

December 2021 As of January 21, 2022 Page 1 of 5

Ensure Financial Stability	
Reconciled Bank Account Balances	Refer to attached Reconciled Bank Account Balances as of 12/31/2021.
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 Drink	ing 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 .

<b>Ensure Revenues are Consistent with Sy</b>	Ensure Revenues are Consistent with System Usage									
Water Shut-offs	There were no water shut-offs for non-payment, 8 were turned back on after payment and 11 service shut-off requests.									
pair/Replace Meters/MXUs/Batteries Drinking Water department staff replaced 13 water meters, replaced 53 batteries, and 11 MXUs.										
Reduce Wet Weather Impacts to Infrasti	ructure, Community, and Receiving Waters									
Negotiate with PADEP/U.S. EPA/DOJ on	CRW is waiting to receive redline comments back on the draft modification to the Partial Consent Decree from USDOJ/U.S. EPA/PADEP.									
Past and Future Practices										
Develop Necessary Planning for	No update.									
Implementation of Green Infrastructure										
Joint Pollutant Reduction Plan -Collaborate	The Paxton Creek Cooperative (CRW, Lower Paxton Township, and Susquehanna Township) meet monthly to coordinate the implementation of our Joint Pollution Reduction									
with Suburban Partners on MS4	Plan (PRP). We are continuing to advance our partnership with PennDOT to increase the pounds of sediment reduction on the Paxton Creek Sediment Reduction project									
	contract. PennDOT has interest in engaging in a second contract within the Paxton Creek Watershed. This opportunity may allow the partners to acheive the remaining									
	pounds of sediment reduction for this first 5-year permit cycle through this cost-effective approach (2020-2025).									
Obtain and Comply with Individual MS4	CRW's staff are working on implementation of the MS4 Permit requirements which include, but are limited to: six (6) Minimum Control Measures, stormwater outfall									
Permit	inspections, Best Management Practice (BMP) inspections, Appendices B & C, investigation of pathogens and priority organic compounds.									

<b>Operate Facilities with a High Standar</b>	d of Care							
Permit Compliance	The Drinking Water department met all primary and secondary Safe Drinking Water Act permit parameters for the month.							
	AWTF met all required NPDES monthly permit parameters in December. No Dry Weather or Sanitary Sewer Overflows were reported.							
Notice of Violations (NOVs)	There were no NOVs received by the Drinking Water department in December.							
	There were no NOVs received by the Wastewater department in December.							
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 December.							
CCTV	A total of 8,462 feet (1.6 miles) of sewer pipe were assessed by CCTV footage during the month of December. A total of 5,286 feet (1.0 mile) of pipe were flushed as well.							
Incident Response	Wastewater responded to seven (7) backup and overflow calls during the month of December. CRW was liable for none.							
	• Twenty (20) PA One Call tickets were completed in December.							
	• The 2012 aerial imagery was replaced with 2021 high resolution aerial imagery given to us from Dauphin County. The new imagery was provided at no cost to CRW.							
Geographic Information System (GIS)	The GSI storymap continues to be updated with new GSI projects and project areas.							



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Cityworks	
Asset Management	The Asset Management Roadmap was finalized on 12/20/2021, and a scope of work for the roadmap quick win initiatives has been prepared for the January Board agenda.
	Workshops to develop the Asset Management of Change and Communication plans were held 1/10 and 1/14/2022. Final plan submittals are scheduled for early February.
	The final report of the 2021 Water Main Condition Assessment was received 1/7/2022. The water main condition data is under quality review by the vendor with expected
	delivery by 1/14/2022. An introduction meeting was held 12/13/2021 for teams collaborating on the implementation of an asset prioritization planning software, Innovyze -
	Asset Management team is assisting in the development of an effective workflow for recording project costs within the computerized maintenance
	management software.
Development Review Summary	For details, see attached Development Stormwater Management Review Summary spreadsheet for December.
<b>Undertake Capital Improvement Projec</b>	ts - Refer to attached Capital Improvement Projects Report
Professional & Contractor Services	Recommend Board approval of the following Task Orders, Change Orders and Agreements:
	Drinking Water:
	• Task Order 2022-04-01: Engineering Services - AM Roadmap Quick Win Activitites with Brown and Caldwell
	• Task Order 2022-05-01: Engineering Services - Cityworks Support with KCI Technologies, Inc.
	• Change Order No. 1 with Joao & Bradley Construction Co. Inc Cameron St. Water Main Improvements Project Phase 3
	Wastewater:
	Change Order No. 2 with R-III Construction - 2021 Sewer System Improvements Project
	Stormwater:
	• Task Order 2022-07-01: Engineering Services for 2022 GSI Operation & Maintenance with AKRF
	• Task Order 2022-08-01: Engineering Services for 2022 GSI Services During Construction with Jacobs
Stormwater O&M Agreements	Recommend Board approval of the following:
	None.
AWTF Primary Digesters Rehabilitation	The contractor is installing Gallery #1 and internal digester piping. Digester insulation will be installed, weather permitting.
AWTF Energy Recovery Improvements	No update.
Front Street Pumping Station	The contractors are addressing punch list items and site cleanup.
Improvements	
WSC Soda Ash Conversion	Water Services Center staff are in the process of procuring major equipment items.
WSC Flocculator Equipment Replacement	The project is in the award process.



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<b>Undertake Renewal and Replacement P</b>	rojects
2020 Sewer System Improvements	A substantial completion inspection was held 1/10/2022. Punch list items and final paving remain.
2021 Sewer System Improvements	The contractor is replacing manholes and storm inlets along Seneca Street in the area of 6th and 7th Streets.
2021 Water System Improvements	The contractor is performing main installation and water service reconnections in the Summit Terrace neighborhood.
Cameron Street Water Main - Phase 3	The contractor is working on Cameron Street between Hanover and Shanois Streets.
Arsenal Boulevard Sewer Improvements	The project is in the design stage.
Front Street Interceptor Rehabilitation -	The project is expected to be advertised for bids in late January 2022.
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 and pumping stations throughout the month of December. A narrative is provided in
	the Wastewater Department Monthly Report.
Sinkhole Program	Two (2) sinkholes were investigated by CRW in the month of December. The Wastewater department was liable for none. Drinking Water department was liable for one. A
	work order was created for repair.
Inlet Cleaning	A total of 153 stormwater inlets were cleaned during the month of December, and 150 stormwater inlet inspections were performed.

Operate as an Efficient, Sustainable and Resilient Water Utility									
DeHart Property Stewardship	Timber harvest to improve regeneration continues in Management Unit (MU) 22/31 in accordance with the DeHart Property Forest Management Plan.								
	Notice to proceed was provided to All Terrain Logging LLC for a regeneration harvest in MUs 20, 34, 36, and 37 (approximately 155 acres); haul road improvements have been completed.								
Sustainability	No update.								
Internal Communications	The Intranet site and calendar continue to be utilized. Direct CEO communications continue as needed. Recent topics have included holiday and COVID messaging.								

Inform and Listen to Customers and En	courage Stewardship of our Systems
Media Relations - Press and Social Media	PRESS RELEASES: (December 21, 2021) Enactment of The Infrastructure Investment and Jobs Act Welcomed Opportunity as Capital Region Water Presents 2022 Budgets
	and Rates
	SOCIAL MEDIA TOPICS:
	•Facebook: 8 New Organic Followers.4 Posts; Highest Engaged Post: (12/9/2021) "Pay Your Bill Options" (15 Post Clicks; 11 Reactions, 0 Comments & 6 Shares; 912 Organic
	Reach); Other topics: CSC Closed to Walk-ins, CRW Board Meeting, Happy Holiday Post.
	2021 Demographics: Active Age Range 25-65; Gender Division: 63% Women/37% Men.
	•Twitter: 3 Tweets; Highest Engaged Tweet: "Pay Your Bill Options" (89 Impressions; 1 Likes, 1 Re-tweets) Month overview: 567 total Impressions; 58 Profile Visits; 1 New Follower; 8 Mentions.
	•Instagram: 659 Total Followers, 3 Posts; Highest Engaged Post: (12/9/2021): "Pay Your Bill Options". 2 likes, 1 comment.
	2021 Demographics: Most Active Age-range: 25-54; Gender Division: 57% Women/43% Men; Locations: 43% Harrisburg; 3% Mechanicsburg; 2% Camp Hill; 3% Lancaster.



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Community Relations	Community Ambassador Meeting held 12/15/2021: Presenter: Jess Rosentel discussed Biobot Chart and CRW COVID protocols. Updates: City of Harrisburg Administration changes and community outreach. Open items: construction projects, CRW job openings, Customer Service Center status, volunteer appreciation celebration and community ambassador concerns and updates.
	Community Outreach:  • Delivered 280 door-to-door notifications re: water service interruptions, sewer line repairs, sewer maintenance, boil water advisory and boil water advisory lifts.  • Two (2) Everbridge emergency notifications to 390 properties - 32.5% confirmed. Daily CSO inspectios and Everbridge updates.  • One (1) community meeting and zero (0) community events, four (4) on-site construction project meetings, and three (3) in-person customer complaint follow-ups.
Public Communications	<b>WHAT'S ON TAP COMMUNICATION:</b> The December monthly bill stuffer was distributed as a bill insert. Topics included: Customer Service Center opening, Short-term River Run details and Ask the CEO - Who is responsible for leaf collection?
Diversity	<ul> <li>Attended Cameron Street Water Improvements Phase 3 job conference.</li> <li>Attended AWTF Primary Digester Facilities Rehabilitation progress meeting.</li> <li>Attended all weekly construction update meetings for our capital improvement projects.</li> </ul>
Administrative	
Risk Management	<ul> <li>Insurance Broker Request for Proposal (RFP) was sent out to several companies with a second quarter timeframe.</li> <li>No significant general liability claims.</li> <li>In the process of obtaining 2022-2023 insurance proposals.</li> </ul>
Human Resources	Recruiting: Refer to Recruiting Status Report attached.
Procurement	<ul> <li>Ongoing projects include:</li> <li>AWTF assessment of inventory on hand for hardware and consumables (temporarily on hold due to COVID).</li> <li>First phase of inventory has been extended out until the end of July to build more usable data (due to COVID).</li> </ul>
Information Technologies (IT)	



