

April 2023 As of May 17, 2023 Page 1 of 7

Ensure Financial Stability	
<b>Reconciled Bank Account Balances</b>	Refer to attached Reconciled Bank Account Balances as of 4/30/2023.
<b>Monthly Financial Statements</b>	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	Provided separately to Board of Directors.
Drinking 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>	stem Usage
Water Shut-offs	There were 41 water shut-offs for non-payment, and 62 service shut-off requests.
Repair/Replace Meters/MXUs/Batteries	Drinking Water Distribution staff replaced 15 water meters, replaced 65 batteries, and 22 MXUs.
Reduce Wet Weather Impacts to Infrastr	ructure, Community, and Receiving Waters
Negotiate with PADEP/U.S. EPA/DOJ on	CRW is proceeding with work to support Alternative Analysis modeling and Water Quality modeling for the revised combined sewer system long term control plan. The first
Past and Future Practices	major deliverable to PADEP/U.S. EPA/DOJ is due 3/31/2024.
<b>Develop Necessary Planning for</b>	• Phase 4 Stormwater Pro-Fi construction will commence at the beginning of June, starting with the Boys and Girls Club GSI.
Implementation of Green	• Design and planning for next phase of GSI (2024-2027) is underway.
Infrastructure	
Joint Pollutant Reduction Plan -	The Paxton Creek Cooperative is actively working with PennDOT's vendor on the construction contract to determine a final change order to secure the additional sediment
Collaborate with Suburban Partners on	reduction required for the 2020-2025 Permit cycle.
MS4	
Obtain and Comply with Individual MS4	No update.
Permit	

<b>Operate Facilities with a High Standar</b>	perate 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 of April.	
	The AWTF met all NPDES permit parameters for the month of April. Two Dry Weather Overflows and one Sanitary Sewer Overflow were reported. Details can be found in the	
	AWTF Monthly Report for April.	
Notice of Violations (NOVs)	There were no NOVs received by the Drinking Water department in April.	
	On 5/2/2023 CRW received a Notice of Violation (NOV) from PADEP regarding events associated with the Front Street Interceptor Rehabilitation Project. On 3/21/2023 a	
	project contractor was attempting to relocate an active sewage bypass pipe when the pipe union broke and caused approximately 13,250 gallons of sewage to discharge to	
	the surrounding grounds. An estimated 3,200 gallons of that discharge made its way by gravity to the Susquehanna River. There were additional incidents of illicit discharge	
	of petroleum products on 3/24, 3/30 and 4/27/2023. All incidents were immediately reported to PADEP. On 5/17/2023 CRW provided a comprehensive NOV response letter	
	that detailed corrective actions and preventative measures taken by the project team to prevent similar incidents from occuring during the remainder of the project	
	schedule.	



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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 for April.
	The Wastewater department completed all regularly scheduled preventative maintenance in the month of April, including semi-annual preventative maintenance of 52 CSO
	sites.
CCTV	A total of 5,702 feet (1.08 miles) of sewer pipes were assessed by CCTV footage during the month of April. A total of 4,219 feet (0.8 miles) of sewer pipe were flushed as well.
Incident Response	Wastewater responded to seven (7) backup and overflow calls from residents during the month of April. CRW was responsible for one.
Geographic Information System (GIS)	• Twenty-two (22) Pennsylvania One Call tickets were completed. Nineteen (19) required maps and three (3) had no CRW-owned facilities in the project area.
	Bi-weekly meetings were held with KCI Technologies, Inc.
	• Progress continues with the development of the ESRI "Lead Service Line Inventory Solution".
	• One (1) in-person GIS update was held at AWTF.
	Attended Operations (OPS) Challenge practice four (4) Fridays in April.
Cityworks	
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Asset Management	Roadmap Implementation activity report:
	Decision Making Capital Planning Roadmap Implementation Group (RIG)
	• CRW has initiated communications to require the construction and engineering communities use created language and templates for delivery of asset information in a
	usable digital format.
	Information System Data Management Roadmap Implementation Group (RIG)
	• Prepared documentation for scope amendment adding a task to update CRW's Geographical Information System (GIS) to reflect the 2019 and 2020 sewer capital
	improvement projects.
	Operations & Maintenance Roadmap Implementation Group (RIG)
	• AWTF inventory and condition assessment task held kickoff meeting on 4/20/2023 establishing the data process. A meeting held 4/19/2023 with AWTF supervisors
	confirmed data schema for process and subprocess. The meeting on 5/4/2023 with the Wastewater Operations Supervisor provided a status summary for settled sewage
	assets, which have been chosen for the inventory pilot.
	• Data cleaning efforts continue for the Collection Asset Management Plan, completion due 6/30/2023. The next series of workshops are scheduled for 5/25, 6/8 and
	6/15/2023.
I	Organizational Framework Roadmap Implementation Group (RIG)
	• Preliminary preparation for Roadmap Development Team meeting is under way.
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	<ul> <li>InfoAsset Planner Year 2 Implementation Activity Report</li> <li>4/27/2023 - to work on collection asset management plan, data cleansing punch list and select inference rules and assignments.</li> <li>5/02/2023 - to discuss impact of change to work order status on the risk model's decision tree logic.</li> </ul>
	Other Activities  • Dashboard development group met on 4/24/2023, 5/8/2023 and 5/15/2023 concentrating on collection system performance indicators.  • The Lead Service Line Inventory Working Group held status report meetings on 4/18 and 4/20/2023, smaller group met on 5/1/2023 to standardize progress report
	templates.  • Asset Manager participated in a departmental leadership meeting on 4/24/2023.  • Development of training materials in preparation for 5/31 and 6/1/2023 Cityworks Alignment training.
Development Review Summary	For details, see attached Development Stormwater Management Review Summary spreadsheet for April.

<b>Undertake Capital Improvement Project</b>	ts - Refer to attached Capital Improvement Projects Report
Professional & Contractor Services	Recommend Board approval of the following Resolutions, Task Orders, Change Orders and Agreements:
	Drinking Water:
	• Task Order 2023-01-02: Engineering Services for AM Roadmap FY2023 Data Maintenance
	• Task Order 2023-10-01: Engineering Services for Consulting Engineer's Annual Reports for Water and Wastewater for FYs 2023-2025
	• Change Order No. 1 - 2022 Water System Improvements Project
	• Change Order No. 3 (Final) - 2022 Street Restoration Project
	Wastewater: None.
	Stormwater: None.
Stormwater O&M Agreements	Recommend Board approval of the following: None.
AWTF Primary Digesters Rehabilitation	Contract Nos. 2 and 3 are expected to be closed out in June 2023.
AWTF Energy Recovery Improvements	The project team is researching the Inflation Reduction Act and the possibility for tax credits. Progress continues on the necessary agreements with UGI Energy Services.
	Permit applications are being reviewed by PADEP.
Front Street Pumping Station	Contract No.1 (General Construction) is expected to be closed out in June.
Improvements	
WSC Flocculator Equipment	This project is being closed out and will be removed from future management reports.
Replacement	

Jndertake Renewal and Replacement Projects	
2022 Water System Improvements	Installation of water main continues in the Sylvan Terrace neighborhood. The project is expected to be complete in Fall of 2023.
Cameron Street Water Main - Phase 4	PENNVEST settlement originally scheduled for 5/9/2023 has been postponed to 6/8/2023.
2023 Sewer System Improvements	The contractor continues construction with inlet replacement along 15th Street.
(Excavation)	
2023 Sewer System Improvements	The contractor continues to provide submittals for approval before physical construction can begin rehabilitation work.
(Trenchless)	



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Arsenal Boulevard Sewer	No update. We are working with property owners to acquire temporary and construction easements needed before advertising the project.
Front Street Interceptor Rehabilitation -	The contractor installed all of the liner for Phase 1 (Forster Street to Front Street Pumping Station). The contractor is grouting the pipe and beginning restoration in
Phase 2	Riverfront Park.
Water Facility Maintenance	Drinking Water Maintenance staff performed repairs to various process units as described in the Drinking Water Department Monthly Report for April.
Wastewater Facility Maintenance	The Wastewater Maintenance group completed various repairs throughout the AWTF, pumping stations, and at the North Front Street offices throughout the month. A
	narrative is provided in the Wastewater Department Monthly Report for April
Sinkhole Program	Eight (8) sinkholes were investigated by CRW in the month of April. Two (2) were due to failure of wastewater assets.
Inlet Cleaning	A total of 130 stormwater inlets were cleaned during the month of April, and 129 stormwater inlet inspections were performed.

