complete 663 work orders.
- Complete 524 water, sewer, and storm water locates.
- Paint 356 hydrants in.
- Exercise 64 valves.
- Continue leak detection daily.
- Work with contractors on several water, sewer, and stormwater capital improvement projects.

Water Quality

In addition to overseeing the operation of both the accredited and process laboratories, the Water Quality Administrator also:

- Ensured collection of regulatory samples for total coliform, and E. coli samples.
- Continued collection of tri-annual lead and copper samples. All samples have now been collected. We are waiting on the final results.



Drinking Water Exhibits



EXHIBIT A Water Quality Anaylsis - 2022

PARAMETERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	Average	MCL Limits
Total Coliform: Presence/Absence														
Distribution System	A	А	А	Α	Α	Α	А	Α						5% P
Chlorine Residual, mg/L Free	7.	7.	7.	7.	7.	,,	71							3701
Filter Plant Effluent	1.94	2.03	1.98	1.97	1.94	1.90	1.88	1.96					1.95	0.2 - 4.0
Distribution System	1.27	1.35	1.32	1.30	1.18	1.17	1.09	1.11					1.22	<0.02
Turbidity, NTU	1.27	1.55	1.52	1.50	1.10	1.17	1.05	1.11					1.22	40.02
Influent from DeHart	0.57	0.55	0.61	0.72	0.67	0.69	0.70	0.82					0.67	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA NA
Filter Plant Effluent	0.04	0.03	0.04	0.03	0.03	0.04	0.03	0.04					0.03	0.30
pH, Std Units	0.04	0.03	0.04	0.03	0.03	0.04	0.03	0.04					0.03	0.30
Influent from DeHart	6.4	6.3	6.3	6.3	6.0	5.8	5.6	5.6					6.04	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA NA
Filter Plant Effluent	7.4	7.5		7.6	7.6	7.6		7.5					7.50	6.5 - 8.5*
	7.4	7.5	7.5 7.6	7.6	7.6	7.6	7.4	7.5					7.50	6.5 - 8.5*
Distribution System	7.6	7.7	7.6	7.6	7.7	7.4	7.5	7.8					7.61	6.5 - 8.5*
Total Alkalinity, mg/L as CaCO3 Influent DeHart	5	5	5	5	5	-	5	-					5.00	NA
			-			5		5						
Influent from Susquehanna	NA 18	NA 10	NA	NA	NA	NA 10	NA	NA					NA	NA
Filter Plant Effluent	13	18	16	15	17	19	21	27					18.41	<15*
Distribution System	15	17	15	16	16	20	22	23					17.97	<15*
Temperature, degrees C														
Influent from DeHart	6.6	6.0	7.4	9.5	12.2	14.8	16.6	17.5					11.33	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA
Filter Plant Effluent	7.0	6.9	8.1	10.6	12.6	14.1	15.2	16.6					8.15	NA
Distribution System	15.3	12.9	13.3	14.6	17.6	21.9	22.7	23.0					14.03	NA
Fluoride, mg/L														
Filter Plant Effluent	0.57	0.58	0.57	0.52	0.64	0.55	0.59	0.61					0.56	2
Aluminum, mg/L														
Filter Plant Effluent	0.10	0.22	0.23	0.03	0.03	0.03	0.02	0.03					0.15	0.2*
Iron, mg/L														
Influent from DeHart	0.62	0.13	0.10	0.07	0.08	0.11	0.18	0.43					0.23	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA
Filter Plant Effluent	0.01	0.02	0.01	0.01	0.02	0.01	0.03	0.02					0.02	0.3*
Distribution System	0.13	0.01	0.03	0.00	0.01	0.02	0.01	0.01					0.03	0.3*
Total Dissolved Solids, mg/L														
Influent from DeHart	13	13	14	15	16	16	16	17					15.19	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA
Filter Plant Effluent	37	38	41	44	46	47	49	59					44.96	500*
Distribution System	39	40	38	45	46	49	51	56					45.59	500*
Total Hardness, mg/L														
Influent from DeHart	8	8	8	8	8	8	8	8					8.00	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA
Filter Plant Effluent	8	8	8	8	8	8	8	8					8.06	NA
Distribution System	8	7	7	6	5	7	6	6					6.44	NA
Orthophosphate, mg/L														
Filter Plant Effluent	1.20	1.15	1.40	1.16	1.36	1.32	1.37	1.29					1.28	0.7 - 1.3*
Distribution System	1.23	1.14	NA	1.18	1.31	1.33	1.30	1.30					1.26	0.7 - 1.3*
**Total Trihalomethanes, ug/L														
Distribution System	35.0	NA	NA	41.0	NA	NA	52.0	NA					42.7	80.0
**Total Haloacetic Acids, ug/L								<u> </u>		<u> </u>		·	*	
Distribution System	33.0	NA	NA	37.0	NA	NA	41.5	NA					37.2	60.0
Total Organic Carbon, mg/L		1.57												
Influent from DeHart	3.00	NA	NA	2.40	NA	NA	2.20	NA					2.53	NA
Influent from Susquehanna	NA	NA NA	NA	NA	NA	NA NA	NA	NA NA					NA NA	NA
Filter Plant Effluent	1.50	NA NA	NA NA	1.30	NA NA	NA NA	1.10	NA NA					1.30	NA NA
Average Filter Run, Hours	114	116	116	115	114	116	100	114					113.13	NA NA
Average Filler Rull, HOULS	114	110	110	113	114	110	100	114			1		113.13	

^{*} Values are related to DEP Secondary MCL ** Running Annual Quarterly Average



EXHIBIT B

Water Production Data - 2022

	DeHart Wi	ithdrawal	River Wit	hdrawal	Total Wit	hdrawal	Treated	Water	Process	Water	Finished	l Water
Month	Total (MG)	Average (MGD)										
January	230.675	7.441	0.000	0.000	230.675	7.441	235.985	7.612	4.634	0.149	228.344	7.366
February	230.134	8.219	0.000	0.000	230.134	8.219	233.393	8.335	5.266	0.188	224.570	8.020
March	225.723	7.282	0.000	0.000	225.723	7.282	233.913	7.546	6.770	0.218	223.545	7.211
April	212.629	7.088	0.000	0.000	212.629	7.088	218.666	2.289	6.006	0.201	209.256	6.975
May	231.932	7.482	0.000	0.000	231.932	7.482	239.807	7.735	6.563	0.212	230.430	7.433
June	237.403	7.913	0.000	0.000	237.403	7.913	242.242	8.075	6.000	0.200	233.202	7.773
July	251.091	8.099	0.000	0.000	251.091	8.099	250.036	8.323	6.183	0.200	248.668	8.022
August	244.659	7.892	0.000	0.000	244.869	7.892	251.347	8.109	6.623	0.213	242.842	7.834
September												
October												
November												
December												
Total	1864.246		0.000		1864.456		1905.389		48.045		1840.857	
Average	233.031	7.677	0.000	0.000	233.057	7.677	238.174	7.253	6.006	0.198	230.107	7.579

Peak Day Water Use 5/31/2020 6.966 (MG) = Million Gallons
Minimum Day Water Use 5/1/2020 6.081 (MGD) = Million Gallons per Day



EXHIBIT C

Rainfall at the DeHart Reservoir - 2022

(inches)

