



Ensure Financial Stability	
Reconciled Bank Account Balances	Refer to attached Reconciled Bank Account Balances as of 9/30/2022.
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 Water	Provided separately to Board of Directors.
Capital Improvement Projects for Wastewater	Provided separately to Board of Directors.
Grant Management	Refer to attached Grant Management Report.
Ensure Revenues are Consistent with System Usage	
Water Shut-offs	There were 7 water shut-offs for non-payment, 13 were turned back on after payment, and 23 service shut-off requests.
Repair/Replace Meters/MXUs/Batteries	Drinking Water Distribution staff replaced 24 water meters, replaced 69 batteries, and 35 MXUs.
Reduce Wet Weather Impacts to Infrastructure, Community, and Receiving Waters	
Negotiate with PADEP/U.S. EPA/DOJ on Past and Future Practices	CRW and USDOJ/U.S. EPA/PADEP are finalizing the Draft Partial Consent Decree Modification for public comment.
Develop Necessary Planning for Implementation of Green Infrastructure	Rebidding Phase 4 PENNVEST SW Pro-Fi - Bid Opening is 11/22/2022 with anticipated contract award at the December Board Meeting.
Joint Pollutant Reduction Plan - Collaborate with Suburban Partners on MS4	Closing out joint Stonebridge Project with Lower Paxton and Susquehanna Township - Amendment No. 1 is a reconciliation of project costs that exceeded the cost estimate, and a request for funds to monitor the project over the next three years. <i>See Resolution No. 2022-046.</i>
Obtain and Comply with Individual MS4 Permit	U.S. EPA Region 3 Inspection of CRW's MS4 Program to be conducted on 10/19 and 10/20/2022. PADEP Inspector to be in attendance as well.
Operate Facilities with a High Standard of Care	
Permit Compliance	The Drinking Water department met all primary and secondary Safe Drinking Water Act permit parameters for the month. The AWTF met all NPDES permit parameters for the month of September. Two Dry Weather Overflows were reported.
Notice of Violations (NOVs)	There were no NOVs received by the Drinking Water department in September. There were no NOVs received by the Wastewater department in September.
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 September.
CCTV	A total of 4,696.6 feet (0.89 miles) of sewer pipes were assessed by CCTV footage during the month of September. A total of 9,009 feet (1.7 miles) of pipe were flushed as well.
Incident Response	Wastewater responded to four backup and overflow calls from residents during the month of September. CRW was liable for none.

Geographic Information System (GIS)	<ul style="list-style-type: none"> • Thirty (30) Pennsylvania One Call tickets, all requiring maps, were completed by GIS. • One (1) meeting was held between the GIS Manager and [REDACTED], Field Maintenance Worker (AWTF) to complete complex GIS updates. • GIS Manager and Cityworks Administrator met with Drinking Water department staff for implementation of the new Service Appointment template. • Operations Challenge practice continues for the GIS Manager. • Bi-weekly meetings were held with KCI Technologies, Inc. Discussions included additional issues with the new water schema and version upgrades to GIS software and related servers. • Met with installer of the GPS equipment used in the street sweepers. His explanation of the wiring and sensors will allow us to revise our sweeping maps to track when the sweepers are actively sweeping versus traveling through the city. • Forty (40) assets were GPS'd. • Updated impervious area data was completed by Harrisburg University and delivered to CRW.
Cityworks	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>
Asset Management	<p>The draft Risk Policy is in process of review by senior leadership, when completed it will be presented for Board approval. The Construction Requirements working group met 10/4/2022 and 10/13/2022 to develop a template format for contractors to deliver new asset information. The [REDACTED] risk model training manual was finalized. Field work for the 2022 Water Main Condition Assessment project will begin 10/17/2022. A comprehensive assessment for compliance to U.S. EPA's lead service line inventory requirements is in development. Completed preliminary steps for the build out of American Water Works Association (AWWA's) Benchmarking Utility Survey in designated software.</p>
Development Review Summary	<p>For details, see attached Development Stormwater Management Review Summary spreadsheet for October.</p>

Undertake Capital Improvement Projects - Refer to attached Capital Improvement Projects Report	
Professional & Contractor Services	<p>Recommend Board approval of the following Task Orders, Change Orders, Agreements and Procurement:</p> <p>Drinking Water: Task Order 2020-20-03: Engineering Services for 2021 Water System Improvements Project [REDACTED] Change Order No. 1 - 2022 Street Restoration Project [REDACTED] Procurement: None.</p> <p>Wastewater: Recommendation of Award - 2023 Sewer System Improvements Project (Excavation) [REDACTED] Recommendation of Award - 2023 Sewer System Improvements Project (Trenchless) [REDACTED] Procurement: None.</p> <p>Stormwater: Resolution No. 2022-046 - Joint Pollutant Reduction Plan – Intergovernmental Cooperation Agrmt – Task Order 2021-01 Amendment No. 1. Change Order No. 1 - Bellevue Park Ponds SW Retrofit GSI Project with Shiloh Paving & Excavating, Inc. Change Order No. 1 - Camp Curtin YMCA GSI Project [REDACTED]</p>
Stormwater O&M Agreements	<p>Recommend Board approval of the following: None.</p>
AWTF Primary Digesters Rehabilitation	<p>The general contractor requested substantial completion the week of 9/19/2022; punchlist work items remain.</p>
AWTF Energy Recovery Improvements	<p>No update. Permit applications are being reviewed by Swatara Township and PADEP.</p>
Front Street Pumping Station Improvements	<p>The contractors are addressing punch list items and site cleanup.</p>
WSC Flocculator Equipment Replacement	<p>Delivery of flocculator equipment is expected in November 2022.</p>

Undertake Renewal and Replacement Projects	
2021 Water System Improvements	A substantial completion inspection was held on 10/12/2022. Final paving and punch list work remain.
2022 Water System Improvements	The contractor is awaiting the delivering of ductile iron pipe which is delayed due to supply chain issues.
Cameron Street Water Main - Phase 3	The project is closed out and will be removed from future reports.
Cameron Street Water Main - Phase 4	The project is in the preliminary (30% level) design phase.
2023 Sewer System Improvements (Excavation)	Refer to the agenda for recommendation of award to an excavation contractor.
2023 Sewer System Improvements (Trenchless)	Refer to the agenda for recommendation of award to a trenchless contractor.
Arsenal Boulevard Sewer Improvements	No update. Temporary and construction easements must be acquired before advertising the project.
Front Street Interceptor Rehabilitation - Phase 2	The contractor will begin the pre-construction activity of televisual pipe inspection and cleaning at the end of October through November.
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 September. A narrative is provided in the Wastewater Department Monthly Report.
Sinkhole Program	Eight sinkholes were investigated by CRW in the month of September. Wastewater was liable for two and Water was liable for one.
Inlet Cleaning	A total of 165 stormwater inlets were cleaned during the month of September, and 163 stormwater inlet inspections were performed.

Operate as an Efficient, Sustainable and Resilient Water Utility	
DeHart Property Stewardship	<p>Timber harvest to improve regeneration is complete in Management Unit (MU) 22/31 with final site restoration/seeding. 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.</p> <p>A third-party Forest Stewardship Council (FSC) desk audit was completed on 8/31/2022 to ensure compliance with FSC standards. The field audit was conducted on 9/29/2022.</p>
Sustainability	Staff is reviewing solar project potential at the Water Service Center.
Internal Communications	The Intranet site and calendar continue to be utilized.

