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Ensure Financial Stability	
Reconciled Bank Account Balances	Refer to attached Reconciled Bank Account Balances as of 12/31/2023.
Monthly Financial Statements	Provided separately to Board of Directors.
Monthly Financial Dashboard	Provided separately to Board of Directors.
AP Check Reconciliation Register	Provided separately to Board of Directors.
Capital Improvement Projects for Drinking Water	Provided separately to Board of Directors.
Capital Improvement Projects for Wastewater	Provided separately to Board of Directors.
Grant Management	Refer to attached Grant Management Report.

Ensure Revenues are Consistent with System Usage	
Water Shut-offs	There were 0 water shut-offs for non-payment and 16 service shut-off requests.
Repair/Replace Meters/MXUs/Batteries	Drinking Water Distribution staff replaced 6 water meters, 32 batteries, and 25 MXUs.
Reduce Wet Weather Impacts to Infrastructure, Community, and Receiving Waters	
Negotiate with PADEP/U.S. EPA/DOJ on Past and Future Practices	No update.
Develop Necessary Planning for Implementation of Green Infrastructure	No update.
Joint Pollutant Reduction Plan - Collaborate with Suburban Partners on MS4	No update.
Obtain and Comply with Individual MS4 Permit	No update.

Operate Facilities with a High Standard of Care	
Permit Compliance	The Drinking Water department met all primary and secondary Safe Drinking Water Act permit parameters for the month of December.
	The AWTF met all NPDES permit parameters for the month of December. One Sanitary Sewer Overflow (SSO) was 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 for December.
	The Wastewater department completed all regularly scheduled preventative maintenance in the month of December.
CCTV	A total of 532.1 feet (0.1 miles) of sewer pipes were assessed by closed circuit television (CCTV) footage during the month of December. A total of 3,852 feet (0.73 miles) of sewer pipes were flushed as well.
Incident Response	Wastewater responded to 18 backup and overflow calls from residents during the month of December. CRW was responsible for one on Kensington Street.
Geographic Information System (GIS)	<ul style="list-style-type: none"> • Ten (10) Pennsylvania One Call tickets were completed. Two (2) had no CRW facilities present and eight (8) required a map. • Lead Service Line Inventory project support continues. This includes attendance to several meetings across multiple departments. • Reviewed RFP submittals and narrowed down the selection to three consultants for final interviews. Interviews are scheduled for January, 2024.
Cityworks	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>

<p>Asset Management</p>	<p>Roadmap Implementation activity report:</p> <ul style="list-style-type: none"> Prepared Asset Management Issue Brief and scope of work for FY 2024 Roadmap Activities for 1/24/2024 Board agenda. <p>Decision Making Capital Planning Roadmap Implementation Group (RIG)</p> <ul style="list-style-type: none"> No update <p>Information System Data Management Roadmap Implementation Group RIG</p> <ul style="list-style-type: none"> Subtask 3.1 finalized data audit and gap closure plan 1/9/2024. Subtask 3.3, draft Information System assessment and recommendation memorandum expected to be received mid-January. <p>Operations & Maintenance Roadmap Implementation Group RIG</p> <ul style="list-style-type: none"> Collection System Asset Management Plan 20-Year Capital Improvement Plan (CIP) completed. Data collection complete for AWTF asset inventory and condition assessment project, updated registry in quality assurance process. Labeling of assets with barcodes to occur in the first quarter of 2024. <p>Organizational Framework Roadmap Implementation Group RIG</p> <ul style="list-style-type: none"> Subtask 5.1 Regulatory Reporting and Monitoring and Subtask 5.2 Employee Development and Training are in progress. CRW in review of draft deliverables for Task Order 2023-01-03 Dashboard Development, edits and comments are due 1/17/2024. <p>InfoAsset Planner Year 2 Implementation activity report:</p> <ul style="list-style-type: none"> Prepared InfoAsset Planner Issue Brief and scope of work for FY 2024 activities for 1/24/2024 Board agenda. <p>Other activities:</p> <ul style="list-style-type: none"> Participating in CRW's Request for Proposal (RFP) - Geographical Information System and Computerized Maintenance Management System Support interview and selection process. Collaboration continues with working groups on the Lead Service Line Inventory, internal land development and permitting process, Cityworks Optimization and Risk Management.
<p>Development Review Summary</p>	<p>For details, see attached Development Stormwater Management Review Summary spreadsheet for January.</p>

Undertake Capital Improvement Projects - Refer to attached Capital Improvement Projects Report	
Professional & Contractor Services	<p>Recommend Board approval of the following Resolutions, Task Orders, Change Orders and Agreements:</p> <p>Drinking Water:</p> <ul style="list-style-type: none"> • Task Order 2024-01-01: Engineering Services for AM Roadmap FY24, Phase 2 Activities [REDACTED] • Task Order 2024-02-01: Engineering Services for InfoAsset Planner Support Services FY 2024 [REDACTED] • Task Order 2024-04-01: Engineering Services for Drinking Water Tank Inspection Services [REDACTED] • Existing Salt Shed @ Water Services Center - Change Order No. 2 [REDACTED] • 2022 Water System Improvements Project – Change Order No. 3 [REDACTED] • Sewer and Water Maintenance Contract (Trenchless) - Recommendation of Award [REDACTED] • Timber Product Harvest/Sale – Recommendation of Award [REDACTED] <p>Wastewater:</p> <ul style="list-style-type: none"> • Task Order 2023-12-02: Engineering Services for 2024 Sewer System Improvements [REDACTED] • 2023 Sewer System Improvements Project - Change Order No. 2 [REDACTED] • Ratification of Renewable Energy Credits (RECs) Purchase and Sale Agreement [REDACTED] • Arsenal Boulevard Sewer Improvements Project - Recommendation of Award [REDACTED] • AWTF Energy Recovery Improvements Project (General Construction) - Recommendation of Award [REDACTED] • AWTF Energy Recovery Improvements Project (Electrical Construction - Recommendation of Award [REDACTED] • Procurement of Echo Level Sensors [REDACTED] (Wastewater) <p>Stormwater:</p> <ul style="list-style-type: none"> • Resolution No. 2024-002 – Stormwater Operation and Maintenance Agreement [REDACTED] • Task Order 2024-03-01: Professional Services for GSI Surface Maintenance [REDACTED] • Phase 4 PENNVEST SW Pro-Fi Project - Change Order No. 1 [REDACTED]
Stormwater O&M Agreements	Recommend Board approval of the following: Resolution No. 2024-002 [REDACTED] - 15th and Walnut Streets.
AWTF Primary Digesters Rehabilitation	No update. Closeout of the general construction contract is dependent upon resolution of the contractor's time delay claim.
AWTF Primary Clarifiers Improvements	The project is in the preliminary design phase.
AWTF Energy Recovery Improvements	Bids were opened on 1/4/2024. Refer to the agenda for recommendation of award for the general and electrical construction contracts. No bids were received for the HVAC contract which will be rebid in January.
Front Street Pumping Station Improvements	No update. Closeout of the general construction contract is dependent upon resolution of the contractor's time delay claim.

Undertake Renewal and Replacement Projects	
2022 Water System Improvements	All work is complete and a final adjusting change order is on this month's agenda for consideration. The project will then be closed out.
Cameron Street Water Main - Phase 4	No update. The contractor will remobilize in the Spring of 2024 to complete the remainder of the contract work.
2023 Sewer System Improvements (Excavation)	All work is complete and a final adjusting change order is on this month's agenda for consideration. The project will then be closed out.
2023 Sewer System Improvements (Trenchless)	No update. Standard Pipe Services has been directed to pause work and will resume cured-in-place pipe (CIPP) lining work after 4/1/2024.
2024 Sewer System Improvements	The project is in final design stage and is expected to be advertised for bids in March.
Arsenal Boulevard Sewer Improvements	Bids were opened on 1/4/2024. Refer to the agenda for recommendation of award.
Front Street Interceptor Rehabilitation - Phase 2	The contractor is performing miscellaneous punch list items in Riverfront Park which should be completed in January.
Water Facility Maintenance	The Water Maintenance group completed various repairs throughout the Water Treatment Facility, pumping stations, and at the Administrative Offices throughout the month. A narrative is provided in the Drinking Water Department Monthly Report for December.
Wastewater Facility Maintenance	The Wastewater Maintenance group completed various repairs throughout the Advanced Wastewater Treatment Facility (AWTF), pumping stations, and at the Administrative Offices throughout the month. A narrative is provided in the Wastewater Department Monthly Report for December.
Sinkhole Program	Two (2) sinkholes were investigated by CRW in the month of December. None were due to failure of a CRW asset.
Inlet Cleaning	A total of 13 stormwater inlets were cleaned during the month of December, and 10 stormwater inlet inspections were performed. Field Construction replaced two inlets during a stormwater pipe replacement project on Burma Street.

Operate as an Efficient, Sustainable and Resilient Water Utility	
DeHart Property Stewardship	In accordance with the DeHart Property Forest Management Plan: <ul style="list-style-type: none"> • A regeneration harvest is underway in Management Units (MUs) 20, 34, 36, and 37 (approximately 155 acres). Harvest will improve forest health and release regeneration of a more desirable understory. • Harvest is underway in MUs 40 and 42 (approximately 135 acres). Harvest prescription supports overstory removal to release regeneration. • A timber harvest and sale agreement for MU 12 (approximately 140 acres) is recommended for award. A sale tour was hosted on 12/20/2023. <i>See related Issue Brief.</i>
Sustainability	Drafting of a Request for Proposal (RFP) for a solar development project is complete and will be released in January 2024.
Internal Communications	Intranet [REDACTED] site continues to be used. The Q4 <i>Daily Flow</i> newsletter was distributed; the content celebrated CRW's 10-year anniversary.

Inform and Listen to Customers and Encourage Stewardship of our Systems	
Media Relations - Press and Social Media	<p>PRESS RELEASES: December 20: "CAPITAL REGION WATER AWARDED \$3.5 MILLION TO CONSTRUCT NEW SEWER INTERCEPTOR ALONG PAXTON CREEK"</p> <p>SOCIAL MEDIA TOPICS: Facebook/Instagram: +2 FB/+7 IG New Followers (TOTAL: 1,653 FB and 726 IG). Four (4) Posts; Highest Engaged Post: "Lt. Gov Davis Event at Boys and Girls Club Harrisburg" (140 Reachs, 7 Reactions, 1 Shares, 0 comments); Other topics: Happy Holiday Posts, and December Board meeting canceled, Nextdoor: Stats: 7,344 Total Members (138 New members); Zero (0) Post. 2023 Demographics: Most Active Age-range: 25-54; Gender Division: 62% Women / 37% Men; Locations: Harrisburg, Penbrook, Mechanicsburg, Steelton, Linglestown, Camp Hill and Lancaster.</p>
Community Relations	<p>Community Outreach:</p> <ul style="list-style-type: none"> • One (1) community event: Volunteer and Partner Appreciation Luncheon on 12/20/2023. • Zero (0) facility tours. • Zero (0) community meetings. • Delivered eight (8) sets of door-to-door notifications impacting approximately six hundred seventy-five (675) customers. Included six (6) courtesy construction notices and two (2) boil water/ lift boil water advisories. • Two (2) Everbridge alerts. Included one (1) boil water advisory and one (1) lift boil water advisory.
Public Communications	<p>WHAT'S ON TAP COMMUNICATION: The December monthly bill stuffer was distributed as a bill insert. Topics included: Fats, Oils and Grease (FOG) and Winter Preparation for Pipes.</p>
Business Diversity	<p>No update.</p>