Date	January	February	March	April	May	June	July	August	September	October	November	December	Annual Total
2022 Total	2.74	3.14	1.67	5.03	6.55	5.84	2.16	2.67	0.00	0.00	0.00	0.00	29.80
Daily Average	0.080	0.113	0.150	0.168	0.211	0.195	0.070	0.086	0.000	0.000	0.000	0.000	1.073
Ten Year Average	3.37	2.572	3.62	4.68	4.138	5.112	4.81	4.154	5.72	5.37	3.83	4.21	51.586
2021 Total	2.74	5.88	7.55	12.58	19.13	24.97	27.13	29.80	0.00	0.00	0.00	0.00	129.78

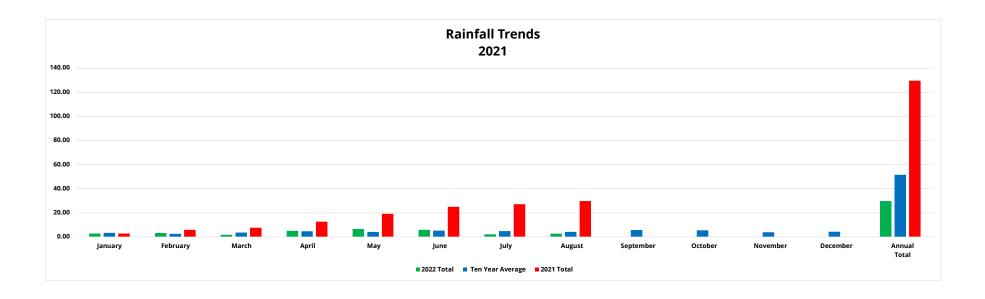




EXHIBIT D

Water Level at the DeHart Reservoir - 2022

(Inches from Spillway)

Date	January	February	March	April	May	June	July	August	September	October	November	December
2022 AVG	1.9	3.1	3.2	4.6	4.1	7.2	12.1	34.1	0.0	0.0	0.0	0.0
Ten Year AVG	-38.8	-36.6	-27.4	-14.4	-12.5	-15.0	-12.0	-42.0	-60.5	-73.5	-75.0	-62.6
2022 AVG	1.9	5.0	6.3	7.8	11.9	15.9	28.0	62.1	0.0	0.0	0.0	0.0

DeHart Reservoir Water Level Trends 2021

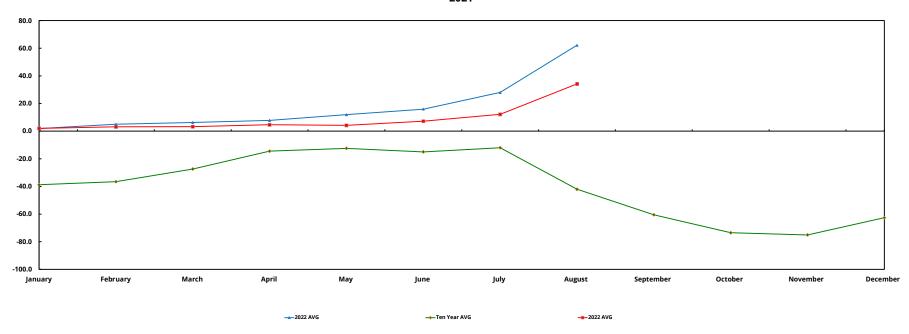
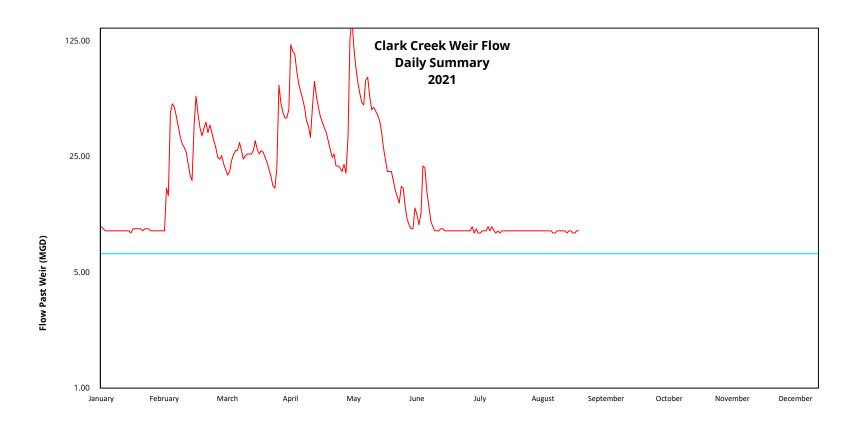




EXHIBIT E

Daily Conservation Release - 2022



——Series1

— Minimum Allowable Flow



EXHIBIT F

Utility Usage - 2022

Location / Utility	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
ter Services Center														
ctric Transmission														
Total, kwH	196,200	136.800	145.800	181.800	172.800	190.800							170,700	1.024.200
Cost, Dollars	\$12,915.36	\$8,967.54	\$8,888.73	\$11,610.27	\$11,641.64	\$12,788.26							\$11,135.30	\$66,811.8
ectric Generation	7.2,5.5.5	10,100.00	10,000	4,	4,	7.2/							71.7.20.00	110,0110
Total, kwH	196,200	136,800	145,800	181.800			190.800						170,280	851,400
Cost. Dollars	\$1,323,23	\$1,339,10	\$1,303,79	\$1,352,63			\$1,220,30						\$1,307,81	\$6,539.05
atural Gas	7.,020.20	1,,0000	11,000.00	1,,000.00			11,220.00						1.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	10,000.00
Total, Cu Ft	14.898	11,450		14.334		4.497							11,295	45,179
Cost, Dollars	\$12,296.76	\$9,486.52		\$1,118.06		\$132.83							\$5,758.54	\$23,034.1
wer		,		.,										,
Total, Gal	7.710.000	6.560,000				5.000.000							6.423.333	19.270.00
Cost, Dollars	\$65.997.60	\$56,152.60				\$42,800.00							\$54,983.40	\$164,950.2
fuse														,
Cost, Dollars	\$509.60	\$509.60	\$509.60	\$509.60	\$509.60	\$509.60	\$509.60	\$509.60	\$509.60	\$509.60	\$509.60	\$509.60	\$509.60	\$6,115.20
servoir Park Pump Station														
ctric Transmission														
Total, kwH	84.800	84.800	81.600	82,400	90.400	79,600							83.933	503,600
Cost, Dollars	\$3,943.58	\$3,917.06	\$3,362.56	\$3,547.63	\$3,565.93	\$2,146.60							\$3,413.89	\$20,483.3
ectric Generation	,													
Total, kwH	84,800	84,800	81,600			78,000	79,600						81,760	408,800
Cost, Dollars	\$1,074.71	\$1,134.00	\$1,168.51			\$1,160.80	\$1,068.11						\$1,121.23	\$5,606.13
ntural Gas							. ,							,
Total, Cu Ft	823	523											673	1,346
Cost, Dollars	\$696.50	\$451.99											\$574.25	\$1,148.49
Isquehanna River Pump Station	-	7.0											121 1122	V./. 10.15
ectric Transmission														
Total, kwH	1.800	1,200	1.800	600	1,200								1,320	6.600
Cost, Dollars	\$77.70	\$14.63	\$84.89	\$80.63	\$7.58								\$53.09	\$265.43
ectric Generation				10000	1								144.11	1200.00
Total, kwH	1,800	1,200	1,800	600	600	600							1,100	6,600
Cost, Dollars	\$75.67	\$74.18	\$71.63	\$69.05	\$68.85	\$68.85							\$71.37	\$428.23
atural Gas	7.000		41.1100	100.00	7.00.00	1,0000							7.1.0	1
Total, Cu Ft	724	641											683	1,365
Cost, Dollars	\$615.82	\$548.16											\$581.99	\$1,163.98
nion Square Booster Station		40.00.0							<u> </u>				122.112	41,110.00
ectric Transmission									1					
Total, kwH	2876	3,875	2,888	2,309	1,508								2.691	10,580
Cost,Dollars	152.42	\$312.67	\$150.83	\$127.58	\$77.44								\$164.19	\$668.52
ectric Generation	132.42	\$512.07	\$150.05	\$127.50	477.44				1				4104.13	4000.52
Total, kwH	2876	3,875	2,888	2,309									2.987	9,072
Cost. Dollars	125.54	\$127.11	\$162.09	\$120.18									\$133.73	\$409.38
eHart Facilities	123.34	\$127.11	\$102.03	\$120.10									¥155.75	\$405.50
ectric Transmission									1					
Total, kwH	2,965	2,845	2,728	2,470	2,209	2,009							2,538	15,226
Cost, Dollars	\$224.15	2,043	\$203.55	\$199.31	\$190.46	\$129.51							\$189.40	\$946.98
ectric Generation	1224.13		1233.33	1.55.51	2.30.40	7.25.51							2.25.40	4540.50
Total, kwH	2.965	2,845	2,728	2,499	2,209		2,015						2.544	15,261
Cost, Dollars	\$101.22	\$96.85	\$97.06	\$90.42	\$151.19	\$158.21	\$96.13						\$113.01	\$791.08
el Oil	9101.22	450.05	\$57.00	750.72	9131.13	P.30.2.	\$30.13	<u> </u>	+	<u> </u>	<u> </u>		7113.01	4,51.00
Total, Gals.		1	1,438										1,438	1,438
Cost, Dollars			\$8,077.31					-	+	-			\$8,077.31	\$8,077.31
ty Island Heat Trace			#0,077.51						·				₽0,U/7.31	\$8,077.31
ectric Transmission														
	200	270	256	25.000	250								F 426	27.400
Total, kwH	390	378	356	25,800	258			-		-	-		5,436	27,182
	\$23.33	\$20.65	\$19.97	\$11.81	\$11.81		-	-	-	-	-	-	\$17.51	\$87.57
Cost, Dollars									1	1	1	1	1	1
ectric Generation														
	390 \$65.29	378 \$65.27	356 \$64.99										375 \$65.18	1,124 \$195.55