Operate as an Efficient, Sustainable and Resilient Water Utility	
DeHart Property Stewardship	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.
Sustainability	Overstory removal in MUs 40 and 42 is publicly available for bidding. A sale tour is scheduled for 5/16/2023 and bids are due 5/30/2023.  No update.
Internal Communications	Intranet (Shareneint) site centinues to be used. The O2 All Employee Meeting was held 4/19/2022
Internal Communications	Intranet (Sharepoint) site continues to be used. The Q2 All Employee Meeting was held 4/18/2023.

nform and Listen to Customers and Encourage Stewardship of our Systems	
Media Relations - Press and Social	PRESS RELEASES: N/A.
Media	
	SOCIAL MEDIA TOPICS:
	Facebook: 0 New Organic Followers (1,611 Total). Seven (7) Posts; Highest Engaged Post: "Employee of the Month: Janice" (367 Reachs, 36 Reactions, 28 Likes, 8 Comments,
	0 Shares); Other topics: Litter Cleanup "Thank You", Earth Day, Boil Water Advisory, Hydrant Flushing Information, and Board meeting.
	Twitter: 2 Tweets; Month overview: 205 total Impressions; 220 Profile Visits; -3 New Followers; 3 Mentions.
	Instagram: 10 New Followers (692 Total), Seven (7) Posts; Highest Engaged Post: "Employee of the Month: Janice" 78 Organic Reachs, 8 likes, 2 comments, 1 shares, 0 saves.
	2023 Demographics: Most Active Age-range: 25-54; Gender division: 62% women / 37% Men; Locations: Harrisburg, Penbrook, Mechanicsburg, Steelton, Linglestown, Camp
	Hill and Lancaster.
Community Relations	Community Outreach:
	• Four (4) community events (Giant Litter Cleanup, Great Harrisburg Litter Cleanup, Harrisburg Young Professionals Forster Street Cleanup, and YMCA Halfity-Half Race).
	• Zero (0) Community Meetings.
	• Delivered ten (10) door-to-door notifications impacting approximately one hundred eighty-eight (188) customers. Included two (2) boil water notifications.
	• Ten (10) Everbridge alerts. Included a boil water advisory, hydrant flushing notices and a notification of past due balances.



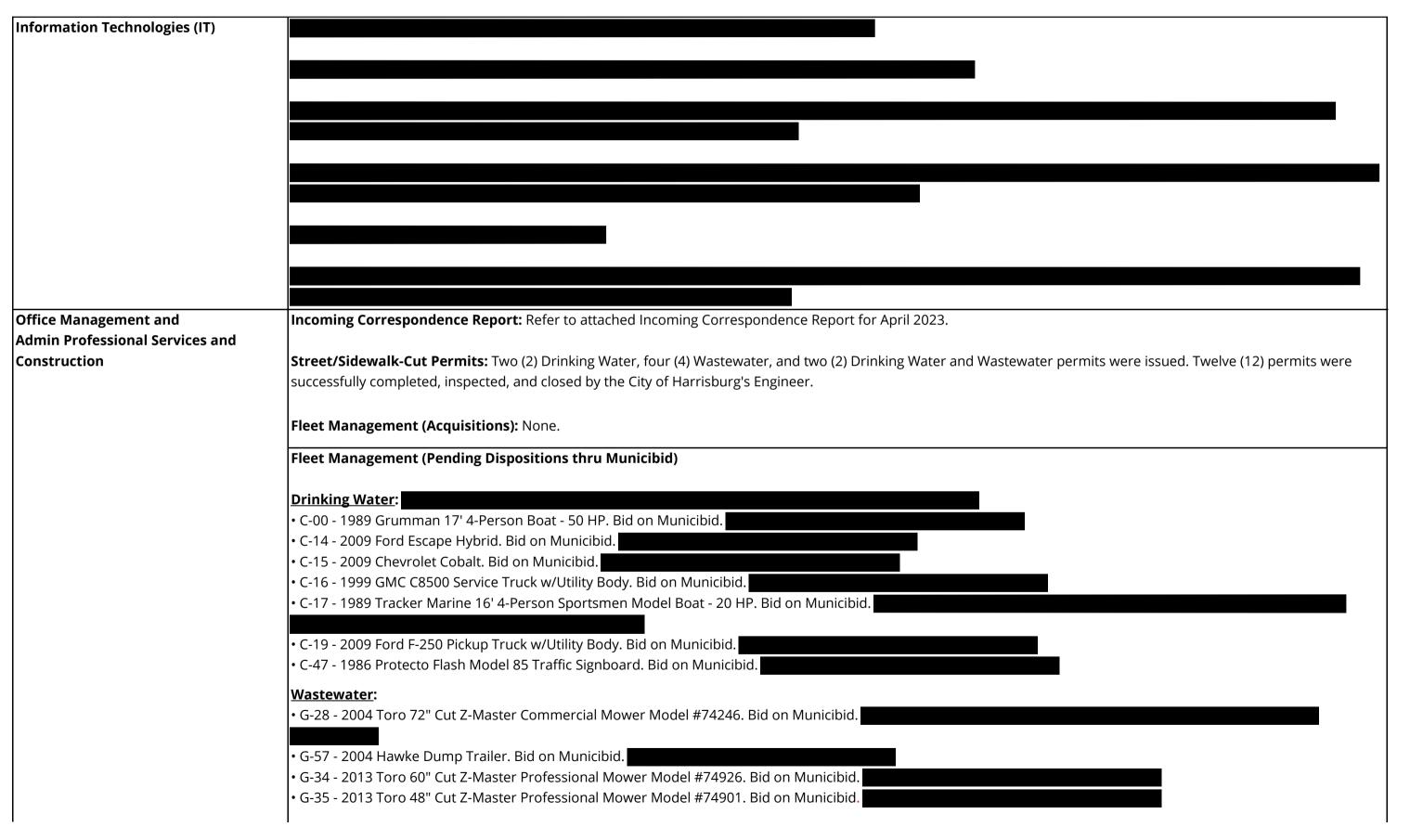
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Public Communications	WHAT'S ON TAP COMMUNICATION: The April monthly bill stuffer was distributed as a bill insert. Topics included: Prevent Sewer Backups and Illicit Discharge and Hydrant
	Flushing.
Diversity	No update.

Administrative	
Risk Management	Executive Summary:
	Total Claims: 15
	New: 3*
	Open: 12
	Closed: 3
	Insurance Line Claim Count:
	Auto: 1
	General Liability: 9
	Public Officials: 1
	Workers Compensation: 4
	Note *new count included in Open
Human Resources	For details, see attached Recruiting Status Report.
Procurement	Procurement staff are coordinating the following bid packages on PennBid:
	• Project Number 2023 - 203 - Maintenance Building Window Replacement at Water Services Center: Published/Issued - 5/2/2023, Mandatory Pre-Bid Meeting - 5/11/2023 @ 9:00 a.m., Bid Opening - 5/16/2023 @ 12 p.m.
	• Project Number 2023 - 204 - Switchgear Replacement and Feeder Cables at AWTF: Published/Issued - 5/2/2023, Mandatory Pre-Bid Meeting - 5/10/2023 @ 9:00 a.m., Bid
	Opening - 5/23/2023 @ 12 p.m.
	• Project Number 2023 - 205 - Published/Issued - 5/2/2023, Mandatory Pre-Bid Meeting - 5/10/2023 @ 10:30 a.m., Bid Opening - 5/16/2023 @ 12 p.m.
	Procurement staff continue to identify and assist in establishing contracts that include fixed rate pricing and discounts with frequently used vendors for goods and services
	Recommend Board approval of the following:
	• Project Number 2023 - 201 - Basin Perimeter Safety Speed-Rail® Railing System
	• Project Number 2023 - 202 - Filter Building Window Glass Replacement



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#### Fleet Management (Completed Dispositions thru Municibid)