Administrative	
Risk Management	<p>Executive Summary:</p> <p>Total Claims: 37</p> <p>Open: 9</p> <p>Closed: 28</p> <p><u>Insurance Line Claim Count:</u></p> <p>Auto: 3</p> <p>General Liability: 21</p> <p>Public Officials: 2</p> <p>Workers Compensation: 11</p>
Human Resources	For details, see attached Recruiting Status Report.
Procurement	<p>Procurement continues to negotiate pricing, terms, etc., as well as conducts bids and assists staff in identifying vendors and requesting quotes for goods and services, as requested.</p> <p>Recommend Board approval of the following Old Business from the 12/14/2023 Operations and Engineering Committee Meeting:</p> <ol style="list-style-type: none"> 1. Ratification of Natural Gas Contract [REDACTED] for the period 1/1/2024 to 12/31/2024. 2. PROJECT NUMBER 2023 – 214 - Water Treatment Chemicals - Ratification of Procurement of Soda Ash Light [REDACTED] 3. PROJECT NUMBER 2023 – 214 - Water Treatment Chemicals - Rejection of Procurement for Hydrated Lime (Lime Slurry). <p>Recommend Board approval of the following:</p> <ol style="list-style-type: none"> 1. Procurement of Microsoft 365 [REDACTED]

<p>Information Technologies (IT)</p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>
<p>Office Management and Admin Professional Services and Construction</p>	<p>Incoming Correspondence Report: Refer to attached Incoming Correspondence Report for December 2023.</p> <p>Street/Sidewalk-Cut Permits: One (1) Drinking Water and one (1) Wastewater permits were issued. One (1) Drinking Water and two (2) Wastewater permit were successfully completed, inspected, and closed by the City of Harrisburg's Engineer.</p> <p>Fleet Management (Acquisitions):</p> <ul style="list-style-type: none"> • CRW accepted delivery of C-103 - 2023 Ford Transit Connect XL Van (Traded-in C-49) on 1/11/2024 (Drinking Water) <p>Fleet Management (Completed Dispositions thru Municibid)</p> <p>Drinking Water:</p> <ul style="list-style-type: none"> • C-14 - 2009 Ford Escape Hybrid. Sold for \$3,200 on 12/22/2023. Vehicle was picked up on 1/2/2024. • C-47 - 1986 Protecto Flash Model 85 Traffic Signboard. Sold for \$525 on 1/2/2024. Equipment was picked up on 1/8/2024. • C-109 - Hach Fluoride Analyzer. Bids closed 12/13/2023 @ 9:00 p.m. (No bids received). <p>Wastewater: None.</p> <p>Recommend Board approval of the following: PROJECT NUMBER 2023 – 211 – Procurement of Janitorial Services [REDACTED]</p>

Right-to-Know Requests	CRW has received and responded to zero (0) Right-to-Know requests during the period 12/14/2023 through 1/17/2024. 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.
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Reconciled Bank Account Balances



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Grant Management Report

GRANT OVERVIEW											
Funding	Program	Project	Proposal Due Date	Anticipated Announcement Date	Date of Notification	Request Amount	Request Type (Cash vs. Loan)	CRW Matching Amount	\$\$\$ Awarded	Loan Disbursed	Rationale/Notes
Capital Region Water's Pending Grant & Loan Applications											
Department of Community and Economic Development	COVID-19 ARPA H2O PA - Small Water Supply, Sanitary Sewer and Storm Water Projects	Paxton Creek Interceptor Site Preparation Project	12/21/2022	N/A	12/19/2023	\$10,500,000	Cash	\$12,275,105	\$3,500,000	\$0	
FY24 Community Project Funding Appropriations Request	Green Stormwater Infrastructure	Paxton Creek Restoration Planning Project	4/25/2023	Early to mid-2024	N/A	\$500,000	Cash	TBD	\$0	\$0	
National Fish and Wildlife Foundation	Chesapeake Bay Innovative Nutrient and Sediment Reduction Grant	Enhancing Community Connections Through Clean Water Project	Initial - 11/17/2022 Additional - 12/14/2023	Additional - Anticipated Early 2024	Initial - 5/30/2023	\$1,000,000	Cash	\$300,000	\$0	\$0	Notified on 5/30/2023 that CRW was not selected for grant funding Notified 11/21/2023 that NFWF was receiving additional funding for 2023 INSR funding round. CRW opting to resubmit with application due 12/14/2023
SUB TOTALS						\$12,000,000		\$12,575,105		\$0	
Capital Region Water's Awarded Grant, Loan and Bond Proceeds											
PENNVEST	Infrastructure (Projects)	ProFi Wastewater Infrastructure Loan	COMPLETED	10/21/2020	10/21/2020	\$65,000,000	Loan	\$1,000,000	\$65,000,000	\$15,406,021	\$960,364.95 submitted for reimbursement on 1/10/2024
PENNVEST	Infrastructure (Projects)	ProFi Wastewater Collection System Rehab Loan	COMPLETED	9/2/2021	9/2/2021	\$21,000,000	Loan	\$500,000	\$21,000,000	\$6,023,430	
PENNVEST	Infrastructure (Projects)	ProFi Green Infrastructure PENNVEST Loan	COMPLETED	10/16/2019	10/16/2019	\$13,000,000	Loan	\$0	\$13,000,000	\$6,324,749	Amount due from COH - \$216,430 \$576,244 submitted for reimbursement on 12/21/2023
PENNVEST	Infrastructure (Projects)	Front Street Pump Station Upgrade	COMPLETED	7/18/2018	7/18/2018	\$11,136,900	Loan	\$0	\$11,136,900	\$10,580,055	\$556,748 is PENNVEST holdback amount for project
PENNVEST	Infrastructure (Projects)	ProFi Drinking Water System Improvements	COMPLETED	4/20/2022	4/20/2022	\$41,622,000	Loan	\$0	\$41,622,000	\$3,776,746	Phase 3 settled on 9/19/2023 \$646,023 submitted for reimbursement on 12/21/2023 \$1,236,461 submitted for reimbursement on 1/10/2024 \$332,878 to be submitted in February after DEP approval of Change Order
FEMA	Coronavirus (COVID-19) Pandemic: Safe Opening and Operation Work Eligible for Public Assistance	FEMA COVID Relief	COMPLETED	7/13/2021	7/13/2021	\$103,258	Cash	\$0	\$103,258	\$103,258	Awarded on 2/7/2022 Final payment of \$10,326 received on 5/9/2023
Susquehanna River Basin Commission (SRBC)	2023 Comsumptive Use Mitigation Grant Program	Advanced Metering Infrastructure Upgrade Project	1/31/2023	April 2023	4/21/2023	\$250,000	Cash	\$2,070,000	\$250,000	\$0	Award letter received on 4/21/2023 PENNVEST Drinking Water Pro-Fi Phase 3 settled on 9/19/2023
SUB TOTALS						\$152,112,158		\$3,570,000	\$152,112,158	\$42,214,259	
Capital Region Water's Unawarded Grants & Loans											
FY23 Community Project Funding Appropriations Request	Green Stormwater Infrastructure	Riverfront Park Green Infrastructure Project	4/25/2022	Notified mid-2023	Notified mid-2023	\$2,000,000	Cash	\$600,000	\$0	\$0	Not awarded due to State budget issues
SUB TOTALS						\$2,000,000		\$600,000	\$0	\$0	



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Capital Improvement Projects Report



ACTUAL EXPENDITURE (from Finance)

MUNIS Project Code	Description	Status	Actual Expenditure (from Finance)												Actual Expenditure YTD	% Budget Expended	2023 Budget
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
80800801-80100-00023	AWTF Energy Recovery Improv	DESIGN	\$ -	\$ -	\$ -	\$ 11,830	\$ -	\$ -	\$ 9,867	\$ -	\$ 251,159	\$ -	\$ 702,603	\$ -	\$ 975,459	12%	\$ 8,074,562
80800801-80100-00024	Primary Clarifier Improvement	DESIGN	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,503	\$ 264	\$ -	\$ 3,123	\$ -	\$ 4,890	3%	\$ 168,000	
80800801-80100-00026	Collection System Rehab	CONSTRUCTION	\$ 131,057	\$ 190,622	\$ 127,034	\$ 735,728	\$ 54,308	\$ 21,915	\$ 216,097	\$ 59,854	\$ 240,420	\$ 33,890	\$ 575,446	\$ 2,386,371	140%	\$ 1,707,000	
80800801-80100-00028	Paxton Creek Interceptor Repai	STUDY	\$ -	\$ -	\$ 4,040	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 132	\$ -	\$ 4,172	1%	\$ 465,000	
80800801-80100-00061	Arsenal Boulevard Sewer Improv	DESIGN	\$ -	\$ 2,877	\$ 2,987	\$ 9,885	\$ -	\$ 308	\$ 22,278	\$ 3,545	\$ 2,295	\$ 5,536	\$ -	\$ 49,711	2%	\$ 2,689,400	
80800801-80100-00065	Other Multi-Modal CCTV Investi	STUDY	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 51,131	\$ 51,131	10%	\$ 500,000	
80800801-80100-00083	Front St Interceptor Rehab P2	CONSTRUCTION	\$ -	\$ 290,525	\$ 52,434	\$ 2,811,899	\$ 4,443,109	\$ 699,579	\$ 1,395,961	\$ 128,883	\$ 5,940,404	\$ 75,282	\$ 34,524	\$ 15,872,600	99%	\$ 16,017,826	
80800801-80100-00115	PennDOT I-83 Expansion	DESIGN	\$ 8,647	\$ 3,358	\$ 1,115	\$ 140,699	\$ 3,113	\$ 1,015	\$ 52,493	\$ 3,232	\$ 8,397	\$ 11,305	\$ -	\$ 233,375	58%	\$ 405,000	
80800801-80100-00126	3rd & Wiconisco Separation	DESIGN	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,063	\$ 609	\$ -	\$ -	\$ 3,311	\$ 4,630	\$ 10,612	5%	\$ 230,000	
80800801-80100-00127	Ww Sewer Rehab Pennvest \$21M	CONSTRUCTION	\$ 152,411	\$ 152,411	\$ 152,411	\$ 152,411	\$ 152,411	\$ 152,411	\$ 152,411	\$ 191,435	\$ 337,983	\$ 17,422	\$ -	\$ 2,015,274	50%	\$ 3,993,881	
80800801-80100-00132	Ww Sewer Rehab Pennvest \$21M Phase 2	CONSTRUCTION	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 204,221	\$ 1,658	\$ 51,484	\$ 69,898	\$ -	\$ 2,015,274	50%	\$ 3,993,881	
80800801-80100-00133	Ww Sewer Rehab Pennvest \$21M Phase 3	DESIGN	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16,871	\$ 17,973	\$ 28,322	\$ 11,132	\$ -	\$ 64,298	0%	\$ 500,000	
80800801-80100-00128	Primary Digester Insulation	STUDY	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0%	\$ 500,000	
Actual Monthly Expenditure 0			\$ 292,115	\$ 639,794	\$ 340,020	\$ 3,862,452	\$ 4,652,941	\$ 877,291	\$ 2,072,310	\$ 406,845	\$ 6,860,463	\$ 231,030	\$ 1,368,334	\$ -	\$ 21,603,595	62.2%	\$ 34,750,669
Actual CUMULATIVE Expenditure 1			\$ 292,115	\$ 931,909	\$ 1,271,929	\$ 5,134,381	\$ 9,787,322	\$ 10,664,612	\$ 12,736,923	\$ 13,143,767	\$ 20,004,231	\$ 20,235,261	\$ 21,603,595	\$ -	\$ 21,603,595		