^{**} Not available at time report was developed

Total Transmission	\$89,264
Total Generation	\$13,969
Total Refuse	\$6,115
Total Gas	\$25,347
Total Sewer	\$164,950
Total Fuel Oil	\$8,077
Total Utilities	\$301,607



Exhibit G

Hydro-Turbine Generator Performance - 2022

Month	Kilowatt-hour (KWH)	Anticipated Savings *
January	48,590	\$2,818
February	42,322	\$2,455
March (Out for Service)	0	\$0
April (Out of Service)	0	\$0
May (Partial Out of Service)	24,528	\$1,423
June	0	\$0
July (out of srv/waiting on parts	0	\$0
August	0	\$0
September	0	\$0
October	0	\$0
November	0	\$0
December	0	\$0
Average	45,456	\$2,636
Year to Date	115,440	\$6,696

^{*} Estimated savings based on electrical rate of \$0.058 per KWH

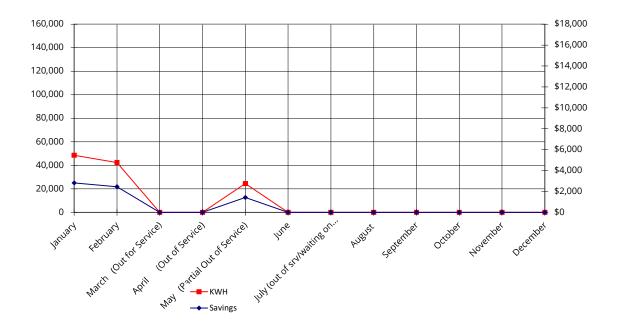




EXHIBIT H

Treatment Chemical Usage - 2022

Chemical	January	February	March	April	Мау	June	July	August	September	October	November	December	Average	Total
Chlorine														
Total Lbs.	6,180	6,133	6,135	5,736	6,296	6,356	6,770	6,593					6,275	50,199
Average, Chlorine Lbs./Day	199	219	198	191	203	212	218	213					206.7	
Average, Chlorine Dose, mg/L	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.4					3.2	
Chlorine, Cost, \$/Lbs.	\$0.305	\$0.305	\$0.305	\$0.305	\$0.305	\$0.305	\$0.305	\$0.305					0.3	
Chlorine Total Cost, Dollars	\$1,885	\$1,871	\$1,871	\$1,749	\$1,919	\$1,939	\$2,065	\$2,011					\$1,913.74	\$15,309.90
Alum 48.5%														
Total Lbs.	48,096	46,683	42,713	38,071	38,686	37,906	34,430	34,688					40,159	321,273
Average, Alum, Lbs./Day	1,551	1,667	1,378	1,269	1,248	1,264	1,111	1,119					1325.9	
Average, Alum, mg/L	25.0	25.0	18.3	18.8	20.0	16.5	16.5	17.8					19.7	
Alum Cost, \$/Lbs.	\$0.164	\$0.164	\$0.164	\$0.164	\$0.164	\$0.164	\$0.164	\$0.164					0.2	
Alum Total Cost, Dollars	\$7,888	\$7,656	\$7,005	\$6,244	\$6,345	\$6,217	\$5,647	\$5,689					\$6,586.34	\$52,690.74
Lime		0	0	0	0	0								
Total Lbs.	0	0	0	0	0	0	U	0					0	0
Average Lime, Lbs./Day	0	0	0	0	0	0	0	0					0.0	
Average, Lime Dose, mg/L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	
Lime Cost, \$/Lbs.	\$0.00 \$0.00	¢0.00	\$0.00 \$0.00	\$0.00 \$0.00	\$0.00	\$0.00	\$0.00	\$0.00					\$0.00	#0.00
Lime Total Cost, Dollars	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00					\$0.00	\$0.00
Soda Ash	0	0	o l	٥										
Total Lbs.	24,800	25,750	25,400	26,250	31,650	32,700	35,450	40,250					30,281	242,250
Average Soda Ash, Lbs./Day	800	920	819	875	1,021	1,090	1,144	1,298					995.9	· · · · · · · · · · · · · · · · · · ·
Average, Soda Ash Dose, mg/L	16.7	16.7	16.2	16.9	17.7	17.9	21.0	22.1					18.2	
Soda Ash Cost, \$/Lbs.	\$0.299	\$0.299	\$0.299	\$0.299	\$0.299	\$0.299	\$0.299	\$0.299					0.3	
Soda Ash Total Cost, Dollars	\$7,415	\$7,699	\$7,595	\$7,849	\$9,463	\$9,777	\$10,600	\$12,035					\$9,054.15	\$72,433.20
Fluoride Total Lbs.	1,155	1,193	1,168	1,111	1,202	1,215	1,445	1,557					1,256	10,046
		43		37		41	47							10,040
Average, Fluoride Lbs./Day	37 0.6	0.6	38	0.6	39 0.6	0.6	0.7	0.7					41.5	
Average, Fluoride (F-) Dose, mg/L Fluoride Cost, \$/Lbs.	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48					\$0.48	
Fluoride Cost, 37205. Fluoride Total Cost, Dollars	\$554	\$573	\$561	\$533	\$577	\$583	\$694	\$747					\$602.80	\$4,822.40
	1.00		,,,,			,,,,,	, , , , ,	,,,,,					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,
Sodium Hydroxide 50%														
Total NaOH 50% dry Lbs.	41,600	36,660	38,202	36,068	41,385	42,323	42,135	45,166					40,442	323,539
Average NaOH 50%, dry Lbs./Day	1,342	1,309	1,232	1,202	1,335	1,411	1,359	1,457					1,331	
Average, NaOH 50%, mg/L	10.7	10.7	9.8	9.9	10.4	9.0	9.8	10.8					10.1	
NaOH 50% Cost, dry \$/Lbs	\$0.174	\$0.174	\$0.174	\$0.174	\$0.174	\$0.174	\$0.174	\$0.174					0.2	
NaOH 50% Total Cost, Dollars	\$7,238	\$6,379	\$6,647	\$6,276	\$720	\$7,364	\$7,332	\$7,859					\$6,226.93	\$49,815.40
Zinc Orthophosphate														
Total Zn3(PO4)2, wet Lbs.	5,142	5,057	5,034	4,712	5,189	5,251	5,600	5,468					5,182	41,453
Average Zn3(PO4)2, wet Lbs./Day	166	181	162	157	167	175	181	176					170.6	
Average, Zn3(PO4)2 Dose, mg/L	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7					2.7	
Zn3(PO4)2 Cost, wet \$/Lbs.	\$0.374	\$0.374	\$0.374	\$0.374	\$0.374	\$0.374	\$0.374	\$0.374					0.4	
Zn3(PO4)2 Total Cost, Dollars	\$1,923	\$1,891	\$1,883	\$1,762	\$1,941	\$1,964	\$2,094	\$2,045					\$1,937.89	\$15,503.11
Potassium Permanganate Total KMnO4, Lbs.														0
														<u>U</u>
Average KMnO4 Dasa mg/l														
Average, KMnO4 Dose, mg/L														
KMnO4 Cost, \$/Lbs. KMnO4 Total Cost, Dollars														\$0.00
NIVITIO4 TOTAL COST, DUILATS														Ψυ.υυ
Expenditure														\$210,574.75
Average Treated Cost per (MG)														
Total Treated Flow (MGD)														0.000
Average Treated Flow (MGD)														238.174