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Office Management and	Incoming Correspondence Report: Refer to attached Incoming Correspondence Report for December 2021.
Admin Professional Services and	
Construction	<b>Street/Sidewalk-Cut Permits:</b> One new Drinking Water request was received and processed from the City of Harrisburg's Engineer. One Wastewater Permit was successfully completed and closed.
	3003 North Front Street Office and Property Management:
	Effective 12/1/2021, the Customer Service Center is temporarily closed to WALK-IN customers due to the COVID-19 pandemic. We continue to provide the several other convenient, contactless options for bill pay that are listed on our website, including the drive-thru.
	Recommend Board approval of the following: None.
Right-to-Know Requests	CRW has received and responded to two previous and one new Right-to-Know request during the period 12/16/2021 through 1/21/2022. 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.
	2021-016 - Tom Pelton (Environmental Integrity Project). Request for any and all records, from 1/1/2019 through the present, in the possession, control or custody of
	Capital Region Water showing 1) How much the state of Pennsylvania is paying CRW in impervious surface fees for state buildings, facilities, and properties on a monthly or
	annual basis; (2) Any additional funds Pennsylvania is paying to CRW for stormwater pollution control or combined sewage overflow prevention projects as part of the CRW's
	City Beautiful H2O Program; and 3) How much Pennsylvania is paying to CRW for water and sewer service for state buildings and facilities on a monthly or annual basis.  Response due: 11/19/2021. Response provided 12/20/2021. Additional questions received via email on 12/20/2021. Response Provided: 1/3/2022.
	2022-001 - Carolina Barrios (SmartProcure). Request for any and all purchasing records from 10/12/2021 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: 1/25/2022. Response Provided: 1/21/2022.
	2022-002 - Tom Pelton (Environmental Integrity Project). Request for any document that indicates the total amount of impervious surface that exists in Harrisburg (including state properties) and is subject to CRW's stormwater fees. Response due: 1/27/2021. Response pending.



# DRINKING WATER DEPARTMENT MONTHLY REPORT





New Bulk Water Station

### December 2021

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



## **Drinking Water Department Monthly Report**

December 2021

## **Plant Operations**

The Capital Region Water (CRW) Drinking Water department met all Federal Safe Drinking Water Act Water Quality Standards for the month of December. Specific water quality results are summarized in Exhibit A. A total of 220.36 MG, averaging 7.10 MGD was withdrawn from the water supply sources for treatment. As shown in Exhibit B, a total of 211.52 MG, averaging 6.81 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 December (Exhibit C) and the DeHart Reservoir water level decreased (Exhibit D). An estimated 284.17 MG of water was released from DeHart Reservoir to Clark Creek, averaging 9.16 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 62 preventative maintenance work orders and three corrective maintenance work orders for the month of December using the Cityworks maintenance management system for all water treatment plant equipment, pumping stations and fleet vehicles.

- The maintenance team continues to follow COVID-19 morning temperature requirements and masking protocols.
- The DeHart Dam watershed was patrolled daily and maintained.
- The maintenance and distribution team installed the new Bulk Water Filling Station, including concrete pad, piping and electrical work.
- The maintenance team installed the new bottled water filling station at the NFS Offices.
- The maintenance team replaced all the tubing. quick connect fittings w/ check valves on the sodium hydroxide (caustic) system for pumps 613A thru 613D.
- The maintenance team epoxied three large water pumps w/ Sherwin Williams MACRON Marine Epoxy.
- The maintenance team install new PVC piping and valving, complete with draw down graduated site tubes for the Alum System.
- The maintenance team refurbished the portable motorized salt spreader.
- The maintenance team continues to do snow removal and rock salt application at the WTP, Administrative Offices, Front Street WPS, Reservoir Park WPS, Union Square FPS and the DeHart Dam facility.
- The maintenance team continues to service and repair the maintenance and distribution fleet.



## **Drinking Water Department Monthly Report**

December 2021

### Distribution

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

- Repair three water main break during the month, 463,812 gallons of unmetered water for the month of December.
- Repair one leaking services during the month, 5,760 gallons of unmetered water for the month of December.
- Repair two fire hydrants, no hydrants are out of service.
- Replace one fire hydrant
- Complete 263 work orders.
- Prepare 338 meter cards.
- Complete 539 water, sewer, and storm water locates.
- Work with contractors on several water and sewer capital improvement projects.
- Completed system wide leak detection and started another round. In 2021, CRW repaired 17 water main breaks and 35 service line leaks.

## **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.



# **Drinking Water Exhibits**



## EXHIBIT A Water Quality Anaylsis - 2021

WATER					VV	ater Quality	/ Anayısıs - 2	021						
PARAMETERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	Average	MCL Limits
Total Coliform: Presence/Absence														
Distribution System	A	Α	А	A	Α	Α	А	Α	Α	Р	А	Α	Α	5% P
Chlorine Residual, mg/L Free														
Filter Plant Effluent	1.77	1.78	1.74	1.72	1.74	1.81	1.71	1.39	1.65	1.83	1.85	1.97	1.75	0.2 - 4.0
Distribution System	1.26	1.27	1.25	1.17	1.17	1.14	1.12	1.09	0.87	0.86	1.01	1.25	1.12	<0.02
Turbidity, NTU														
Influent from DeHart	0.95	0.94	0.60	0.62	0.62	0.45	0.29	0.62	1.61	1.56	2.63		0.99	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13.33	NA	0.47	NA
Filter Plant Effluent	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.08	0.04	0.03		0.03	0.30
pH, Std Units														
Influent from DeHart	6.7	6.7	6.7	6.7	6.6	6.6	6.7	6.4	6.5	6.2	6.1	6.4	6.5	NA
Influent from Susquehanna	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.3	NA	7.2	NA
Filter Plant Effluent	7.8	7.8	7.8	7.8	7.7	7.9	7.9	7.9	7.8	7.7	7.4	7.4	7.7	6.5 - 8.5*
Distribution System	7.6	7.6	7.6	7.2	7.2	7.6	7.6	7.7	7.8	7.8	7.3	7.8	7.6	6.5 - 8.5*
Total Alkalinity, mg/L as CaCO3	7.0	7.0	7.0	7.2	7,2	7.0	7.0	7.7	7.0	7.0	7.5	7.0	7.0	0.5 - 0.5
Influent DeHart	5	5	5	5	5	5	6	6	5	6.00	5	5	5	NA
Influent from Susquehanna	NA NA	NA	NA	NA NA	NA NA	NA	NA	NA	NA	NA	43	NA	54	NA NA
Filter Plant Effluent	13	13	13	13	13	13	17	24	25	26	20	16	17	<15*
Distribution System	14	12	13	12	11	12	14	19	25	24.70	24	19	17	<15*
Temperature, degrees C	14	12	15	12	I I	12	14	19	23	24.70	24	19	17	<13
Influent from DeHart	6.0	4.9	6.0	9.5	12.0	14.0	15.0	17.0	10.1	17.4	13.4	9.7	12.1	NA
	6.0		6.9		12.0		15.9		18.1					
Influent from Susquehanna	NA 7.0	NA 6.0	NA 7.4	NA 10.1	NA 12.2	NA 15.7	NA 15.1	NA 18.1	NA 17.6	NA 17.1	13.4	NA 10.0	7.4	NA
Filter Plant Effluent	7.0	6.0	7.4	10.1	12.3	15.7	15.1	18.1	17.6	17.1	13.6		12.5	NA
Distribution System	12.5	8.5	10.2	11.3	15.1	17.2	20.8	21.4	21.6	20.7	NA	15.5	15.9	NA
Fluoride, mg/L	0.70	0.50	0.67	2.52	2.52	0.50	0.54	0.56	0.55	0.57	0.64	2.52	2.42	
Filter Plant Effluent	0.70	0.69	0.67	0.68	0.60	0.59	0.54	0.56	0.55	0.57	0.64	0.62	0.62	2
Aluminum, mg/L	0.04	0.00	0.01	0.01	0.01	0.00	2.27	0.00	0.00	0.00	0.00		2.22	0.04
Filter Plant Effluent	0.01	0.02	0.01	0.01	0.01	0.02	0.07	0.03	0.03	0.03	0.02	0.02	0.02	0.2*
Iron, mg/L	0.06	0.05	0.04	0.06	0.47	0.40	0.01	0.4.4	0.64	0.72	0.72	0.40	0.04	NIA
Influent from DeHart	0.06	0.05	0.04	0.06	0.17	0.10	0.01	0.14	0.61	0.73	0.72	0.18	0.24	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42	NA	0.19	NA
Filter Plant Effluent	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.05	0.02	0.02	0.02	0.01	0.02	0.3*
Distribution System	0.02	0.00	0.02	0.03	0.00	0.00	0.01	0.01	0.00	0.02	0.01	0.03	0.01	0.3*
Total Dissolved Solids, mg/L														
Influent from DeHart	13	13	13	14	14	14	17	15	14	14	13	13	14	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	105	NA	130	NA
Filter Plant Effluent	27	33	30	30	31	30	35	39	51	52	47	38	37	500*
Distribution System	39	39	40	41	41	42	41	49	57	73	62	42	47	500*
Total Hardness, mg/L														
Influent from DeHart	8	8	8	8	8	8	8	8	8	9	8	8	8	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	86	NA	83	NA
Filter Plant Effluent	8	8	8	8	8	11	10	8	8	8	12	8	9	NA
Distribution System	6	6	6	6	6	6	11	6	6	6	18	8	8	NA
Orthophosphate, mg/L														
Filter Plant Effluent	1.27	1.20	1.21	1.23	1.39	1.22	1.21	1.24	1.21	1.20	1.21	1.24	1.24	0.7 - 1.3*
Distribution System	1.29	1.20	1.20	1.25	1.29	1.23	1.20	1.28	1.22	1.23	1.18	1.32	1.24	0.7 - 1.3*
**Total Trihalomethanes, mg/L														
Distribution System	0.040	NA	NA	0.041	NA	NA	***	NA	NA	0.123	0.104	0.041	0.070	0.080
**Total Haloacetic Acids, mg/L														
Distribution System	0.030	NA	NA	0.031	NA	NA	***	NA	NA	0.108	0.057	0.039	0.053	0.060
Total Organic Carbon, mg/L														
Influent from DeHart	1.96	NA	NA	1.63	NA	NA	1.67	NA	NA	4.64	NA	NA	2.48	NA
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.10	NA	2.12	NA
Influent from Susquehanna								NIA		2.06	1.90	NA	1.39	NA
Influent from Susquehanna	1.12	NA	NA	0.92	NA	NA	0.96	NA	NA	2.00	1.90	IVA	1.33	
		NA	NA 113	0.92 112	NA 112	112	0.96 111	112	100	123	102	111	1.33	1.0.1
Influent from Susquehanna		NA 112											112	NA