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Development Stormwater Management Review Summary



Development Stormwater Management Review Summary

January 17, 2024
Status Report

Development	Status	Latest Submittal	Latest Comments	Act 167 Watershed	BMP	Disturbed Area (Ac)	Rate Control	Volume Control	Infiltration	Comment
15th and Walnut Street	Preliminary/Final Development	12/17/2019	1/2/2020	Paxton Creek	Rain Garden/Porous Pavement	3.23	X	X	X	Sent comment letter on 1/2/2020
638-644 Woodbine Street	Preliminary/Final Development	2/12/2020	2/27/2020	Paxton Creek	Control Structure with Weir	0.24	X	X		Sent comment letter on 2/27/2020
1605-1609 Swatara Street	Preliminary/Final Development	1/19/2021	2/2/2021	Paxton Creek	SWM Facility/Porous Pavement	1.68	X		X	Sent comment letter on 2/2/2021
430 Reily Street	Preliminary/Final Development	2/23/2021	3/24/2021	Paxton Creek	Basin	1.69	X	X		Sent comment letter on 3/24/2021
1216 Kittatinny Street/ Hummel Street	Preliminary/Final Development	4/13/2021	5/17/2021	Paxton Creek	Pervious Pavement	0.31	X	X		Sent comment letter on 5/7/2021
1103 S. Front Street	Preliminary/Final Development	5/17/2021	12/21/2021	Susquehanna River/Paxton Creek	Rain Garden, Infiltration Trench, Infiltration Basin	5	X	X	X	Approval letter 12/29/2021
6th & Herr St (Bethel Village)	Preliminary/Final Development	9/3/2021	9/20/2021	Susquehanna River	Underground Infiltration Facility	0.49	X	X	X	Approval letter 9/20/2021
2101 North 6th Street	Preliminary/Final Development	8/17/2021	8/31/2021	Paxton Creek	SW Conveyance	0.71	X			Approval letter 1/18/2022
3rd and Clinton Street	Preliminary/Final Development	9/13/2021	10/4/2021	Paxton Creek	Underground Infiltration Facility and Porous Pavement	0.6	X	X	X	Sent comment letter on 10/4/2021
2426 North 2nd Street	Preliminary/Final Development	12/17/2021	1/5/2022	Paxton Creek	Underground Infiltration Facility / Pervious Pavement	0.17	X	X	X	Sent comment letter on 1/5/2022



Development Stormwater Management Review Summary

January 17, 2024
Status Report

Development	Status	Latest Submittal	Latest Comments	Act 167 Watershed	BMP	Disturbed Area (Ac)	Rate Control	Volume Control	Infiltration	Comment
2463 Jefferson Street	Preliminary/Final Development	1/24/2022	1/31/2022	Paxton Creek	Basin	0.54	X	X	X	Sent comment letter on 2/9/2022
1400 Sycamore Street	Preliminary/Final Development	9/1/2022	2/2/2023	Paxton Creek	Underground Storage	0.29	X	X	X	Approval letter 2/2/2023
Catherine Hershey School (6th-7th Street & Muench)	Preliminary/Final Development	6/21/2022	6/22/2022	Paxton Creek	Underground Storage	5	X	X	X	Sent comment letter on 6/22/2022
6th Street Apartments	Preliminary/Final Development	5/22/2023	6/12/2023	Susquehanna River	Rain Garden	0.77	X	X	X	Approval letter 6/12/2023
2151-2161 N. 4th Street	Preliminary/Final Development	7/13/2023	8/2/2023	Susquehanna River	Roof Sump	0.17	X		X	Approval letter 8/2/2023
2709 and 2717 N. Front Street	Preliminary/Final Development	2/9/2023	3/22/2023	Susquehanna River	Rain Garden/Trench	0.87	X	X	X	Sent comment letter on 3/22/2023
6th and Emerald Street	Preliminary/Final Development	4/11/2023	6/16/2023	Susquehanna River/Paxton Creek	Underground Storage	1	X	X	X	Sent comment letter on 9/6/2023
1933 & 1951 Herr Street	Preliminary/Final Development	10/4/2023	6/16/2023	Paxton Creek	Infiltration Trench	0.707	X	X	X	Sent approval letter on 10/16/2023
1610 N. 4th Street	Preliminary/Final Development	10/18/2023	12/12/2013	Susquehanna River	Underground Storage/ Pours Pavement	0.54	X	X	X	Sent comment letter on 12/12/2023



CAPITAL REGION™

WATER

Recruiting Status

New Hires

Position	Employee	Effective Date	Service Area
Payroll Manager and Accounting Specialist	Katherine Nichols	1/8/2024	No
Operator I – Drinking Water	Raymond Penson, III	1/8/2024	No
Laborer I – Wastewater	Isaiah Claytor	1/11/2024	Yes

Promotions/Transfers

Employee	Former Position	New Position	Effective Date
John Shipe	Laborer I – Wastewater	Operator I – Wastewater	12/18/2023

Left Employment/Resignations/Retirements

Employee	Position	Effective Date
Jordan Hileman	Accounting Manager - Revenues & Capital Assets	1/12/2024
Damon Clowe	Laborer I – Drinking Water	1/12/2024

Open Positions

Position	Status	Service Area
Project Manager/Design Engineer	Interview process underway	N/A
Accounting Manager	Interview process underway	N/A
Confidential Executive Assistant	Interview process underway	N/A
Environmental Compliance Inspector	Interview process underway	N/A
Electrician III	Interview process underway	N/A

Laborer I – Wastewater	Interview process underway	N/A
Laborer I – Drinking Water (2 positions)	Interview process underway	N/A
Operator I – Drinking Water	Interview process underway	N/A
Operator I – Wastewater (2 positions)	Interview process underway	N/A
Maintenance Specialist I – Drinking Water	Interview process underway	N/A
Service Person I – Drinking Water	Interview process underway	N/A
Customer Care Technician	Interview process underway	N/A
Posting Specialist	On Hold	N/A



CAPITAL REGION™

WATER

Incoming Correspondence Report

Incoming Correspondence Report

December 2023

Date Received	Date of Correspondence	Company/Agency and Name of Sender	Reference	CRW Addressee/ Received by/ Provided to
12/1/2023	11/21/2023	All Terrain Logging, LLC Timber Product Harvest/	Sales Agreement MU#20/34/36/37	Addressed to: Tanya Dierolf Received by: Janice Miller-Zerbe Provided to: Tanya Dierolf
12/27/2023	12/22/2023	Dauphin County Conservation District	Municipal MS4 Contacts, Newspaper Ad and Posters	Addressed to: Tanya Dierolf Received by: Bob Lipscomb Provided to: Tanya Dierolf



CAPITAL REGION[™]

WATER

Drinking Water





CAPITAL REGION[™]
WATER

**DRINKING WATER DEPARTMENT
MONTHLY REPORT**



All You Can Inc. (Steelton High School) tour at DeHart Dam.

December 2023

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

Plant Operations

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

The DeHart water source was in service for 31 days. The Susquehanna River water source was in service for 0 days.

Specific water quality results are summarized in Exhibit A. As shown in Exhibit B, a total of 220.863 MG, averaging 7.125 MGD was withdrawn from the DeHart water supply source for treatment. A total of 210.896 MG, averaging 6.803 MGD, of finished drinking water was pumped to the distribution system.

The DeHart Watershed had above average rainfall in December (Exhibit C) and the DeHart Reservoir water level increased (Exhibit D). An estimated 237.17 MG of water was released from the DeHart Reservoir to Clark Creek, averaging 7.65 MGD for the month. This downstream flow, which is received by remote flow monitoring from the weir location and actual staff gauge readings, met the flow required by the State Water Allocation Permit (Exhibit E).

Plant Maintenance

The Maintenance team performed 44 maintenance work orders and six 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 DeHart Dam watershed was patrolled daily and maintained.
- The Water Service Center (WSC) sold the following vehicles on Municibid; C-00 Grumman Outlaw Boat, C-14 Ford Escape, C-16 GMC Service (Main Break Truck), C-15 Chevrolet Cobalt, and C-47 Protecto Flash Traffic Signboard.
- Installation of Rotork Isolation Valves A2 and B2 with remote heads located on the upper Pump Gallery level.
- Preparation and Macropoxy of the Lime Slurry Containment Floor Area.
- Flushed out the Soda Ash Feed Lines, replaced the existing valves at the injection points.
- Replaced 804/805 Soda Ash Feeder Eductor Tube Assemblies.
- Painted Operations Supervisors office wall and hung wall cabinets.
- Installed the new Salt Dawg Salt Spreader on C-06, a Ford F250 for use at the smaller pump stations and DeHart Dam Facility.
- Continued to do landscaping duties (leaf removal) at the pump houses, water treatment plant, and DeHart Dam facility.
- Assisted customer service with postings and shut offs.

Distribution

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

- Three fire hydrants were repaired.
- Repaired two water main breaks totaling 4,974,360 gallons of unaccounted for water.
- Completed 242 work orders.
- Completed 533 water, sewer, and stormwater locates.
- Exercised 13 street valves.
- 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.
- Received one taste and odor complaint of chlorine on December 29, 2023. Visited the residence on January 2, 2024. The chlorine residual was 1.27 mg/L.



