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The Water Cooler

Newsletter Winter Issue

Hello and welcome to the quarterly Bay County Department of Water and Sewer (BCDWS) newsletter! We're happy that you have taken a few minutes of your time to read it.

This newsletter is for you, the customers of the Bay County Department of Water & Sewer. Our goal is to get you more information about your water and sewer services. In each issue, you will find things such as tap water test results, water quality information, DWS happenings, and any updates that you may want to know.

If you'd like to sign up to have the newsletter emailed to you, contact us at: <https://baycodws.org/newsletters/>. You can also sign up to having the newsletter mailed to your house.

Once you read through the newsletter, we'd love to hear from you. What do you want to see in future issues? What can we do better? Let us know!

Career in Water/Wastewater

Do you want a rewarding career that provides an essential service to your community and protects public health? If so, you may want to consider employment in the municipal water or wastewater field, and Delta College can help get you there.

Delta is one of only two colleges in the state of Michigan that offer classes in water/wastewater. Through their Water Environmental Technology (WET) program, students can work towards either an Advanced Certificate or an Associate Degree.

Students taking WET classes will learn about things such as water and wastewater treatment technology, maintenance, microbiology, and utility management. Classes are taught by local engineers, superintendents, lab analysts and managers with up-to-date experience and are often offered either online or in evenings for flexibility.

Due to an aging workforce and retirement of workers, the prospects of employment opportunities in the water/wastewater field are currently high and are expected to increase over the next decade. Taking WET classes gives an applicant one of the best opportunities to be chosen for these positions. The Bay County DWS has hired numerous employees that have either graduated with a WET degree or taken WET classes.

To learn more about the Delta College WET program, please visit www.delta.edu/news/2018-wet-program-story.html

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Special points of interest

- Best Tasting Water Award
- Sewer Backup Prevention
- Black Slime Explanation
- Phosphoric Acid Usage



Billing and Past Due Process

Just a little information on how your bill is prepared and what happens when your bill is past due.

Bay County Department of Water and Sewer Meter Readers will go out and obtain a read from the customer's touchpad or radio read device. That read will then be uploaded to our billing software. A Customer Service Representative will then address any issues on an account by placing a phone call to the customer. The issues for example could be: A higher than normal usage or a lower than normal usage based on the previous quarters, it could also be a no usage issue for the quarter or we were unable to obtain a read because of a problem with the outside equipment.

Once the bills are mailed, they are due 3 weeks from the day they were prepared. If a customer does not pay by the due date a 10% penalty is added to the account. If the bill is not paid 10 days after the due date a Late Notice will be mailed to the customer with a Cutoff Date listed. (Which is 30 days from due date). If the bill is not paid after the Late Notice is mailed, an Automated phone call will be generated a week before the cut off date to give the customer one last chance to make a payment before water services are shut off.

Featured Employee

This edition's featured employee is Carl Helmreich. Carl is a Meter Reader/Technician in the Water Distribution Division. He is a 2012 graduate of Bay City Western High School and a current resident of Monitor Township. He started his employment with the Water Department in May of 2016. Carl's favorite parts of the job are all the opportunities he gets to meet and help all the customers he sees on a daily basis. Carl was just recently married in February to his lovely wife Emmaly. After several cancelled dates due to Covid they took to their favorite hobby of travelling and had a destination wedding in Key West. They enjoy travelling together so much that in the last 2 years alone they have gone to Key West, The Bahamas, California, Texas, Mexico, Oregon, Chicago, Washington, and Honduras. They also love to travel locally with friends and stay in their camper.



Black Slime Explained



Have you ever noticed black slime on your faucets, spouts, aerators, shower heads, in toilet bowls or on other fixtures? Harmless manganese bacteria cause this, and in this article we will help explain how it occurs and how you can get rid of it. Manganese is a naturally occurring metal that can be found in different types of rocks, soils, and sediments; and typically occurs in lakes, rivers, and underground water supplies. The black slime that accumulates on