<sup>\*</sup> Values are related to DEP Secondary MCL

2021-08-00 WSC Monthly Report Exhibit A Process Control/Water Quality Analysis

<sup>\*\*</sup> Running Annual Quarterly Average



**EXHIBIT B** 

### Water Production Data - 2021

	DeHart Wi	ithdrawal	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	209.783	6.767	0.000	0.000	209.783	6.767	180.312	6.529	4.032	0.130	176.280	6.678
February	201.526	7.197	0.000	0.000	201.526	7.197	196.055	7.001	3.892	0.139	192.163	6.862
March	226.813	7.317	0.000	0.000	226.813	7.317	216.560	6.986	4.691	0.151	221.203	7.136
April	189.192	6.306	0.000	0.000	189.192	6.306	204.603	6.820	4.318	0.144	209.711	6.990
May	229.160	7.392	0.000	0.000	229.160	7.392	201.785	6.509	4.428	0.147	221.168	7.134
June	222.902	8.112	0.000	0.000	222.902	8.112	200.315	6.677	4.828	0.161	217.696	7.257
July	236.058	7.614	0.000	0.000	236.058	7.614	230.385	7.431	5.673	0.183	232.837	7.510
August	227.923	7.352	0.000	0.000	227.923	7.352	222.667	7.183	5.246	0.169	228.582	7.373
September	219.154	7.305	0.000	0.000	219.154	7.305	214.941	7.165	5.205	0.174	214.636	7.155
October	222.752	7.186	0.000	0.000	222.752	7.186	224.727	7.249	5.235	0.169	225.089	7.261
November	182.973	6.464	24.816	0.886	207.789	7.350	224.727	7.249	6.002	0.231	208.425	6.948
December	220.364	7.109	0.000	0.000	220.364	7.109	220.039	7.098	4.961	0.160	211.152	6.811
Total	2588.600		24.816		2613.416		2537.116		58.511		2558.942	
Average	215.717	7.177	2.068	0.074	217.785	7.251	211.426	6.991	4.876	0.163	213.245	7.093

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

2021-08-00 WSC Monthly Report Exhibit B

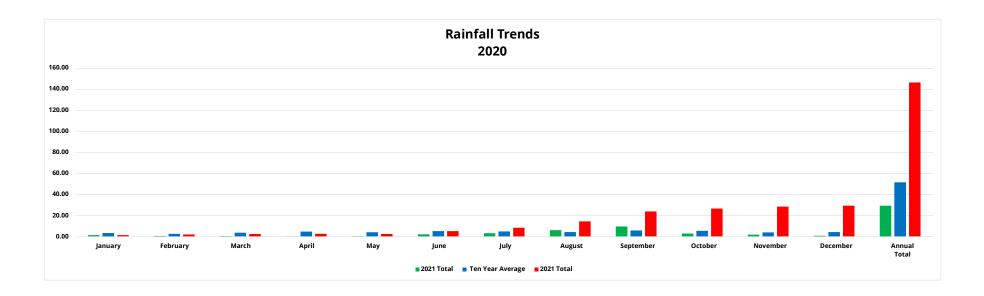


#### **EXHIBIT C**

#### Rainfall at the DeHart Reservoir - 2021

(inches)

Date	January	February	March	April	May	June	July	August	September	October	November	December	Annual Total
2021 Total	1.37	0.55	0.50	0.13	0.34	2.17	3.22	6.04	9.55	2.78	1.81	0.82	29.28
Daily Average	0.040	0.019	0.016	0.004	0.011	0.070	0.103	0.194	0.032	0.089	0.060	0.027	0.66
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	1.37	1.92	2.42	2.55	2.40	5.06	8.28	14.32	23.87	26.65	28.46	29.28	146.58





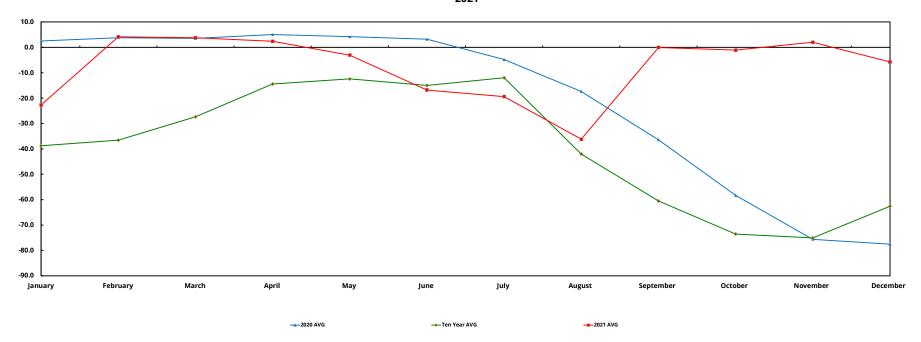
#### **EXHIBIT D**

#### Water Level at the DeHart Reservoir - 2021

(Inches from Spillway)

Date	January	February	March	April	May	June	July	August	September	October	November	December
2021 AVG	-22.7	4.1	3.8	2.4	-3.1	-16.8	-19.4	-36.2	-0.1	-1.1	2.0	-5.8
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
2020 AVG	2.5	3.8	3.5	5.0	4.2	3.2	-4.8	-17.4	-36.4	-58.3	-75.6	-77.5

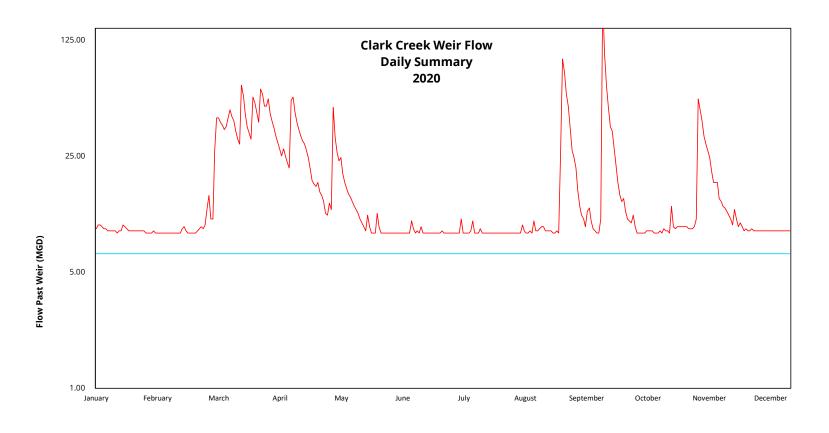
#### DeHart Reservoir Water Level Trends 2021