CAPITAL REGION™

WATER

Drinking Water Exhibits

EXHIBIT A Water Quality Analysis - 2023

PARAMETERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Average	MCL Limits
Total Coliform: Presence/Absence														
Distribution System	A	A	A	A	A	A	A	A	A	A	A	A	A	5% P
Chlorine Residual, mg/L Free														
Filter Plant Effluent	2.00	1.98	2.01	1.99	1.95	1.98	1.99	1.99	1.91	1.96	1.97	1.98	1.98	0.2 - 4.0
Distribution System	1.40	1.43	1.42	1.31	1.21	1.19	1.10	1.07	1.02	1.14	1.20	1.29	1.23	>0.20
Turbidity, NTU														
Influent from DeHart	1.20	0.98	0.71	0.61	0.77	1.02	1.05	0.80	0.97	1.44	1.42	0.09	0.92	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.64	6.13	NA	4.38	NA
Filter Plant Effluent	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.03	0.30
pH, Std Units														
Influent from DeHart	6.4	6.5	6.5	6.4	6.1	6.0	5.9	5.8	5.8	5.8	6.1	6.3	6.12	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.8	7.5	NA	7.69	NA
Filter Plant Effluent	7.6	7.5	7.9	7.7	7.5	7.4	7.4	7.4	7.5	7.5	7.6	7.6	7.55	6.5 - 8.5*
Distribution System	7.1	7.7	8.1	8.0	8.0	7.4	7.9	8.0	7.9	7.8	7.8	7.3	7.75	6.5 - 8.5*
Total Alkalinity, mg/L as CaCO3														
Influent DeHart	5	5	5	5	5	5	5	5	6	6	5	5	5.17	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	41	46	NA	43.50	NA
Filter Plant Effluent	15	14	13	15	16	18	20	24	26	23	20	19	18.61	NA
Distribution System	13	14	15	14	15	14	20	25	28	26	21	23	18.99	NA
Temperature, degrees C														
Influent from DeHart	5.9	5.4	7.3	10.0	13.0	14.2	16.8	17.9	18.1	16.4	13.3	9.7	12.33	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	16.4	15.2	NA	15.80	NA
Filter Plant Effluent	6.6	6.4	7.2	9.8	12.0	13.3	15.4	16.4	17.4	17.7	13.2	9.7	12.08	NA
Distribution System	14.1	13.2	13.6	16.8	18.3	20.9	22.4	23.7	22.2	19.6	16.2	12.4	17.78	NA
Fluoride, mg/L														
Filter Plant Effluent	0.95	1.02	1.00	0.88	0.69	0.77	0.75	0.83	0.71	0.73	0.75	0.70	0.82	2
Aluminum, mg/L														
Filter Plant Effluent	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.02	0.2*
Iron, mg/L														
Influent from DeHart	0.11	0.06	0.04	0.05	0.07	0.13	0.24	0.42	0.62	0.54	0.44	0.14	0.24	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.18	0.23	NA	0.21	NA
Filter Plant Effluent	0.02	0.01	0.01	0.02	0.02	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.02	0.3*
Distribution System	0.07	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.02	0.01	0.00	0.01	0.3*
Total Dissolved Solids, mg/L														
Influent from DeHart	15	15	16	16	16	17	17	18	27	19	17	17	17.56	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	139	137	NA	138.21	NA
Filter Plant Effluent	37	34	35	37	39	42	45	51	52	54	46	42	42.74	500*
Distribution System	39	36	34	38	40	44	46	52	55	78	53	50	47.10	500*
Total Hardness, mg/L														
Influent from DeHart	8	8	8	8	8	8	8	8	8	8	8	8	8.00	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	71	85	NA	78.00	NA
Filter Plant Effluent	8	8	8	8	8	8	8	8	9	9	9	8	8.35	NA
Distribution System	10	6	6	6	6	7	7	7	7	20	6	6	7.72	NA
Orthophosphate, mg/L														
Filter Plant Effluent	1.20	1.24	1.27	1.27	1.20	1.22	1.17	1.24	1.15	1.18	1.15	1.16	1.20	0.7 - 1.3*
Distribution System	1.21	1.19	1.12	1.27	1.21	1.18	1.12	1.27	1.19	1.06	1.27	1.21	1.19	0.7 - 1.3*
**Total Trihalomethanes, ug/L														
Distribution System	34.2	NA	NA	42.8	NA	NA	57.0	NA	NA	66.8	NA	NA	50.2	80.0
**Total Haloacetic Acids, ug/L														
Distribution System	36.8	NA	NA	48.4	NA	NA	51.4	NA	NA	60.7	42.5	NA	48.0	60.0
Total Organic Carbon, mg/L														
Influent from DeHart	2.16	NA	NA	1.90	NA	NA	2.10	NA	NA	2.00	NA	NA	2.04	NA
Influent from Susquehanna	NA	NA	NA	NA	NA	NA	NA	NA	NA	***	2.20	NA	2.20	NA
Filter Plant Effluent	1.22	NA	NA	1.20	NA	NA	1.20	NA	NA	1.20	1.20	NA	1.20	NA
Average Filter Run, Hours	115	112	120	119	112	109	112	113	112	113	112	111	113.35	NA

*** Not Available at Time of Report

* Values are related to DEP Secondary MCL

** Running Annual Quarterly Average

EXHIBIT B

Water Production Data - 2023

Month	DeHart Withdrawal		River Withdrawal		Total Withdrawal		Treated Water		Process Water		Finished Water	
	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	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	225.428	7.272	0.000	0.000	225.428	7.272	232.974	7.515	6.110	0.197	222.530	7.178
June	226.317	7.544	0.000	0.000	226.317	7.544	226.356	7.545	6.117	0.204	215.490	7.185
July	238.920	7.707	0.000	0.000	238.920	7.707	239.368	7.722	5.935	0.191	228.528	7.372
August	235.092	7.584	0.000	0.000	235.092	7.584	240.323	7.752	6.166	1.199	248.488	8.016
September	219.933	7.331	0.000	0.000	219.933	7.331	222.412	7.413	5.979	0.199	212.208	7.073
October	192.132	6.198	30.960	3.440	223.092	7.197	231.371	7.464	6.189	0.200	220.329	7.107
November	209.208	6.974	16.080	3.216	225.288	7.510	219.329	7.311	6.045	0.202	207.898	6.930
December	220.863	7.125	0.000	0.000	220.863	7.125	222.990	7.193	5.858	0.189	210.896	6.803
Total	2668.579		47.040		2715.619		2746.110		76.752		2637.979	
Average	222.382	7.311	3.920	0.555	226.302	7.439	228.843	7.523	6.396	0.294	219.832	7.226

Peak Day Water Use
Minimum Day Water Use

(MG) = Million Gallons
(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	2.63	3.85	7.85	2.66	5.00	2.07	2.50	4.71	41.70
Daily Average	0.087	0.039	0.095	0.124	0.085	0.128	0.253	0.086	0.166	0.067	0.083	0.340	1.553
Ten Year Average	3.028	2.558	3	3.672	4.531	4.518	5.576	3.831	4.589	3.931	2.544	3.002	44.78
2022 Total	2.74	3.14	1.67	5.03	6.55	5.84	2.16	2.67	4.16	3.43	2.94	6.63	46.96

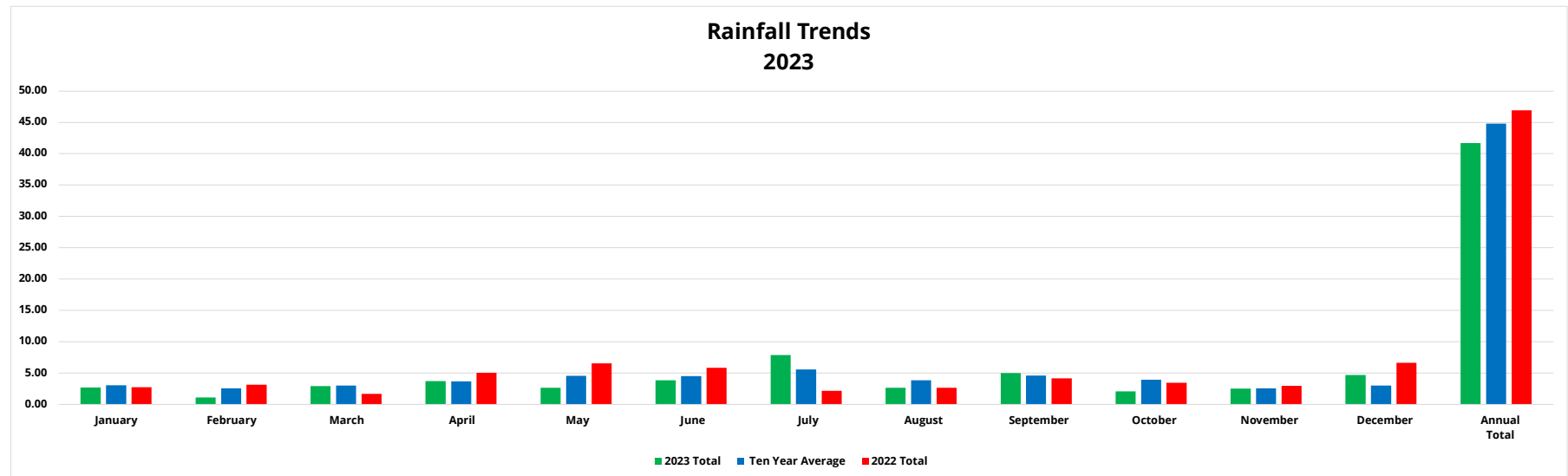


EXHIBIT D

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	1.8	-10.0	-20.1	-32.3	-49.3	-55.9	-67.1	-48.2
Ten Year AVG	-22.6	-19.4	-19.5	-8.0	-2.1	-2.9	-7.2	-18.1	-26.2	-39.1	-44.5	-42.5
2022 AVG	1.9	3.1	3.2	4.6	4.1	7.2	-12.1	-34.1	-48.5	-68.9	-80.6	-58.9

