

**Water Department
March, 2020
Monthly Report**

Operational

1. The plant operated throughout the month and complied with all state and federal requirements for water quality and reporting.
2. All distribution system flows and pressure needs, for both fire protection and the water customers, were met.

Maintenance and Improvements

1. The staff performed all required preventative maintenance during the month.
2. Elkhead work by the staff this month consisted of routine maintenance, inspections, and snow removal. Near the end of the month, the tower and conduit were refilled to prepare for any releases that may be needed by the river district to control the reservoir spill.
3. The staff continued working on year end reports for the health department and city administration throughout the month.
4. The staff cleaned both DAF trains during the month in preparation for spring runoff season.
5. The 1st set of 40 Lead & Copper samples for 2020 were collected, and sent in to the contract lab for analysis near the end of the month.
6. The staff worked with Velocity and their subcontractors all month to finalize the new chemical feed systems at the water plant and the 2 booster chloramine feed stations so that they could be put into service by the end of the month to meet CDPHE's April 1 compliance deadline.
7. The staff continued to assist or work with other city departments, vendors, customers, and contractors as needed. The staff also worked on building and grounds maintenance, equipment repair, and on the Cross Connection Control Program.

Distribution System Operation/Maintenance

1. There were 83 line locates requested and completed this month. This required approximately 62.0 man-hours to complete.
2. All work orders, meter readings, meter tech appointments, distribution of nonpayment door hangers, nonpayment water service shut offs, and service line inspections requested or scheduled were completed.
3. Miscellaneous water department work by the staff this month included; completed 12 final meter reads, completed 11 service turn offs/ons (0 non-payment, 0 seasonal, & 11 repair work), and repaired 1 meter/MXU.

4. The staff worked on a couple of miscellaneous projects during the month. These projects included continuing the valve exercise program by working 10 system valves, and completing the 1st quarter water storage tank inspections to comply with the state health departments "2016 Storage Tank Rule". The staff continued assisting the contractors on the distribution portion of the chloramine conversion upgrade project as needed this month. This included isolating storage tanks and pressuring up the new downloading valve vaults.
5. The staff received the new Hurco Vac/Valve Turner/Pressure Washer Trailer this month, and performed start up testing and training on this piece of equipment with the manufacturer's representative.
6. The staff was able to perform their regularly scheduled work on the distribution system, bulk water sales stations, and equipment maintenance during the month. They were able to assist contractors, other city departments, and complete all emergency assignments as required.

Water Production Statistics

Effluent Total Flow	25,256,000 gallons	Total Chemical Cost	\$ 5,271.13
Backwash Total Flow	741,800 gallons	Total Chemical Cost/MG	\$ 202.75
Total Flow	25,997,800 gallons	Alum & Ash Cost/Mg	\$ 132.81

(Backwash Flow % of Total = (2.85%))

The Craig Municipal Water Treatment Plant utilizes water rights for municipal use. These included direct flow diversions from the following:

Craig Irrigation Ditch	Deep Cut Ditch
Fortification Creek Ditch	Craig Water Supply System

Monthly Report

Wastewater

March 2020

A. Treatment – Operation:

1. Operated treatment plant to comply with State and Federal regulations.
2. Performed daily, weekly, and monthly maintenance as recommended in the manufacturer's manuals.
3. Treated average of 1,115,000 gallons/day of wastewater.
4. Received and treated 3,100 gallons of hauled waste.

B. Collection – Operation:

1. 41.5 man hours used to perform 83 line locates.
2. 24 man hours used to hydraulically clean 3,575 feet (0.68 miles) of sewer main as part of routine (every 5 weeks) maintenance.
3. 30.5 man hours used to hydraulically clean 8925 feet (1.69 miles) of sewer main pipe as part of routine annual maintenance.

c. Collection – Correction

1. 2 man hours used to respond to a backup complaint at 870 Taylor. Homeowner stated that his neighbor above him had a local plumber come clear their service line of roots a couple of hours prior to the backup at 870 Taylor. City personnel found a four inch root ball that created the backup at 870 Taylor, removed it, and flow returned to normal for 870 Taylor. No damage was found in the house, and the homeowner did not want to file a claim or have photos taken.

D. Other:

1. Assisted other departments, local plumbers, and contractors as needed.
2. Analyzed Maybell's Wastewater Plant monthly samples.
3. Safety meeting attended by all Wastewater personnel.