#### **Wastewater**:

- G-17 2008 Chevrolet Pickup Truck w/Utility Body. Sold via Municibid for \$3,800. Bids closed 5/11/2023 @ 9:00 a.m. and vehicle was picked up on
- G-20 2008 Chevrolet 3/4 Ton Pickup Truck. Sold via Municibid for \$8,676. Bids closed 5/11/2023 @ 9:00 a.m. and vehicle was picked up on
- G-26 2006 EZGO Model TXT Gas Cart (Maintenance Division Golf Cart). Sold via Municibid for \$2,045. Bids closed 5/11/2023 @ 9:00 a.m. and equipment was picked up on
- G-27 2006 EZGO Model TXT Gas Cart (Operations Division Golf Cart). Sold via Municibid for \$531. Bids closed 5/11/2023 @ 9:00 a.m. and equipment was picked up on
- G-37 1989 John Deere 40"" Cut Tractor Mower Model #332. Bid on Municibid. Sold via Municibid for \$925. Bids closed 5/11/2023 @ 9:00 a.m. and equipment was picked up on the second s
- Hydraulic Pump @ Front Street Pump Station. Sold via Municibid for \$211. Bids closed 5/11/2023 @ 9:00 a.m. and equipment was picked up on

#### Right-to-Know Requests

CRW has received and responded to two (2) Right-to-Know requests during the period 4/20/2023 through 5/17/2023. Other informational requests were identified as not being formal RTK requests and/or were transferred to the Customer Service Center for appropriate response throughout the month,

**OOR Training:** No update.

RTK 2023-003 - Carolina Ramos Barrios (SmartProcure) - Request for any and all purchasing records from 2/3/2023 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: 5/11/2023. Response provided 5/11/2023.

RTK 2023-004 - Antonio Tavares - Requested unit prices for both Dewcon, Inc. and Mainlining America, LLC for the Capital Region Water Cameron Street Water Main Improvements Project - Phase 4. This was bid on 3/7/2023 at 10:00 a.m. There are 76 bid items and unit prices for each contractor. Response due: 5/12/2023. Response provided 5/11/2023.



## DRINKING WATER DEPARTMENT MONTHLY REPORT



2023 Hydrant Flushing

April 2023

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



## **Drinking Water Department Monthly Report**

April 2023

## **Plant Operations**

Capital Region Water's (CRW) Drinking Water department met all Federal Safe Drinking Water Act water quality standards for the month of April.

Specific water quality results are summarized in Exhibit A. A total of 225.172 MG, averaging 7.500 MGD was withdrawn from the water supply source for treatment. As shown in Exhibit B, a total of 216.616 MG, averaging 7.221 MGD, of finished drinking water was pumped to the distribution system.

The DeHart water source was in service for 30 days. The Susquehanna River water source was in service for zero days.

The DeHart Watershed had above average rainfall in April (Exhibit C) and the DeHart Reservoir water level increased (Exhibit D). An estimated 689.25 MG of water was released from the DeHart Reservoir to Clark Creek, averaging 12.03 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 58 preventative maintenance work orders and corrective maintenance work orders for the month of April using the Cityworks maintenance management system for all water treatment plant equipment, pumping stations and fleet vehicles.

- The DeHart Dam watershed was patrolled daily and maintained.
- The Maintenance team repaired Caustic Pump 613C. Needed to replace pump as the pump head sensor was not working.
- The Maintenance team installed a new American and State Flag along with solar flagpole lights.
- The Maintenance team repaired a faulty auger chute on soda ash feeder 805.
- The new Aluminum Sulfate Chemical Injection system is currently under testing for commissioning and PADEP approval.
- The Maintenance team upgraded the Bulk Chemical Fill Valve Station and modified the existing Bulk Chemical Box.
- The Maintenance team worked on the caustic control panel; as the system kept shutting down.
   Replaced faulty isolation card.



## **Drinking Water Department Monthly Report**

April 2023

- The Maintenance team has continued to label various instrumentation and electrical panels and disconnects throughout the plant.
- The Maintenance team installed the Fluoride Analyzer components and drainage for the initial startup of the unit.
- The Maintenance team continues to perform spring/summer landscape duties at the Water Services Center, Front Street pump houses, DeHart Dam facility and the North Front Street Administrative Offices.
- The Maintenance team continues to maintain the distribution and maintenance of fleet vehicles and equipment.

### Distribution

The Distribution group completed the following work during the month of April:

- Repaired six leaking services during the month of April totaling 135,444 gallons of unmetered water.
- Completed 342 work orders.
- Completed 520 water, sewer, and stormwater locates.
- Started hydrant flushing on April 10, 2023, and flushed 722 hydrants in three weeks out of a total of 1800 hydrants.
- Twenty-one distribution valves were exercised.
- Worked 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 monthly regulatory samples for Total Coliform, and E. Coli. All quarterly samples of TOC, Alkalinity, SOCs, THM and HAA were collected as well as the annual IOC requirement.
- Collected UCMR5 samples for PFOA/PFOs and lithium. Results received and there were no detections of PFOA, PFOs, or lithium.
- No taste or odor complaints. The taste of the water is back to where it used to be prior to the complaints.



### **EXHIBIT A** Water Quality Anaylsis - 2023

PARAMETERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	Average	MCL Limits
Tabel California Durana (Alamana														
Total Coliform: Presence/Absence				_										50/ 5
Distribution System	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	5% P
Chlorine Residual, mg/L Free					ı	ı						1		
Filter Plant Effluent	2.00	1.98	2.01	1.99									2.00	0.2 - 4.0
Distribution System	1.40	1.43	1.42	1.31									1.39	<0.02
Turbidity, NTU	4.00	0.00	0.74		I	I							2.22	
Influent from DeHart	1.20	0.98	0.71	0.61									0.88	NA
Influent from Susquehanna	NA	NA	NA	NA										NA
Filter Plant Effluent	0.03	0.03	0.03	0.03									0.03	0.30
pH, Std Units					ı	ı	l							
Influent from DeHart	6.4	6.5	6.5	6.4									6.45	NA
Influent from Susquehanna	NA	NA	NA	NA										NA
Filter Plant Effluent	7.6	7.5	7.9	7.7									7.66	6.5 - 8.5*
Distribution System	7.1	7.7	8.1	8.0									7.71	6.5 - 8.5*
Total Alkalinity, mg/L as CaCO3					ı	ı								
Influent DeHart	5	5	5	5									5.00	NA
Influent from Susquehanna	NA	NA	NA	NA									N/A	NA
Filter Plant Effluent	15	14	13	15									14.23	<15*
Distribution System	13	14	15	14									14.04	<15*
Temperature, degrees C											_			
Influent from DeHart	5.9	5.4	7.3	10.0									7.15	NA
Influent from Susquehanna	NA	NA	NA	NA									N/A	NA
Filter Plant Effluent	6.6	6.4	7.2	9.8									7.50	NA
Distribution System	14.1	13.2	13.6	16.8									14.42	NA
Fluoride, mg/L														
Filter Plant Effluent	0.95	1.02	1.00	0.88									0.96	2
Aluminum, mg/L														
Filter Plant Effluent	0.02	0.02	0.02	0.01									0.02	0.2*
Iron, mg/L														
Influent from DeHart	0.11	0.06	0.04	0.05									0.07	NA
Influent from Susquehanna	NA	NA	NA	NA									N/A	NA
Filter Plant Effluent	0.02	0.01	0.01	0.02									0.02	0.3*
Distribution System	0.07	0.00	0.00	0.01									0.02	0.3*
Total Dissolved Solids, mg/L														
Influent from DeHart	15	15	16	16									15.65	NA
Influent from Susquehanna	NA	NA	NA	NA									N/A	NA
Filter Plant Effluent	37	34	35	37									35.65	500*
Distribution System	39	36	34	38									36.86	500*
Total Hardness, mg/L														
Influent from DeHart	8	8	8	8									8.00	NA
Influent from Susquehanna	NA	NA	NA	NA									N/A	NA
Filter Plant Effluent	8	8	8	8									8.16	NA
Distribution System	10	6	6	6									6.94	NA
Orthophosphate, mg/L		, and the second	, and the second	, and the second									U.S.	1.00
Filter Plant Effluent	1.20	1.24	1.27	1.27									1.25	0.7 - 1.3*
Distribution System	1.21	1.19	1.12	1.27									1.20	0.7 - 1.3*
**Total Trihalomethanes, ug/L	1,21	1.15	1.12	1.27									1.20	0.7 1.5
Distribution System	34.2	NA	NA	42.8									38.5	80.0
**Total Haloacetic Acids, ug/L	34.2	INA	INA	72.0						1	1	1	30.3	55.0
Distribution System	36.8	NA	NA	48.4									42.6	60.0
Total Organic Carbon, mg/L	30.0	INA	INA	40.4						1	1		42.0	00.0
Influent from DeHart	2.16	NA	NA	1.90							T		2.03	NA
	NA	NA NA	NA NA	NA						1		-	2.03 N/A	NA NA
Influent from Susquehanna	1.22	NA NA	NA NA	1.20									1.21	NA NA
Filter Plant Effluent			120	1.20						1				NA NA
Average Filter Run, Hours	115	112											116.50	