DeHart Reservoir Water Level Trends
2023

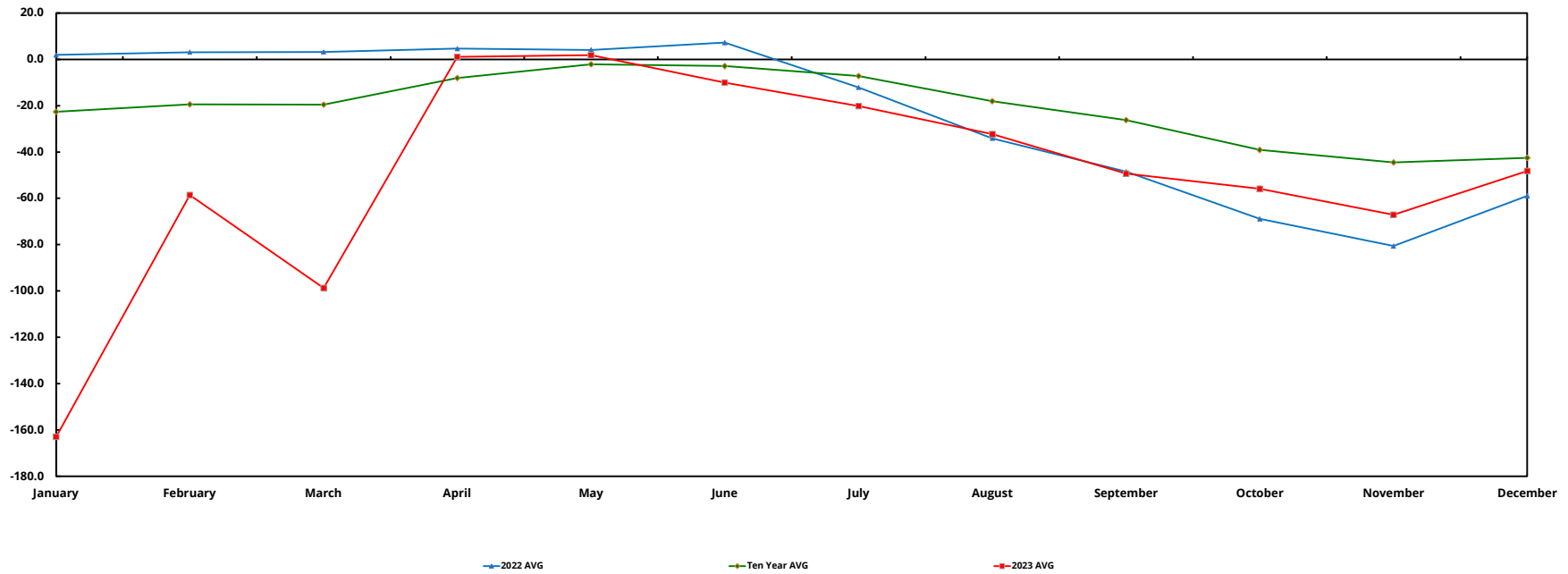


EXHIBIT E

Daily Conservation Release - 2023

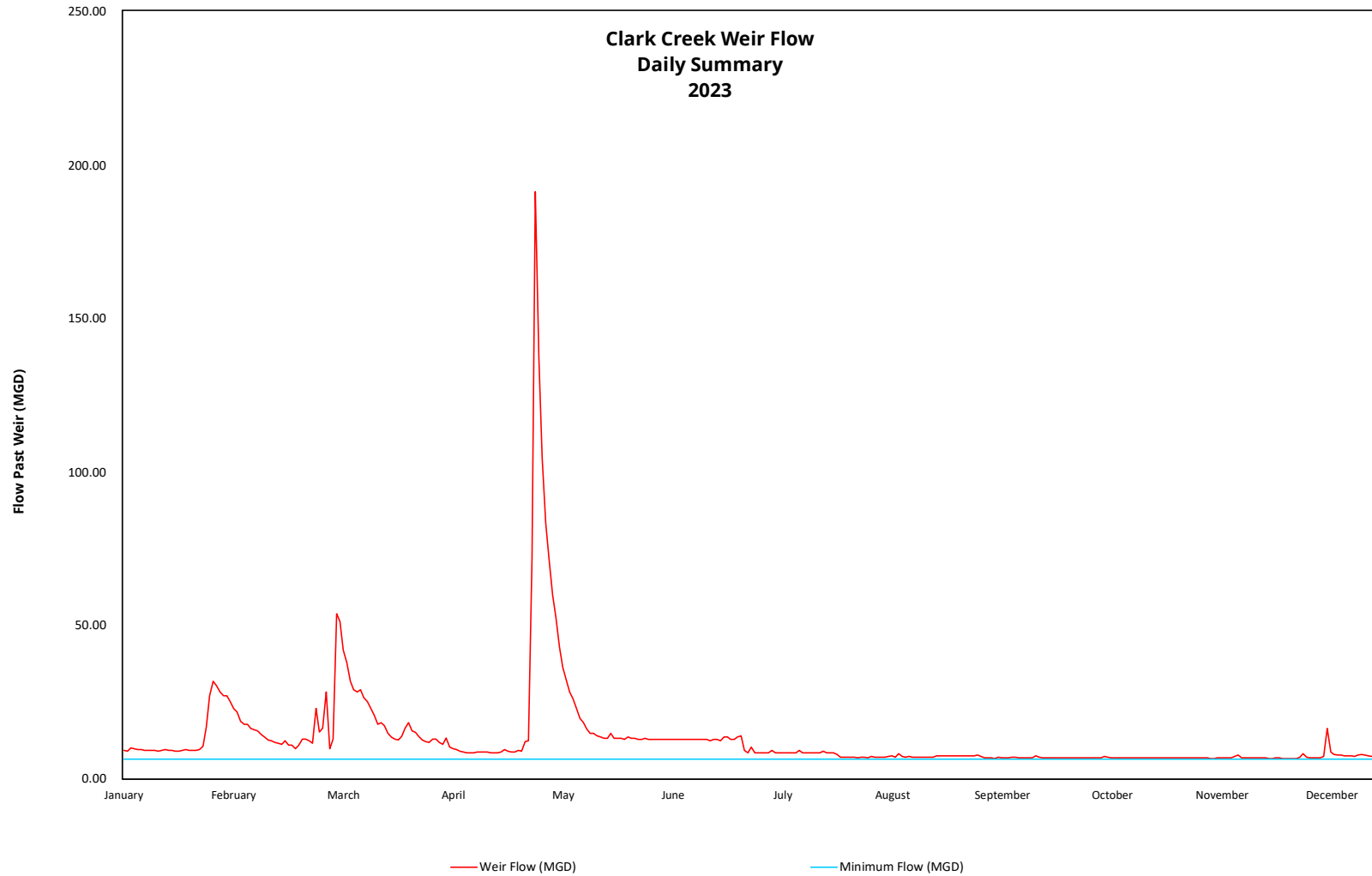


Exhibit G

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	\$5,725
May	57,840	\$8,560
June	72,100	\$10,671
July	57,020	\$8,439
August	38,300	\$5,668
September	0	\$0
October	80	\$12
November	18,410	\$2,725
December	42,070	\$6,229
Average	27,042	\$4,002
Year to Date	324,500	\$48,029

* Estimated savings based on electrical rate of \$0.148 per KWH

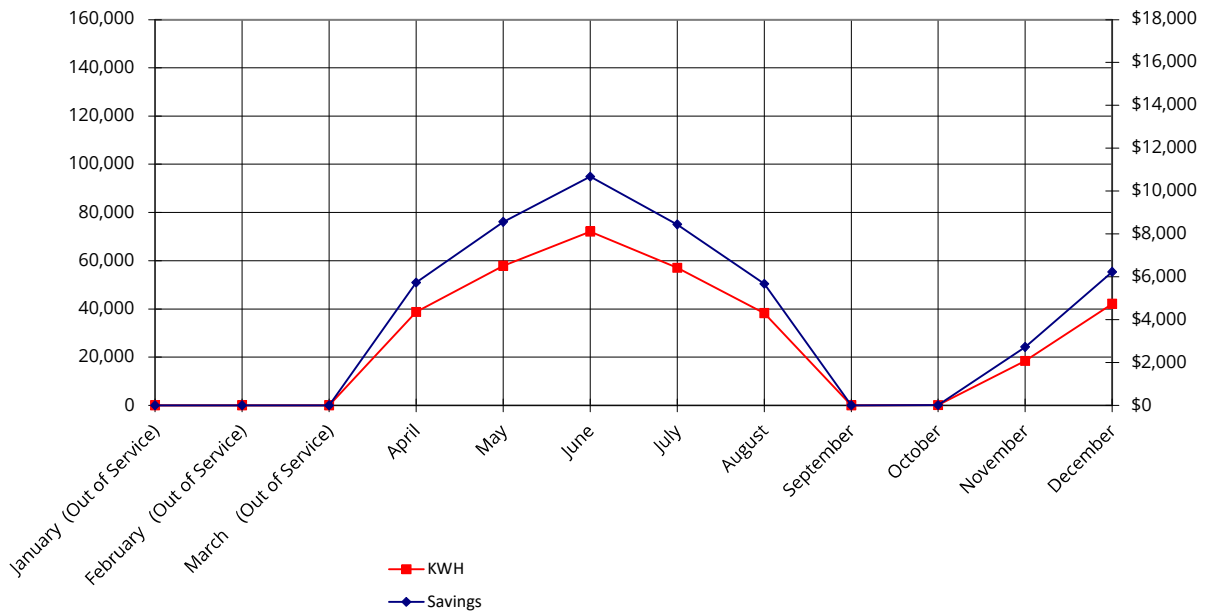


EXHIBIT H
Treatment Chemical Usage - 2023

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	6,112	5,938	6,279	6,117	5,834	6,069	5,636	5,849	5,966	71,586
Average, Chlorine Lbs./Day	203	197	193	198	197	198	203	197	194	195	188	189	196.0	
Average, Chlorine Dose, mg/L	6.9	1.6	2.6	3.2	3.4	3.2	3.1	3.2	3.1	3.1	2.0	3.2	3.2	
Chlorine, Cost, \$/Lbs.	\$1.639	\$1.639	\$1.639	\$1.639	\$1.639	\$1.639	\$1.639	\$1.639	\$1.639	\$1.639	\$1.639	\$1.639	\$1.639	1.6
Chlorine Total Cost, Dollars	\$10,316	\$9,044	\$9,819	\$9,750	\$10,018	\$9,732	\$10,291	\$10,026	\$9,562	\$9,947	\$9,237	\$9,587	\$9,777.44	\$117,329.23
Alum 48.5%														
Total Lbs.	26,829	16,763	19,163	21,756	20,615	19,942	19,413	19,606	18,709	24,880	19,040	28,919	21,303	255,635
Average, Alum, Lbs./Day	866	599	618	725	665	664	626	632	623	803	635	933	699.1	
Average, Alum, mg/L	10.7	7.7	12.0	11.8	11.0	10.4	10.0	10.0	10.2	14.2	10.1	15.7	11.2	
Alum Cost, \$/Lbs.	\$0.121	\$0.121	\$0.121	\$0.121	\$0.121	\$0.121	\$0.121	\$0.121	\$0.121	\$0.121	\$0.121	\$0.121	\$0.121	0.1
Alum Total Cost, Dollars	\$3,246	\$2,028	\$2,319	\$2,632	\$2,494	\$2,413	\$2,349	\$2,372	\$2,264	\$3,010	\$2,304	\$3,499	\$2,577.57	\$30,930.90
Lime														
Total Lbs.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Lime, Lbs./Day	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average, Lime Dose, mg/L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lime Cost, \$/Lbs.	\$0.86	\$0.86	\$0.86	\$0.86	\$0.86	\$0.86	\$0.86	\$0.86	\$0.86	\$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	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Soda Ash														
Total Lbs.	17,400	12,350	13,050	13,650	17,400	20,350	23,950	23,803	27,590	25,400	15,550	21,700	19,349	232,193
Average Soda Ash, Lbs./Day	561	441	421	455	561	678	772	767	819	819	518	700	634.3	
Average, Soda Ash Dose, mg/L	19.2	13.5	19.0	7.2	9.0	10.8	12.0	12.1	15.0	15.8	8.3	11.8	12.8	
Soda Ash Cost, \$/Lbs.	\$0.368	\$0.368	\$0.368	\$0.368	\$0.368	\$0.368	\$0.368	\$0.368	\$0.368	\$0.368	\$0.368	\$0.368	\$0.368	0.4
Soda Ash Total Cost, Dollars	\$6,403	\$4,545	\$4,802	\$5,023	\$6,403	\$7,489	\$8,814	\$8,760	\$10,153	\$9,347	\$5,722	\$7,986	\$7,120.55	\$85,446.62
Fluoride														
Total Lbs.	2,240	1,965	1,965	1,660	1,167	1,133	1,198	1,167	1,112	1,158	1,098	1,116	1,415	16,979
Average, Fluoride Lbs./Day	72	70	63	55	38	38	38	37	37	37	37	36	46.4	
Average, Fluoride (F-) Dose, mg/L	1.1	1.1	1.0	0.9	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.8	
Fluoride Cost, \$/Lbs.	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	0.30
Fluoride Total Cost, Dollars	\$672	\$590	\$590	\$498	\$350	\$340	\$359	\$350	\$334	\$347	\$329	\$329	\$424.09	\$5,089.12
Sodium Hydroxide 50%														
Total NaOH 50% dry Lbs.	35,623	31,225	33,907	33,665	34,585	33,603	35,534	17,449	36,912	35,647	36,519	35,111	33,315	399,780
Average NaOH 50%, dry Lbs./Day	1,149	1,115	1,094	1,122	1,116	1,120	1,146	562	1,230	1,150	1,217	1,133	1,096	
Average, NaOH 50%, mg/L	19.2	15.7	19.2	8.9	8.8	8.9	8.9	8.9	19.9	18.5	20.0	18.9	14.6	
NaOH 50% Cost, dry \$/Lbs	\$0.450	\$0.450	\$0.450	\$0.450	\$0.450	\$0.450	\$0.450	\$0.450	\$0.450	\$0.450	\$0.450	\$0.450	\$0.450	0.5
NaOH 50% Total Cost, Dollars	\$16,030	\$14,051	\$15,258	\$15,149	\$15,563	\$15,121	\$15,990	\$7,852	\$16,610	\$16,041	\$16,434	\$15,800	\$14,991.68	\$179,900.15
Zinc Orthophosphate														
Total Zn3(PO4)2, wet Lbs.	4,802	4,239	4,565	4,539	4,559	4,246	4,788	4,669	4,446	4,616	4,356	4,419	4,520	54,244
Average Zn3(PO4)2, wet Lbs./Day	155	151	147	151	147	142	154	150	148	148	145	143	148.4	
Average, Zn3(PO4)2 Dose, mg/L	2.5	2.5	2.5	2.5	2.5	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
Zn3(PO4)2 Cost, wet \$/Lbs.	\$1.724	\$1.724	\$1.724	\$1.724	\$1.724	\$1.724	\$1.724	\$1.724	\$1.724	\$1.724	\$1.724	\$1.724	\$1.724	1.7
Zn3(PO4)2 Total Cost, Dollars	\$8,279	\$7,308	\$7,870	\$7,825	\$7,860	\$7,320	\$8,255	\$8,049	\$7,665	\$7,958	\$7,510	\$7,618	\$7,793.05	\$93,516.61
Potassium Permanganate														
Total KMnO4, Lbs.	0	0	0	0	0	0	0	0	0	496	195	0	58	691
Average KMnO4, Lbs./Day	0	0	0	0	0	0	0	0	0	62	39	0	8.4	
Average, KMnO4 Dose, mg/L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.0	
KMnO4 Cost, \$/Lbs.													#DIV/0!	
KMnO4 Total Cost, Dollars	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Expenditure													\$42,684.39	\$512,212.63
Average Treated Cost per (MG)														
Total Treated Flow (MGD)														0.000
Average Treated Flow (MGD)														228.843