#### **EXHIBIT E**

### Daily Conservation Release - 2021



---- Series1

Minimum Allowable Flow



#### **EXHIBIT F**

#### Utility Usage - 2021

Location / Utility	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
ater Services Center														
ctric Transmission														
Total, kwH	199,800	180,000	127,800	142,200	176,400	140,400	127,800	169,200	156,600	176,400	154,800		159,218	1,751,4
Cost, Dollars	\$10,115.44	\$9,464.58	\$7,296.32	\$7,996.78	\$9,326.30	\$9,118.83	\$8,895.93	\$10,873.77	\$10,713.92	\$11,817.14	\$10,634.70		\$9,659.43	\$106,25
ctric Generation														
Total, kwH	199,800	180,000	127,800	142,200	176,400	140,400	127,800	169,200	156,600	176,400	154,800		159,218	1,751,4
Cost, Dollars	\$1,189.56	\$1,316.05	\$1,159.68	\$1,198.51	\$1,223.21	\$1,283.61	\$1,298.27	\$1,331.15	\$1,295.62	\$1,294.54	\$1,230.93		\$1,256.47	\$13,821
itural Gas														
Total, Cu Ft	13,324	15,670	9,111	5,371	3,591	1,987	1,469	1,031	1,758	2,927	8,162		5,855	64,40
Cost, Dollars	\$10,625.83	\$12,476.31	\$7,314.20	\$4,376.97	\$2,662.90	\$1,697.79	\$1,291.62	\$971.50	\$1,560.52	\$2,518.96	\$6,755.72		\$4,750.21	\$52,252
wer														
Total, Gal	4,975,083	4,460,000	4,760,000	4,460,000	4,980,000	4,870,000	5,670,000	5,240,000	5,900,000	5,002,583	6,160,000		5,134,333	56,477,
Cost, Dollars	\$40,944.93	\$34,441.87	\$39,174.80	\$36,705.80	\$40,985.40	\$40,080.10	\$46,664.10	\$43,125.20	\$48,557.00	\$50,696.80	\$50,695.80		\$42,915.62	\$472,07
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.
servoir Park Pump Station														
ectric Transmission														
Total, kwH	93,200	87,600	84,000	101,600	94,400	82,800	89,600	78,400	79,200	81,600	84,400		86,982	956,80
Cost, Dollars	\$3,316.80	\$3,450.73	\$2,959.87	\$3,654.31	\$3,241.58	\$2,804.06	\$3,077.42	\$2,271.80	\$2,546.31	\$2,908.75	\$3,313.08		\$3,049.52	\$33,544
ectric Generation														
Total, kwH	93,200	87,600	84,000	101,600	94,400	82,800	89,600	78,400	79,200	81,600	84,400		86,982	956,80
Cost, Dollars	\$1,199.32	\$1,140.00	\$1,234.10	\$1,266.47	\$1,263.16	\$1,280.30	\$1,240.20	\$1,024.25	\$1,166.48	\$1,271.70	\$1,124.62		\$1,200.96	\$13,210
atural Gas														
Total, Cu Ft	505	664	298	78	375	1	0	0	0	10	318		204	2,249
Cost, Dollars	\$421.56	\$546.98	\$258.73	\$84.93	\$319.56	\$24.35	\$23.55	\$23.84	\$24.40	\$33.52	\$282.68		\$185.83	\$2,044.
squehanna River Pump Station														
ectric Transmission														
Total, kwH	10.800	1.200	1.200	600	1.200	600	600	1.200	1.200	23.400	17.400		5.400	59.400
Cost, Dollars	\$532.67	\$69.78	\$66.57	\$71.23	\$75.36	\$62.15	\$69.11	\$77.18	\$64.25	\$21.05	\$1,637.31		\$249.70	\$2,746.0
ectric Generation														
Total, kwH	10.800	1.200	1.200	600	1,200	600	600	1,200	1,200	23.400	17.400		5.400	59.400
Cost. Dollars	\$492.96	\$1.062.13	\$102.12	\$72.73	\$74.14	\$77.20	\$73.42	\$100.40	\$104.10	\$799.77	\$781.92		\$340.08	\$3,740,
atural Gas														
Total, Cu Ft	682	670	403	153	78	0	0	0	2	14	299		209	2,301
Cost, Dollars	\$561.17	\$551.71	\$341.68	\$144.17	\$84.93	\$23.55	\$23.55	\$23.55	\$25.94	\$36.75	\$ 267.24		\$189.48	\$2.084.
nion Square Booster Station														
ectric Transmission														
Total, kwH	11561	12,375	6,776	1,845	1,151	426	384	408	381	317	953	2.388	2,502	25,016
Cost.Dollars		\$446.58	\$468.09	\$327.32	\$70.74	\$46.82	\$19.80	\$17.85	\$12.12	\$4.54	-\$2.52	\$42.15	\$141.13	\$1,411.
ectric Generation														
Total, kwH	11561	12,375	6,776	1.845	1,151	426	384	408	381	317	953	2,388	2,502	25,016
Cost, Dollars	141.89	\$142.94	\$168.86	\$107.74	\$148.36	\$88.07	\$69.35	\$69.37	\$69.33	\$67.89	\$86.10	\$99.72	\$101.61	\$1,117.
eHart Facilities		71.00	7.1000		4.1.0.00		7.53.05	705.0.	777700	70.105	100			
ectric Transmission														
Total. kwH	3.130	3.101	2.841	2.076	1.584	2.060	2.669	2.314	2376	1.313	2.292		2.341	25.756
Cost, Dollars	\$189.44	\$191.54	\$169.19	\$148.68	\$125.81	\$176.18	\$203.76	\$184.08	\$191.52	\$108.90	\$174.00		\$169.37	\$1,863.
ectric Generation	4.44	4.51.5	********	41.000			1200.0			*******			112121	1.,
Total, kwH	3,130	3,101	2,841	2,076	1.584	2,060	2,669	2.314	2,376	1,313	2,292		2,341	25,756
Cost, Dollars	\$103.92	\$100.04	\$98.96	\$99.92	\$96.02	\$105.24	\$110.39	\$105.62	\$105.73	\$54.34	\$63.30		\$94.86	\$1,043.
el Oil	\$103.3£	7.00.04	¥30.30	433.32	750.02	9100224	9110.33	9.00.02	7.00.75	+54.54	P03.30		734.00	\$1,043.
Total, Gals.	2,434	772		500					1	650			1,089	4,356
Cost, Dollars	\$4,959.36	\$1.664.38		\$1,107,55					1	\$1,853.99			\$2.396.32	\$9.585.
y Island Heat Trace	\$44,535.30	\$1,004.30		\$1,107.33						#1,033.55			42,390.32	49,363.
ectric Transmission														
Total, kwH	471	432	370	260	341	316	305	329	298	329	377		348	3.828
	\$20.65	\$20.56	\$17.66	\$13.94	\$17.94	\$17.57	\$16.63	\$17.47	\$15.49	\$17.58	\$20.49		\$17.82	\$195.9
Cost, Dollars	\$20.65	\$20.56	\$17.66	\$13.94	\$17.94	\$17.57	\$10.03	\$17.47	\$15.49	\$17.58	\$20.49		\$17.82	<b>\$195.</b> 9
ectric Generation	471	422	270	260	341	216	205	220	200	220	277		240	3 000
Total, kwH		432 \$67.75	370	260		316	305	329	298	329	377		348	3,828
Cost, Dollars penditures YTD	\$97.45	\$67.75	\$68.51	\$69.19	\$69.36	\$65.52	\$65.48	\$65.53	\$64.33	\$66.49	\$66.57		\$69.65	\$766.1
		1	1	1	1	1	1				1		\$67,298	\$723,86

<sup>\*\*</sup> Not available at time report was developed

Total Transmission	\$146,016
Total Generation	\$33,700
Total Refuse	\$6,115
Total Gas	\$56,381
Total Sewer	\$472,072
Total Fuel Oil	\$9,585
Total Utilities	\$717.753

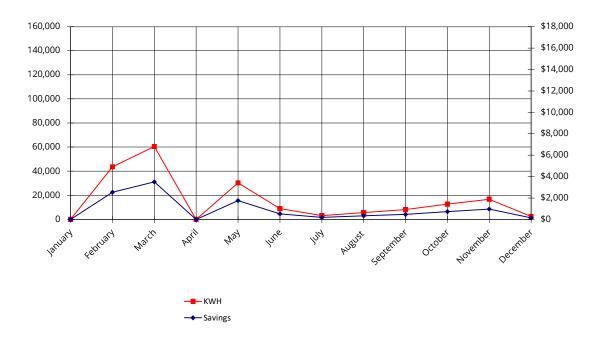


Exhibit G

Hydro-Turbine Generator Performance - 2021

Month	Kilowatt-hour (KWH)	Anticipated Savings *
January	0	\$0
February	43650	\$2,532
March	60,454	\$3,506
April	0	\$0
May	30,380	\$1,762
June	8,911	\$517
July	3,158	\$183
August	5741	\$333
September	8,102	\$470
October	12640	\$733
November	16,720	\$970
December	2430	\$141
Average	16,015	\$929
Year to Date	192,186	\$11,147