2022-02-00 WSC Monthly Report Exhibit H



EXHIBIT I

DISTRIBUTION DEPARTMENT ACTIVITIES - 2022

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	Average
PA One Call Locates	423	501	523	564	481	513	490	524	0	0	0	0	4,019	502
Street Restorations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leak Detection Assessment Percent of Distribution System	8	8	8	8	8	8	8	8	0	0	0	0	64	8
Main Break Repair - Detected Non-Surfacing	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Main Breaks Repaired - Emergency	2	6	3	1	3	1	0	0	0	0	0	0	16	2
Service Line Leaks Detected	2	10	0	0	0	3	1	1	0	0	0	0	17	2
Service Line Leaks Repaired	1	11	0	0	2	2	1	10	0	0	0	0	27	3
Valves - Exercised	0	0	0	2	0	0	24	64	0	0	0	0	90	11
Valves - Replaced	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrant Flow Tests	0	2	3	2	5	2	3	9	0	0	0	0	26	3
Hydrants Returned to Service	0	0	1	0	1	0	0	2	0	0	0	0	4	1
Water Tap - Disconnected	1	0	2	3	4	11	29	0	0	0	0	0	50	6
Water Tap - New Connection	1	1	1	1	0	1	0	0	0	0	0	0	5	1
Water Shutoffs - Delinquent Accounts	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Water Shutoffs - Other	26	23	14	47	31	60	14	28	0	0	0	0	243	30
Water Shutoffs - Non Payment	0	0	0	37	31	41	9	21	0	0	0	0	139	17
Water Restoration Turn on Other	22	24	22	36	52	39	18	23	0	0	0	0	236	30
Water Turn on - Non Payment	5	6	5	24	14	22	7	6	0	0	0	0	89	11



EXHIBIT J

Metering Activities - 2022

Board Monthly Report	Distribution Monthly Report														
Activity	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	Average
Meter Installations															
	Missing	7	8	3	4	6	13	5	7					53	7
	Leaking	7	1	3	1	4	1	4	1					22	3
Replacement	Frozen	10	6	6	5	1	0	0	2					30	4
	Non-registering	1	3	5	5	2	4	3	6					29	4
	Large Meters ¹	0	0	0	1	1	0	0	0					2	0
New Service	New Installation	0	1	1	1	0	1	0	0					4	1
Meter Service															
MXU's Replaced	MXU's Replaced	20	22	41	18	31	24	61	38					255	32
Batteries Replaced	Batteries Replaced	67	25	123	65	48	34	31	30					423	53
Meter Pits Serviced	Meter Pits Serviced	1	0	0	1	1	1	1	0					5	1
Meter Calibrations															
Small Meters ²	Calibrated meters	2	0	1	2	11	9	0	0					25	3

¹ Large Meters are Meters 3" or greater that are calibrated at the customer's location by a contracted calibration service, assisted and witnessed by CRW staff

² Small Meters are Meters 2" or less that are calibrated at the Water Services Center by CRW staff on a certified calibration stand



EXHIBIT K

Miscellaneous Water Usage (gals) - 2022

Category of Water Use	Description	Jan	Feb	Mar	APR	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	Average
Process Water	Process Water	N/A	N/A					0	N/A						
Billed Metered Exported	Bulk Water Hauling	N/A	N/A					0	N/A						
Billed Metered	Hydrant Connections	0	0	0	8,176	359,716	81,274	0	7,616	0	0	0	0	456,782	57,098
Billed Unmetered	Hydrant Flow Tests	0	7,955	11,526	3,812	11,792	13,039	13,740	28,868	0	0	0	0	90,732	11,342
Unbilled Unmetered	Hydrant Flushing (and Unbilled Authorized)	221,167	32,288	120,010	3,485,233	5,695,883	6,663,397	2,258,900	104,492	0	0	0	0	18,581,370	2,322,671
Leakage on Distribution Mains	Main Leaks	4,349,565	1,286,902	2,856,325	71,360	896,734	88,843	0	0	0	0	0	0	9,549,729	1,193,716
Leakage on Service Lines	Service Leaks	998,776	708,950	595,243	573,408	111,040	466,560	412,704	181,440	0	0	0	0	4,048,121	506,015
	Total	5,569,508	2,036,095	3,583,104	4,141,989	7,075,165	7,313,113	2,685,344	322,416	0	0	0	0	32,726,734	4,090,842



Wastewater



WASTEWATER DEPARTMENT MONTHLY REPORT



Operator, Brian Mountain, retires after 41 years of service.

August 2022

1662 South Cameron Street, Harrisburg, PA 17104 | 888-510-0606 capitalregionwater.com



August 2022

Overview

The summer-long focus on staffing continued through August in the Wastewater department. While a new Operations Laborer was hired and started the training process, recruitment of replacement Operators was difficult. While one Operator was hired and will begin training in September, two vacancies remain.