Inform and Listen to Customers and Encourage Stewardship of our Systems	
Media Relations - Press and Social Media	<p>PRESS RELEASES: N/A.</p> <p>SOCIAL MEDIA TOPICS: Facebook: 0 New Organic Followers (1,589 Total). 5 Posts; Highest Engaged Post: (9/30/2022) "Employee of the Month: Cody Howe." (1,095 Reaches, 143 Reactions, 37 Comments, 4 Share); Other topics: DeHart Day Posts (and cancellation), Board of Directors Meeting and Drone Photography Alert in Riverfront Park.</p> <p>Twitter: 2 Tweets; Highest Engaged Tweet: "Aerial Drone Photography to begin" Month Overview: 745 Profile Visits; -1 Followers; 1 Mention. "PA Parks & Forests: DeHart video".</p> <p>Instagram: 3 New followers (666 Total), 5 Posts; Highest Engaged Post: (9/30/2022) "Employee of the Month: Cody Howe," 69 Organic Reaches, 5 likes, 0 comments.</p> <p>2022 Demographics: Most Active Age-range: 25-54; Gender Division: 62% Women / 37% Men; Locations: Harrisburg, Penbrook, Mechanicsburg, Steelton, Linglestown, Camp Hill and Lancaster.</p>
Community Relations	<p>Community Ambassador Meeting held 9/21/2022: Presenter: Jeff Bowra regarding Front Street Interceptor project. Updates: Biobot, Community Events and CSO Signage. Ambassador updates and Introduction of Sean Sauro (Community Outreach Specialist).</p> <p>Community Outreach:</p> <ul style="list-style-type: none"> • Delivered thirty three (33) door-to-door notifications regarding water service interruptions. • Daily combined sewer overflow (CSO) inspections and Everbridge customer updates. • One (1) community event which was a litter clean up on the Maclay Street Bridge. • One (1) public meeting/presentation (Midtown Action Council). • Everbridge outreach. • Three (3) in-person customer complaint follow-ups.
Public Communications	<p>WHAT'S ON TAP COMMUNICATION: The September monthly bill stuffer was distributed as a bill insert. Topics included: Modification to the Partial Consent Decree, Progress Made To Date, and a "Thank You" to our feedback session participants.</p>
Diversity	<p>Capital Improvement Project event held on 10/5/2022 with City Beautiful H2O Manager and the Lead Engineer for the purpose of expanding prime and M/W/DBE subcontractor opportunities.</p>

Administrative	
Risk Management	<p>Insurance Claims:</p> <ul style="list-style-type: none"> • General Liability - one claim submitted but it was closed with no liability. • Auto - one (1) claim submitted for the third quarter. • Injuries - three (3) claims open in the third quarter. One (1) was a significant injury. • A second quarter claim should be closed this month just waiting on final documents. <p>Training:</p> <ul style="list-style-type: none"> • A draft course has been created to present information on dealing with difficult/aggressive people and incidents of threatened violence. • Two courses were developed to help with internal safety training which cover Safe Lifting and Avoiding Back Injuries and the other covers working with ladders.
Human Resources	<p>For details, see attached Recruiting Status Report.</p>
Procurement	<p>No update.</p>

<p>Information Technologies (IT)</p>	<p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p>
<p>Office Management and Admin Professional Services and Construction</p>	<p>Incoming Correspondence Report: Refer to attached Incoming Correspondence Report for September 2022.</p> <p>Street/Sidewalk-Cut Permits: One (1) Drinking Water and one (1) Sewer permit were issued. Two (2) Drinking Water and one (1) Sewer permit were successfully completed, inspected, and closed by the City of Harrisburg's Engineer.</p> <p>Fleet Management (Acquisitions):</p> <ul style="list-style-type: none"> • Purchase of (G-84) 2022 JCB Model 427ZX Wheel Loader [Redacted] through COSTARS for Wastewater Department. <p>Fleet Management (Dispositions): None.</p> <p>[Redacted]</p> <p>[Redacted]</p> <p>[Redacted]</p>

<p>Right-to-Know Requests</p>	<p>CRW has received and responded to four Right-to-Know requests during the period 9/22/2022 through 10/19/2022. 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.</p> <p>OOB Training: No update.</p> <p>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 provided 9/26/2022.</p> <p>2022-014 - Carolina Barrios (SmartProcure) Request for any and all purchasing records from 6/6/2022 to current. Specific information requested from the record-keeping system: (1) Purchase Order Number. If purchase orders are not used a comparable substitute is acceptable, i.e. invoice, encumbrance, or check number. (2) Purchase date. (3) Line item details (Detailed description of the purchase). (4) Line item quantity. (5) Line item price. (6) Vendor ID number, name, address, contact person and their email address. The request is limited to readily available records without physically copying, scanning or printing paper documents. Any editable electronic document is acceptable. Response due: 9/26/2022. Response provided: 9/26/2022.</p> <p>2022-015 - Ted Evgeniadis (Lower Susquehanna Riverkeeper Association) & Natalia M. Cabrera, Esq. (Environmental Integrity Project) GIS data for the Capital Region Water combined sewer system and separate sanitary sewer system, specifically the data reflected in the public viewer at https://crw-crew.hub.arcgis.com/, including GPS coordinates for the locations of each outfall. Response due: 9/29/2022. Response provided: 9/27/2022 for 30-day extension until 10/31/2022. Final Response provided 9/30/2022.</p> <p>2022-016 - Doand G. Forney and Jeff Novak, Esq. (Wecando Enterprise) Requesting water bills for property located at 2327 North 7th Street, Harrisburg, PA for the period 1/1/2016 to 9/30/2022 and any bills showing usage (past and present) generated on this property due to a sprinkler system that was not functional at the time of a fire, as well as any invoices for disconnection of service for said location. Response due: 10/4/2022. Response inquiry made for clarification of request on 9/27/2022. Response provided on 10/3/2022.</p>
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CAPITAL REGION™
WATER

**DRINKING WATER DEPARTMENT
MONTHLY REPORT**



New Soda Ash Feeders

September 2022

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

Plant Operations

The Capital Region Water (CRW) Drinking Water department met all Federal Safe Drinking Water Act water quality standards for the month of September. Specific water quality results are summarized in Exhibit A. A total of 219.84 MG, averaging 7.58 MGD was withdrawn from the water supply source for treatment. As shown in Exhibit B, a total of 216.31 MG, averaging 7.45 MGD, of finished drinking water was pumped to the distribution system.

The DeHart water source was in service 30 days. The Susquehanna River water source was not in service. The DeHart Watershed had below average rainfall in September (Exhibit C) and the DeHart reservoir water level decreased (Exhibit D). An estimated 269.25 MG of water was released from DeHart reservoir to Clark Creek, averaging 8.97 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).

Soda Ash feeder 805 was installed and will be put into operation on October 24th. With this feeder being installed, this concludes the soda ash feeder upgrade project, and will give the operations group two reliable feeders for years to come.

Plant Maintenance

The Maintenance team performed approximately 48 preventative maintenance work orders and one corrective maintenance work order for the month of September 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 repaired the duct work for the air make-up from the Blower building to the Pump Gallery building.
- The Maintenance team replaced the motor for the exhaust fan in the Hydro Turbine building.
- The Maintenance team installed the conduit, wiring, control panel and racking for the Sodium Hydroxide (Caustic) system.
- The Maintenance team repaired several roof leaks in the Operations building.
- The Maintenance team installed the Rotork actuator for the Backwash Valve 406.
- 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.

- 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 three leaking services during the month totaling 587,520 gallons of unmetered water.
- Repair one Main Break 173,462 gallons of unmetered Water.
- Repair one fire hydrants.
- Replace two fire hydrants.
- Complete 789 work orders.
- Complete 529 water, sewer, and storm water locates.
- Paint 210 hydrants.
- Exercise 12 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.
- All lead and copper samples have been collected and all data received. All lead data was non detect and the average copper result was 0.05 ppm with the highest result being 0.2 ppm.