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	497	485	546	523	492	521	502	533	6,100	508
Street Restorations	0	0	7	1	15	6	1	0	0	1	0	0	31	3
Leak Detection Assessment <i>Percent of Distribution System</i>	8	8	8	8	8	8	8	8	8	8	8	8	96	8
Main Break Repair - Detected Non-Surfacing	0	0	0	0	0	0	0	0	0	2	0	0	2	0
Main Breaks Repaired - Emergency	2	1	1	0	1	3	1	1	0	2	0	2	14	1
Service Line Leaks Detected	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Service Line Leaks Repaired	1	0	10	7	4	2	6	7	4	7	5	0	53	4
Valves - Exercised	0	0	0	21	1	0	55	88	60	71	33	13	342	29
Valves - Replaced	0	0	0	0	0	0	1	3	0	0	0	0	4	0
Hydrant Flow Tests	0	8	1	2	7	6	4	1	1	2	0	1	33	3
Hydrants Returned to Service	0	0	0	0	1	2	2	0	0	0	1	0	6	1
Water Tap - Disconnected	2	0	11	13	4	0	6	1	0	4	3	3	47	4
Water Tap - New Connection	2	0	0	0	0	0	5	0	2	1	0	0	10	1
Water Shutoffs - Delinquent Accounts	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Water Shutoffs - Other	24	11	21	62	48	56	56	31	46	36	30	16	437	36
Water Shutoffs - Non Payment	0	0	21	41	31	43	42	37	30	24	13	0	282	24
Water Restoration Turn on Other	24	22	23	33	23	55	41	19	42	33	36	23	374	31
Water Turn on - Non Payment	0	1	6	24	4	38	21	19	24	0	19	6	162	14

EXHIBIT J

Metering Activities - 2023

Board Monthly Report	Distribution Monthly Report														
Activity	Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	Average
Meter Installations															
Replacement	Missing	6	3	4	5	7	6	1	6	9	7	5	2	61	5
	Leaking	2	3	2	5	2	2	2	0	0	2	1	1	22	2
	Frozen	20	4	3	1	1	1	0	0	1	2	0	1	34	3
	Non-registering	6	6	9	4	8	10	16	10	9	4	7	2	91	8
	Large Meters¹	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Service	New Installation	2	0	0	0	0	0	0	0	0	0	5	0	7	1
Meter Service															
MXU's Replaced	MXU's Replaced	47	43	40	22	34	66	34	40	36	24	22	25	433	36
Batteries Replaced	Batteries Replaced	45	323	113	65	80	134	75	67	48	44	56	32	1082	90
Meter Pits Serviced	Meter Pits Serviced	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Meter Calibrations															
Small Meters²	Calibrated meters	0	0	0	0	0	0	0	1	0	0	0	0	1	0

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

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



EXHIBIT K

Miscellaneous Water Usage (gals) - 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	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	0	0	113,557	4,500	407	448	11,883	0	1,494	495	0	55,904	188,688	15,724
Billed Unmetered	Hydrant Flow Tests	0	12,300	4,000	4,305	14,094	14,304	9,450	12,200	11,600	36,450	39,640	2,880	161,223	13,435
Unbilled Unmetered	Hydrant Flushing (and Unbilled Authorized)	48,449	51,011	40,285	3,479,672	5,975,003	39,060	277,818	34,248	138,253	103,605	47,050	182,330	10,416,784	868,065
Leakage on Distribution Mains	Main Leaks	1,318,637	2,836,746	95,144	0	109,685	383,537	370,363	19,274	0	2,940,797	0	4,974,360	13,048,543	1,087,379
Leakage on Service Lines	Service Leaks	2,321,113	41,760	568,560	135,444	95,040	17,280	312,960	241,920	80,640	20,160	1,031,202	0	4,866,079	405,507
	Total	3,688,199	2,941,817	821,546	3,623,921	6,194,229	454,629	982,474	307,642	231,987	3,101,507	1,117,892	5,215,474	28,681,317	2,390,110



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WATER

Wastewater

Wastewater





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WATER

WASTEWATER DEPARTMENT MONTHLY REPORT



Sunrise over the AWTF.

December 2023

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

Overview

The Wastewater department focused on multiple personnel vacancies in the month of December. There were multiple vacancies in Facility Operations, Maintenance Laborer, Assistant Maintenance Supervisor, Electrician and Environmental Compliance Inspector.

As of the time of reporting, we are pleased that several of these vacancies have been filled, and we are excited with the candidates that have been interviewed for which offers will soon be extended. This is the result of the tireless efforts of Human Resources and the hiring managers to spend countless hours on recruitment and interviewing.

As reported in detail below, the Wastewater department celebrated when tipping fees from the Contract Waste Program were tallied as the year ended. The program eclipsed the \$1M mark for the first time in AWTF history and more than doubled the revenue from 2022. Pretreatment Coordinator Brain Hart should be commended for attracting new customers and working closely with Operations Supervisor Ray Hoke to ensure sufficient treatment capacity for the additional waste streams. Additionally, none of it would be possible without the extra effort from the Facility Operators, Laboratory Technicians and Administrative Assistant Brenda Rohrer who manages offloading, sampling, analysis, and documentation of this increased activity. It was a great team effort that resulted in the achievement of this remarkable goal.

Operations

During the month of December, the AWTF met all monthly average NPDES requirements. One Sanitary Sewer Overflow (SSO) was reported. Details are contained in the Field Operations section below.

Hydraulic loading to the AWTF averaged 22.2 million gallons per day (MGD) during the month. The treatment process achieved removal reductions of 97.2 percent CBOD, 97.2 percent Suspended Solids, 61.1 percent Phosphorus, and 96.8 percent Ammonia (Exhibit A).

The Contract Waste Hauling program collected \$97,562.58 in revenue from 1,749,140 gallons discharged (Exhibit G). For the first time in program history over \$1 million in non-ratepayer revenue has been generated! Modern Landfill has been the largest driving force behind this feat and does not look to be slowing down anytime soon.

The Cogeneration Facility experienced a run time of seven percent in December. Revenue is estimated at \$1,327.59 on 9,000 kilowatt-hours generated for the month. The low runtime was due to the unit being out of service due to mechanical and electrical issues.

Laboratory

- Completed Chapter 252 Laboratory Accreditation renewal for PADEP to remain a certified laboratory.
- Completed the second round of IU sampling to check for compliance and verify self-monitoring results.
- Continuing to sample and run fecal coliform and E. Coli analysis on the PFA pilot plant on weekdays. We are increasing the ratio of primary to secondary wastewater into the pilot plant to simulate blending conditions and generate data on performic acid dosing as it relates to disinfection efficacy.

Pretreatment

- Facility inspections have been completed and all of them went well. Where minor infractions were discovered, we discussed the cause as well as paths to correct the issue.
- Upper Allen Township Authority, Leacock Township Sewer Authority, and Keystone Sanitation Landfill are new waste haulers that have been added as clients to hopefully increase non-ratepayer revenue for 2024.
- Exploring ways to track IU and waste hauling data in WIMS.

Plant Maintenance

- Replaced the peristaltic hose for one of the ferric chloride feed pumps at the Chemical Storage building.
- Replaced the failed oil cooler for Cryo Compressor No. 1 and added 70 gallons of oil that was lost from the failed unit.
- Replaced the high-temperature Victaulic piping couplings on discharge side of Cryo Compressor No. 1.
- Installed a new electrical circuit for the heat trace on Cryo Plant Cooling Tower.
- Installed new drive assembly for screw auger on the Hydrogritter unit then returned it to normal operations.
- Serviced the standby generator at the Market Street Pump Station and ran at full load to test.
- Replaced a failed drive coupling on Grit Removal Unit No. 3.
- Pumped, cleaned, and serviced the sludge collection mechanism for Primary Clarifier No. 1. The cross-collector drive was found to be derailed.
- Continued electrical upgrades for Primary Clarifier Nos. 3 and 4.
- Working on dislodging the influent valve for Return Sludge Pump No. 4. The valve is stuck in the closed position.
- Installed a new sump pump in the Mixed Liquor Metering Pit.

-
- Installed new guide wheels for the bar screen rake assembly at the Spring Creek Pump Station.
 - Serviced the standby generator for Spring Creek Pump Station and ran on full load to test.
 - Repaired the float assembly for the sump pump at the Thickened Sludge Pump Station.
 - Performed numerous vehicle repairs in preparation for state inspections.
 - Provided weekly maintenance for the JCB loader.
 - Performed daily service for vehicular related repairs such as bulbs, batteries, tires, A/C, lube oil and filters, and flat tires.
 - Performed numerous maintenance tasks per request at the Administrative Offices.

Field Construction

- In the month of December, the crew continued with the project on Burma Street. A brick inlet and top has been replaced with prefabricated concrete box and M top with bicycle grating. The crew also replaced 112 feet of 10-inch clay pipe with a new 10-inch SDR. Crew currently has the second inlet dug out and is preparing the location for the installation of a new concrete box and M top with bicycle grating.

Field Operations

- Performed CCTV assessment of 532.1 feet (.1 miles) of pipe.
- Flushed 3,852 feet (0.73 miles) of sewer pipe.
- Responded to 18 backup and overflow calls with one at 2237 Kensington Street being CRW's responsibility.
- Responded to two sinkhole calls with none being CRW's responsibility.
- Cleaned 13 stormwater inlets.
- Inspected 10 stormwater inlets.
- Monitoring 22nd and Kensington site and fueling bypass pump daily.
- Monitoring Front and Cumberland site and fueling bypass pump daily.
- Completed one final semi-annual CSO PM. All 58 PMs are completed.
- Cleaned Pista Grit Nos. 1 and 2.

Environmental Compliance

- Completed five inspections of FOG dischargers. The Street Supervisor will continue filling this role as time is allotted until the vacancy is filled.
- Investigated illicit discharge with Brian Hart from a fire at William Penn High School. The discharge affected Italian Lake. PADEP was contacted and a full investigation from CRW was performed as well.
- Continued to self-educate regarding the FOG program.
- Continued to get educated on illicit discharge inspection and pertinent SOPs.

-
- Investigating businesses of Market Square that are relocating to temporary buildings for the proper installation of grease traps and interceptors. Spoke with Director of the Market and he is to advise CRW on the status of businesses on a month-to-month basis.

Street Sweeping

- Received two complaints this month. All complaints were resolved.
- Completed 639.62 miles of scheduled street sweeping within the City of Harrisburg.
- Repaired the water tank on Sweeper No. 1. A pipe hidden within a leaf pile caused a hole in the tank.
- Replaced three hydraulics for the debris hopper on Sweeper No.3
- Continued to assist cleaning storm inlets in scheduled sweeping area.
- Participating in Green Stormwater Infrastructure meetings.
- Continuing to get acclimated to the FOG Program and performing FOG Inspections.
- When the days of the month fall on a fifth week, there is no scheduled sweeping. CRW did not perform any unscheduled sweeping in the month of December.