The AWTF also saw the loss of a second Laboratory Technician, leaving the laboratory unstaffed. Most regulatory and process testing had to be contracted out. However, as of the time of reporting, both vacancies have been filled and regulatory testing has been brought back in-house.

Another bright spot was with the hiring of an Electrician for the Wastewater department. This provides a huge relief for the Maintenance group as the position has been vacant for most of the last two years, bringing the electrical work that has been contracted out back in-house. Work on the backlog of projects began immediately.

Lastly, progress continued on the contract for the sale of Nitrogen Credits generated from the "Food Slurry as Supplemental Carbon Source" pilot project. The purchasing authority's Board of Director approved a three-year contract with CRW during the month. Operations projection for the 2022 Water Year fell to 75,000 credits – due to some process difficulties and PADEP's release of its Phase III Watershed Implementation Plan, which reduced the calculation for CRW's credits by 18 percent. The three-year agreement is on the agenda for approval by CRW's Board during the September meeting.

Operations

During the month of August, the AWTF had an NPDES permit excursion for the monthly concentration limit of phosphorus. The average exceeded the limit by 0.4 mg/L (Exhibit A). This was a direct result of the staffing shortage endured by our accredited laboratory. With the outsourcing of regulatory testing, results are not received by the contracted lab for 2-3 weeks. After year of very stable effluent phosphorus concentrations, results increased dramatically just after testing was being sent out. By the time results were received weeks later and process adjustments were made, there was not enough time for recovery in the remaining days in the month. With the lab fully staffed once again, it is very unlikely for this condition to repeat in September.

Six Dry Weather Overflows were reporting in the month – several were at a single site at CSO #039 and were caused by construction work and deteriorating pipe conditions upstream of the site.



August 2022

Hydraulic loading to the AWTF averaged 15.3 million gallons per day (MGD). The treatment process achieved removal reductions of 97.3 percent CBOD, 95.8 percent Suspended Solids, 49.9 percent Phosphorus, and 97.3 percent Ammonia (Exhibit A).

Revenue of the Contract Waste Hauling program collected \$18,378.81 in revenue from 535,610 gallons discharged (Exhibit G). Revenue was lower due to almost no landfill leachate being offloaded in this increasingly dry climate but is expected to pick up significantly in September.

The Cogeneration Facility experienced an average run time of 28 percent in August. Revenue is estimated at \$2,526.12 on 21,600 Kilowatt-hours generated for the month. The decrease in runtime is primarily due to the mechanical failures of the 38-year-old Enginator unit.

Laboratory

- Hired Matthew Orndorf for Laboratory Technician I to start on September 12th.
- Updated the entire Quality Manual to update policy and procedures.
- Updated the following SOPs to the 23rd Edition of Standard Methods as required by the DEP: BOD/CBOD, Total Phosphorous, Ammonia-Nitrogen, and Total Suspended Solids.
- Working on a new Field of Accreditation for Fecal Coliform analysis by Colilert/Quanti-Tray technology.

Pretreatment

- Amended Ames Companies, Inc. industrial permit for authorized representative and changed language for their monthly flow estimate.
- Sent Letters of Violation to REYWSC and Harrisburg Dairies.
- Sent Notice of Violation to Norfolk Southern.

Plant Maintenance

- Cleared drainage outfall around plant perimeter.
- Tested startup of Gorman Rupp Pump No. 3 at the Plant Drain Pump Station.
- Rebuilt the sludge collection system at Primary Clarifier No. 3.
- Serviced the standby generators, tested full load and replaced batteries at Spring Creek and Market Street Pump Stations.
- Began to overhaul bar screen at Spring Creek Pump Station.
- Performed 15 vehicular repairs in preparation for state inspections.
- Performed vegetation control around the Market Street Pump Station.



August 2022

- Sold the following salvaged vehicles and equipment on Municibid: G-62 International Vactor \$72,100.00, G-01 Ford Taurus \$525.00, G-16 GMC Dump Truck \$6,275.00, G-13 Ford Flusher Truck \$5,200.00, G-52 Chevrolet Dump Truck \$6,658.00, Stow Street Cut Saw \$1,150.00, and (2) Snowplows \$202.00 for a total sale of \$92,110.00.
- Performed several maintenance tasks per request at 3003 NFS Offices.
- Installed tankless water heaters in bathrooms at 3003 NFS Offices.

Field Construction

- Repaired 44 inlets at various locations throughout the city.
- Blanked 16 inlets at various locations throughout the city to add solids and floatables control.
- Finished all work that was able to be completed for Phase One of the CSO Modification per CDM Smith report.
- Raised a concrete inlet top to grade at 6th and Agnes Streets.
- Raised a concrete inlet top to grade at 211 Briarcliff Road.
- Replaced two manhole lids and grates at Front and Seneca Streets.
- Repaired two storm inlet laterals on Front and Manor Streets. The inlet on the northeast corner of the intersection was causing a sinkhole. In total, 14 feet of VCP was replaced with SDR pipe.

Field Operations

- Total CCTV footage of sewer pipe assessed this August was 12,722.9 feet (2.41 miles). No breakdown available for CCTV and flushing at this time.
- Total of pipe flushed this month was 12,067 feet (2.29 miles).
- Responded to seven backup and overflow calls from residents. CRW was liable for none.
- Responded to six sinkhole calls. CRW was liable for none.
- Cleaned 254 stormwater inlets.
- Inspected 246 stormwater inlets.
- There were six dry weather overflows: four occurred at CSO #039 S. Mulberry and Cameron, one at Front and Mulberry Streets, and one at Front and Reily Streets.
- There were no SSO's this month.
- Completed last semi-annual CSO PM.
- Hosed wet well areas at Spring Creek Pump Station.



August 2022

Environmental Compliance

- Capital Region Water's Environmental Compliance Inspector resumed normal inspection duties during the month of August. In addition, the Inspector began conducting stormwater outfall inspections along the Paxton Creek and Susquehanna River. These initial inspections are part of CRW's MS4 permit and must be completed as part of CRW's efforts to inventory the MS4 system.
- Completed 21 outfall inspections.
- Completed 16 inspections of FOG dischargers. Fifteen locations received letters of non-compliance with compliance plans and one location was exempt.
- Issued five new FOG discharge permits.
- Issued nine FOG-related Notice of Violations (NOVs).
- Provided education packets to two newly identified FOG dischargers (either new business or previously unidentified). Spent time educating business owners/representative and provided them with a FOG Best Management Practices Manual, copy of Section 7.5 of the updated Wastewater and Stormwater Rules and Regulations, discharge permit request, cleaning log sign-off sheet, and introduction letter.
- Three investigations were conducted during the month of August.
- During the process of stormwater inspections, an outfall located along the Paxton Creek at Walnut Street was found to be discharging a significant amount of water. The investigation identified this outfall as one permitted by DEP and owned by another utility in Harrisburg.
- A resident reported concrete being dumped in a stormwater inlet near Kelker and Green Streets. Concrete was found on the inlet grate and a very small amount was found in the inlet. The investigation was inconclusive due to the lack of evidence available.
- Environmental Compliance responded to a report of sewage being discharged onto the street from a resident's cleanout near Derry and 13th Streets. CRW's Field Operations Crew conducted a CCTV assessment of the sewer main. This investigation is still on-going.