CAPITAL REGION™

WATER

Drinking Water Exhibits

EXHIBIT A Water Quality Analysis - 2022

PARAMETERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Average	MCL Limits
Total Coliform: Presence/Absence														
Distribution System	A	A	A	A	A	A	A	A	A					5% P
Chlorine Residual, mg/L Free														
Filter Plant Effluent	1.94	2.03	1.98	1.97	1.94	1.90	1.88	1.96	1.93				1.95	0.2 - 4.0
Distribution System	1.27	1.35	1.32	1.30	1.18	1.17	1.09	1.11	0.97				1.20	<0.02
Turbidity, NTU														
Influent from DeHart	0.57	0.55	0.61	0.72	0.67	0.69	0.70	0.82	1.04				0.71	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				0.03	0.30
pH, Std Units														
Influent from DeHart	6.4	6.3	6.3	6.3	6.0	5.8	5.6	5.6	6.0				6.04	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA				NA	NA
Filter Plant Effluent	7.4	7.5	7.5	7.6	7.6	7.6	7.4	7.5	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	7.6				7.61	6.5 - 8.5*
Total Alkalinity, mg/L as CaCO3														
Influent DeHart	5	5	5	5	5	5	5	5	5				5.00	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA				NA	NA
Filter Plant Effluent	13	18	16	15	17	19	21	27	26				19.31	<15*
Distribution System	15	17	15	16	16	20	22	23	27				18.93	<15*
Temperature, degrees C														
Influent from DeHart	6.6	6.0	7.4	9.5	12.2	14.8	16.6	17.5	18.5				12.12	NA
Influent from Susquehanna	NA	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	17.7				8.15	NA
Distribution System	15.3	12.9	13.3	14.6	17.6	21.9	22.7	23.0	22.8				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	0.86				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	0.03				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	0.68				0.23	NA
Influent from Susquehanna	NA	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	0.01				0.02	0.3*
Distribution System	0.13	0.01	0.03	0.00	0.01	0.02	0.01	0.01	0.05				0.03	0.3*
Total Dissolved Solids, mg/L														
Influent from DeHart	13	13	14	15	16	16	16	17	17				15.44	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA				NA	NA
Filter Plant Effluent	37	38	41	44	46	47	49	59	55				46.05	500*
Distribution System	39	40	38	45	46	49	51	56	62				47.45	500*
Total Hardness, mg/L														
Influent from DeHart	8	8	8	8	8	8	8	8	8				8.00	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA				NA	NA
Filter Plant Effluent	8	8	8	8	8	8	8	8	8				8.08	NA
Distribution System	8	7	7	6	5	7	6	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	1.24				1.28	0.7 - 1.3*
Distribution System	1.23	1.14	NA	1.18	1.31	1.33	1.30	1.30	1.22				1.25	0.7 - 1.3*
**Total Trihalomethanes, ug/L														
Distribution System	35.0	NA	NA	41.0	NA	NA	52.0	NA	NA				42.7	80.0
**Total Haloacetic Acids, ug/L														
Distribution System	33.0	NA	NA	37.0	NA	NA	41.5	NA	NA				37.2	60.0
Total Organic Carbon, mg/L														
Influent from DeHart	3.00	NA	NA	2.40	NA	NA	2.20	NA	NA				2.53	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA				NA	NA
Filter Plant Effluent	1.50	NA	NA	1.30	NA	NA	1.10	NA	NA				1.30	NA
Average Filter Run, Hours	114	116	116	115	114	116	100	114	114				113.22	NA

*** Not Available at Time of Report

* Values are related to DEP Secondary MCL

** Running Annual Quarterly Average

EXHIBIT B

Water Production Data - 2022

DeHart Withdrawal		River Withdrawal		Total Withdrawal		Treated Water		Process Water		Finished Water		
Month	Total (MG)	Average (MGD)	Total (MG)	Average (MGD)	Total (MG)	Average (MGD)	Total (MG)	Average (MGD)	Total (MG)	Average (MGD)	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	219.848	7.581	0.000	0.000	219.848	7.581	224.729	7.750	6.184	0.213	216.319	7.459
October												
November												
December												
Total	2084.094		0.000		2084.304		2130.118		54.229		2057.176	
Average	231.566	7.666	0.000	0.000	231.589	7.666	236.680	7.308	6.025	0.199	228.575	7.566

Peak Day Water Use
Minimum Day Water Use

5/31/2020
5/1/2020

6.966
6.081

(MG) = Million Gallons
(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	4.16	0.00	0.00	0.00	33.96
Daily Average	0.080	0.113	0.150	0.168	0.211	0.195	0.070	0.086	0.139	0.000	0.000	0.000	1.212
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	33.96	0.00	0.00	0.00	163.74

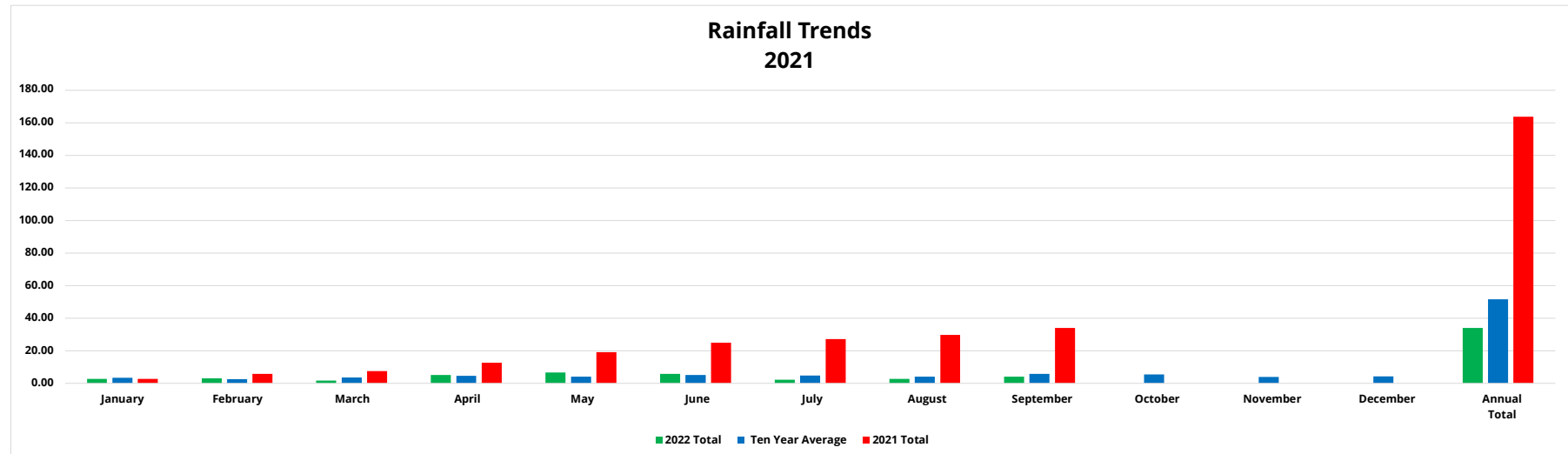


EXHIBIT D

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	-48.5			
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	110.6			