<sup>\*</sup> Values are related to DEP *Secondary* MCL \*\* Running Annual Quarterly Average



### **EXHIBIT B**

## Water Production Data - 2023

	DeHart Wi	ithdrawal	River Wit	hdrawal	Total Wit	hdrawal	Treated	Water	Process	Water	Finished	l Water
Month	Total (MG)	Average (MGD)										
January	233.562	7.534	0.000	0.000	233.562	7.534	239.964	7.741	6.487	0.210	229.172	7.393
February	202.799	7.243	0.000	0.000	202.799	7.243	210.336	7.513	4.938	0.176	202.279	7.224
March	235.779	7.606	0.000	0.000	235.779	7.606	233.913	7.546	6.770	0.218	223.545	7.211
April	228.546	7.618	0.000	0.000	228.546	7.618	226.774	7.559	10.158	0.339	216.616	7.221
May												
June												
July												
August												
September												
October												
November												
December												
Total	900.686		0.000		900.686		910.987		28.353		871.612	
Average	225.172	7.500	0.000	0.000	225.172	7.500	227.747	7.590	7.088	0.236	217.903	7.262

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

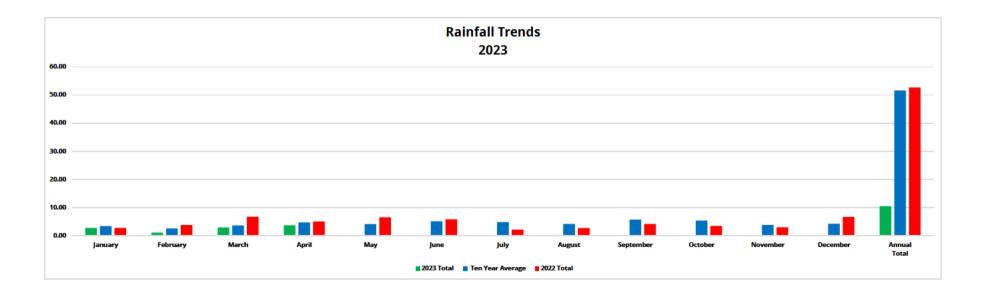


**EXHIBIT C** 

#### Rainfall at the DeHart Reservoir - 2023

(inches)

Date	January	February	March	April	May	June	July	August	September	October	November	December	Annual Total
2023 Total	2.70	1.09	2.93	3.71									10.43
Daily Average	0.087	0.039	0.095	0.124									0.345
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
2022 Total	2.70	3.79	6.72	5.03	6.55	5.84	2.16	2.67	4.16	3.43	2.94	6.63	52.62





#### **EXHIBIT D**

#### Water Level at the DeHart Reservoir - 2023 (Inches from Spillway)

Date	January	February	March	April	May	June	July	August	September	October	November	December
2023 AVG	-162.9	-58.6	-98.7	1.1								
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	-162.9	-104.3	-5.6	4.6	4.1	7.2	-12.1	-34.1	-48.5	-68.9	-80.6	319.0

#### DeHart Reservoir Water Level Trends 2023

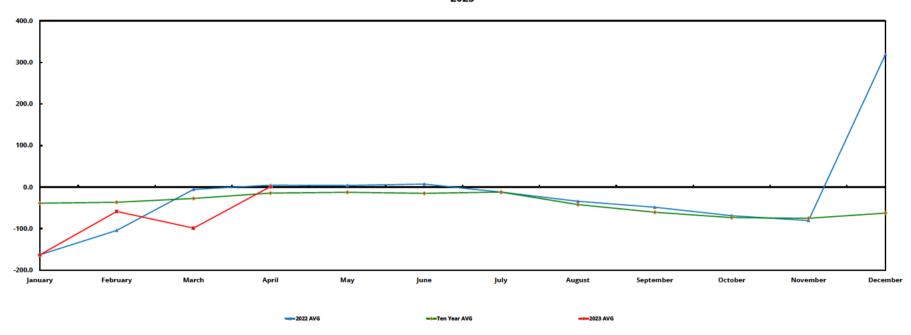
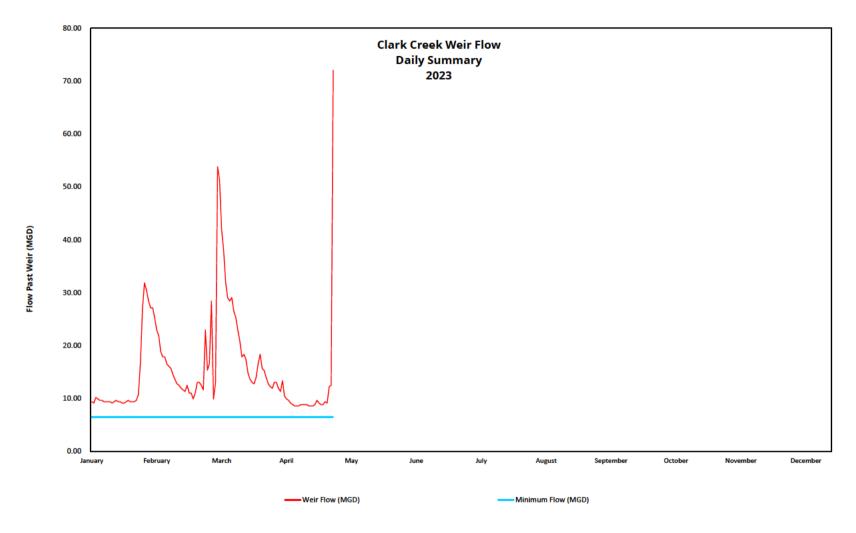