Street Sweeping

- Received three complaints this month. All complaints were resolved.
- Scheduled two sweepers for 1,000-hour PM service.
- Completed 537.6 miles of street sweeping within the City of Harrisburg in August.
- Performed additional sweeping operations for clean up at the Cultural Festival on August 20th for Dauphin County.
- Continued to sweep area of Reservoir Park. It will be scheduled with areas 1, 6, and 9.
- Water usage was approximately 12,200 gallons.
- Continued to assist cleaning storm inlet surfaces in scheduled sweeping areas.
- When the days of the month fall on a 5th week, there is no scheduled sweeping. However, the



August 2022

Street Sweeping group will be assigned specific assignments throughout the city to continue the upkeep in highly visible areas. During the final week of August, the Street Sweeping group swept an additional 56.4 miles and continued to clean off storm inlets.



Wastewater Exhibits



EXHIBIT A

CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Process Control - 2022

Parameters	January	February	March	April	May	June	July	August	September Oc	tober Novemb	er Decembe	er Average	NPDES Limits
Volume, MGD	18.4	24.3	20.3	26.0	28.6	19.4	17.7	15.3				21.3	37.7
Carbonaceous Biochemical Oxygen Demand													
Influent, mg/L	176 3		163 3	121	128	138 4	149	160				146	
Effluent, mg/L Percent Removal, %	98.1		97.9	3 97.0	3 96.0	97.1	3 97.9	4 97.3				3 96.8	25
Effluent Loading, lb/d	520		572	724	952	637	446	520				652	7,860
Suspended Solids:				•	•								
Influent, mg/L	177	149	212	144	137	153	184	174				166	
Effluent, mg/L	4	4	3	2	3	3	3	7				4	30
Percent Removal, %	97.5	92.4	98.6	98.3	96.5	98.0	98.2	95.8				96.9	
Effluent Loading, lb/d	715	1,397	499	569	990	650	468	822				764	9,433
Nitrogen													
Total-N													
Influent, mg/L	26		26	20	23	24	25	27				24	
Effluent, mg/L	3.1		5	5.0	5.6	4.5	3.2	5.0				4	Monitor
Percent Removal, %	88.0		80	75.1	75.2	81.2	87.2	81.1				81.3	
Effluent Loading, lb/d NH3-N	469	719	778	996	1,170	705	449	649				742	
Influent mg/L	16	13	15	11	11	15	16	19				14	
Effluent, mg/L	0.7	1.8	2.3	0.7	1.6	0.6	0.8	0.5				1	11 (2)
Percent Removal, %	95.5	85.7	84.4	93.8	85.0	95.9	94.9	97.3				91.6	
Effluent Loading, lb/d	113	386	411	157	364	99	127	56				214	4,716
Phosphorus:													
Influent, mg/L	3.5		3.6	2.9	2.9	3.5	4.0	4.9				3.5	
Effluent, mg/L	0.9	1.0	1.6	1.1	1.2	1.5	0.7	2.4				1.3	2.0
Percent Removal, %	71.6		53.6	63.1	58.9	57.1	82.3	49.9				62.5	
Effluent Loading, lb/d	144	206	274	220	241	240	102	284				214	629
pH:													
Influent, Std. Units	7.4		7.3	7.3	7.2	7.3	7.3	7.5				7.3	
Effluent, Std. Units	7.0	6.7	7.0	6.9	7.0	7.0	7.1	7.7				7.1	6.0 - 9.0
Dissolved Oxygen:		- -	- .	7.0	7.0		7.0					7.4	5014
Effluent Minimum, mg/L	7.0	7.7	7.1	7.0	7.2	6.3	7.2	7.3				7.1	5.0 Min.
Fecal Coliform:					2	2	2	_				2	200/400 1 /43
Effluent, No./100 ml	6	6	1	4	2	3	3	2				3	200/100 ml (1)
Chlorine Residual:	0.10	0.30	0.10	0.21	0.41	0.20	0.42	0.42				0.30	0.50
Effluent, mg/L	0.19	0.20	0.19	0.21	0.41	0.36	0.42	0.42				0.30	0.50

⁽¹⁾ Seasonal limit 2,000/100 ml Oct. 1 to Apr. 30 and 200/100 ml May 1 to Sept. 30.

PROCESS2022-A

⁽²⁾ Seasonal Limit May 1 to Nov.1.

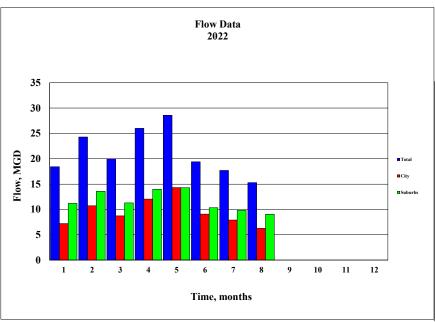


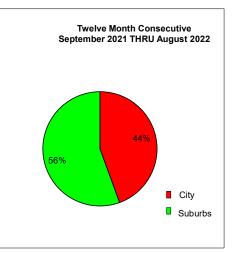
EXHIBIT B

CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Flow Monitoring Information, MGD - 2022

														Total
	Total				C	ity Region	S			Su	burb Regi	ons		Precip
Month	Flow	City	Suburbs	1	2	3	4	5	6	7	8	9	10	inches
											•			
January	18.400	7.202	11.198	6.361	0.158	0.300	0.254	0.129	1.300	4.217	1.820	3.532	0.329	2.170
February	24.300	10.705	13.595	9.854	0.197	0.300	0.066	0.288	1.300	5.146	2.271	4.350	0.528	2.800
March	20.000	8.710	11.290	7.388	0.170	0.300	0.679	0.173	1.300	3.948	1.956	3.697	0.389	2.540
April	26.000	12.031	13.969	10.089	0.211	0.300	1.225	0.206	1.500	4.869	2.421	4.766	0.413	3.430
May	28.600	14.310	14.290	11.442	0.246	0.300	2.099	0.223	1.800	4.578	2.830	4.666	0.416	6.030
June	19.400	9.085	10.315	7.097	0.162	0.300	1.275	0.251	1.400	3.274	1.863	3.330	0.448	4.170
July	17.700	7.894	9.806	5.850	0.144	0.300	1.400	0.200	1.400	3.200	1.656	3.170	0.380	4.880
August	15.300	6.250	9.050	4.540	0.130	0.300	1.130	0.150	1.300	2.820	1.500	3.050	0.380	1.980
September														
October														
November														
December														
Average	21.21	9.52	11.69											3.50
Percent	100.00	44.90	55.10											28.00





FLOW2022 No Zeros-B



EXHIBIT C

CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Treatment Utility and Chemical Usage - 2022