DeHart Reservoir Water Level Trends
2021

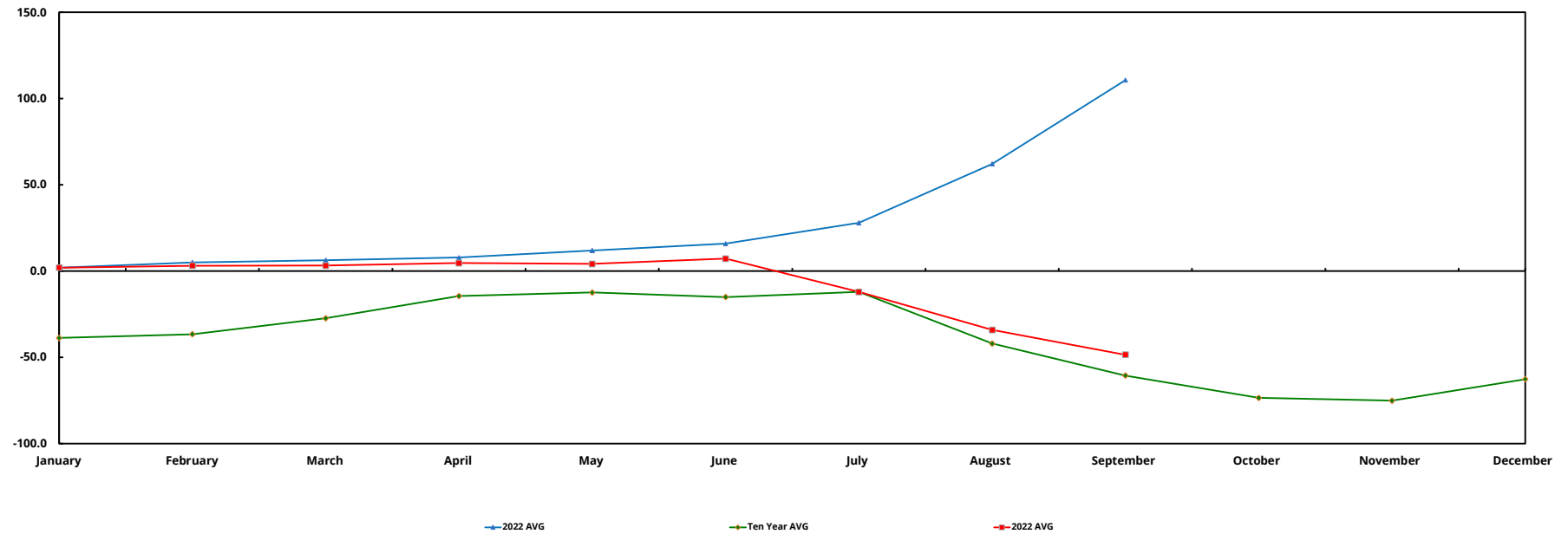


EXHIBIT E
Daily Conservation Release - 2022

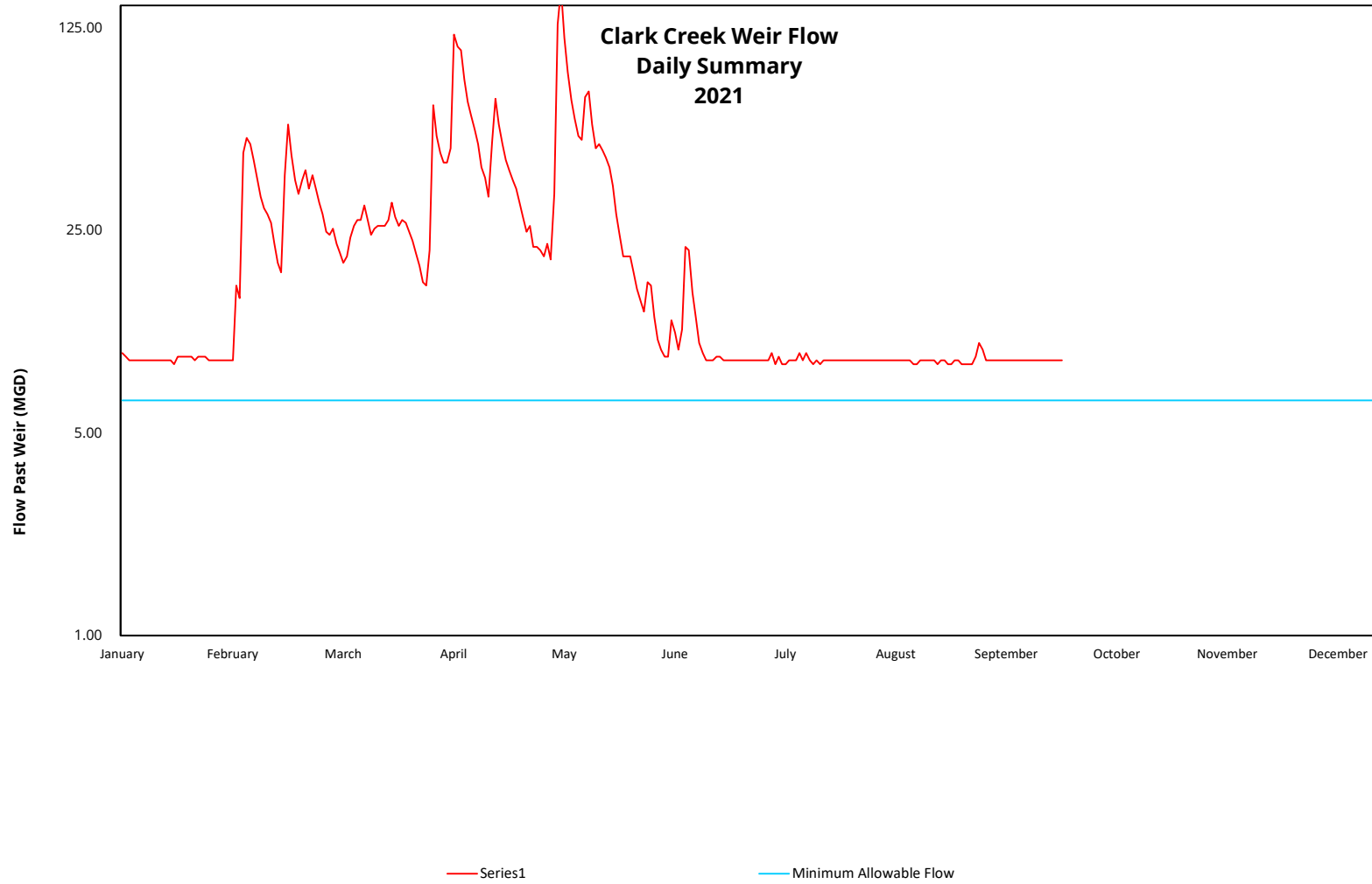




EXHIBIT F
Utility Usage - 2022

Location / Utility	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
Water Services Center														
Electric 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	\$66,811.80
Electric Generation							190,800							
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
Natural Gas														
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	\$23,034.17
Sewer														
Total, Gal	7,710,000	6,560,000				5,000,000							6,423,333	19,270,000
Cost, Dollars	\$65,997.60	\$56,152.60				\$42,800.00							\$54,983.40	\$164,950.20
Refuse														
Total, Cu Ft	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	509.60
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
Reservoir Park Pump Station														
Electric 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	\$20,483.36
Electric Generation							79,600							
Total, kWh	84,800	84,800	81,600	82,400	90,400	79,600	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
Natural Gas														
Total, Cu Ft	823	523											673	1,346
Cost, Dollars	\$696.50	\$451.99											\$574.25	\$1,148.49
Wassukuhina River Pump Station														
Electric 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
Electric Generation							600							
Total, kWh	1,800	1,200	1,800	600	1,200	600							1,100	6,600
Cost, Dollars	\$75.67	\$74.18	\$71.63	\$69.05	\$68.85	\$68.85							\$71.37	\$428.23
Natural Gas														
Total, Cu Ft	724	641											683	1,365
Cost, Dollars	\$615.82	\$548.16											\$581.99	\$1,163.98
Union Square Booster Station														
Electric Transmission														
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
Electric Generation							2,309							
Total, kWh	2876	3,875	2,888	2,309	1,508	2,309							2,987	9,072
Cost, Dollars	125.54	\$127.11	\$162.09	\$120.18									\$133.73	\$409.38
DeHart Facilities														
Electric Transmission														
Total, kWh	2,965	2,845	2,728	2,470	2,209	2,009							2,538	15,226
Cost, Dollars	\$224.15		\$203.55	\$199.31	\$190.46	\$129.51							\$189.40	\$946.98
Electric Generation							2,015							
Total, kWh	2,965	2,845	2,728	2,499	2,209	2,015	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
Fuel Oil														
Total, Gals			1,438										1,438	1,438
Cost, Dollars			\$8,077.31										\$8,077.31	\$8,077.31
City Island Heat Trace														
Electric Transmission														
Total, kWh	390	378	356	25,800	258								5,436	27,182
Cost, Dollars	\$23.33	\$20.65	\$19.97	\$11.81	\$11.81								\$17.51	\$87.57
Electric Generation							258							
Total, kWh	390	378	356				258						375	1,124
Cost, Dollars	\$65.29	\$65.27	\$64.99										\$65.18	\$195.55
Expenditures YTD													\$88,271	\$307,722