<sup>\*</sup> Estimated savings based on electrical rate of \$0.058 per KWH





#### **EXHIBIT H**

#### Treatment Chemical Usage - 2021

Chemical	January	February	March	April	Мау	June	July	August	September	October	November	December	Average	Total
Chlorine	2.552	4 422	4004	4764	F 400		6.455	6.426	0.700	0.724	6041			W4 000
Total Lbs.	3,663	4,422	4,924	4,764	5,163	5,535	6,156	6,139	8,702	9,734	6,241	5,767	5,934	71,209
Average, Chlorine Lbs./Day	118	158	159	159	167	185	199	198	290	314	231	186	196.9	
Average, Chlorine Dose, mg/L Chlorine, Cost, \$/Lbs.	2.5 \$0.305	\$0.305	3.0 \$0.305	\$0.305	\$0.305	\$0.305	\$0.305	2.7 \$0.305	3.8 \$0.305	2.6 \$0.305	2.7 \$0.305	\$0.305	2.9 \$0.305	
Chlorine Total Cost, Dollars	\$1,117	\$1,349	\$1,502	\$1,453	\$1,575	\$1,688	\$1,878	\$1,872	\$2,654	\$2,969	\$1,904	\$1,759	\$1,809.91	\$21,718.96
emornic rotal cost, bollars	Ψ1,117	Ψ1,545	¥1,302	¥1,455	Ψ1,575	¥1,000	41,070	¥1,072	\$2,034	42,303	Ψ1,30 <del>4</del>	Ψ1,733	\$1,005.51	421,710.50
Alum 48.5%														
Total Lbs.	16,762	19,643	22,051	19,093	20,211	19,248	20,284	20,359	42,186	51,256	47,402	46,216	28,726	344,710
Average, Alum, Lbs./Day	541	702	711	636	652	711	654	657	1,406	1,653	1,742	1,491	963.0	
Average, Alum, mg/L	12.0	21.0	21.0	14.8	10.9	21.0	10.8	10.8	10.8	27.6	27.3	26.0	17.8	
Alum Cost, \$/Lbs.	\$0.164	\$0.164	\$0.164	\$0.164	\$0.164	\$0.164	\$0.164	\$0.164	\$0.164	\$0.164	\$0.164	\$0.164	\$0.164	
Alum Total Cost, Dollars	\$2,749	\$3,221	\$3,616	\$3,131	\$3,315	\$3,157	\$3,327	\$3,339	\$6,919	\$8,406	\$7,715	\$7,580	\$4,706.24	\$56,474.82
Lime														
Total Lbs.														
Average Lime, Lbs./Day														
Average, Lime Dose, mg/L														
Lime Cost, \$/Lbs.														
Lime Total Cost, Dollars														
Soda Ash														
Total Lbs.	9,300	12,200	9,582	11,618	6,160	10,600	17,600	24,650	27,600	29,500	24,450	24,400	17,305	207,659
Average Soda Ash, Lbs./Day	300	400	309	387	199	400	568	795	928	952	815	787	570.0	
Average, Soda Ash Dose, mg/L	6.9	6.9	7.2	7.3	7.3	7.5	12.0	14.2	23.4	18.5	10.2	16.0	11.5	
Soda Ash Cost, \$/Lbs.	\$0.299	\$0.299	\$0.299	\$0.299	\$0.299	\$0.299	\$0.299	\$0.299	\$0.299	\$0.299	\$0.299	\$0.299	\$0.299	
Soda Ash Total Cost, Dollars	\$2,781	\$3,648	\$2,865	\$3,474	\$1,842	\$3,169	\$5,262	\$7,370	\$8,252	\$8,821	\$7,311	\$7,296	\$5,174.23	\$62,090.73
Fluoride														
Total Lbs.	946	893	1,011	956	961	970	1,057	1,091	1,112	1,127	844	1,085	1,005	12,054
Average, Fluoride Lbs./Day	31	32	33	32	31	32	34	35	37	36	33	35	33.4	·
Average, Fluoride (F-) Dose, mg/L	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
Fluoride Cost, \$/Lbs.	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	
Fluoride Total Cost, Dollars	\$454	\$429	\$485	\$459	\$461	\$466	\$508	\$524	\$534	\$541	\$429	\$521	\$484.22	\$5,810.65
Sodium Hydroxide 50%														
Total NaOH 50% dry Lbs.	24,202	24,624	28,760	26,892	29,914	27,395	31,326	38,200	51,071	58,816	46,199	48,704	36,342	436,102
Average NaOH 50%, dry Lbs./Day	781	879	928	896	965	913	1,011	1,232	1,702	1,897	1,711	1,571	1,207	,
Average, NaOH 50%, mg/L	7.1	7.7	7.8	8.0	8.9	8.1	8.6	10.2	14.3	15.7	14.6	13.2	10.4	
NaOH 50% Cost, dry \$/Lbs	\$0.174	\$0.174	\$0.174	\$0.174	\$0.174	\$0.174	\$0.174	\$0.174	\$0.174	\$0.174	\$0.174	\$0.174	\$0.174	
NaOH 50% Total Cost, Dollars	\$4,211	\$4,285	\$5,004	\$4,679	\$5,205	\$4,767	\$5,451	\$6,647	\$8,886	\$10,234	\$8,039	\$8,474	\$6,323.46	\$75,881.53
Zinc Orthophosphate														
Total Zn3(PO4)2, wet Lbs.	4,616	4,377	4,981	4,722	4,980	4,902	5,229	5,257	4,833	5,069	4,240	4,755	4,830	57,961
Average Zn3(PO4)2, wet Lbs./Day	149	156	161	157	161	163	169	170	161	164	157	153	160.1	. ,,,,
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	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	\$0.374	\$0.374	\$0.374	\$0.374	
Zn3(PO4)2 Total Cost, Dollars	\$1,726	\$1,637	\$1,863	\$1,766	\$1,863	\$1,833	\$1,956	\$1,966	\$1,808	\$1,896	\$1,586	\$1,778	\$1,806.50	\$21,678.04
Potassium Permanganate														
Total KMnO4, Lbs.														
Average KMnO4, Lbs./Day														
Average, KMnO4 Dose, mg/L														
KMnO4 Cost, \$/Lbs.														
KMnO4 Total Cost, Dollars														
Expenditure														\$243,654.73
	1													
Average Treated Cost per (MG)		1		l l		L.	I	l l		l l	I	l l		
Average Treated Cost per (MG) Total Treated Flow (MGD)														0.000

2021-08-00 WSC Monthly Report Exhibit H



#### **EXHIBIT I**

#### **DISTRIBUTION DEPARTMENT ACTIVITIES - 2021**

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	Average
PA One Call Locates	412	387	581	558	534	602	542	531	479	504	427	539	6,096	508
Street Restorations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leak Detection Assessment Percent of Distribution System	0	0	8	8	8	8	8	8	8	8	8	8	80	7
Main Break Repair - Detected Non-Surfacing	0	0	0	0	0	1	0	0	1	1	1	0	4	0
Main Breaks Repaired - Emergency	2	0	1	2	1	1	3	1	0	0	2	3	16	1
Service Line Leaks Detected	0	0	0	0	1	1	0	1	0	0	0	2	5	0
Service Line Leaks Repaired	1	0	2	2	2	0	1	0	1	0	1	1	11	1
Valves - Exercised	0	2	1	0	1	1	0	109	55	1	0	3	173	14
Valves - Replaced	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrant Flow Tests	1	1	0	3	1	5	5	1	5	2	2	4	30	3
Hydrants Returned to Service	3	0	0	0	2	3	2	1	0	2	0	1	14	1
Water Tap - Disconnected	1	0	1	5	1	4	0	0	8	1	2	0	23	2
Water Tap - New Connection	1	0	1	2	0	0	0	1	0	0	0	0	5	0
Water Shutoffs - Delinquent Accounts	0	0	0	0	0	0	46	46	12	0	0	0	104	9
Water Shutoffs - Other	15	7	7	11	6	9	2	16	30	42	27	11	183	15.25
Water Shutoffs - Non Payment	0	0	0	0	0	0	0	0	0	29	13	0	42	4
Water Restoration Turn on Other	23	9	16	14	15	13	79	33	27	27	25	26	307	26
Water Turn on - Non Payment	0	0	0	0	0	0	0	0	0	17	16	8	41	3



### **EXHIBIT J**

### **Metering Activities - 2021**

<b>Board Monthly Report</b>	Distribution Monthly Report														
Activity	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	Average
Meter Installations															
	Missing	8	6	3	4	3	4	9	4	6	4	6	7	64	5
	Leaking	1	1	3	3	2	1	0	1	0	1	3	2	18	2
Replacement	Frozen	0	0	1	0	0	1	1	2	2	1	1	3	12	1
	Non-registering	3	1	1	2	3	0	7	4	4	4	5	0	34	3
	Large Meters <sup>1</sup>	0	0	0	0	0	0	1	0	0	0	0	0	1	0
New Service	New Installation	1	0	1	2	1	2	0	1	0	0	0	0	8	1
Meter Service															
MXU's Replaced	MXU's Replaced	6	5	7	13	6	8	33	17	33	28	29	11	196	16
Batteries Replaced	Batteries Replaced	108	130	22	62	121	92	20	28	25	82	19	53	762	64
Meter Pits Serviced	Meter Pits Serviced	0	0	0	0	0	0	0	0	1	1	0	0	2	0
Meter Calibrations															
Small Meters <sup>2</sup>	Calibrated meters	0	0	1	0	0	1	18	3	1	0	0	0	24	2

**<sup>1</sup> 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

**<sup>2</sup> 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) - 2021

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	N/A	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A	N/A
Billed Metered	Hydrant Connections	1,134	680,818	0	113,286	11,309	17,794	21,178	715	115	0	550,349	0	1,396,698	116,392
Billed Unmetered	Hydrant Flow Tests	1,000	1,720	0	12,220	1,160	7,760	10,985	760	10,250	4,205	7,447	28,135	85,642	7,137
Unbilled Unmetered	Hydrant Flushing (and Unbilled Authorized)	62,640	0	0	8,491,299	4,863,975	564,250	77,650	20,649	100,874	76,438	8,056,207	217,686	22,531,668	1,877,639
Leakage on Distribution Mains	Main Leaks	153,542	0	215,498	32,690	78,566	17,930	1,488,336	355,372	333,317	243,418	2,652,466	463,812	6,034,947	502,912
Leakage on Service Lines	Service Leaks	23,040	131,997	148,536	122,400	0	0	0	0	14,400	0	11,472,480	5,760	11,918,613	993,218
	Total	241,356	814,535	364,034	8,771,895	4,955,010	607,734	1,598,149	377,496	458,956	324,061	22,738,949	715,393	41,967,568	3,497,297



## **Wastewater**



# WASTEWATER DEPARTMENT MONTHLY REPORT



Welding of Primary Digester #1 Fixed Cover Seams

### December 2021

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



December 2021

### **Overview**

Mitigation of COVID-19 once again became the primary focus of the Wastewater department in December, fueled by the rapid increase in local cases. Several mitigation measures that were implemented in past surges were reinstituted and remain in place at the time of reporting.

The elimination of punchlist items for the Front Street Pumping Station Rehabilitation project came to a halt during the month of December as the general contractor was not on site. More than a dozen punchlist items remain for the contractor to achieve the Final Completion benchmark.

Progress on the Primary Digester Rehabilitation Project continued in December. The general contractor finished setting and painting process pumps and digester piping. Application of the insulation for the digester fixed cover is being held up by cold winter temperatures and will delay commissioning of this digester. The current expectation is that the unit will be ready for service in late March 2022.

## **Operations**

During the month of December, the AWTF met all monthly average NPDES permit requirements. No Dry Weather or Sanitary Sewer Overflows were reported.

Hydraulic loading to the AWTF averaged 15.2 million gallons per day (MGD). The treatment process achieved removal reductions of 98.3 percent CBOD, 98.0 percent Suspended Solids, 85.3 percent Phosphorus, 96.5 percent Ammonia, and 90.1 percent Nitrogen (Exhibit A).

A full-scale trial with a free alternative supplemental carbon source for the denitrification process began in August and continued through December. Effluent Nitrogen concentration averaged 2.9 mg/L for the month (Exhibit A). Continued success would result in a dramatic decrease in chemical cost and the potential generation of significant non-rate revenue through the sale of nitrogen credits.

Revenue of the Contract Waste Hauling program collected \$38,124.09 in revenue from 1,241,700 gallons discharged (Exhibit G). The program finished the year with \$710,237 in non-rate revenue, which is a 12.2 percent increase over 2020 numbers.