EXHIBIT E

Daily Conservation Release - 2023





#### **EXHIBIT F**

#### Utility Usage - 2023

Location / Utility	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
ater Services Center														
ectric Transmission														1
Total kwH	214 200	172 800	198 000	**									195 000	585 00
Cost Dollars	\$16.812.87	\$8 947.67	\$10 245.05	**									\$12 001.86	\$36 005.
ectric Generation														
Total kwH	214 200	172 800	198 000	**									195 000	585 00
Cost Dollars	\$1 253.64	\$1 180.73	\$1 168.47	**									\$1 200.95	\$3 602.8
latural Gas		************	4											10.000
Total Cu Ft	13 533	13 229	11 509	8 795									11 767	47 066
Cost Dollars	\$12 244.94	\$11 133.40	\$9 875.88	\$8 238.84									\$10 373.27	\$41 493.
ewer														
Total Gal	7 710 000	6 070 000	7 288 000	7 213 000									7 070 250	28 281 0
Cost, Dollars	\$71 240.40	\$56 086.80	\$67 341.12	\$66,359.60									\$65,256.98	\$261,027.
tefuse													,	
Cost. Dollars	\$967.70	\$967.70	\$967.70	\$967.70									\$967.70	\$3.870.8
eservoir Park Pump Station			450							1	•	•		30,010
ectric Transmission				1		1		1	1					
Total, kwH	88 000	92 400	85 600	**									88.667	266,000
Cost, Dollars	\$3 704.13	\$1 995.17	\$3 935.15	**									\$3,211.48	\$9,634.4
lectric Generation	\$5,704.15	\$1.555.17	45 555.15										45,211.40	45,054.4
Total, kwH	88 000	92 400	85 600	**									88.667	266.000
Cost, Dollars	\$1 350.22	\$1 214.10	\$1 215.18	**									\$1,259.83	\$3,779.5
latural Gas	\$1,330.22	\$1214.10	\$1213.10										\$1,233.03	43,119.3
Total, Cu Ft	982	629	473	466		_							638	2,550
Cost, Dollars	\$903.79	\$626.39	\$509.26	\$456.90									\$624.09	\$2,496.3
usquehanna River Pump Station	\$903.79	\$626.39	\$509.26	\$456.90									\$624.09	\$2,496.3
		l		1		1		1			1	1		
lectric Transmission	4 200	4.200	**	**	-								4 000	2 400
Total kwH	1 200	1 200	**	**									1 200	2 400
Cost Dollars	-\$56.33	\$172.86	××	**									\$58.27	\$116.53
ectric Generation				**										
Total kwH	1 200	1 200	600										1 000	3 000
Cost Dollars	\$98.68	\$71.83	\$70.50	**									\$80.34	\$241.01
latural Gas														
Total Cu Ft	580	499	499	389									492	1 967
Cost, Dollars	\$543.32	\$515.95	\$524.07	\$378.07									\$490.35	\$1,961.4
nion Square Booster Station		,												
lectric Transmission														
Total, kwH	3 340	2 744	2 483	1,559									2,532	10,126
Cost,Dollars	\$305.46	\$132.56	\$138.65	\$118.51									\$173.80	\$695.18
ectric Generation														
Total, kwH	3 340	2 744	2 483	1,559									2,532	10,126
Cost, Dollars	\$130.77	\$113.42	\$101.36	\$95.50									\$110.26	\$441.05
PeHart Facilities														
lectric Transmission														
Total, kwH	3 131	2 289	2 308	2,945									2,668	10,673
Cost, Dollars	\$168.70	\$167.37	\$165.82	\$158.03									\$164.98	\$659.92
lectric Generation														
Total, kwH	3 131	2 289	2 308	**									2,576	7,728
Cost, Dollars	\$102.80	\$83.69	\$161.05	**									\$115.85	\$347.54
uel Oil														
Total, Gals.	2 251	0	0	0									563	2,251
Cost, Dollars	\$5 768.00	\$0.00	\$0.00	\$0.00									\$1,442.00	\$5,768.0
ity Island Heat Trace					•	*		*	<u> </u>	·	·			,
lectric Transmission														
Total kwH	40	140	147	**									109	327
Cost Dollars	\$7.57	\$16.44	-\$30.01	**	+		1				1	t	-\$2.00	-\$6.00
ectric Generation	97.37	\$10.44	*#30.01	1	+		1				1	t	-42.00	
		140	147	116	1	1	1	1	1		1	<b> </b>	111	443
Total kwill														443
Total kwH Cost Dollars	40 \$61.81	\$61.93	\$119.36	\$61.83									\$76.23	\$304.93

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

Total Transmission	\$47,106
Total Generation	\$8,717
Total Refuse	\$3,871
Total Gas	\$45,951
Total Sewer	\$261,028
Total Fuel Oil	\$5,768
Total Utilities	\$368 569

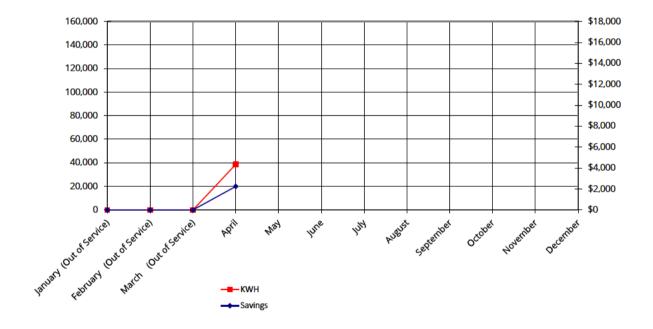


Exhibit G

Hydro-Turbine Generator Performance - 2023

Month	Kilowatt-hour (KWH)	Anticipated Savings *
January (Out of Service)	0	\$0
February (Out of Service)	0	\$0
March (Out of Service)	0	\$0
April	38,680	\$2,243
May		
June		
July		
August		
September		
October		
November		
December		
Average		
Year to Date	38,680	\$2,243

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





#### **EXHIBIT H**

#### **Treatment Chemical Usage - 2023**

Chemical	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
Chlorine														
Total Lbs.	6,294	5,518	5,991	5,949									5,938	23,752
Average, Chlorine Lbs./Day	203	197	193	198									197.8	
Average, Chlorine Dose, mg/L	6.9	1.6	2.6	3.2									3.6	
Chlorine, Cost, \$/Lbs.	\$1.639	\$1.639	\$1.639	\$1.639									1.6	
Chlorine Total Cost, Dollars	\$10,316	\$9,044	\$9,819	\$9,750									\$9,732.22	\$38,928.87
Alum 48.5%														
Total Lbs.	26,829	16,763	19,163	21,756									21,128	84,511
Average, Alum, Lbs./Day	866	599	618	725									702.0	<u> </u>
Average, Alum, mg/L	10.7	7.7	12.0	11.8									10.6	
Alum Cost, \$/Lbs.	\$0.121	\$0.121	\$0.121	\$0.121									0.1	
Alum Total Cost, Dollars	\$3,246	\$2,028	\$2,319	\$2,632									\$2,556.33	\$10,225.3
	15/2:5	,	12/2 12	,									1.2,200.00	, , , , , , , , , , , , , , , , , , , ,
Lime														
Total Lbs.	0	0	0	0				1					0	(
Average Lime, Lbs./Day	0	0	0	0				1					0.0	
Average, Lime Dose, mg/L	0.0	0.0	0.0	0.0									0.0	
Lime Cost, \$/Lbs.	\$0.86	\$0.86	\$0.86	\$0.86									\$0.86	
Lime Total Cost, Dollars	\$0.00	\$0.00	\$0.00	\$0.00									\$0.00	\$0.00
Soda Ash														
Total Lbs.	17,400	12,350	13,050	13,650									14,113	56,450
Average Soda Ash, Lbs./Day	561	441	421	455									469.5	
Average, Soda Ash Dose, mg/L	19.2	13.5	19.0	7.2									14.7	
Soda Ash Cost, \$/Lbs.	\$0.368	\$0.368	\$0.368	\$0.368									0.4	
Soda Ash Total Cost, Dollars	\$6,403	\$4,545	\$4,802	\$5,023									\$5,193.30	\$20,773.20
Fluoride														
Total Lbs.	2,240	1,965	1,965	1,660									1,958	7,830
Average, Fluoride Lbs./Day	72	70	63	55									65.0	<u> </u>
Average, Fluoride (F-) Dose, mg/L	1.1	1.1	1.0	0.9									1.0	
Fluoride Cost, \$/Lbs.	\$0.30	\$0.30	\$0.30	\$0.30									\$0.30	
Fluoride Total Cost, Dollars	\$672	\$590	\$590	\$498									\$587.50	\$2,350.00
Cadima Undurvida 500/														
Sodium Hydroxide 50%	25.622	24.225	22.007	22.665									22.605	424 420
Total NaOH 50% dry Lbs.	35,623	31,225	33,907	33,665									33,605	134,420
Average NaOH 50%, dry Lbs./Day	1,149	1,115	1,094	1,122									1,120	
Average, NaOH 50%, mg/L	19.2	15.7	19.2	8.9									15.8	
NaOH 50% Cost, dry \$/Lbs NaOH 50% Total Cost, Dollars	\$0.450 \$16,030	\$0.450 \$14,051	\$0.450 \$15,258	\$0.450 \$15,149									0.5 \$15,122.09	\$60,488.35
Tradition 50% Foral Cost, Bollars	Ψ10,030	Ψ14,031	413,230	413,143									¥13,122.03	+00,400.55
Zinc Orthophosphate														
Total Zn3(PO4)2, wet Lbs.	4,802	4,239	4,565	4,539									4,536	18,145
Average Zn3(PO4)2, wet Lbs./Day	155	151	147	151									151.1	
Average, Zn3(PO4)2 Dose, mg/L	2.5	2.5	2.5	2.5									2.5	
Zn3(PO4)2 Cost, wet \$/Lbs.	\$1.724	\$1.724	\$1.724	\$1.724									1.7	******
Zn3(PO4)2 Total Cost, Dollars	\$8,279	\$7,308	\$7,870	\$7,825									\$7,820.41	\$31,281.65
Potassium Permanganate														
Total KMnO4, Lbs.	0	0	0	0									0	0
Average KMnO4, Lbs./Day	0	0	0	0									0.0	
Average, KMnO4 Dose, mg/L	0.0	0.0	0.0	0.0				1					0.0	
KMnO4 Cost, \$/Lbs.	\$0.00	\$0.00	\$0.00	\$0.00									\$0.00	
KMnO4 Total Cost, Dollars	\$0.00	\$0.00	\$0.00	\$0.00									\$0.00	\$0.00
Expenditure													\$41,011.85	\$164,047.38
Average Treated Cost per (MG)														
Total Treated Flow (MGD)														0.00
Average Treated Flow (MGD)														227.74