** 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 (out of service)	0	\$0
September (out of service)	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

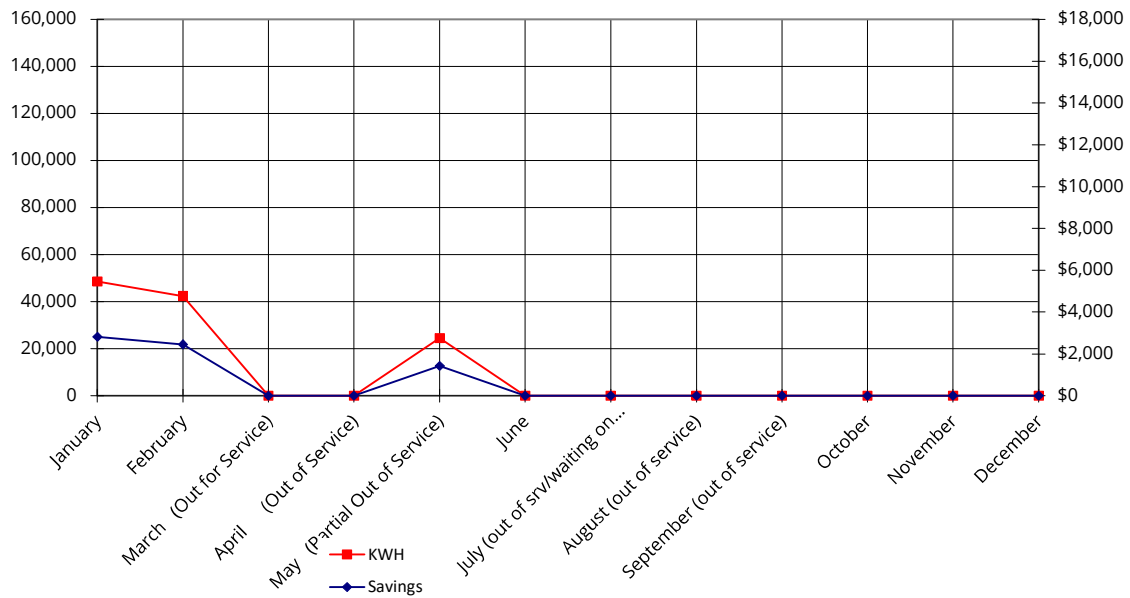


EXHIBIT H
Treatment Chemical Usage - 2022

Chemical	January	February	March	April	May	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	5,895				6,233	56,094
Average, Chlorine Lbs./Day	199	219	198	191	203	212	218	213	203				206.3	
Average, Chlorine Dose, mg/L	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.4	3.2				3.2	
Chlorine Cost, \$/Lbs.	\$0.305	\$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	\$1,798				\$1,900.88	\$17,107.90
Alum 48.5%														
Total Lbs.	48,096	46,683	42,713	38,071	38,686	37,906	34,430	34,688	28,073				38,816	349,346
Average, Alum, Lbs./Day	1,551	1,667	1,378	1,269	1,248	1,264	1,111	1,119	968				1286.2	
Average, Alum, mg/L	25.0	25.0	18.3	18.8	20.0	16.5	16.5	17.8	12.5				18.9	
Alum Cost, \$/Lbs.	\$0.164	\$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	\$4,604				\$6,366.08	\$57,294.74
Lime														
Total Lbs.	0	0	0	0	0	0	0	0	0				0	0
Average Lime, Lbs./Day	0	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				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	
Lime Total Cost, Dollars	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00				\$0.00	\$0.00
Soda Ash														
Total Lbs.	24,800	25,750	25,400	26,250	31,650	32,700	35,450	40,250	30,700				30,328	272,950
Average Soda Ash, Lbs./Day	800	920	819	875	1,021	1,090	1,144	1,298	1,023				998.9	
Average, Soda Ash Dose, mg/L	16.7	16.7	16.2	16.9	17.7	17.9	21.0	22.1	25.9				19.0	
Soda Ash Cost, \$/Lbs.	\$0.299	\$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	\$9,179				\$9,068.02	\$81,612.20
Fluoride														
Total Lbs.	1,155	1,193	1,168	1,111	1,202	1,215	1,445	1,557	2,049				1,344	12,095
Average, Fluoride Lbs./Day	37	43	38	37	39	41	47	50	71				44.8	
Average, Fluoride (F-) Dose, mg/L	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	1.1				0.7	
Fluoride Cost, \$/Lbs.	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48				\$0.48	
Fluoride Total Cost, Dollars	\$554	\$573	\$561	\$533	\$577	\$583	\$694	\$747	\$984				\$645.16	\$5,806.40
Sodium Hydroxide 50%														
Total NaOH 50% dry Lbs.	41,600	36,660	38,202	36,068	41,385	42,323	42,135	45,166	40,353				40,432	363,892
Average NaOH 50%, dry Lbs./Day	1,342	1,309	1,232	1,202	1,335	1,411	1,359	1,457	1,392				1,338	
Average, NaOH 50%, mg/L	10.7	10.7	9.8	9.9	10.4	9.0	9.8	10.8	11.1				10.2	
NaOH 50% Cost, dry \$/Lbs	\$0.174	\$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	\$7,200	\$7,364	\$7,332	\$7,859	\$7,021				\$6,315.16	\$56,836.40
Zinc Orthophosphate														
Total Zn3(PO4)2, wet Lbs.	5,142	5,057	5,034	4,712	5,189	5,251	5,600	5,468	4,871				5,147	46,324
Average Zn3(PO4)2, wet Lbs./Day	166	181	162	157	167	175	181	176	168				170.3	
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				2.7	
Zn3(PO4)2 Cost, wet \$/Lbs.	\$0.374	\$0.374	\$0.374	\$0.374	\$0.374	\$0.374	\$0.374	\$0.374	\$0.374				0.4	
Zn3(PO4)2 Total Cost, Dollars	\$1,923	\$1,891	\$1,883	\$1,762	\$1,941	\$1,964	\$2,094	\$2,045	\$1,822				\$1,925.01	\$17,325.11
Potassium Permanganate														
Total KMnO4, Lbs.														0
Average KMnO4, Lbs./Day														
Average, KMnO4 Dose, mg/L														
KMnO4 Cost, \$/Lbs.														
KMnO4 Total Cost, Dollars														\$0.00
Expenditure														\$235,982.75
Average Treated Cost per (MG)														0.000
Total Treated Flow (MGD)														236.680

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	529	0	0	0	4,548	505
Street Restorations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leak Detection Assessment <i>Percent of Distribution System</i>	8	8	8	8	8	8	8	8	8	0	0	0	72	8
Main Break Repair - Detected Non-Surfacing	1	0	0	0	0	0	0	0	1	0	0	0	2	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	4	0	0	0	31	3
Valves - Exercised	0	0	0	2	0	0	24	64	12	0	0	0	102	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	4	0	0	0	30	3
Hydrants Returned to Service	0	0	1	0	1	0	0	2	2	0	0	0	6	1
Water Tap - Disconnected	1	0	2	3	4	11	29	0	3	0	0	0	53	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	18	0	0	0	261	29
Water Shutoffs - Non Payment	0	0	0	37	31	41	9	21	7	0	0	0	146	16
Water Restoration Turn on Other	22	24	22	36	52	39	18	23	23	0	0	0	259	29
Water Turn on - Non Payment	5	6	5	24	14	22	7	6	13	0	0	0	102	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															
Replacement	Missing	7	8	3	4	6	13	5	7	7				60	7
	Leaking	7	1	3	1	4	1	4	1	2				24	3
	Frozen	10	6	6	5	1	0	0	2	1				31	3
	Non-registering	1	3	5	5	2	4	3	6	7				36	4
	Large Meters ¹	0	0	0	1	1	0	0	0	0	0			2	0
New Service	New Installation	0	1	1	1	0	1	0	0	0				4	0
Meter Service															
MXU's Replaced	MXU's Replaced	20	22	41	18	31	24	61	38	35				290	32
Batteries Replaced	Batteries Replaced	67	25	123	65	48	34	31	30	69				492	55
Meter Pits Serviced	Meter Pits Serviced	1	0	0	1	1	1	1	0	0				5	1
Meter Calibrations															
Small Meters ²	Calibrated meters	2	0	1	2	11	9	0	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	N/A	N/A	N/A	N/A	N/A	N/A	N/A				0	N/A
Billed Metered Exported	Bulk Water Hauling	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				0	N/A
Billed Metered	Hydrant Connections	0	0	0	8,176	359,716	81,274	0	7,616	40,297	0	0	0	497,079	55,231
Billed Unmetered	Hydrant Flow Tests	0	7,955	11,526	3,812	11,792	13,039	13,740	28,868	43,260	0	0	0	133,992	14,888
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	76,987	0	0	0	18,658,357	2,073,151
Leakage on Distribution Mains	Main Leaks	4,349,565	1,286,902	2,856,325	71,360	896,734	88,843	0	0	173,462	0	0	0	9,723,191	1,080,355
Leakage on Service Lines	Service Leaks	998,776	708,950	595,243	573,408	111,040	466,560	412,704	181,440	587,520	0	0	0	4,635,641	515,071
	Total	5,569,508	2,036,095	3,583,104	4,141,989	7,075,165	7,313,113	2,685,344	322,416	921,526	0	0	0	33,648,260	3,738,696