Utility / Chemical	January	February	March	April	May	June	July	August	September	October	November Decemb	er Average	Total
												'	
Electric													
Total, kwH	1,131,900	1,032,600	1,019,700	1,072,500	969,300	1,000,500	1,066,200	963,600				1,032,038	8,256,300
Average, kwH/Day	36,513	36,879	32,894	35,750	31,268	33,350	34,394	31,084				34,016	
Cost, Dollars	\$70,491.63	\$72,766.82	\$64,633.22	\$70,097.82	\$65,581.40	\$67,785.65	\$71,265.00	\$70,412.96				\$69,129.31	\$553,034.50
Natural Gas													
Total, Cu Ft	905.6	647.3	401.4	292.5	32.4	0.0	0.0	*				285	2,279
Average, Cu Ft/Day	29	23	13	10	1	0	0	*				11	
Cost, Dollars	\$7,509.60	\$5,404.37	\$3,544.64	\$2,689.99	\$413.51	\$129.95	\$129.95	*				\$2,477.75	\$19,822.01
Water													
Total, Gal.	681,000	871,833	743,167	1,166,000	1,126,000	1,361,000	893,000	*				977,429	6,842,000
Average, Gal./Day	21,968	31,137	23,973	38,867	36,323	45,367	28,806	*				32,349	
Cost, Dollars	\$10,384.54	\$12,357.75	\$11,027.35	\$15,399.44	\$14,282.72	\$17,415.74	\$12,576.62	*				\$11,680.52	\$93,444.16
MicroC													
Total, Gal.	0	0	0	0	0	0	0	0				0	0
Average, Gal./Day	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0	
Cost, Dollars	\$0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0				\$0.00	\$0.00
Sodium Hydroxide													
Total, Gal.	0	0	0	0	0	0	0	0				0	0
Average, Gal./Day Cost, Dollars	0	0	0	0	0	0	0	0				0 \$0.00	\$0.00
Chlorine Disinfection													
Total, Lbs.	5,340	6,020	5,100	7,150	8,720	7,955	7,972	8,420				7,085	56,677
Average, Lbs./Day	172	215	165	238	281	265	256	272				233	
Avg Residual, mg/L	0.19	0.20	0.19	0.21	0.41	0.41	0.42	0.42				0.31	
Cost, \$/Lbs.	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99				\$0.99	#EC 110 33
Total Cost, Dollars	\$5,286.60	\$5,959.80	\$5,049.00	\$7,078.50	\$8,632.80	\$7,875.45	\$7,892.28	\$8,335.80				\$7,013.78	\$56,110.23
Phosphorous Removal													
Total FeCl3, Gals.	507	1,333	1,634	2,743	2,417	2,675	447	4,472				2,029	16,229
Avg FeCl3, Gals./Day	16	48	53	91	78	89	14	144				67	
FeCl3 Cost, \$/Gal.	\$1.26	\$1.26	\$1.26	\$1.26	\$1.26	\$1.26	\$1.26	\$1.26				\$1.26	#20 446 79
FeCl3 Total Cost, Dollars	\$638.82	\$1,679.58	\$2,058.84	\$3,456.18	\$3,045.42	\$3,370.00	\$563.22	\$5,634.72				\$2,555.85	\$20,446.78

^{*} No data at time of report

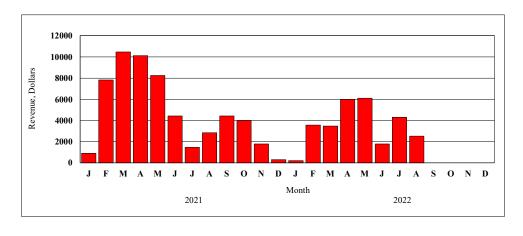


EXHIBIT D

CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Cogeneration Electrical Production: 2021-2022

	Percent	Daily Avg	Kilowatt Hours	Estimated		
Period	Run Time	Kilowatt	Produced	Revenue		
January 2021	12	377	11,700	\$901.25		
February 2021	75	3,632	101,700	\$7,833.95		
March 2021	84	4,384	135,900	\$10,468.38		
April 2021	77	4,380	131,400	\$10,121.74		
May 2021	79	3,454	107,100	\$8,249.91		
June 2021	42	1,920	57,600	\$4,436.93		
July 2021	8	406	12,600	\$1,473.57		
August 2021	26	784	24,300	\$2,841.89		
September 2021	27	1,260	37,800	\$4,420.71		
October 2021	26	1,103	34,200	\$3,999.69		
November 2021	12	510	15,300	\$1,789.34		
December 2021	2	87	2,700	\$315.77		
·						
Total - 2021			672,300	\$56,853.12		
Monthly Average - 2021	39	1,858	56,025	\$4,737.76		
January 2022	2	58	1,800	\$210.51		
February 2022	37	1,093	30,600	\$3,578.67		
March 2022	33	958	29,700	\$3,473.42		
April 2022	43	1,710	51,300	\$5,999.54		
May 2022	53	1,687	52,200	\$6,104.79		
June 2022	23	510	15,300	\$1,789.34		
July 2022	33	1,190	36,900	\$4,315.46		
August 2022	28	697	21,600	\$2,526.12		
September 2022						
October 2022						
November 2022						
December 2022						
Total - 2022			239,400	\$27,997.83		
Monthly Average - 2022	31	988	29,925	\$3,499.73		



COGEN2022-D 10



EXHIBIT E

CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Sludge Handling Information - 2022

Process	January	February	March	April	May	June	July	August	September Octo	ber November December	er Average	Total
Solids Removal												
Process, Lbs.	836,796	808,604	1,256,456	1,295,249	1,041,739	1,063,962	963,124	618,077			985,501	7,884,008
CWH Program, Lbs.	69,353	76,120	124,956	61,652	122,100	72,880	64,239				84,471	591,300
Total Solids, Lbs.	906,149	884,724	1,381,413	1,356,901	1,163,839	1,136,842	1,027,363	618,077			1,059,414	8,475,308
Sludge Dewatering												
Feed Volume, Gals.	3,577,000	2,678,000	4,535,000	5,007,000	4,782,000	6,279,000	2,853,000	4,377,000			4,261,000	34,088,000
Feed Solids, %	1.7	1.7	2.0	1.8	2.0	1.4	1.6	1.3			1.7	-
Labor, Hours	459	416	659	644	561	659	467	615			560	4,480
Operations, Hours	930	785	1,132	1,058	962	1,181	571	721			917	7,340
Total Cake, Dry Tons	179	167	312	295	281	279	110	112			217	1,735
Total Cake, Wet Tons	1,149	1,069	1,855	1,682	1,533	1,570	712	950			1,315	10,520
Cake TS, %	15.5	15.6	16.8	17.6	18.4	17.8	17.1	17.3			17.0	-
Press Rate, Lbs./Hour	2,472	2,725	3,279	3,179	3,186	2,659	2,493	2,634			2,828	22,628
Polymer Dosage, Lbs	3,188	2,976	4,605	5,056	4,545	5,358	2,258	3,582			3,946	31,568
Polymer Dosage, Lbs/Dry Ton	20.4	19.4	15.1	17.5	16.9	19.2	19.7	21.7			18.8	-
Disposal Cost												
Labor, Dollars	\$8,821.98	\$7,995.52	\$12,665.98	\$12,383.45	\$10,778.58	\$12,665.98	\$8,981.51	\$11,810.69			\$10,762.96	\$86,103.68
Electrical,Dollars	\$409.07	\$345.18	\$497.86	\$465.56	\$423.37	\$519.64	\$251.28	\$317.42			\$403.67	\$3,229.38
Polymer, Dollars	\$6,216.60	\$5,803.20	\$8,979.75	\$9,859.20	\$8,862.75	\$10,448.10	\$4,403.10	\$6,984.90			\$7,694.70	\$61,557.60
Disposal, Dollars	\$27,763.12	\$91,664.12	\$107,614.33	\$87,453.98	\$89,783.89	\$85,636.00	\$44,429.50	\$38,464.29			\$71,601.15	\$572,809.24
Total Cost, Dollars	\$43,210.77	\$105,808.02	\$129,757.92	\$110,162.19	\$109,848.58	\$109,269.72	\$58,065.39	\$57,577.30			\$90,462.49	\$723,699.90
Cost Per Dry Ton, Dollars	\$241.40	\$633.58	\$415.89	\$373.43	\$390.92	\$391.65	\$527.87	\$514.08			\$436.10	