spouts is bacteria that feed on oxidized iron and manganese in the water. Manganese is harmless, and the World Health Organization recommends having a concentration of 5 parts per million in drinking water. Though we do not add manganese to the water, it can naturally occur from mineral deposits that can develop in your plumbing or in the distribution system. The black slime that is visible on your fixtures is the manganese oxidizing when it meets oxygen in the air and then harmless bacteria from the air will gather and feed on it, making it appear black and slimy. Chlorine is the best weapon against this, as it will kill the bacteria. Therefore, we experience this occurrence the most in the summer and early fall months when the water is warmer, and the chlorine will not carry as far out into the system. Unfortunately, there are no simple solutions for this nuisance. The best way to clean it is with bleach, but it will most likely reappear in time and must be cleaned again. Flushing your service line can also help, as it can clear mineral build up from your service line and interior plumbing. The only way to completely eliminate the problem is by removing the minerals completely from the water. This can only be accomplished by installing a reverse osmosis (RO) system on your water, but that typically can have more drawbacks than benefits. RO systems require maintenance themselves and use on average 3 gallons of water for every 1 gallon produced. Not desirable for most. I hope this helps answer some questions you may have had if you've been experiencing this problem, and as always, you can call our office and we would be happy to talk about it or even send a technician to look at your situation and offer any advice we can.

Bay County Water Remained Safe to Drink Throughout 2021, Despite Drinking Water Standard Violation

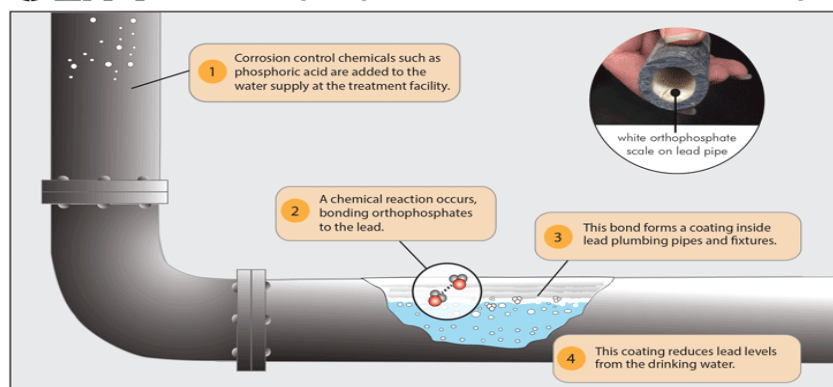
In October 2021, a letter was sent to every customer of the Bay County Department of Water and Sewer, stating that the water system violated a drinking water standard. The violation was due to the fact that the Bay Area Water Treatment Plant (BAWTP) fed phosphoric acid which had not been certified for use in drinking water. Water plant staff had ordered certified phosphoric acid, but the chemical supplier inadvertently sent acid that was not certified. The chemical was introduced in May 2021 and was discovered in August. "All chemicals added to the water supply must meet ANSI/NSF 60 standard," says Ryan Goebel, Water Plant Superintendent. "When chemicals are delivered, plant staff reviews the clarity, chemical makeup, and concentration. Unfortunately, we didn't have a policy in place to ensure compliance with NSF 60." Goebel assures that this has since been fixed. "We now require chemical suppliers to submit proof that the chemicals they deliver have been certified."



Phosphoric Acid Tank

The reason that the uncertified acid wasn't discovered sooner was because the acid was basically the same as certified acid. "We sent a sample of the uncertified phosphoric acid to NSF for testing, and test results were in compliance with Standard 60," states Goebel. "The chemical looked, acted, and worked the same as it always did. Our water was safe to use and drink the whole time." Still, Goebel wants to reassure the public that they can trust the water coming from the BAWTP. "The last thing I want is for people to lose confidence in us. Our Plant staff cares deeply about water quality and are constantly monitoring its safety. We won't make this mistake again." If you have questions for Goebel, you can contact him through email at bawtp@baycodws.org or via phone at (989) 439-7245.

How Orthophosphates Coat and Protect Water Pipes



Why Does the Water Plant Feed Phosphoric Acid

Phosphoric acid is fed because it acts as a corrosion control. It forms a coating on lead and copper surfaces, which helps keep those metals from dissolving into the water. Lead is of a particular concern. Water mains transporting water from the plant through the distribution system are virtually lead free, but there are still some lead service lines out there that connect a house to the water main. A number of these are being removed and replaced every year, and the goal is 100% removal as soon as possible. Until they're gone, feeding phosphoric acid may be our best defense. To see which communities have lead services, or to view the most recent lead and copper sampling results, please check out our 2020 Water Quality Report at <https://baycodws.org/ccr2020.pdf>.