2023-04-00 WSC Monthly Report Exhibit H



EXHIBIT I

DISTRIBUTION DEPARTMENT ACTIVITIES - 2023

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	Average
PA One Call Locates	501	430	550	520									2,001	500
Street Restorations	0	0	7	1									8	2
Leak Detection Assessment Percent of Distribution System	8	8	8	8									32	8
Main Break Repair - Detected Non-Surfacing	0	0	0	0									0	0
Main Breaks Repaired - Emergency	2	1	1	0									4	1
Service Line Leaks Detected	0	0	0	0									0	0
Service Line Leaks Repaired	1	0	10	6									17	4
Valves - Exercised	0	0	0	21									21	5
Valves - Replaced	0	0	0	0									0	0
Hydrant Flow Tests	0	8	1	2									11	3
Hydrants Returned to Service	0	0	0	0									0	0
Water Tap - Disconnected	2	0	11	13									26	7
Water Tap - New Connection	2	0	0	0									2	1
Water Shutoffs - Delinquent Accounts	0	0	0	0									0	0
Water Shutoffs - Other	24	11	21	62									118	30
Water Shutoffs - Non Payment	0	0	21	41									62	16
Water Restoration Turn on Other	24	22	23	33									102	26
Water Turn on - Non Payment	0	1	6	24									31	8



#### **EXHIBIT J**

### Metering Activities - 2023

<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	6	3	4	5									18	5
	Leaking	2	3	2	5									12	3
Replacement	Frozen	20	4	3	1									28	7
	Non-registering	6	6	9	4									25	6
	Large Meters <sup>1</sup>	0	0	0	0									0	0
New Service	New Installation	2	0	0	0									2	1
Meter Service															
MXU's Replaced	MXU's Replaced	47	43	40	22									152	38
Batteries Replaced	Batteries Replaced	45	323	113	65									546	137
Meter Pits Serviced	Meter Pits Serviced	0	0	0	0									0	0
Meter Calibrations															
Small Meters <sup>2</sup>	Calibrated meters	0	0	0	0									0	0

**<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) - 2023

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									0	N/A
Billed Metered Exported	Bulk Water Hauling	N/A	N/A	N/A	N/A									0	N/A
Billed Metered	Hydrant Connections	0	0	113,557	4,500									118,057	29,514
Billed Unmetered	Hydrant Flow Tests	0	12,300	4,000	4,305									20,605	5,151
Unbilled Unmetered	Hydrant Flushing (and Unbilled Authorized)	48,449	51,011	40,285	2,799,222									2,938,967	734,742
Leakage on Distribution Mains	Main Leaks	1,318,637	2,836,746	95,144	0									4,250,527	1,062,632
Leakage on Service Lines	Service Leaks	2,321,113	41,760	568,560	135,444									3,066,877	766,719
	Total	3,688,199	2,941,817	821,546	2,943,471	0	0	0	0	0	0	0	0	10,395,033	866,253



## **Wastewater**



# WASTEWATER DEPARTMENT MONTHLY REPORT



Rail fabrication for Primary Clarifier No. 4 continues

## April 2023

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



April 2023

### Overview

The Wastewater department was engaged with multiple projects throughout the month of April.

The Facility Maintenance group is completing the final stages of their Primary Clarifier Rehabilitation project. Since 2021, the CReW has been taking down each of the four tanks one at a time to replace all mechanical components (drives, sprockets, chains and flights) and replacing the supporting electrical service. It has been a long, difficult, and drawn-out process that has saved CRW nearly \$1 million by self-performing this work instead of awarding the work to an outside contractor. These savings are based on original engineering cost estimates from when the project was designed in 2017 and would have likely seen significant increases with inflation over the last several years. A huge kudos to the Facility's Maintenance CReW for this monumental accomplishment. Finishing touches are expected through May with Clarifier No. 4 being returned to full service in June.

Wastewater's Field group also took advantage of the favorable weather by completing 52 semi-annual preventative maintenances of CSO sites, cleaning/inspecting 130 inlets, replacing and repairing 10 inlets, and also undertook the heavy task of replacing a 31-foot section of sewer main near 17<sup>th</sup> and Raleigh Streets.

Field conditions for farm application of biosolids continued to be favorable in April, allowing for disposal at our lowest cost options. High diesel prices continue to cause elevated hauling costs, but tipping fees at farm sites are by far the most favorable.

## **Operations**

During the month of April, the AWTF met all monthly average NPDES permit requirements. One Sanitary Sewer Overflow (SSO) and two Dry Weather Overflows (DWO) were reported.

Hydraulic loading to the AWTF averaged 19.1 million gallons per day (MGD). The treatment process achieved removal reductions of 98.4 percent CBOD, 96.6 percent Suspended Solids, 55.6 percent Phosphorus, and 89.7 percent Ammonia (Exhibit A).

The Contract Waste Hauling Program collected \$28,533.78 in revenue from 845,180 gallons discharged (Exhibit G). The continued drop in leachate discharge for April caused a drop in revenue from the previous few months. This trend is apparent looking back at recent years but should pick back up in the coming months with more rain.



April 2023

The Cogeneration Facility experienced an average run time of 25 percent in April. Revenue is estimated at \$4,248.29 on 28,800 Kilowatt-hours generated for the month. The decrease in runtime is due to mechanical failures and the long lead time for replacement parts.

## Laboratory

- Completed BOD/CBOD IDOCs. We are running all samples in-house.
- Completed and submitted data pack for new Fecal and E. Coli method to PADEP and set up supplemental assessment for beginning of May.
- Continued assisting operations with automated chlorine system calibrations.
- Continuing to set up WIMS and to iron out support issues with Aquatic Informatics.

### **Pretreatment**

- Working on completing response for the final inspection report from the USEPA audit conducted in February.
- Reissued REYWSC Industrial User Permit, pending sample results. Updated their permit regarding USEPA audit and will use it as a template to update all other permits.
- Starting to review Industrial User first quarter data that has been received and advise, as necessary.

### **Plant Maintenance**

- Repaired electrical wiring and replaced transformer at the Chlorine Contact tank.
- Performed seasonal grounds maintenance and cleared trees and debris from fence.
- Performed landscaping and planted new bushes and flowers around the main building.
- Installed washdown piping to lagoon for cleanup.
- Mounted and installed hardwiring for 12 new surveillance cameras at the Front Street Pump Station.
- Serviced standby generator and ran full load test at Spring Creek and Market Street Pump Stations
- Replaced thrust bearing Rotork valve actuator on Pista Grit No. 3.
- Reconfigured pump curve and replaced sheaves at the Plant Drain Pump Station.
- Welded and replaced return rail and installed new sludge collection conveyance system for Primary Clarifier No. 4.
- Cleared debris from the bar screen and replaced and adjusted necessary drive components at the Spring Creek Pump Station.
- Performed 10 vehicular repairs in preparation for state inspections. Performed daily vehicular related repairs such as bulbs, batteries, tires, lube oil and filters, and flat tires.



April 2023

- Provided weekly maintenance on JCB Loader.
- Performed maintenance tasks at 3003 North Front Street as per request.

### **Field Construction**

- Repaired ten inlets in various locations throughout the city.
- Blanked three inlet backs in various locations throughout the city to combat debris from entering the system.
- Performed a sanitary replacement at 27th and Raleigh Streets. The Crew replaced 31-feet of broken and deformed 12-inch vitrified clay (VCP) pipe with new 12-inch standard dimension radio (SDR) pipe. By doing this repair, we made the run eligible to be cured-in-place piping (CIPP) lined in the future.