THE 2019 WATER AND WASTEWATER ANNUAL REPORT

The City of Craig Water and Wastewater Departments are proud to present this annual report for 2019. During the past year, both of the publicly owned and operated utilities successfully met the needs of the community, and continuously maintained compliance with the mandatory guidelines established by both the state and federal regulations governing the industry.

PRE-AUDIT PROJECTED FIGURES FOR 2019:

	<u>Revenues:</u>	<u>Expenditures:</u>	<u>Unreserved Fund Balance:</u>
WATER FUND	\$6,775,400.00	\$6,695,350.00	\$2,765,244.00
WASTEWATER FUND	\$2,049,640.00	\$1,841,140.00	\$1,549,391.00

2019 WATER DEPARTMENT ANNUAL REPORT

OUR MISSION STATEMENT:

IT IS THE MISSION OF THE CITY OF CRAIG WATER DEPARTMENT TO PROVIDE THE CUSTOMER WITH SAFE, DEPENDABLE, AND HIGH QUALITY DRINKING WATER AT A REASONABLE COST; TO MAINTAIN EXISTING INFRASTRUCTURE AND EFFECTIVELY PLAN FOR MEETING THE NEEDS OF A GROWING COMMUNITY; AND TO SATISFY THE CONCERNS OF THE PUBLIC IN A TIMELY, COURTEOUS AND PROFESSIONAL MANNER.



Figure 1 Sandrock Tank Chloramine Booster Station Pad & Tank

WATER PRODUCTION OVERVIEW;

	<u>(2019)</u>	<u>(2018)</u>	<u>(2017)</u>	<u>(2016)</u>
Total Production MG	543.5	620.0	587.6	608.9
Peak Month MG	96.0/July	114.4/July	106.2/July	107.3/July
Chemical Cost/Year	\$109,791.04	\$123,770.15	\$121,343.59	\$121,742.33
Chemical Cost/MG	\$202.02/mg	\$199.64/mg	\$206.53/mg	\$199.93/mg
Total Backwash %	2.76%	2.84%	2.57%	2.89%

Backwash Pond #2 Cleaning;

<u>Contractor Cost</u>	<u>Loads to Landfill</u>	<u>Tons of Material</u>	<u>City Man Hours</u>
\$ 9,981.25	32	489.02	28

Contractual Engineering/SGM Services & Projects:

<u>Projects</u>	<u>Date Start/Complete</u>	<u>Est. Costs Project/Engineering</u>
Roundbottom Tank	5-1-2019/7-15-2019	\$411,000.00/\$42,500.00
Plant/System Upgrade	7-1-2019/Est 6-15-2020	\$2,650,000.00/\$674,000.00



Figure 2 Pershing Street Water Main Damage during Sewer Main Replacement Project

Elkhead Operational & Maintenance:

<u>Parts/Service Costs</u>	<u>Admin. Fee</u>	<u>Site Trips</u>	<u>Man Hours</u>	<u>Total City Costs</u>
\$24,887.60	\$4,730.24	219	424	\$52,032.61

Water Main Replacement Projects (In House):

<u>Location</u>	<u>Length/Size</u>	<u>Manhours</u>	<u>Approximate Materials Cost</u>
9th & Rose Streets	60Ft/6" PVC	48	\$ 3,000.00
East HWY 40 to 1 st Street	800Ft/8" PVC	240	\$15,000.00



Figure 3 North Glen Erie Tank Cleaning & 5 Year Structural Inspection Program

Bulk Water Sales Stations Usage:

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
#1 Station	3.54mg	3.94mg	3.84mg	4.40mg
#2 Station	3.48mg	4.09mg	4.08mg	2.59mg
#3 Station	2.38mg	3.13mg	1.87mg	3.87mg
Fire Hydrant Meters	0.33mg	0.23mg	0.18mg	0.89mg
Total Water Delivered	9.73mg	11.39mg	9.96mg	11.75mg



Figure 4 East Victory Way Water Main Replacement Project



Figure 5 Elkhead Control Building w/Outfall at 0%

Distribution System Maintenance & Projects:

<u>Project Name</u>	<u>Quantity</u>	<u>Man hours</u>
Water Breaks	14	110
Line Locates	934	850
Valves Exercised	520	300
Valves Replaced	0	0
Fire Hydrants Exercised	291	190
Fire Hydrants Replaced	2	10
Fire Hydrants Flushed	240	240
Water Service Taps	2	2
Curb Stop/Risers Replaced	10	50
Final Meter Reads	206	90
Water Meters/MXUs Repairs	168	100
Services Shut Offs/Turn Ons	395	200
Water Pump Station Maintenance	45	125
Delinquent Account Notices Distributed	1,200	190
Water Meter Reads	3,500/month	160
Bulk Water Sales Stations Maintenance	35	40
Storage Tank Inspections/Maintenance	30	50
Cross Connection Control Program	2 (staff/485 surveys)	300
Training CIRSA & State Certification	4 (distribution staff)	50



Figure 6 Uni-Directional Flushing Program w/New Truck Mounted Diffuser



Figure 7 PVC Water Main Leak

WATER PLANT GOALS 2020;

1. Coordinate removal of sediment from the #3 backwash pond.
2. Oversee the Small Barclay Tank “Repair & Improvement Project”.
3. Continue to work on small (in-house) water main replacement program.
4. Oversee the completion of the Water Plant & System “Upgrade & Improvement Project” for 0.2 mg/l disinfectant residual compliance.
5. Continue working with SGM on water and wastewater capital projects development, and future projects design.



2019 WASTEWATER ANNUAL REPORT



Treatment

	Percent Change Per Year						
	2019	2018	2017	2016	18-19	17-18	16-17
Effluent flow (million gallons	284	282	292	310	+0.70	-3.42	-5.81
Effluent flow (Avg. Daily MGD)	0.777	0.771	0.800	0.848	+0.77	-3.62	-5.66
Biosolids Produced (dry metric tons)	221	225	244	257	-1.81	-7.79	-5.06
Biosolids Land Applied (dry metric tons)	0*	119	95	95	N/A	+25.3	0
Bushels Harvested	51	32	50	45	+37.2	-36.0	+10.0
Hauled Waste received (gallons)	39,685	77,723	150,545	790,060	-51.1	-48.4	-81.0

Safety: Held quarterly and monthly safety meetings for wastewater employees. Zero lost time accidents in 2019.

Permit: Zero violations in 2019.

*111 Dry Metric Tons of Biosolids stored for landfill disposal in 2020 due to high nitrogen content.

Collection System

	Percent Change Per Year						
	2019	2018	2017	2016	18-19	17-18	16-17
Sewer Tap Permits	4	4	5	2	0	-20.0	+150.0
Line Locates	873	476	136	118	+183.4	+250.0	+15.2
Man Hours Used	436.5	281.5	104	82.5	+155.1	+171.7	+26.1
City Pipe Cleaned	200,960ft.	126,569ft.	52,448ft.	37,044ft.			
(miles)	38.1	23.97	9.93	7.02	+158.9	+141.3	+41.6
Man Hours Used	862	613.5	300	238	+104.5	+26.0	-61.0
Herbicide Applied							
(ft.)	0	0	14,185	12,033	0	-100.0	+17.9
Man Hours Used	0	0	58.5	47.5	0	-100.0	+23.2
Maybell Pipe							
Cleaned (ft.)	10,445						
(miles)	1.98						
Man Hours Used	35						
Maybell							
Collection System							
Video Inspection							
% Completion	80						
Man Hours Used	32						
Backup							
Complaints	24	23	18	25	+4.2	+27.8	-28.0
Man Hours Used	47	55.5	27.5	52.5	-18.1	+101.8	-47.6
Homeowner's							
Responsibility	16	14	17	19	+12.5	-17.6	-10.5
City's Responsibility							
	8*	7	1	6	+12.5	+600.0	-83.3

*Of the eight (8) that were the City's Responsibility, three (3) did not require action beyond our department, and five (5) were handled through our insurance.

Other:

In August, a lightning strike took out the power and communications to Wastewater. As a result, the operator on call was not called out and the basement flooded to the ceiling. Thanks to a quick response from Wastewater, Water Shop, and Water personnel, the flooding was contained to just the basement. No homes or businesses were impacted by this. However, it did cost the City roughly \$100,000.00 in repairs.

David Mondeau retired at the end of December after 36 years of working for the City.