Bay County Department of Water and Sewer - Statistics

20,966 Billing Customers

58 Full Time Employees

19,177 Water Meters

648 Bacteriological Monitoring
Annual Samples

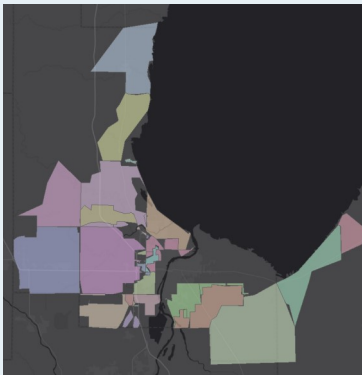
1,920 Membrane Cartridges in Bay
Area Water Treatment Plant

In 2021, the Water Plant Pumped:
-2.71 Billion Gallons of Water
-226 Million Gallons per month avg
-7.43 Million Gallons per day avg

The Bay Area Water Treatment
Plant and the West Bay County
Regional Wastewater Treatment
Plant are staffed 24 hours per day
365 days per year.

Water Distribution Systems Maintained by Bay County Department of Water and Sewer

Akron Township
Bangor Charter Township
Beaver Road Association
Beaver Township
Frankenlust Township
Fraser Township
Kawkawlin Township
Merritt Township
Charter Township of Monitor
Pinconning Township
Portsmouth Township
Williams Charter Township
Wisner Township



2022 Budget

On November 9, 2021 the Board of County Road Commissioners formally approved the 2022 fiscal year budget for the Department of Water and Sewer. The adopted budget effects the DWS rates as followed:

The wholesale cost of water rate effective January 1, 2022 will be \$4.03/CCF;	
Cost of water from BAWTP	\$3.26/ccf
Cost sharing agreement	.10/ccf
Water Transmission	.67/ccf

The Wastewater Treatment Rate effective January 1, 2022 will be \$234.79/REU per year;

BCDWS OM&R	\$147.74 per base REU/Year
Inflow/Infiltration	\$20.74 per I/I REU/Year
Capital Improvement	\$66.31 per base REU/Year

The 2022 fiscal year budget also includes funding for several capital projects across the organization.

WATER DISTRIBUTION DEPARTMENT:

VEHICLE REPLACEMENT – Replace vehicle #104, ½ ton 2-wheel drive truck
POLE BARN #2 UPGRADES – Convert cold storage to heated storage
BACKHOE REPLACEMENT – Replace backhoe #113

ADMINISTRATION DEPARTMENT:

TYLER SERVER – Replace current servers

BAY AREA WATER TREATMENT PLANT:

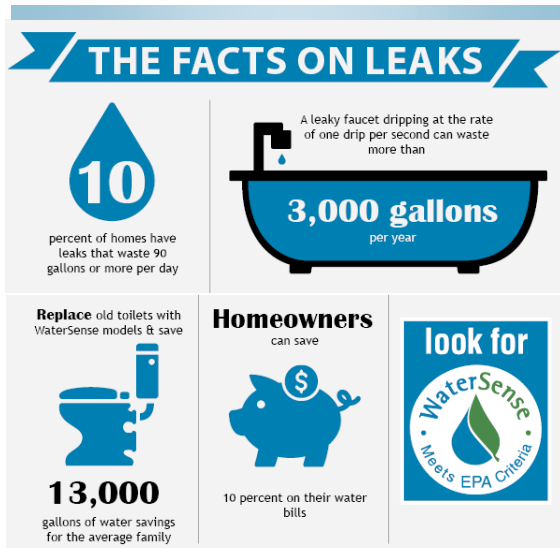
ACCESS CONTROL SYSTEM UPGRADE – Install new equipment into an existing system
AIR DRYER – Dryer system to reduce dew point in compressed air system
DEHUMIDIFICATION – Dehumidification units in plant
TRACTOR – New equipment to replace old
FLOURIDE ANALYZER – Monitor Fluoride level in water
MEMBRANE SKIDS – Replace two membrane skids
PIPE SUPPORTS – Pipe support improvements and corroded pipe replacement