## **Field Operations**

- Performed CCTV assessment of 5,702 feet (1.08 miles) of pipe.
- Flushed 4,219 feet (0.8 miles) of sewer pipe.
- Responded to seven backup and overflow calls. CRW was liable for one at 1512 Naudain Street.
- Responded to eight sinkhole calls. CRW was liable for two.
- Cleaned 130 stormwater inlets.
- Inspected 129 stormwater inlets.
- Completed 52 Combined Sewer Overflow (CSO) semi-annual preventative maintenance's (22 in March and 30 in April).
- Two Dry Weather Overflows (DWO) occurred this month. One at CSO No. 018 and 016. The first
  was due to the failure of the bypass pumping system for the Front Street Interceptor
  Rehabilitation project. The second was due to a mechanical failure of the CSO gate operator.

## **Environmental Compliance**

- Completed four inspections of Fats, Oil & Grease (FOG) dischargers.
- Renewed three FOG discharge permits.
- Issued one FOG-related Notice of Violation (NOVs).
- Provided education packet to one newly identified FOG discharger (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.



April 2023

- Two investigations were conducted during the month of April.
  - Environmental Compliance received a report of an illicit discharge of petroleum products to the Susquehanna River. The discharge was confirmed, and penalties are still being assessed.
  - Environmental Compliance investigated a report of erosion and flooding near the intersection of 18<sup>th</sup> and Holly Streets during rain events. Poor grading and street surface damage were witnessed as contributing factors to the flooding. All information was forwarded to CRW's Engineering department.

## **Street Sweeping**

- There were no complaints received this month.
- Completed 723 miles of scheduled street sweeping within the city.
- Water usage was approximately 10,120 gallons.
- Continued to assist cleaning storm inlets in scheduled sweeping areas.



#### **EXHIBIT A**

## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Process Control - 2023

Parameters	January	February	March	April	May	June	July	August	September	October	November D	)ecember	Average	NPDES Limits
					May	June	July	rtugust	September	octobe.	reoverniser 2	recember		
Volume, MGD	22.0	16.8	19.3	19.1									19.3	37.7
Carbonaceous Biochemical Oxyge														
Influent, mg/l	97		114	205									139	
Effluent, mg/l	4		4	3									4	25
Percent Removal, %	95.6		96.7	98.4									97.0	
Effluent Loading, lb/d	681	469	596	368									529	7,860
Suspended Solids:														
Influent, mg/l	156	222	173	187									185	
Effluent, mg/l	8	3	3	4									5	30
Percent Removal, %	95.0	98.5	98.1	96.6									97.1	
Effluent Loading, lb/d	1,447	412	582	1,043									871	9,433
Nitrogen														
Total-N														
Influent, mg/l	26	33	26	30									29	
Effluent, mg/l	5.0		5.7	4.3									5	Monitor
Percent Removal, %	80.5		78	85.6									83.1	
Effluent Loading, lb/d	993	548	846	652									760	
NH3-N														
Influent mg/L	17	21	17	16									18	
Effluent, mg/L	1.9	1.2	1.4	1.6									2	11 (2
Percent Removal, %	88.5		91.8	89.7									91.1	`
Effluent Loading, lb/d	359		248	258									258	4,716
Phosphorus:														
Influent, mg/L	2.9	4.2	3.5	3.8									3.6	
Effluent, mg/L	0.8		1.2	1.6									1.3	2.0
Percent Removal, %	70.3		64.4	55.6									62.9	
Effluent Loading, lb/d	152		194	237									201	629
pH:														
Influent, Std. Units	7.4	7.3	7.3	7.3									7.3	
Effluent, Std. Units	7.4		7.4	7.4									7.4	6.0 - 9.0
Dissolved Oxygen:														
Effluent Minimum, mg/L	8.0	8.8	7.8	8.3									8.2	5.0 Min.
Fecal Coliform:														
Effluent, No./100 ml	25	3	5	3									9	200/100 ml (1
Chlorine Residual:														
Effluent, mg/L	0.22	0.18	0.20	0.22									0.21	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.

PROCESS2032-A xls 7

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

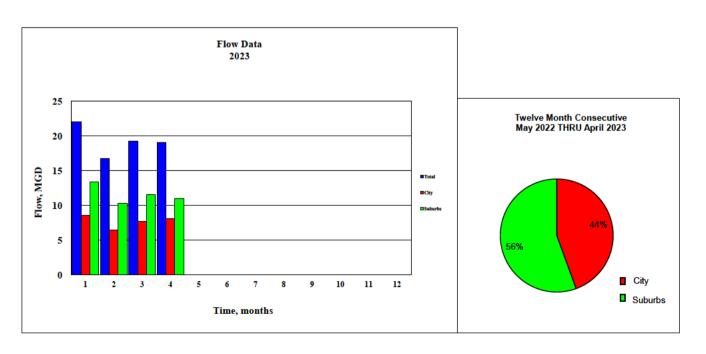


#### **EXHIBIT B**

## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Flow Monitoring Information, MGD - 2023

	Total				С	ity Region	s			Total Precip				
Month	Flow	City	Suburbs	1	2	3	4	5	6	7	8	9	10	inches
January February	22.000 16.800	8.622 6.480	13.378 10.320	8.110 5.480	0.192 0.150	0 300 0 300	-0.160 0.410	0.180 0.140	1.400 1.200	5.280 3.950	2.208 1.720	4.060 3.100	0.430 0.350	2.450 1.010
March	19.300	7.696	11.604	6.670	0.176	0 300	0 390	0.160	1.300	4.250	2.024	3.670	0.360	2.560
April May June July August September October November December	19.100	8.076	11.024	7.140	0.166	0.300	0.270	0.200	1.300	4.130	1.914	3.320	0.360	5.890
Average Percent	19.30 100.00	7.72 39.99	11.58 60.01											2.98 11.91



FLOW2023 No Zeros-B xls 8



#### EXHIBIT C

## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

#### Treatment Utility and Chemical Usage - 2023

Utility / Chemical	January	February	March	April	May	June	July	August	September	October	November December	Average	Total
					-								
Electric													
Total, kwH	1,158,900	1,028,400	1,033,800	1,089,000								1,077,525	4,310,100
Average, kwH/Day	37,384	36,729	33,348	36,300								35,940	
Cost, Dollars	\$98,628.52	\$60,520.22	\$60,192.18	\$63,307.22								\$70,662.04	\$282,648.14
Natural Gas													
Total, Cu Ft	621.9	554.8	287.6	*								366	1,464
Average, Cu Ft/Day	20	20	207.0	*								16	
Cost, Dollars	\$6,237.14	\$5,423.45	\$3,026.40	*									\$14,686.99
Water													
Water Total, Gal.	1,187,000	1,298,000	928,000	*								1,137,667	3,413,000
Average, Gal./Day	38,290	46,357	29,935	*								38,194	3,413,000
Cost, Dollars	\$15,616.58		\$12,938.52	*								\$11,329.86	\$45,319.42
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MicroC													
Total, Gal.	0	0	0	0								0	0
Average, Gal./Day	0.0	0.0	0.0	0.0								0	
Cost, Dollars	\$0	\$0.00	\$0	\$0								\$0.00	\$0.00
Sodium Hydroxide													
Total, Gal.	0	0	0	0								0	0
Average, Gal./Day	0	0	0	0								0	
Cost, Dollars	0	0	0	0								\$0.00	\$0.00
Chlorine Disinfection													
Total, Lbs.	13,115	5,973	6,830	5,240								7,789	31,158
Average, Lbs./Day	423	223	220	175								260	
Avg Residual, mg/L	0.22	0.18	0.20	0.22								0.21	
Cost, \$/Lbs.	\$1.64	\$1.64	\$1.64	\$1.64								\$1.64	
Total Cost, Dollars	\$21,508.60	\$9,795.72	\$11,201.20	\$8,593.60								\$12,774.78	\$51,099.12
Phosphorous Removal													
Total FeCl3, Gals.	3,113	2,950	3,113	3,589								3,191	12,765
Avg FeCl3, Gals./Day	100	105	100	120								106	
FeCl3 Cost, \$/Gal. FeCl3 Total Cost, Dolla	\$1.74 \$5,416.97	\$1.74 \$5,133.00	\$1.74 \$5,416.62	\$1.74 \$6,244.86								\$1.74 \$5.552.86	\$22,211.45
recis Total Cost, Dolla	₽5,410.3/	₽J, 1 JJ.UU	47,410.02	<b>₽</b> 0,∠44.00								00.25 روپ	C+.112,224