SLUDGE2022-E

EXHIBIT F

CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Conveyance Utility Usage - 2022

Location / Utility	January	February	March	April	May	June	July	August	September October	November December	Average	Total
Front Street Pump Station	January	· car aar y				Jame	Jy	7106000	- September Settember		, trainings	7 0 0 0.1
Electric												
Total, kwH	232,800	219,600	187,200	187,200	190,800	93,600	67,200	58,800			154,650	1,237,200
Average, kwH/Day	7,510	7,843	6,039	6,240	6,155	3,120	2,168	1,897			5,121	
Cost, Dollars	#######	\$14,468.72	\$10,417.84		\$13,421.18	\$5,141.58	\$2,480.22	-\$1,177.19			\$9,002.08	\$72,016.65
Fuel Oil		,,	, , , , , , , , , ,	,,	,,	, , , , , , , ,	,	,			,	, , _, , , , , , , ,
Total, Gals.	0	0	0	0	0	0	0	0			0	0
Average, Gals./Day	0	0	0	0	0	0	0	0			0	
Cost, Dollars	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			0	\$0.00
Water												
Total, Gals.	315,000	180,833	479,167	261,819	397,181	350,000	246,000	*			318,571	2,230,000
Average, Gal./Day	10,161	6,458	15,457	8,727	12,812	11,667	7,935	*			10,460	
Cost, Dollars	\$3,953.62	\$2,566.33	\$5,651.11	\$3,403.73	\$4,803.37	\$4,315.52	\$3,240.16	*			,	\$27,933.84
	10,200.00	. =,=====	, =,==	,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	. ,,,,,,,,,,	,					,_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Spring Creek Pump Station												
Electric												
Total, kwH	36,160	52,160	55,040	85,120	96,960	79,360	64,960	53,440			65,400	523,200
Average, kwH/Day	1,166	1,863	1,775	2,837	3,128	2,645	2,095	1,724			2,154	
Cost, Dollars	\$2,617.50	\$3,866.14	\$3,752.30	\$6,514.96	\$7,873.63	\$6,791.79	\$5,832.00	\$4,878.26			\$5,265.82	\$42,126.58
Fuel Oil												
Total, Gals.	0	0	0	0	0	0	0	0			0	0
Average, Gals./Day	0	0	0	0	0	0	0	0			0	
Cost, Dollars	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.00	\$0.00
Water												
Total, Gals.	25,000	39,000	106,000	79,333	224,667	140,000	79,944	*			99,135	693,944
Average, Gal./Day	806	1,393	3,419	2,644	7,247	4,667	2,579	*			3,251	
Cost, Dollars	\$334.49	\$479.25	\$1,172.03	\$896.29	\$2,399.05	\$1,523.59	\$902.61	*			\$1,101.04	\$7,707.31
Market Street Pump Station												
Electric												
Total, kwH	1,200	1,200	1,080	960	1,080	840	960	480			975	7,800
Average, kwH/Day	39	43	35	32	35	28	31	15			32	
Cost,Dollars	\$207.27	\$123.51	\$121.40	\$237.38	\$146.40	\$66.71	\$77.82	-\$23.33			\$119.65	\$957.16
Fuel Oil												
Total, Gals.	0	0	0	0	0	0	0	0			0	0
Average, Gals./Day	0	0	0	0	0	0	0	0			0	
Cost, Dollars	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			\$0.00	\$0.00
City Island Pump Station												
Electric												
Total, kwH	40	40	40	40	40	40	40	0			35	280
Average, kwH/Day	1	1	1	1	1	1	1	0			1	
Cost, Dollars	\$63.36	\$54.75	\$61.50	\$63.19	\$56.52	\$53.56	\$50.70	\$37.77			\$55.17	\$441.35

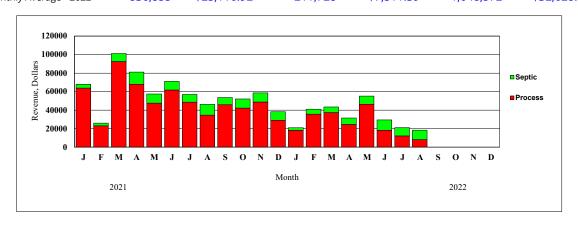


EXHIBIT G

CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Contract Waste Hauling Program 2021 - 2022

	Proc	ess	Sep	tic	Total			
Month	Gallons	Revenue	Gallons	Revenue	Gallons	Revenue		
January	2,207,599	\$63,748.15	118,100	\$4,255.20	119,200	\$68,003.35		
February	765,460	\$23,088.42	81,060	\$2,864.16	846,520	\$25,952.58		
March	3,321,165	\$92,510.78	239,250	\$8,559.00	3,560,415	\$101,069.78		
April	2,345,220	\$67,928.04	366,960	\$13,093.56	2,712,180	\$81,021.60		
May	1,571,220	\$47,547.72	278,050	\$9,883.80	1,489,270	\$57,431.52		
June	2,116,390	\$61,668.09	265,920	\$9,380.70	2,382,340	\$71,048.79		
July	1,683,380	\$48,625.56	233,900	\$8,366.40	1,917,280	\$56,991.96		
August	1,157,030	\$34,517.61	327,260	\$11,655.36	1,484,290	\$46,172.97		
September	1,591,020	\$45,863.64	220,840	\$7,779.24	1,811,860	\$53,642.88		
October	1,495,740	\$42,324.00	273,850	\$9,786.60	1,769,590	\$52,110.90		
November	1,667,580	\$48,803.22	277,250	\$9,864.00	1,944,830	\$58,667.22		
December	988,550	\$29,082.69	253,150	\$9,041.40	1,241,700	\$38,124.09		
Total - 2021	20,910,354	\$605,707.92	2,935,590	\$104,529.42	21,279,475	\$710,237.64		
Monthly Average - 2021	1,742,530	\$50,475.66	244,633	\$8,710.79	1,773,290	\$59,186.47		
January	557,788	\$18,254.25	78,450	\$2,770.20	636,238	\$21,024.45		
February	1,253,749	\$35,714.94	150,975	\$5,336.00	1,404,724	\$41,051.04		
March	1,266,410	\$37,456.11	168,400	\$5,918.40	1,434,810	\$43,374.51		
April	832,860	\$24,607.44	189,750	\$6,795.00	1,022,610	\$31,402.44		
May	1,599,990	\$46,377.27	250,650	\$8,874.90	1,850,640	\$55,252.17		
June	583,370	\$18,218.79	315,100	\$11,217.60	898,470	\$29,436.39		
July	352,570	\$12,137.31	252,900	\$8,969.40	605,470	\$21,106.71		
August	248,100	\$8,169.21	287,600	\$10,209.60	535,610	\$18,378.81		
September	.,	,		,	,-	,.		
October								
November								
December								
_								
Total - 2022	6,694,837	\$200,935.32	1,693,825	\$60,091.10	8,388,572	\$261,026.52		
Monthly Average - 2022	836,855	\$25,116.92	211,728	\$7,511.39	1,048,572	\$32,628.32		



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