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WATER

Wastewater Exhibits

EXHIBIT A

**CAPITAL REGION WATER
ADVANCED WASTEWATER TREATMENT FACILITY**

Process Control - 2023

Parameters	January	February	March	April	May	June	July	August	September	October	November	December	Average	NPDES Limits
Volume, MGD	22.0	16.8	19.3	19.1	20.3	16.2	21.0	16.0	17.8	15.7	15.2	22.2	18.5	37.7
Carbonaceous Biochemical Oxygen Demand														
Influent, mg/L	97	139	114	198	165	193	145	161	160	162	179	133	154	-----
Effluent, mg/L	4	3	4	4	3	3	3	3	3	3	3	3	3	25
Percent Removal, %	95.6	97.4	96.7	98.3	98.1	98.2	97.7	98.2	97.1	98.3	98.3	97.2	97.6	-----
Effluent Loading, lb/d	681	469	596	821	507	470	582	393	488	377	417	693	541	7,860
Suspended Solids:														
Influent, mg/L	156	222	173	187	175	212	168	185	180	176	197	152	182	-----
Effluent, mg/L	8	3	3	4	4	6	4	4	6	5	5	4	5	30
Percent Removal, %	95.0	98.5	98.1	96.6	97.5	96.8	97.2	97.6	96.3	96.9	97.5	97.2	97.1	-----
Effluent Loading, lb/d	1,447	412	582	1,043	660	954	827	588	958	717	704	847	812	9,433
Nitrogen														
Total-N														
Influent, mg/L	26	33	26	30	26	30	23	24	24	29	55	29	30	-----
Effluent, mg/L	5.0	4.0	5.7	4.3	3.7	5.2	4.5	3.1	6.3	9.0	12.4	11.5	6	Monitor
Percent Removal, %	80.5	87.9	78	85.6	85.5	82.8	80.3	87.0	73.8	69.1	77.6	60.1	79.0	-----
Effluent Loading, lb/d	993	548	846	652	861	717	730	542	942	1,076	2,004	2,195	1,009	-----
NH3-N														
Influent mg/L	17	21	17	16	13	15	12	14	15	17	18	13	16	-----
Effluent, mg/L	1.9	1.2	1.4	1.6	0.4	1.1	0.5	0.9	0.3	0.3	0.3	0.4	1	11 (2)
Percent Removal, %	88.5	94.3	91.8	89.7	97.0	92.6	95.9	93.8	98.0	98.2	98.3	96.8	94.6	-----
Effluent Loading, lb/d	359	168	248	258	74	150	86	118	53	39	50	80	140	4,716
Phosphorus:														
Influent, mg/L	2.9	4.2	3.5	3.8	3.5	4.0	3.1	3.6	3.6	3.6	3.8	2.8	3.5	-----
Effluent, mg/L	0.8	1.6	1.2	1.6	1.4	1.6	1.7	1.6	1.6	1.6	1.6	1.1	1.5	2.0
Percent Removal, %	70.3	61.3	64.4	55.6	59.0	58.1	43.5	52.8	52.8	54.7	54.7	61.1	57.4	-----
Effluent Loading, lb/d	152	222	194	237	215	223	301	220	218	210	191	192	215	629
pH:														
Influent, Std. Units	7.4	7.3	7.3	7.3	7.4	7.4	7.4	6.8	7.4	7.5	7.5	7.5	7.4	-----
Effluent, Std. Units	7.4	7.4	7.4	7.4	7.5	7.5	7.4	7.6	7.5	7.5	7.5	7.4	7.5	6.0 - 9.0
Dissolved Oxygen:														
Effluent Minimum, mg/L	8.0	8.8	7.8	8.3	7.6	6.5	6.1	7.2	6.7	7.0	8.1	7.6	7.5	5.0 Min.
Fecal Coliform:														
Effluent, No./100 ml	25	3	5	3	2	2	4	7	11	217	284	184	62	200/100 ml (1)
Chlorine Residual:														
Effluent, mg/L	0.22	0.18	0.20	0.22	0.43	0.44	0.45	0.37	0.39	0.39	0.16	0.20	0.30	0.50

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

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

EXHIBIT B

**CAPITAL REGION WATER
ADVANCED WASTEWATER TREATMENT FACILITY**

Flow Monitoring Information, MGD - 2023

Month	Total			City Regions					Suburb Regions					Total Precip inches
	Flow	City	Suburbs	1	2	3	4	5	6	7	8	9	10	
January	22.000	8.622	13.378	8.110	0.192	0.300	-0.160	0.180	1.400	5.280	2.208	4.060	0.430	2.450
February	16.800	6.480	10.320	5.480	0.150	0.300	0.410	0.140	1.200	3.950	1.720	3.100	0.350	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	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
May	20.300	8.151	12.149	6.780	0.191	0.300	0.600	0.280	1.500	4.320	2.199	3.730	0.400	0.200
June	16.200	5.883	10.317	5.130	0.173	0.300	0.130	0.150	1.300	3.820	1.987	2.900	0.310	4.250
July	21.000	7.382	13.618	6.740	0.212	0.300	(0.060)	0.190	1.400	4.770	2.438	3.970	1.040	6.380
August	16.000	5.979	10.021	5.120	0.139	0.300	0.280	0.140	1.300	3.680	1.601	3.080	0.360	2.230
September	17.800	7.246	10.554	6.120	0.156	0.300	0.460	0.210	1.300	3.730	1.794	3.260	0.470	5.800
October	15.700	5.515	10.185	5.040	0.145	0.300	(0.120)	0.150	1.200	3.970	1.665	2.980	0.370	2.330
November	15.200	5.233	9.967	4.490	0.153	0.300	0.150	0.140	1.200	3.710	1.757	2.970	0.330	2.720
December	22.200	8.880	13.320	8.050	0.200	0.300	0.030	0.300	1.400	5.270	2.300	3.920	0.430	5.880
Average	18.47	7.10	11.37											3.48
Percent	100.00	38.42	61.58											41.70

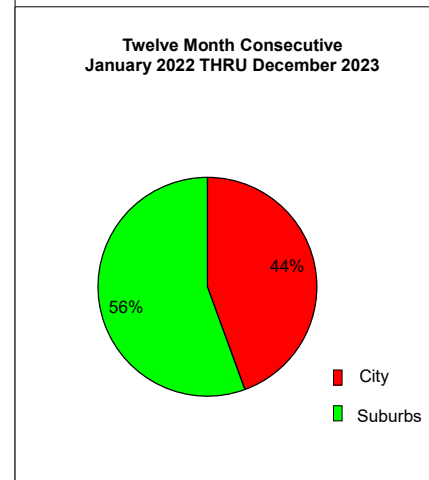
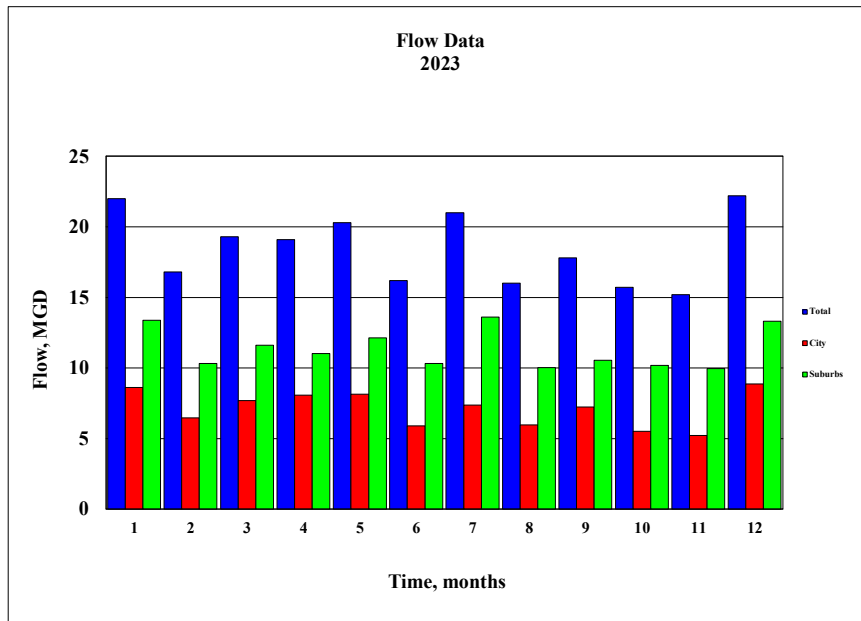


EXHIBIT C

**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	994,800	977,100	1,103,700	1,016,400	963,600	1,115,700	1,034,700	1,107,600	1,051,975	12,623,700
Average, kWh/Day	37,384	36,729	33,348	36,300	32,090	32,570	35,603	32,787	32,120	35,990	34,490	35,729	34,595	-----
Cost, Dollars	\$98,628.52	\$60,520.22	\$60,192.18	\$63,307.22	\$59,395.55	\$58,647.46	\$65,379.99	\$59,269.04	\$56,654.02	\$62,160.72	\$61,689.29	\$66,226.00	\$64,339.18	\$772,070.21
Natural Gas														
Total, Cu Ft	621.9	554.8	287.6	27.4	0.8	0.6	0.1	1.1	0.3	145.7	459.8	*	175	2,100
Average, Cu Ft/Day	20	20	9	1	0	0	0	0	0	5	15	*	6	-----
Cost, Dollars	\$6,237.14	\$5,423.45	\$3,026.40	\$377.30	\$147.32	\$147.14	\$142.69	\$151.59	\$146.22	\$1,548.85	\$4,717.52	*	\$1,838.80	\$22,065.62
Water														
Total, Gal.	1,187,000	1,298,000	928,000	977,000	932,000	1,218,000	1,020,000	946,000	851,999	936,000	787,000	*	1,007,364	11,080,999
Average, Gal./Day	38,290	46,357	29,935	32,567	30,065	40,600	32,903	30,516	28,400	30,194	26,233	*	33,278	-----
Cost, Dollars	\$15,616.58	\$16,764.32	\$12,938.52	\$13,445.18	\$12,979.88	\$15,937.12	\$13,889.80	\$13,124.64	\$12,152.67	\$13,021.24	\$11,480.58	*	\$12,612.54	\$151,350.53
MicroC														
Total, Gal.	0	0	0	0	258	0	0	0	0	0	0	0	0	22
Average, Gal./Day	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
Cost, Dollars	\$0	\$0.00	\$0	\$0	\$1,029	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$85.79
Sodium Hydroxide														
Total, Gal.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average, Gal./Day	0	0	0	0	0	0	0	0	0	0	0	0	0	-----
Cost, Dollars	0	0	0	0	0	0	0	0	0	0	0	0	\$0.00	\$0.00
Chlorine Disinfection														
Total, Lbs.	13,115	5,973	6,830	5,240	10,940	8,630	11,170	8,309	10,055	6,530	5,940	9,640	8,531	102,372
Average, Lbs./Day	423	223	220	175	353	288	360	268	335	210	198	311	280	-----
Avg Residual, mg/L	0.22	0.18	0.20	0.22	0.43	0.44	0.45	0.39	0.39	0.39	0.39	0.20	0.33	-----
Cost, \$/Lbs.	\$1.64	\$1.64	\$1.64	\$1.64	\$1.64	\$1.64	\$1.64	\$1.64	\$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	\$17,941.60	\$14,153.20	\$18,318.80	\$13,626.76	\$16,490.20	\$10,709.20	\$9,741.60	\$15,809.60	\$13,825.50	\$152,080.48
Phosphorous Removal														
Total FeCl3, Gals.	3,113	2,950	3,113	3,589	4,429	3,156	4,231	4,997	5,263	6,072	3,208	2,786	3,909	46,907
Avg FeCl3, Gals./Day	100	105	100	120	143	105	136	161	175	196	107	90	128	-----
FeCl3 Cost, \$/Gal.	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74	-----
FeCl3 Total Cost, Dollars	\$5,416.97	\$5,133.00	\$5,416.62	\$6,244.86	\$7,706.46	\$5,491.44	\$7,361.94	\$8,694.78	\$9,157.62	\$10,565.28	\$5,581.92	\$4,847.64	\$6,801.54	\$81,618.53