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WASTEWATER DEPARTMENT MONTHLY REPORT



CRW's Operations Challenge Team, Sanitary Confinement, competes at the WEFTEC 2022 conference. Pictured from left to right are Tom York, Tom Bernstein, Mitch Webb, and Cody Howe.

September 2022

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

Overview

As is typical in September of each year, budget preparation was a significant focus for the Wastewater department throughout the month. Various interdivision workshops were held to develop operating and capital budget requests for the department. This was followed by interdepartmental meetings to discuss these requests later in the month. Final refinements will continue through October before presentation to the Board in November.

The Wastewater department also continued making significant gains on the staffing front in September. Recruitment and interviews continued throughout the month. One Operator began training in September, while another offer was extended and will start training in October. Additionally, the Laboratory is once again fully staffed, which allowed the group to bring outsourced analyses back in-house to reduce costs.

Lastly, the end of September marked the conclusion of the 2022 Water Year and the conclusion of the “Food Slurry as Supplemental Carbon Source” pilot project. While the 70,288 nitrogen credits that were generated were slightly less than what was being projected earlier in the year, it still marks an extraordinary achievement by the AWTF Operations and Maintenance groups. Staff devised a method by using a food slurry waste product as energy source for the denitrification process, allowing treatment so far beyond our permit requirements that these tradable credits will be awarded. The sale of which will result in approximately \$193,292 in additional non-rate revenue that can be used to supplement our Customer Assistance Program (CAP).

Operations

During the month of September, the AWTF met all monthly average NPDES permit requirements. Two Dry Weather Overflows were reported.

Hydraulic loading to the AWTF averaged 17.0 million gallons per day (MGD). The treatment process achieved removal reductions of 96.5 percent CBOD, 96.5 percent Suspended Solids, 57.2 percent Phosphorus, and 95.0 percent Ammonia (Exhibit A).

Revenue of the Contract Waste Hauling program collected \$55,870.65 in revenue from 1,901,590 gallons discharged (Exhibit G). Revenue is back on track as wetter fall weather is here and we have begun to receive leachate from our landfill clients.

The Cogeneration Facility experienced an average run time of 12 percent in September. Revenue is estimated at \$1,578.83 on 13,500 Kilowatt-hours generated for the month. The decrease in runtime is primarily due to the mechanical failures of the 38-year-old Enginotor unit.

Laboratory

- Completed the following IDOC's for both new Lab Technicians: Total Phosphorous, Ammonia-Nitrogen, pH, Total Suspended Solids, and Total Residual Chlorine.
- Completed writing the Colilert Fecal/E. Coli SOP and additional QC logs.
- Successfully ran and passed Colilert QC and IDOC's.
- All solids testing is now being run in-house instead of subcontracting to ALS.

Pretreatment

- Created new business with Eldredge, Inc. for additional sources of trucked in waste to increase revenue for the CWH program.
- Continuing to monitor data from Industrial Users and work with them to maintain compliance.
- Digitizing forms and logbooks as they are discovered for easier data management.

Plant Maintenance

- Performed annual facility-wide lubrication of all mechanical equipment.
- Completed piping configuration for divert haulers/chemical connection lines at the Chemical Storage Building.
- Repaired tipping weirs for Primary Clarifier No. 1.
- Initiated work progress for Primary Clarifier No. 4 restoration.
- Serviced, tested, and replaced batteries for the standby generators at the Spring Creek Pump Station.
- Completed bar screen overhaul, including complete chain and sprocket replacement at the Spring Creek Pump Station.
- Performed 22 vehicular repairs in preparation for state inspections.
- Repaired several portable pumps.
- Performed several maintenance tasks as requested at 3003 NFS offices.

Field Construction

- Repaired 27 inlets in various locations in the city.
- Added steel plate baffles to 12 inlets in various locations in Harrisburg to combat floatables and debris entry into the system.
- Repaired SSP-000632 at the intersection of Penn and Calder Streets. Twelve feet of pipe was replaced.
- SSMH-000059 was found to have a large mass of concrete in the flow channel. Crew was sent to remove concrete with a jackhammer to restore flow and grant access to the CCTV crew.

- Repaired SWP-006433 and SWP-006432 at the intersection of Fifth and Muench Streets.
- Replaced a broken manhole grate and cover at Peffer and Wood Streets.

Field Operations

- Total CCTV footage of sewer pipe assessed this September was 4,696.6 feet (0.89 miles). No breakdown available for CCTV and flushing at this time.
- Total of pipe flushed this month was 9,009 feet (1.7 miles).
- Responded to four backup and overflow calls from residents. CRW was liable for none.
- Responded to eight sinkhole calls. Wastewater was liable for two and Water was liable for one.
- Cleaned 165 stormwater inlets.
- Inspected 163 stormwater inlets.
- There were two dry weather overflows at CSO #034 South Market and Cameron Streets.
- There were no SSO's this month.
- Assisted with cleaning out of the food slurry tank with plant operations.
- Flushed grease pit line No. 2.

Environmental Compliance

- Completed 11 outfall inspections.
- Completed 10 inspections of FOG dischargers. Six locations received letters of non-compliance with compliance plans and four locations were exempt.
- Issued five new FOG discharge permits.
- Issued one 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 September:
 - Environmental Compliance received a complaint about a commercial salt pile in uptown Harrisburg not having the proper containment measures and causing run-off into a nearby storm inlet. The complaint was investigated and found to be unwarranted.
 - Environmental Compliance received a complaint from CRW's Field Operations regarding petroleum products in the sewer near Green and Woodbine Streets. The source of the petroleum could not be located, and the slug flow passed through within a couple hours. The investigation was inconclusive.
 - CRW's Field Operations reported a blue discoloration in a storm inlet in the vicinity of Forster and Capitol Streets. The source was found to be a local painting contractor who

cleaned his paint brushes in a 5-gallon bucket and dumped the bucket into a storm inlet. The painting contractor will receive a Notice of Violation.

Street Sweeping

- Received four complaints in the month of September. All complaints have been resolved.
- Completed 490.4 miles of street sweeping within the City of Harrisburg in September.
- Continued to sweep area of Reservoir Park. It is scheduled with areas 1, 6, and 9.
- Water usage was approximately 13,240 gallons.
- Continued to assist cleaning storm inlets in scheduled sweeping areas.
- When the days of the month fall on a 5th week, there is no scheduled sweeping. However, the Street Sweeping group will be assigned specific assignments throughout the city to continue the upkeep in highly visible areas. The end of September 2022, the Street Sweeping group swept an additional 34.4 miles (included in total miles swept) and continued to clean off storm inlets.