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

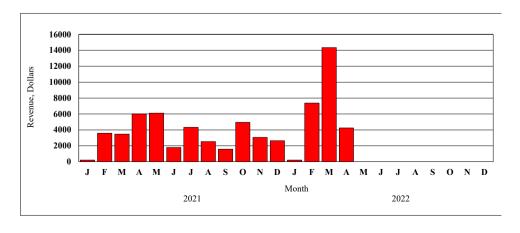


#### **EXHIBIT D**

## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

**Cogeneration Electrical Production: 2022-2023** 

	Dorcent	Daily Ava	Kilowatt Hours	Ectimated		
Period	Percent Run Time	Daily Avg Kilowatt	Produced	Estimated		
Period	Run Time	Kilowatt	Produced	Revenue		
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	34	1,365	42,300	\$4,946.99		
November 2022	21	870	26,100	\$3,052.40		
December 2022	20	726	22,500	\$2,631.38		
Total - 2022 Monthly Average - 2022	28	943	343,800 28,650	\$40,207.41 \$3,350.62		
January 2023 February 2023 March 2023	2 58 75	58 2,250 3,135	1,800 63,000 97,200	\$210.51 \$7,367.85 \$14,337.97		
April 2023 May 2023 June 2023 July 2023 August 2023 September 2023 October 2023 November 2023 December 202	25	960	28,800	\$4,248.29		
Total - 2023 Monthly Average - 2023	40	1,601	190,800 47,700	\$26,164.62 \$6,541.16		





#### EXHIBIT E

## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Sludge Handling Information - 2023

Process	January	February	March	April	May	June	July	August	September	October	November	December	Average	
iolids Removal														
Process, Lbs.	704,819	890,443	1,557,518	1,554,485									1,176,816	
CWH Program, Lbs.	196,727	230,186	125,669	137,543									172,531	
Total Solids, Lbs.	901,546	1,120,629	1,683,187	1,692,028									1,349,347	
udge Dewatering														
Feed Volume, Gals.	5,489,000	4,398,000	3,878,000	5,322,000									4,771,750	
Feed Solids, %	1.5	1.5	1.5	1.4									1.4	
Labor, Hours	635	519	531	651									584	
Operations, Hours	1,181	977	1,014	672									961	
Total Cake, Dry Tons	208	168	162	181									180	
Total Cake, Wet Tons	1,264	1,089	1,040	1,164									1,139	
Cake TS, %	16.5	15.9	15.6	15.6									15.9	
Press Rate, Lbs./Hour	2,140	2,228	2,052	3,465									2,471	
Polymer Dosage, Lbs	4,299	4,556	4,533	5,031									4,605	
Polymer Dosage, Lbs/Dry	24.3	26.4	28.6	29.2									27.1	
visposal Cost														
Labor, Dollars	\$12,208.54	\$9,982.89	\$10,200.05	\$12,502.61									\$11,223.52	
Electrical,Dollars	\$519.82	\$430.06	\$445.98	\$295.64									\$422.87	
Polymer, Dollars	\$8,383.05	\$8,885.16	\$8,839.35	\$9,810.45									\$8,979.50	
Disposal, Dollars	\$43,033.40	\$59,350.50	\$42,993.10	\$23,433.90									\$42,202.73	
Total Cost, Dollars	\$64,144.81	\$78,648.61	\$62,478.49	\$46,042.60									\$62,828.63	
Cost Per Dry Ton, Dollars	\$308.39	\$468.15	\$385.67	\$254.38									\$354.15	

SLUDGE2023-E xls



## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

#### Conveyance Utility Usage - 2023

Location / Utility	January	February	March	April	May	June	July	August	September	October	November	December	Average	Total
Front Street Pump Station														
Electric														
Total, kwH	153,600	97,200	78,000	*									109,600	328,80
Average, kwH/Day	4,955	3,471	2,516	*									3,647	
Cost, Dollars	\$10,171.87	\$6,179.35	\$5,794.20	*									\$7,381.81	\$22,145.4
Fuel Oil														
Total, Gals.	0	0	0	0									0	(
Average, Gals./Day	0	0	0	0									0	
Cost, Dollars	\$0.00	\$0.00	\$0.00	\$0.00									0	\$0.00
Water														
Total, Gals.	284,000	318,000	276,000	*									292,667	878,000
Average, Gal./Day	9,161	11,357	8,903	*									9,807	
Cost, Dollars	\$3,633.08	\$3,984.64	\$3,550.36	*										\$11,168.08
Spring Creek Pump Station														
Electric														
Total, kwH	38,400	50,240	40,640	38,400									41,920	167,680
Average, kwH/Day	1,239	1,794	1,311	1,280									1,406	
Cost, Dollars	\$1,274.90	\$3,346.91	\$3,295.83	\$3,158.30									\$2,768.99	\$11,075.94
Fuel Oil														
Total, Gals.	0	0	0	0									0	0
Average, Gals./Day	0	0	0	0									0	
Cost, Dollars	\$0.00	\$0.00	\$0.00	\$0.00									\$0.00	\$0.00
Water														
Total, Gals.	90,000	104,000	86,000	*									93,333	280,000
Average, Gal./Day	2,903	3,714	2,774	*									3,131	
Cost, Dollars	\$1,006.59	\$1,151.35	\$965.23	*									\$1,041.06	\$3,123.17
Market Street Pump Station														
Electric														
Total, kwH	1,320	1,200	1,200	960									1,170	4,680
Average, kwH/Day	43	43	39	32									39	
Cost,Dollars	\$151.91	\$153.90	\$174.52	\$157.79									\$159.53	\$638.12
Fuel Oil														
Total, Gals.	0	0	0	0									0	0
Average, Gals./Day	0	0	0	0									0	
Cost, Dollars	\$0.00	\$0.00	\$0.00	\$0.00									\$0.00	\$0.00
City Island Pump Station														
Electric														
Total, kwH	40	40	*	*									40	80
Average, kwH/Day	1	1	*	*									1	
Cost, Dollars	\$42.43	\$62.63	*	*									\$52.53	\$105.06

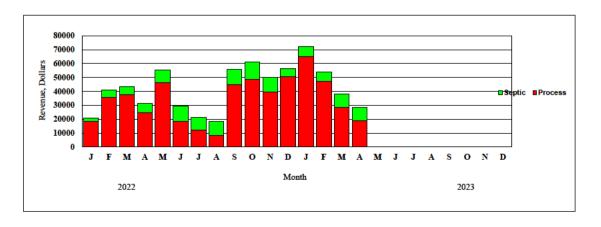


#### **EXHIBIT G**

## CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Contract Waste Hauling Program 2022 - 2023

	Proc	ess	Sep	tic	Total			
Month	Gallons	Revenue	Gallons	Revenue	Gallons	Revenue		
	FF7 700	<b>*</b> 40.254.25	70.450	to 770 00	626.220	t24.024.45		
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	1,738,680	\$48,922.56	342,650	\$12,173.40	2,081,330	\$61,095.96		
November	1,412,550	\$39,494.61	293,700	\$10,537.20	1,706,250	\$50,031.81		
December	1,776,820	\$50,682.24	158,050	\$5,586.30	1,934,870	\$56,268.54		
Total - 2022	13,212,877	\$384,858.78	2,799,825	\$99,434.60	16,012,612	\$484,293.48		
Monthly Average - 2022	1,101,073	\$32,071.57	233,319	\$8,286.22	1,334,384	\$40,357.79		
monding Average 2022	1,101,075	432,071.37	233,313	40,200.22	1,55 1,56 1	+ 10,557.73		
January	2,332,260	\$65,162.88	208,150	\$7,173.90	2,540,410	\$72,336.78		
February	1,424,370	\$47,326.95	191,150	\$6,694.20	1,615,520	\$54,021.15		
March	944,920	\$28,533.96	265,650	\$9,491.40	1,210,570	\$38,025.36		
April	579,580	\$19,060.38	265,600	\$9,473.40	845,180	\$28,533.78		
May								
June								
July								
August								
September								
October								
November								
December								
Total - 2023	5,281,130	\$160,084.17	930,550	\$32,832.90	6,211,680	\$192,917.07		
Monthly Average - 2023	1,320,283	\$40,021.04	232,638	\$8,208.23	1,552,920	\$48,229.27		



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