The Cogeneration Facility experienced an average run time of 2 percent in December. Revenue is estimated at \$207.98 on 2,700 Kilowatt-hours generated for the month. Reduction in run time can be attributed to an increase in secondary wasting to reduce the MLSS causing an increase in pumping of thinner sludge to Primary Digester No. 2 and the use of the gas for the heating of facility buildings. This program generated a total of \$51,787.27 in non-rate revenue in 2021, a significant



December 2021

drop of 32 percent from 2020 due to the absence of a redundant generator unit, which was abandoned when the cost of needed repairs far exceeded the value of the unit. This process is due to be replaced in 2022.

### Laboratory

- Completed semi-annual compliance monitoring at The AMES Companies, Inc. All semi-annual compliance monitoring is complete.
- Submitted primary influent samples to Biobot for COVID-19 testing on behalf of PA Department of Health.
- Purchased plastic and PVC coated borosilicate glass BOD bottles for the Operators Laboratory.

### **Pretreatment**

- Received self monitoring reports submitted for November.
- Completed the second semi-annual self monitoring inspection at the Swatara Township Landfill.
   All semi-annual self-monitoring inspections are complete.
- Completed a follow-up inspection at Harrisburg Dairies, Inc. to determine whether flooding of the metering pit in October impacted the flow meter. No impacts were observed.
- Completed the third quarter 2021 significant noncompliance evaluation.
- Completed the Contract Waste Hauling Program's Quickbooks November billing and submitted to Billing.

## **Plant Maintenance**

- Removed Filtrate Pump No. 1 at the Belt Filter Press for electrical issues.
- Ordered parts for the Belt Filter Press overhead door to repair damage. Parts are on backorder.
- Prepared to install new sump pump pits at the Chemical Storage Building. Core-drilled 32-inch
  holes through the 8-inch concrete deck to rectify eroded 4-inch floor drains. Installation of
  pumps is currently underway. This addresses a major safety concern.
- Replaced and updated lighting throughout the facility.
- Repaired and cleaned blockage on the Orival plant water filter in the Main Control Building.
- Removed Storm Pump No. 1 and 3 at the Market Street Pump Station to clear blockages from trash entering inlets under the Market Street Subway.
- Addressed generator switchgear issue at the Market Street Pump Station.
- Replaced Paddle Drive No. 4 on SEW gearbox at the Pista Grit.
- Ordered parts to install new lighting at the Primary Tanks.
- Installed new 20hp Diluent Pump No. 1 at the Settled Sewage Pump Station.
- Performed load test on stand-by generator at the Spring Creek Pump Station.
- Cleared blockage issues on Thickener Pump No. 1 and 3.



December 2021

- Performed seven vehicular related repairs.
- Responded to alarms at 3003 North Front Street as needed.

### **Field Construction**

- Excavated and replaced damaged manhole frame and cover at Schuylkill and James Streets.
- Excavated and lowered damaged manhole frame and cover at 18th and Holly Streets.
- Excavated and lowered damaged manhole frame and cover at 25th and Raleigh Streets.
- Milled and recessed steel street plates for the winter season. Began weekly checks on plates throughout the City.
- Installed one 12-inch mechanical point repair on Barbara and River Streets. This is a sinkhole remediation.
- Installed one 12-inch mechanical point repair at Summit and Market Streets. This is a sinkhole remediation.
- Excavated and repaired a failing stormwater pipe at 15th and Herr Streets. Ten feet of clay pipe was replaced with 10-inch SDR.
- Performed entry into a 32-inch by 40-inch rectangular stormwater pipe at 25th and Ellerslie Streets and repaired areas where concrete was spalling and exposing the reinforcing steel.
- Repaired and retrofitted one stormwater inlet at Division and Clark Streets with C-top to combat floatable debris.
- Rogele completed an IDIQ repair at 1930 Bellevue Road. A 5-foot section of CRW's 8-inch clay sewer was compromised at a lateral connection. 5-foot of 8-inch SDR was used for the repair and 8-foot of 6-inch clay lateral was repaired to the curb line with a clean-out installed. This is a sinkhole remediation.
- Rogele completed an IDIQ repair at 15th and Berryhill Streets. A 30-inch brick sewer main was
  discovered collapsed during routine CCTV. This intersection was scheduled to be rehabilitated
  in September of 2022. Due to the collapse, a 20-foot section of brick sewer main was replaced
  with SDR 26. A new manhole was installed to further facilitate upcoming CIPP lining. The
  manhole that was used was in CRW's inventory as a left over from the initial Front Street
  Interceptor Project.
- Mr. Rehab completed the installation of two CIPP tee liners on 16th Street. Lateral connection to the main was compromising CRW's asset.
- Seven inlets were repaired at various locations throughout the City.
- Retrofitted 28 A-3 open back inlets to C-top or M-top inlets in 2021.
- 123 inlets were repaired in 2021.

## **Field Operations**

 A total of 8,462 feet (1.6 miles) of sewer pipe were assessed by CCTV footage throughout the month.



December 2021

- A total of 5,286 feet (1 mile) of pipe were flushed during the month.
- Responded to seven backup and overflow calls from residents. CRW was liable for none.
- Responded to two sinkhole calls. Wastewater was liable for none. Water was liable for one.
- Cleaned 153 stormwater inlets.
- Inspected 150 stormwater inlets.
- CCTV'd clean project on Cameron Street.
- Hydro excavated for maintenance department at the Chemical Storage Building
- Finished sampling for Harrisburg University.

## **Environmental Compliance**

- Completed 22 inspections of FOG dischargers. Eighteen locations received letters of noncompliance with compliance plans.
- Notices of Violation were issued to 11 FOG dischargers for failing to comply with permitting regulations.
- Provided education packets to three newly identified FOG discharger (either new business or previously unidentified). Spent time educating business owner/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 signoff sheet, and introduction letter.
- No investigations were conducted during the month of December.

## **Street Sweeping**

- Received five customer complaints this month.
- Completed 448 miles of street sweeping within the City of Harrisburg.
- Water usage was approximately 0 gallons.
- Continued to assist cleaning storm inlets in scheduled sweeping areas.
- Continued coordination with the City of Harrisburg on leaf pickup. Received confirmation from City that they will continue picking up leaves until completed.
- When the days of the month fall on a fifth week, there is no scheduled sweeping. However, the sweeping department will be assigned specific assignments throughout the City to continue the upkeep in highly visible areas. By the end of December, the sweeping department swept an additional 15 miles and continued to clean off storm inlets.
- Performed preventive maintenance on Sweepers No. 1 and 3.



# **Wastewater Exhibits**



#### **EXHIBIT A**

## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

#### Process Control - 2021

Parameters	January	February	March	April	May	June	July	Διισιιετ	September	October	November	December	Average	NPDES Limits
				·										
Volume, MGD	18.8	21.7	23.8	20.2	19.8	17.8	24.4	21.7	29.0	19.1	18.3	15.2	20.8	37.7
Carbonaceous Biochemical Oxygen De														
Influent, mg/L	322		256	276	273	171	121	132		149		186	202	
Effluent, mg/L	3		3	3	3	3	3	3		3		3	3	25
Percent Removal, %	98.8		98.7	98.8	98.7	98.1	96.8	97.5		97.7		98.3	97.9	
Effluent Loading, lb/d	494	698	620	506	540	481	686	543	1,086	568	475	329	586	7,860
Suspended Solids:														
Influent, mg/L	385	363	409	387	382	199	149	147	127	172	188	203	259	
Effluent, mg/L	3	3	3	3	4	4	4	3	4	5	4	3	4	30
Percent Removal, %	99.2	99.0	99.2	99.2	98.7	97.8	97.2	97.8	95.9	97.2	97.8	98.0	98.1	
Effluent Loading, lb/d	441	769	569	479	714	587	798	567	1,260	833	609	433	672	9,433
Nitrogen														
Total-N														
Influent, mg/L	30	23	39	28	27	24	19	22	22	25	28	29	26	
Effluent, mg/L	7.3	9.2	12	8.8	6.1	4.7	6.1	4.9	5.0	2.7	3.1	2.9	6	Monitor
Percent Removal, %	75.3	60.2	70	68.9	77.7	80.6	68.6	77.7	77.0	89.0	88.8	90.1	77.0	
Effluent Loading, lb/d	1,115	1,552	2183	1,446	928	729	1,240	820	999	388	455	375	1,019	
NH3-N														
Influent mg/L	16		12	16	13	20	13	14		15			15	
Effluent, mg/L	1.9		1.5	8.0	0.3	0.3	0.5	0.2		0.5			1	11 (2)
Percent Removal, %	88.4		87.0	94.9	97.8	98.5	96.2	98.6		96.7			94.7	
Effluent Loading, lb/d	294	386	306	140	58	50	96	45	81	96	60	81	141	4,716
Phosphorus:														
Influent, mg/L	5.9	5.5	5.1	6.5	6.0	4.5	3.0	3.1	2.6	3.5	3.7	4.2	4.5	
Effluent, mg/L	1.2	1.2	1.0	1.4	1.5	1.6	1.4	1.2	1.0	1.0	0.6	0.6	1.1	2.0
Percent Removal, %	78.9	78.0	78.4	76.9	73.0	63.1	51.5	62.0	57.5	68.9	83.8	85.3	71.4	
Effluent Loading, lb/d	174	201	201	231	238	235	272	210	217	150	89	68	191	629
pH:														
Influent, Std. Units	7.4	7.4	7.4	7.3	7.3	7.3	7.2	7.3	7.3	7.3	7.3	7.4	7.3	
Effluent, Std. Units	7.1	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.1	7.2	7.1	7.0	6.0 - 9.0
Dissolved Oxygen:														
Effluent Minimum, mg/L	7.9	5.8	7.2	7.0	7.1	7.0	5.9	6.5	6.6	6.8	7.6	8.2	7.0	5.0 Min.
Fecal Coliform:														
Effluent, No./100 ml	7	11	2	2	1	2	4	3	6	13	12	2	5	200/100 ml (1)
Chlorine Residual: Effluent, mg/L	0.18	0.19	0.21	0.19	0.43	0.42	0.42	0.41	0.43	0.19	0.18	0.17	0.29	0.50

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

PROCESS2021-A 7

<sup>(2)</sup> Seasonal Limit May 1 to Nov.1.