CAPITAL REGION™

WATER

Wastewater Exhibits

EXHIBIT A

**CAPITAL REGION WATER
ADVANCED WASTEWATER TREATMENT FACILITY**

Process Control - 2022

Parameters	January	February	March	April	May	June	July	August	September	October	November	December	Average	NPDES Limits
Volume, MGD	18.4	24.3	20.3	26.0	28.6	19.4	17.7	15.3	17.0				20.8	37.7
Carbonaceous Biochemical Oxygen Demand														
Influent, mg/L	176	129	163	121	128	138	149	159	110				141	----
Effluent, mg/L	3	3	3	3	3	4	3	4	3				3	25
Percent Removal, %	98.1	93.3	97.9	97.0	96.0	97.1	97.9	97.3	96.5				96.8	----
Effluent Loading, lb/d	520	846	572	724	952	637	446	536	413				627	7,860
Suspended Solids:														
Influent, mg/L	177	149	212	144	137	153	184	174	161				166	----
Effluent, mg/L	4	4	3	2	3	3	3	7	5				4	30
Percent Removal, %	97.5	92.4	98.6	98.3	96.5	98.0	98.2	95.7	96.5				96.9	----
Effluent Loading, lb/d	715	1,397	499	569	990	650	468	822	725				759	9,433
Nitrogen														
Total-N														
Influent, mg/L	26	24	26	20	23	24	25	27	6				22	----
Effluent, mg/L	3.1	4.3	5	5.0	5.6	4.5	3.2	4.8	5.3				5	Monitor
Percent Removal, %	88.0	82.2	80	75.1	75.2	81.2	87.2	82.2	7.0				73.2	----
Effluent Loading, lb/d	469	719	778	996	1,170	705	449	649	879				757	----
NH3-N														
Influent mg/L	16	13	15	11	11	15	16	19	20				15	----
Effluent, mg/L	0.7	1.8	2.3	0.7	1.6	0.6	0.8	0.5	1.0				1	11 (2)
Percent Removal, %	95.5	85.7	84.4	93.8	85.0	95.9	94.9	97.3	95.0				91.9	----
Effluent Loading, lb/d	113	386	411	157	364	99	127	58	132				205	4,716
Phosphorus:														
Influent, mg/L	3.5	2.8	3.6	2.9	2.9	3.5	4.0	4.9	4.2				3.6	----
Effluent, mg/L	0.9	1.0	1.6	1.1	1.2	1.5	0.7	2.3	1.8				1.3	2.0
Percent Removal, %	71.6	63.4	53.6	63.1	58.9	57.1	82.3	50.9	57.2				62.0	----
Effluent Loading, lb/d	144	206	274	220	241	240	102	296	247				219	629
pH:														
Influent, Std. Units	7.4	7.1	7.3	7.3	7.2	7.3	7.3	7.5	7.4				7.3	----
Effluent, Std. Units	7.0	6.7	7.0	6.9	7.0	7.0	7.1	7.7	7.5				7.1	6.0 - 9.0
Dissolved Oxygen:														
Effluent Minimum, mg/L	7.0	7.7	7.1	7.0	7.2	6.3	7.2	7.3	6.6				7.0	5.0 Min.
Fecal Coliform:														
Effluent, No./100 ml	6	6	1	4	2	3	3	2	4				3	200/100 ml (1)
Chlorine Residual:														
Effluent, mg/L	0.19	0.20	0.19	0.21	0.41	0.36	0.42	0.42	0.40				0.31	0.50

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

(2) Seasonal Limit May 1 to Nov.1.

EXHIBIT B

**CAPITAL REGION WATER
ADVANCED WASTEWATER TREATMENT FACILITY**

Flow Monitoring Information, MGD - 2022

Month	Total			City Regions					Suburb Regions					Total Precip inches
	Flow	City	Suburbs	1	2	3	4	5	6	7	8	9	10	
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	17,000	6,942	10,058	5,650	0.142	0.300	0.690	0.160	1,300	3,450	1,628	3,320	0.360	3,300
October														
November														
December														
Average	20.74	9.24	11.51											3.48
Percent	100.00	44.53	55.47											31.30

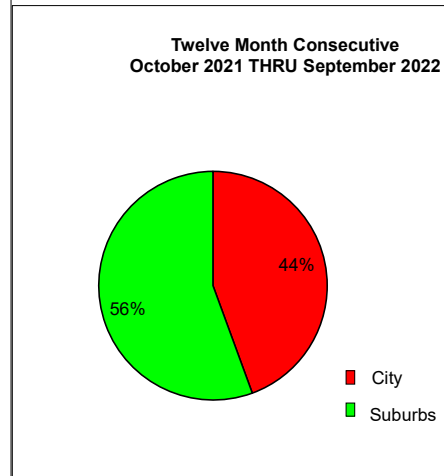
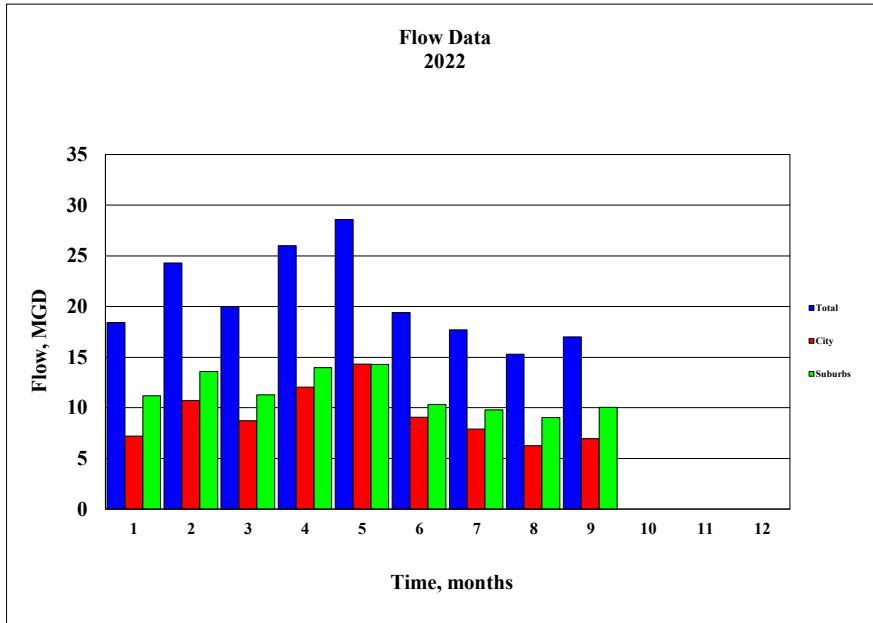


EXHIBIT C

**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	December	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	918,000				1,019,367	9,174,300
Average, kWh/Day	36,513	36,879	32,894	35,750	31,268	33,350	34,394	31,084	30,600				33,637	-----
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	\$59,769.81				\$68,089.37	\$612,804.31
Natural Gas														
Total, Cu Ft	905.6	647.3	401.4	292.5	32.4	0.0	0.0	*	*				253	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	*	*				\$2,202.45	\$19,822.01
Water														
Total, Gal.	681,000	871,833	743,167	1,166,000	1,126,000	1,361,000	893,000	990,000	*				979,000	7,832,000
Average, Gal./Day	21,968	31,137	23,973	38,867	36,323	45,367	28,806	31,935	*				32,297	-----
Cost, Dollars	\$10,384.54	\$12,357.75	\$11,027.35	\$15,399.44	\$14,282.72	\$17,415.74	\$12,576.62	\$13,579.60	*				\$11,891.53	\$107,023.76
MicroC														
Total, Gal.	0	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	0.0				0	-----
Cost, Dollars	\$0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0				\$0.00	\$0.00
Sodium Hydroxide														
Total, Gal.	0	0	0	0	0	0	0	0	0				0	0
Average, Gal./Day	0	0	0	0	0	0	0	0	0				0	-----
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	6,975				7,072	63,652
Average, Lbs./Day	172	215	165	238	281	265	256	272	233				233	-----
Avg Residual, mg/L	0.19	0.20	0.19	0.21	0.41	0.41	0.42	0.42	0.40				0.32	-----
Cost, \$/Lbs.	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99				\$0.99	-----
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	\$6,905.25				\$7,001.72	\$63,015.48
Phosphorous Removal														
Total FeCl3, Gals.	507	1,333	1,634	2,743	2,417	2,675	447	4,472	10,208				2,937	26,437
Avg FeCl3, Gals./Day	16	48	53	91	78	89	14	144	340				97	-----
FeCl3 Cost, \$/Gal.	\$1.26	\$1.26	\$1.26	\$1.26	\$1.26	\$1.26	\$1.26	\$1.26	\$1.26				\$1.26	-----
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	\$12,862.08				\$3,700.98	\$33,308.86