* No data at time of report

EXHIBIT D

**CAPITAL REGION WATER
ADVANCED WASTEWATER TREATMENT FACILITY**

Cogeneration Electrical Production: 2022-2023

	Period	Percent Run Time	Daily Avg Kilowatt	Kilowatt Hours Produced	Estimated 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
<hr/>					
Total - 2022				343,800	\$40,207.41
Monthly Average - 2022		28	943	28,650	\$3,350.62
January 2023		2	58	1,800	\$210.51
February 2023		58	2,250	63,000	\$7,367.85
March 2023		75	3,135	97,200	\$14,337.97
April 2023		25	960	28,800	\$4,248.29
May 2023		38	1,713	53,100	\$7,832.78
June 2023		5	120	3,600	\$531.04
July 2023		32	1,103	34,200	\$5,044.84
August 2023		0	0	0	\$0.00
September 2023		0	0	0	\$0.00
October 2023		13	4,936	15,300	\$2,256.90
November 2023		26	1,140	34,200	\$5,044.84
December 2023		7	290	9,000	\$1,327.59
<hr/>					
Total - 2023				340,200	\$48,202.61
Monthly Average - 2023		23	1,309	28,350	\$4,016.88

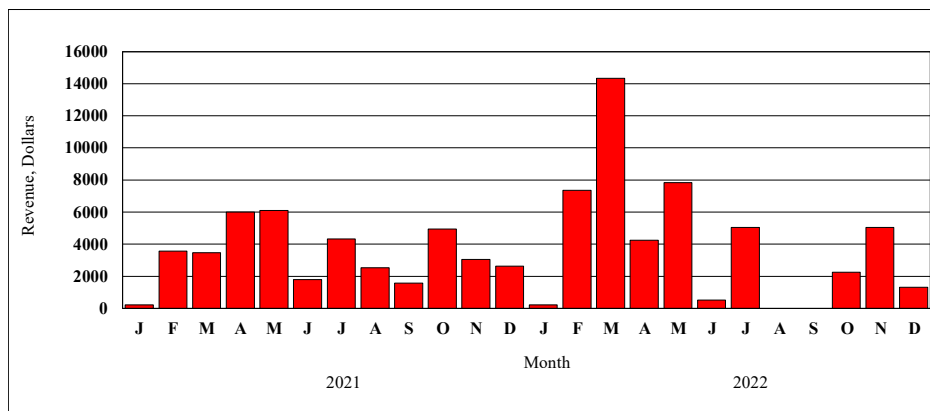


EXHIBIT E

**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	Total
Solids Removal														
Process, Lbs.	704,819	890,443	1,557,518	1,554,485	1,206,679	964,105	1,146,178	786,642	505,711	608,037	361,393	659,064	912,090	10,945,074
CWH Program, Lbs.	196,727	230,186	125,669	137,543	502,270	446,289	315,199	412,091	586,445	697,323	708,421	591,694	412,488	4,949,857
Total Solids, Lbs.	901,546	1,120,629	1,683,187	1,692,028	1,708,949	1,410,394	1,461,377	1,198,733	1,092,156	1,305,360	1,069,814	1,250,758	1,324,578	15,894,931
Sludge Dewatering														
Feed Volume, Gals.	5,489,000	4,398,000	3,878,000	5,322,000	4,268,000	5,185,000	4,945,000	5,373,000	4,460,000	5,147,000	4,307,000	3,739,000	4,709,250	56,511,000
Feed Solids, %	1.5	1.5	1.5	1.4	1.5	1.4	1.5	1.8	1.9	1.6	1.8	1.9	1.6	-
Labor, Hours	635	519	531	651	691	671	688	602	639	1224	1102	1106	755	9,058
Operations, Hours	1,181	977	1,014	672	691	671	1,104	1,130	892	617	581	561.5	841	10,092
Total Cake, Dry Tons	208	168	162	181	197	228	238	213	224	237	227	157	203	2,440
Total Cake, Wet Tons	1,264	1,089	1,040	1,164	1,223	1,421	1,485	1,267	1,335	1,509	1,433	978	1,267	15,208
Cake TS, %	16.5	15.9	15.6	15.6	16.1	16.1	16.0	16.9	16.9	16.2	15.9	16.0	16.1	-
Press Rate, Lbs./Hour	2,140	2,228	2,052	3,465	3,539	4,237	2,690	2,242	2,993	4,889	4,932	3,484	3,241	38,892
Polymer Dosage, Lbs	4,299	4,556	4,533	5,031	5,765	7,226	5,208	3,947	3,200	3,809	3,355	2,567	4,458	53,496
Polymer Dosage, Lbs/Dry Ton	20.7	27.1	28.0	27.8	29.3	31.7	21.9	18.5	15.0	17.2	17.2	16.4	22.6	-
Disposal Cost														
Labor, Dollars	\$12,208.54	\$9,982.89	\$10,200.05	\$12,502.61	\$13,282.94	\$12,890.85	\$13,223.36	\$11,570.44	\$12,281.58	\$23,517.59	\$21,176.60	\$21,261.16	\$14,508.22	\$174,098.62
Electrical, Dollars	\$519.82	\$430.06	\$445.98	\$295.64	\$304.08	\$295.11	\$485.76	\$497.20	\$392.48	\$271.61	\$255.68	\$247.06	\$370.04	\$4,440.48
Polymer, Dollars	\$8,383.05	\$8,885.16	\$8,839.35	\$9,810.45	\$11,241.75	\$14,090.70	\$10,155.60	\$7,696.65	\$6,240.00	\$7,427.55	\$6,542.25	\$5,005.65	\$8,693.18	\$104,318.16
Disposal, Dollars	\$47,358.20	\$52,886.50	\$47,998.60	\$25,793.27	\$70,097.60	\$60,858.30	\$143,251.00	\$52,571.30	\$41,776.90	\$57,836.00	\$42,106.40	\$23,922.20	\$55,538.02	\$666,456.27
Total Cost, Dollars	\$68,469.61	\$72,184.61	\$67,483.99	\$48,401.97	\$94,926.38	\$88,134.96	\$167,115.72	\$72,335.59	\$60,690.96	\$89,052.75	\$70,080.93	\$50,436.07	\$79,109.46	\$949,313.54
Cost Per Dry Ton, Dollars	\$329.18	\$429.67	\$416.57	\$267.41	\$481.86	\$386.56	\$702.17	\$339.60	\$270.94	\$375.75	\$308.73	\$321.25	\$385.81	\$4,629.69

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	61,200	96,000	54,000	76,800	68,400	56,400	68,400	50,400	*	78,218	860,400
Average, kWh/Day	4,955	3,471	2,516	2,040	3,097	1,800	2,477	2,206	1,880	2,206	1,680	*	2,575	----
Cost, Dollars	#####	\$6,179.35	\$5,794.20	\$4,760.30	\$6,808.76	\$5,640.08	\$6,454.65	\$6,101.73	\$5,816.54	\$6,163.84	\$4,002.33	*	\$6,172.15	\$67,893.65
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.	284,000	318,000	276,000	291,000	326,000	355,000	336,000	340,000	307,000	310,000	309,000	*	313,818	3,452,000
Average, Gal./Day	9,161	11,357	8,903	9,700	10,516	11,833	10,839	10,968	10,233	10,000	10,300	*	10,346	----
Cost, Dollars	\$3,633.08	\$3,984.64	\$3,550.36	\$3,705.46	\$4,067.36	\$4,367.22	\$4,170.76	\$4,212.12	\$3,870.90	\$3,901.92	\$3,891.58	*		\$43,355.40
Spring Creek Pump Station														
Electric														
Total, kWh	38,400	50,240	40,640	38,400	56,320	49,600	54,080	48,320	46,080	51,520	45,440	50,240	47,440	569,280
Average, kWh/Day	1,239	1,794	1,311	1,280	1,817	1,653	1,745	1,559	1,536	1,662	1,515	1,621	1,561	----
Cost, Dollars	\$1,274.90	\$3,346.91	\$3,295.83	\$3,158.30	\$4,604.53	\$3,047.64	\$4,356.37	\$3,775.67	\$3,437.65	\$4,078.76	\$3,475.47	\$4,260.42	\$3,509.37	\$42,112.45
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.	90,000	104,000	86,000	105,000	118,000	137,000	141,000	117,000	115,000	128,000	109,000	*	113,636	1,250,000
Average, Gal./Day	2,903	3,714	2,774	3,500	3,806	4,567	4,548	3,774	3,833	4,129	3,633	*	3,744	----
Cost, Dollars	\$1,006.59	\$1,151.35	\$965.23	\$1,161.69	\$1,296.11	\$1,492.57	\$1,533.93	\$1,285.77	\$1,265.09	\$1,399.51	\$1,203.05	*	\$1,250.99	\$13,760.89
Market Street Pump Station														
Electric														
Total, kWh	1,320	1,200	1,200	960	1,080	720	840	840	720	840	960	1,080	980	11,760
Average, kWh/Day	43	43	39	32	35	24	27	27	24	27	32	35	32	----
Cost, Dollars	\$151.91	\$153.90	\$174.52	\$157.79	\$253.89	\$207.36	\$208.98	\$185.03	\$146.63	\$150.05	\$170.16	\$142.29	\$175.21	\$2,102.51
Fuel Oil														
Total, Gals.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average, Gals./Day	0	0	0	0	0	0	0	0	0	0	0	0	0	----
Cost, Dollars	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
City Island Pump Station														
Electric														
Total, kWh	40	40	40	40	40	40	0	40	40	40	40	40	37	440
Average, kWh/Day	1	1	1	1	1	1	0	1	1	1	1	1	1	----
Cost, Dollars	\$42.43	\$62.63	\$64.36	\$64.11	\$64.27	\$83.86	\$62.57	\$64.16	\$64.70	\$64.98	\$62.88	\$62.85	\$63.65	\$763.80

* No Data at time of report

CAPITAL REGION WATER ADVANCED WASTEWATER TREATMENT FACILITY

Contract Waste Hauling Program 2022 - 2023

Month	Process		Septic		Total	
	Gallons	Revenue	Gallons	Revenue	Gallons	Revenue
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
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	1,273,220	\$68,101.35	267,600	\$9,588.60	1,540,820	\$77,689.95
June	1,329,280	\$68,218.26	326,700	\$11,626.20	1,655,980	\$79,844.46
July	1,372,660	\$59,957.87	262,650	\$9,411.30	1,635,310	\$69,369.17
August	1,883,530	\$87,631.96	314,650	\$11,214.90	2,198,180	\$98,846.86
September	2,137,570	\$105,510.75	276,550	\$9,849.60	2,414,120	\$115,360.35
October	2,340,860	\$134,366.80	288,550	\$10,332.90	2,629,410	\$144,699.70
November	1,762,060	\$118,125.70	239,550	\$8,610.30	2,001,610	\$126,736.00
December	1,543,690	\$90,184.38	205,450	\$7,378.20	1,749,140	\$97,562.58
Total - 2023	18,924,000	\$892,181.24	3,112,250	\$110,844.90	22,036,250	\$1,003,026.14
Monthly Average - 2023	1,577,000	\$74,348.44	259,354	\$9,237.08	1,836,354	\$83,585.51