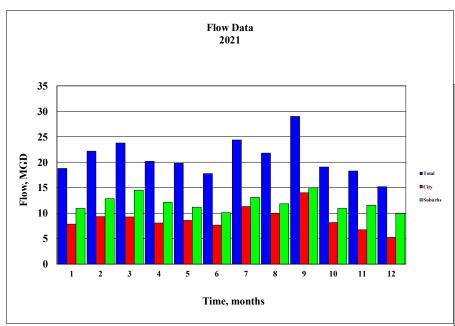


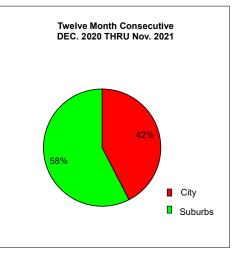
**EXHIBIT B** 

## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Flow Monitoring Information, MGD - 2021

	Total			City Regions						Su	burb Regi	ons		Total Precip
Month	Flow	City	Suburbs	1	2	3	4	5	6	7	8	9	10	inches
January	18.800	7.859	10.941	6.879	0.143	0.300	0.429	0.108	1.300	4.063	1.646	3.634	0.298	1.440
February	22.200	9.333	12.867	8.661	0.173	0.300	0.040	0.159	1.400	4.801	1.995	4.380	0.291	3.200
March	23.800	9.269	14.531	7.892	0.196	0.300	0.639	0.242	1.400	5.319	2.260	5.192	0.360	2.790
April	20.200	8.066	12.134	6.927	0.162	0.300	0.529	0.148	1.300	4.323	1.862	4.343	0.306	1.930
May	19.800	8.601	11.199	6.960	0.164	0.300	1.017	0.160	1.300	3.823	1.880	3.883	0.313	4.600
June	17.800	7.682	10.118	6.087	0.137	0.300	0.978	0.180	1.300	3.342	1.577	3.615	0.284	3.230
July	24.400	11.307	13.093	9.001	0.185	0.300	1.635	0.186	1.800	4.379	2.127	4.451	0.336	7.560
August	21.800	9.963	11.837	7.957	0.162	0.300	1.391	0.153	1.400	4.056	1.857	4.177	0.347	5.950
September	29.000	14.013	14.987	12.071	0.200	0.300	1.112	0.330	1.900	5.858	2.301	4.453	0.475	9.530
October	19.100	8.167	10.933	7.092	0.147	0.300	0.444	0.184	1.400	4.072	1.693	3.376	0.392	2.440
November	18.300	6.759	11.541	5.709	0.153	0.300	0.448	0.149	1.500	4.103	1.757	3.811	0.370	1.370
December	15.200	5.267	9.933	4.495	0.133	0.300	0.216	0.123	1.200	3.561	1.534	3.366	0.272	0.830
Average	20.87	8.86	12.01											3.74
Percent	100.00	42.45	57.55											44.87





FLOW2021 No Zeros-B



#### EXHIBIT C

## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

#### Treatment Utility and Chemical Usage - 2021

Utility / Chemical	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
				•										
Electric														
Total, kwH	1,142,100	1,020,600	1,116,900	1,014,600	1,036,200	1,029,000	981,300	929,400	1,056,600	947,700	964,500	1,018,200	1,021,425	12,257,100
Average, kwH/Day	36,842	36,450	36,029	33,820	33,426	34,300	31,655	29,981	35,220	30,571	32,150	32,845	33,607	
Cost, Dollars	\$61,638.56	\$55,018.21	\$61,872.06	\$54,982.52	\$57,389.89	\$61,494.17	\$63,170.07	\$60,166.37	\$68,684.29	\$62,214.84	\$65,197.16	\$66,534.82	\$61,530.25	\$738,362.96
National Con-														
Natural Gas Total. Cu Ft	1.069.9	784.2	332.4	141.1	38.7	11.8	3.4	1.5	13.3	24.8	504.9	*	244	2,926
Average, Cu Ft/Day	35	27	11	5	36.7	0	0	0	0	24.0	17	*	9	2,920
Cost, Dollars	\$7,282.90	\$5,312.26	\$2,742.50	\$1,230.88	\$422.29	\$211.76	\$144.93	\$131.25	\$231.19	\$327.68	\$4,188.42	*	\$1,852.17	\$22,226.06
Water	802,000	920,000	926 000	1 212 000	702.000	1 111 000	969,000	000 000	842,000	0.49.000	050.667	*	932,788	10.200.007
Total, Gal. Average, Gal./Day	802,000 25,871	31,724	826,000 26,645	1,213,000 40,433	782,000 25,226	1,111,000 37,033	868,000 28,000	998,000 32,194	28,067	948,000 30,581	950,667 31,689	*	30.678	10,260,667
Cost, Dollars	\$11,298.08	\$12.482.80	\$11.539.04	\$15,424.52	\$11,097.28	\$14.400.44	\$11,960.72	\$13.265.92	,	\$12,763.92	\$12,790.70	*	,	\$138,723.10
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MicroC														
Total, Gal.	1,117	105	2,524	3,891	617	0	106	150	0	0	0	0	709	8,510
Average, Gal./Day	0.0	3.8	81.4	129.7	19.9	0.0	3.4	4.8	0.0	0.0	0.0	0.0	20	
Cost, Dollars	\$2,167	\$203.70	\$4,897	\$7,549	\$1,197	\$0	\$206	\$291	\$0	\$0	\$0	\$0	\$1,375.78	\$16,509.40
Sodium Hydroxide														
Total, Gal.	0	0	0	0	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	0	0	0 \$0.00	\$0.00
Cost, Dollars	0	U	U	U	U	U	U	U	U	U	U	0	\$0.00	\$0.00
Chlorine Disinfection														
Total, Lbs.	10,232	13,013	9,204	8,698	11,190	9,701	10,830	9,425	11,750	5,760	5,400	5,070	9,189	110,273
Average, Lbs./Day	330	431	261	256	333	296	349	304	392	186	180	164	290	
Avg Residual, mg/L	0.18	0.20	0.21	0.19	0.43	0.42	0.42	0.41	0.43	0.19	0.18	0.17	0.29	
Cost, \$/Lbs.	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35 \$1,774.50	\$0.35	#36 931 OF
Total Cost, Dollars	\$3,581.20	\$4,554.55	\$3,221.40	\$3,044.30	\$3,916.50	\$3,395.35	\$3,790.50	\$3,298.75	\$4,112.50	\$2,016.00	\$1,890.00	\$1,774.50	\$3,347.37	\$36,821.05
Phosphorous Removal														
Total FeCl3, Gals.	2,124	1,195	1,832	1,608	3,818	3,552	3,535	3,225	1,892	740	705	774	2,083	25,000
Avg FeCl3, Gals./Day	69	43	59	54	123	118	114	104	63	24	24	25	68	
FeCl3 Cost, \$/Gal. FeCl3 Total Cost, Dollars	\$1.26 \$2,676.24	\$1.26 \$1,505.70	\$1.26 \$2,308.32	\$1.26 \$2,026.08	\$1.26 \$4.810.68	\$1.26 \$4,475.52	\$1.26 \$4.454.10	\$1.26 \$4,063.50	\$1.26 \$2,383.92	\$1.26 \$932.40	\$1.26 \$888.30	\$1.26 \$975.24	\$1.26 \$2,625.00	\$31,500.00
recis Total Cost, Dollars	\$2,070.24	φ1,3U3.7U	<b>₽</b> ∠,3∪0.3∠	<b>⊉∠,∪∠∪.∪</b> 8	⊅4,01U.08	#4,475.3Z	₽ <del>4,434</del> .10	<b>\$4,003.30</b>	<b>₽</b> ∠,303.9∠	<b>⊅</b> 93∠.40	₽000.3U	¥9/3.24	\$2,023.00	431,300.00

<sup>\*</sup> No data at time of report

MAIN PLANT UTILITY & CHEM C-2021

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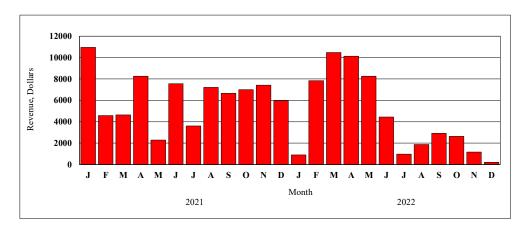


#### **EXHIBIT D**

## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

**Cogeneration Electrical Production: 2020-2021** 

	Percent	Daily Avg	Kilowatt Hours	Estimated
Period	Run Time	Kilowatt	Produced	Revenue
January 2020	72	4,587	142,200	\$10,953.67
February 2020	32	2,048	59,400	\$4,575.58
March 2020	38	1,945	60,300	\$4,644.91
April 2020	67	3,570	107,100	\$8,249.91
May 2020	24	958	29,700	\$2,287.79
June 2020	54	3,270	98,100	\$7,556.64
July 2020	26	1,510	46,800	\$3,605.00
August 2020	53	3,019	93,600	\$7,210.01
September 2020	50	2,880	86,400	\$6,655.39
October 2020	59	2,932	90,900	\$7,002.03
November 2020	68	3,210	96,300	\$7,417.99
December 2020	44	2,497	77,400	\$5,962.12
•		, , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , ,	· ,
Total - 2020			988,200	\$76,121.05
Monthly Average - 2020	49	2,702	82,350	\$6,343.42
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	\$970.58
August 2021	26	784	24,300	\$1,871.83
September 2021	27	1,260	37,800	\$2,911.73
October 2021	26	1,103	34,200	\$2,634.43
November 2021	12	510	15,300	\$1,178.56
December 2021	2	87	2,700	\$207.98
Total - 2021			672,300	\$51,787.27
Monthly Average - 2021	39	1,858	56,025	\$4,315.61