REGIONAL WASTEWATER TREATMENT PLANT:

UV DISINFECTION PHASE I – Project design and engineering
POLYMER PUMP – Replace existing polymer pumps
PLC UPGRADE – Upgrade PLC software
AERATION TANK AIR SYSTEM UPGRADE – Update system components
WHEELER RD BASIN – Completion of earthwork for secondary retention basin
LIFT STATION #2 – Building update and new equipment
PRIMARY SLUDGE TRANSFER – Rework primary sludge transfer

Water Leaks

Bay County Department of Water and Sewer alerts customers when high water usage is detected. If you have high usage and do not have an explanation, please contact our office. We can send a technician to help diagnose the problem at no cost to the customer. The customer may need to hire a licensed professional to fix the issue.



The Bay Area Water Treatment Plant Wins Regional Best Tasting Water



Operations Supervisor Mike W. with Award

"I don't know why it took them 6 years to figure out that we have the best tasting water in the area, we knew it immediately!" - Mike W.

The Bay Area Water Treatment Plant (BAWTP) can now claim a new title; they produce the best tasting water in Central Michigan. A water tasting competition was held at the Michigan American Water Works Association (MI-AWWA) Fall Regional Meeting in October. The BAWTP was declared the winner. "We're grateful to have won this award. Credit is due to the hard-working staff at the DWS Office and Water Plant," says Mike Wagar, Water Plant Operations Supervisor. This is the first best tasting water award won by the plant since it started producing water in 2015. Adds Wagar, "I don't know why it took them 6 years to figure out that we have the best tasting water in the area, we knew it immediately!" In 2022, the BAWTP will compete against other regional winners to be crowned as having the best tasting water in the state.

Bay County Department of Water and Sewer

Mission Statement

The mission of the Bay County Department of Water & Sewer is to provide industry leading quality services to our customer base. This service will be delivered with high regards to safety, environmental stewardship, fiduciary prudence, and uncompromising integrity. We are committed to our mission and take great honor in serving the community.

Bay County Department of Water and Sewer

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Sanitary Sewer Backups – Prevention

In the previous newsletter, we discussed sanitary sewer backups, how they occur, and how you can prepare for them. This time, we're going to examine what you can do to prevent sanitary sewer backups in your home or business.

1. Properly Maintain Your Sanitary Sewer Pipes

Your sewer lateral, the pipe that runs from your house or business to the sanitary sewer main, is your responsibility to maintain. You may need to have it cleaned periodically, especially if you know you have a problem with tree roots in the lateral. If you know or suspect the lateral is degraded, consider having it inspected via camera to determine if it needs to be lined or replaced before it causes major problems. Some buildings are equipped with a backflow preventer to keep sewage from running backward from the sewer into your basement. While they are a very useful tool, they also need to be maintained to ensure they will work properly when they are needed.

2. Be Careful About What You Put Down the Drain

Used cooking oil and grease should never go down the drain; as it cools, it will solidify in your drain, sewer lateral, or in the sanitary sewer. This could cause a constriction or blockage that will cause backups. Store used cooking oil and grease in heat-resistant containers until they are cool enough to dispose of properly. Additionally, many useful household items can cause a problem if they are flushed down the toilet, even those that are advertised as "flushable". Personal wipes, disposable diapers, paper towels, and hygiene products are among the many items that could, over time, clog your lateral, sewer main, or nearest downstream lift station pump. Dispose of them in the trash instead.

3. Disconnect Illegal Connections

Never connect footing drains, sump pumps, roof drains, or gutters to your sanitary sewer. It is against your community's Sewer Use Ordinance, and could cause a sewer backup during wet weather events when the sanitary sewer becomes overwhelmed with storm water. Consult a plumber to correct any illegal connections.

Hopefully this was helpful to you. If you ever have any questions about sanitary sewer backups, feel free to contact us here at the Bay County Department of Water and Sewer. In the next issue, we'll take a closer look at how wastewater gets conveyed from your home or business to the West Bay County Regional Wastewater Treatment Plant!