* No data at time of report

EXHIBIT D

**CAPITAL REGION WATER
ADVANCED WASTEWATER TREATMENT FACILITY**

Cogeneration Electrical Production: 2021-2022

	Period	Percent Run Time	Daily Avg Kilowatt	Kilowatt Hours Produced	Estimated 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
<hr/>					
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		12	450	13,500	\$1,578.83
October 2022					
November 2022					
December 2022					
<hr/>					
Total - 2022				252,900	\$29,576.66
Monthly Average - 2022		29	928	28,100	\$3,286.30

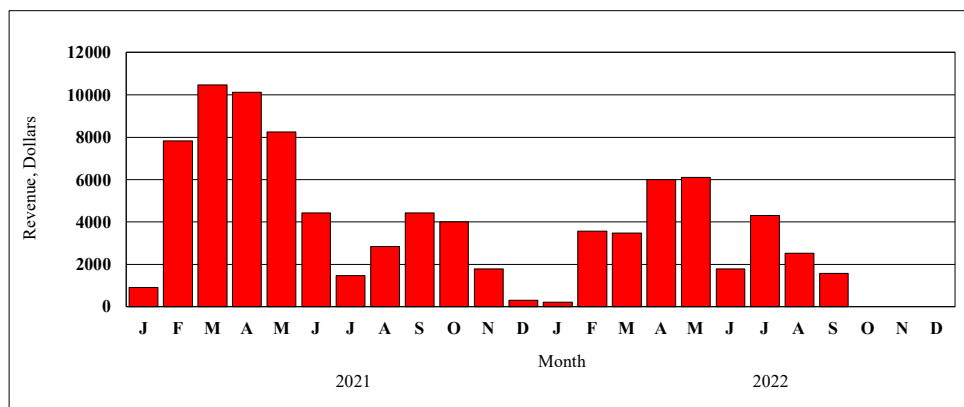


EXHIBIT E

**CAPITAL REGION WATER
ADVANCED WASTEWATER TREATMENT FACILITY**

Sludge Handling Information - 2022

Process	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
Solids Removal														
Process, Lbs.	836,796	808,604	1,256,456	1,295,249	1,041,739	1,063,962	963,124	569,504	693,176				947,623	8,528,610
CWH Program, Lbs.	69,353	76,120	124,956	61,652	122,100	72,880	64,239	48,574	129,624				85,500	769,497
Total Solids, Lbs.	906,149	884,724	1,381,413	1,356,901	1,163,839	1,136,842	1,027,363	618,077	822,799				1,033,123	9,298,108
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	5,164,000				4,361,333	39,252,000
Feed Solids, %	1.7	1.7	2.0	1.8	2.0	1.4	1.6	1.3	1.6				1.7	-
Labor, Hours	459	416	659	644	561	659	467	615	617				566	5,097
Operations, Hours	930	785	1,132	1,058	962	1,181	571	721	971				923	8,310
Total Cake, Dry Tons	179	167	312	295	281	279	110	165	238				225	2,026
Total Cake, Wet Tons	1,149	1,069	1,855	1,682	1,533	1,570	712	950	1,343				1,318	11,863
Cake TS, %	15.5	15.6	16.8	17.6	18.4	17.8	17.1	17.4	17.8				17.1	-
Press Rate, Lbs./Hour	2,472	2,725	3,279	3,179	3,186	2,659	2,493	2,634	2,768				2,822	25,395
Polymer Dosage, Lbs	3,188	2,976	4,605	5,056	4,545	5,358	2,258	3,582	4,169				3,971	35,737
Polymer Dosage, Lbs/Dry Ton	20.4	19.4	15.1	17.5	16.9	19.2	19.7	21.7	17.8				18.6	-
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	\$11,851.05				\$10,883.86	\$97,954.73
Electrical, Dollars	\$409.07	\$345.18	\$497.86	\$465.56	\$423.37	\$519.64	\$251.28	\$317.42	\$427.02				\$406.27	\$3,656.40
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	\$8,129.55				\$7,743.02	\$69,687.15
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	\$52,568.47				\$69,486.41	\$625,377.71
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	\$72,976.09				\$88,519.55	\$796,675.99
Cost Per Dry Ton, Dollars	\$241.40	\$633.58	\$415.89	\$373.43	\$390.92	\$391.65	\$527.87	\$348.95	\$306.62				\$403.37	

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														
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	\$12,381.18	\$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	0	0	0	0
Average, Gals./Day	0	0	0	0	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	\$0.00	\$0.00	0	\$0.00
Water														
Total, Gals.	315,000	180,833	479,167	261,819	397,181	350,000	246,000	345,000	*				321,875	2,575,000
Average, Gal./Day	10,161	6,458	15,457	8,727	12,812	11,667	7,935	11,129	*				10,543	-----
Cost, Dollars	\$3,953.62	\$2,566.33	\$5,651.11	\$3,403.73	\$4,803.37	\$4,315.52	\$3,240.16	\$4,263.82	*					\$32,197.66
Spring Creek Pump Station														
Electric														
Total, kWh	36,160	52,160	55,040	85,120	96,960	79,360	64,960	53,440	50,240				63,716	573,440
Average, kWh/Day	1,166	1,863	1,775	2,837	3,128	2,645	2,095	1,724	1,675				2,101	-----
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	\$4,313.52				\$5,160.01	\$46,440.10
Fuel Oil														
Total, Gals.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average, Gals./Day	0	0	0	0	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	\$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	81,523	*				96,933	775,467
Average, Gal./Day	806	1,393	3,419	2,644	7,247	4,667	2,579	2,630	*				3,173	-----
Cost, Dollars	\$334.49	\$479.25	\$1,172.03	\$896.29	\$2,399.05	\$1,523.59	\$902.61	\$918.94	*				\$1,078.28	\$8,626.25
Market Street Pump Station														
Electric														
Total, kWh	1,200	1,200	1,080	960	1,080	840	960	480	600				933	8,400
Average, kWh/Day	39	43	35	32	35	28	31	15	20				31	-----
Cost, Dollars	\$207.27	\$123.51	\$121.40	\$237.38	\$146.40	\$66.71	\$77.82	-\$23.33	-\$23.01				\$103.79	\$934.15
Fuel Oil														
Total, Gals.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average, Gals./Day	0	0	0	0	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	\$0.00	\$0.00	\$0.00	\$0.00
City Island Pump Station														
Electric														
Total, kWh	40	40	40	40	40	40	40	0	40				36	320
Average, kWh/Day	1	1	1	1	1	1	1	0	1				1	-----
Cost, Dollars	\$63.36	\$54.75	\$61.50	\$63.19	\$56.52	\$53.56	\$50.70	\$37.77	\$47.95				\$54.37	\$489.30

* No Data at time of report

EXHIBIT G

CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Contract Waste Hauling Program 2021 - 2022

Month	Process		Septic		Total	
	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	1,589,990	\$44,824.05	311,600	\$11,046.60	1,901,590	\$55,870.65
October						
November						
December						
Total - 2022	8,284,827	\$245,759.37	2,005,425	\$71,137.70	10,290,162	\$316,897.17
Monthly Average - 2022	920,536	\$27,306.60	222,825	\$7,904.19	1,143,351	\$35,210.80