COGEN2021-D 10



#### **EXHIBIT E**

## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Sludge Handling Information - 2021

Process	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
Solids Removal														
Process, Lbs.	950,520	918,926	1,045,336	953,001	920,120	758,924	1,123,178	882,676	792,487	834,005	697,290	936,636	901,092	10,813,100
CWH Program, Lbs.	171,336	81,424	251,334	220,579	180,952	212,602	186,594	153,836	134,545	129,899	158,244	111,185	166,044	1,992,529
Total Solids, Lbs.	1,121,855	1,000,350	1,296,670	1,173,580	1,101,072	971,527	1,309,772	1,036,512	927,033	963,904	855,534	1,047,821	1,067,136	12,805,628
Sludge Dewatering														
Feed Volume, Gals.	3,068,000	2.780.000	3.227.000	3,224,000	4,217,000	4.477.000	5,220,000	4.082.000	4,366,000	5,012,000	4.247.000	3.659.000	3.964.917	47,579,000
Feed Solids, %	2.3	2.0	1.9	2.2	1.8	1.6	1.6	2.0	1.8	1.6	1.5	1.5	1.8	-
Labor, Hours	445	401	503	573	634	660	652	583	589	574	494	455	547	6,561
Operations, Hours	847	771	950	954	1,205	1,015	1,175	867	1,028	1,110	1007	880.8	984	11,809
Total Cake, Dry Tons	202	167	197	251	236	231	267	230	231	251	224	198	224	2,685
Total Cake, Wet Tons	1,022	888	1,104	1,433	1,384	1,422	1,568	1,278	1,267	1,449	1,294	1,184	1,274	15,293
Cake TS, %	19.9	18.5	17.9	17.6	17.2	16.2	17.1	17.9	18.2	17.0	17.4	17.8	17.7	-
Press Rate, Lbs./Hour	2,413	2,305	2,324	3,003	2,298	2,803	2,668	2,947	2,465	2,610	2,571	2,688	2,591	31,096
Polymer Dosage, Lbs	2,992	2,933	4,354	5,117	5,321	4,943	5,749	4,274	4,485	5,418	4,274	3,559	4,452	53,419
Polymer Dosage, Lbs/Dry Ton	15.4	19.6	22.6	22.9	24.3	21.7	21.9	19.5	18.9	23.1	21.2	19.4	20.9	-
Disposal Cost														
Labor, Dollars	\$8,552.90	\$7,701.45	\$9,673.43	\$11,009.22	\$12,175.87	\$12,677.51	\$12,535.28	\$11,197.57	\$11,314.81	\$11,028.44	\$9,485.07	\$8,750.87	\$10,508.54	\$126,102.42
Electrical,Dollars	\$372.77	\$339.02	\$418.00	\$419.94	\$530.02	\$446.38	\$517.18	\$381.66	\$452.23	\$488.44	\$442.90	\$387.55	\$433.01	\$5,196.09
Polymer, Dollars	\$5,744.64	\$5,631.23	\$8,359.68	\$9,824.64	\$10,216.32	\$9,490.56	\$11,038.08	\$8,206.08	\$8,611.20	\$10,402.56	\$8,206.08	\$6,833.28	\$8,547.03	\$102,564.35
Disposal, Dollars	\$42,866.60	\$18,922.52	\$65,388.10	\$51,429.63	\$39,484.50	\$39,109.77	\$85,039.44	\$38,089.67	\$34,537.17	\$32,573.42	\$50,670.12	\$33,381.81	\$44,291.06	\$531,492.75
Total Cost, Dollars	\$57,536.91				\$62,406.72						\$68,804.17	•	\$63,779.63	\$765,355.61
Cost Per Dry Ton, Dollars	\$284.84	\$195.17	\$425.58	\$289.58	\$264.44	\$267.20	\$408.73	\$251.63	\$237.73	\$217.22	\$307.16	\$249.26	\$283.21	

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#### **EXHIBIT F**

## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Conveyance Utility Usage - 2021

Location / Utility	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
Front Street Pump Station														
Electric	0	0	0	0	0	2.400	F.C. 400	0	0	0	10 200	*	7.001	70.000
Total, kwH Average, kwH/Day	0	0	0	0	0	2,400 80	56,400 1,819	0	0	0	19,200 640	*	7,091 231	78,000
Cost, Dollars	\$2,412.63	\$379.61	\$1,884.55	\$2,376.87	\$1,485.85	\$1,936.79	\$4,789.30	\$429.30	\$429.30	\$383.84	\$1,110.89	*		\$17,618.93
Fuel Oil	\$2,412.03	4373.01	\$1,004.55	42,370.07	¥1, <del>4</del> 05.05	\$1,550.75	44,705.50	¥423.30	¥423.30	4303.04	\$1,110.05		Ψ1,001.7 <i>2</i>	\$17,010.55
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.	5,000	0	0	5,000	25,000	140,000	265,000	325,000	395,000	400,000	390,000	*	177,273	1,950,000
Average, Gal./Day	161	0	0	167	806	4,667	8,548	10,484	13,167	12,903	13,000	*	5,809	
Cost, Dollars	\$726.43	\$676.23	\$676.23	\$726.43	\$927.23	\$2,081.83	\$3,336.83	\$3,939.23	\$4,642.03	\$4,692.23	\$4,591.83	*	\$2,456.05	\$27,016.53
Spring Creek Pump Station														
Electric														
Total, kwH	57,280	43,200	46,080	44,480	44,480	41,280	44,800	38,400	60,800	36,800	35,520	39,680	44,400	532,800
Average, kwH/Day	1,848	1,543	1,486	1,483	1,435	1,376	1,445	1,239	2,027	1,187	1,184	1,280	1,461	
Cost, Dollars	\$4,245.05	\$3,043.90	\$3,323.27	\$3,162.99	\$3,568.88	\$3,255.81	\$4,029.02	\$3,598.26	\$4,951.04	\$2,799.82	\$2,629.86	\$3,056.75	\$3,472.05	\$41,664.65
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	\$0.00	\$0.00
Water														
Total, Gals.	97,000	124,000	104,000	108,000	61,000	101,000	61,000	114,833	38,167	47,000	88,236	*	85,840	944,236
Average, Gal./Day	3,129	4,429	3,355	3,600	1,968	3,367	1,968	3,704	1,272	1,516	2,941	*	2,841	
Cost, Dollars	\$1,047.66	\$1,318.74	\$1,117.94	\$1,158.10	\$686.22	\$1,087.82	\$686.22	\$1,226.70	\$456.98	\$545.66	\$959.67	*	\$935.61	\$10,291.71
Market Street Pump Station														
Electric														
Total, kwH	2,280	5,760	6,840	5,040	4,320	1,440	2,520	720	1,080	840	1,080	1,080	2,750	33,000
Average, kwH/Day	74	206	244	168	139	48	81	23	36	27	36	35	93	
Cost,Dollars	\$244.55	\$357.82	\$442.68	\$318.41	\$303.34	\$211.23	\$338.04	\$244.71	\$270.43	\$197.64	\$184.24	\$181.37	\$274.54	\$3,294.46
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	200	40	40	40	40	40	40	0	40	40	40	40	50	600
Average, kwH/Day	6	1	1	1	1	1	1	0	1	1	1	1	2	
Cost, Dollars	\$113.02	\$69.48	\$68.15	\$71.45	\$71.05	\$70.71	\$69.24	\$65.77	\$131.24	\$64.03	\$60.00	\$70.04	\$77.02	\$924.18

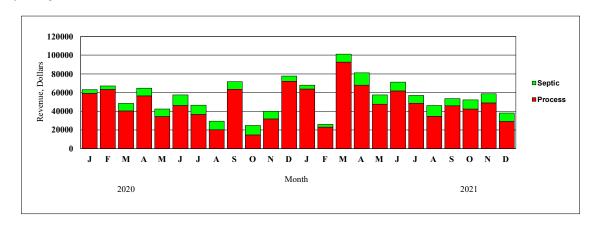


#### **EXHIBIT G**

## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

**Contract Waste Hauling Program 2020 - 2021** 

	Process			Total		
Month	Gallons	Revenue	Gallons	Revenue	Gallons	Revenue
January	2,085,917	\$59,051.97	118,100	\$4,010.40	2,204,017	\$63,062.37
February	2,114,160	\$63,265.86	108,750	\$3,864.60	2,222,910	\$67,130.46
March	1,249,201	\$40,292.49	225,450	\$7,990.20	1,474,651	\$48,282.69
April	1,991,755	\$56,319.89	235,800	\$8,389.80	2,227,555	\$64,709.69
May	1,147,302	\$34,396.98	222,950	\$8,026.20	1,374,252	\$42,495.18
June	1,584,771	\$46,218.55	315,600	\$11,271.60	1,900,371	\$57,490.15
July	1,238,019	\$36,620.08	276,950	\$9,835.20	1,514,696	\$46,455.28
August	665,062	\$20,073.48	258,800	\$9,226.80	923,862	\$29,300.28
September	1,643,428	\$63,395.23	231,700	\$8,229.60	1,875,128	\$71,624.83
October	419,464	\$14,581.74	284,600	\$10,191.60	704,064	\$24,773.34
November	1,083,920	\$31,711.13	231,800	\$8,272.80	1,315,720	\$39,983.93
December	2,484,980	\$71,922.25	158,700	\$5,659.20	2,643,680	\$77,581.45
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Total - 2020	17,707,979	\$537,849.65	2,669,200	\$94,968.00	20,380,906	\$632,889.65
Monthly Average - 2020	1,475,665	\$44,820.80	222,433	\$7,914.00	1,698,409	\$52,740.80
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
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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



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