



THE Pipeline

YOUR CURRENT WATER INFO SOURCE

Spring 2022 In this edition...

- A Day in the Life of Audra
- Chambers Reservoir Update
- Sewer Line Maintenance Technology
- New Billing Software
- Water Main Flushing



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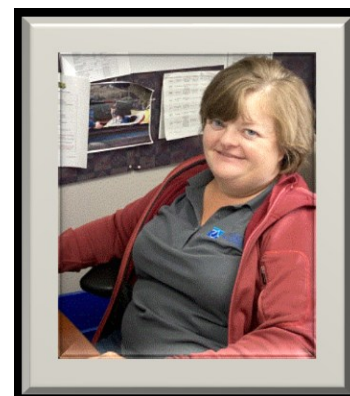
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a Day in the Life of

Meet Audra ~



GIS (geographic information systems) is extremely important to many industries including water and wastewater. ACWWA has approximately 265 miles of water and 100 miles of wastewater pipelines for which the exact locations need to be known. Audra Baumgardner, ACWWA's GIS Analyst oversees knowing and correcting the locations of pipelines and other features throughout the ACWWA service area. She has over ten years of experience in GIS. She started out with a bachelor's degree in landscape architecture and moved on to a master's degree in GIS.

Audra's daily routine generally consists of working with field operations to address any changes that may need to be made to the maps and making sure the database is up to date with the most accurate data. In addition to making sure that the maps are current, Audra makes sure that all One Call locate tickets are successfully sent to GIS, tracking the completed work on a dashboard, including what type of ticket and which employee completed each request. ACWWA made the move to a GIS Enterprise system four years ago which allows real time data to be displayed to everyone in ACWWA. In addition to making sure all the data is getting into GIS, Audra is also responsible for creating various maps for different departments in the organization. This includes paper maps, "webmaps" and apps, dashboards, and "storymaps."

ACWWA has also undertaken an asset management program that tracks all the maintenance on the valves, manholes, and fire hydrants. Audra makes sure that operators have current "webmaps" to track their progress and know where the features are located. She also manages all the data that comes back from the field crews regarding the features. This tracks which features need additional maintenance.

ACWWA's underground assets need to be extremely accurate, which is accomplished by having detailed GPS units and ground penetrating radar (GPR). As more development continues within the ACWWA service area, GIS will become even more important.



This update will bring our ACWWA customers up to date with the latest construction and operational activities occurring at the Chambers Reservoir, ACWWA's irrigation water storage reservoir.

RECONSTRUCTION ACTIVITIES – Phase 2 Reconstruction Efforts (Completed 4th Quarter 2020)

The Phase 2 reconstruction consisted of reshaping the reservoir for the installation of a geosynthetic liner and underdrainage system for the reservoir:

- The general civil construction efforts including final grading, underdrainage system installation, monitoring wells installation, perimeter road construction and fencing work items;
- The liner installation contract – including the installation of all liner materials, and all attachments for the liner to structures throughout the reservoir site.

A pedestrian pathway on the west side of the reservoir was also reconstructed to allow pedestrians the ability to walk along the west side of the reservoir. Fencing has been installed at the top of the reservoir to fully enclose the reservoir and protect the reservoir. The reservoir is not accessible for public use, it will only be used to store water from Cherry Creek alluvial aquifer for ACWWA's irrigation distribution system

WATER DELIVERY TO CHAMBERS RESERVOIR – 2021 – 2023

Site inspection by the State Engineer's Office (SEO), Dam Safety Division, has given ACWWA **FULL PERMISSION** to use the reservoir after fulfilling the inspection and documentation requirements. This allows the reservoir to be filled to its intended capacity of 1,400 acre-feet. The process of filling the reservoir will take until 2022-2023. Stored water will be used in ACWWA's non-potable irrigation distribution system.

A contract has been awarded for the renovation of the pump station pumping capabilities to allow for a delivery flow of up to 4,500 gallons per minute for the non-potable irrigation system. This work will be completed in the 2nd quarter 2022. This project will complete the installation of new pumps to allow ACWWA to deliver Chambers Reservoir water for irrigation use.

Continued filling of the reservoir will be ongoing as additional groundwaters from ACWWA's Cherry Creek wells are available. Monitoring of the water stored within the reservoir is also accomplished with testing and analysis of the incoming groundwater and the quality of the stored water.

Questions have been asked of ACWWA concerning the status of the reservoir:

- ***Why are there wrinkles in the liner?***
The liner installed is a reinforced polyethylene (RPE) liner that is 45 mils thick with a geotextile underlayer for drainage and protection of the primary liner. This material was chosen for its puncture resistance and the minimal elongation characteristics. The tan color was selected to minimize the solar gain compared to dark liner.
- ***What is the source of the water in Chambers Reservoir?***
As described above, the water that is supplied for the reservoir is from legally permitted potable source wells that have been used for many years in ACWWA's non-potable/irrigation system. These wells are legally permitted to withdraw water from the Cherry Creek Alluvial aquifer for use within the ACWWA distribution system.



Sewer Line Maintenance Technology



One of the most enjoyable parts of working in the Water/Wastewater industry is the abundance of opportunities in advancement of our processes, using creative, outside the box thinking in development of new procedures.

Just this past month, ACWWA's field staff initiated a new sewer line maintenance schedule that uses acoustic technology to evaluate the need for lateral sewer line cleaning. Historically ACWWA has used contractors to inspect and clean all our systems on a three-year cycle. This work is an extremely important form of preventive maintenance which cannot go ignored.

You may have already seen ACWWA staff conducting these inspections in your neighborhood, and if not, you soon will. Our technicians wear bright, safety vests with the ACWWA logo, and will be in the streets, removing manholes covers, two at a time. During these inspections the device being used creates a series of low audible tones sending sound waves from the transmitter to the receiver located at the following manhole. These soundwaves will generate data points to our technicians on the current state of the sewer line on a scale of one to ten, one being the cleanest. The data will be stored in ACWWA's Geographic Information Systems (GIS) mapping software, then providing our technicians the data to strategically pinpoint areas of most concern that need immediate attention. By using this approach, we will avoid cleaning clean sewer lines and focus our attention on the areas that the data identifies as most urgent. By not following a data supported cleaning schedule, we're running blind and could potentially suffer avoidable future Sanitary Sewer Overflows (SSO) by not focusing our attention on critical areas first.

By taking this new approach, ACWWA will not only see an improvement to our overall maintenance but equally as important, a financial savings as well.

Further information on the technology can be found at: <https://infosense.com/sl-rat/>

ACWWA is implementing new billing software in spring 2022! After extensive research, ACWWA chose Continental Utility Solutions, Inc. (CUSI), who has been developing and servicing Customer Information Systems, Utility Billing Application, and Financial Management Software since 1984. This new software will increase productivity of the billing staff and improve operational efficiency, lending itself to industry-leading customer service. The new software will allow customers 24/7 access to all of their data, with easy-to-use tools to help manage their account, including quick pay, schedule a payment, electronic billing, bank draft and recurring payment services.

At publication, we have done our first round of beta testing, staff is undergoing training, and we will be rolling out the new software later this spring. Don't be alarmed, while your bills will look different, they will be easier to read and will contain more information that is actually helpful to our customers.

**New
Billing Software
Is Coming!**



Water Main FLUSHING

Water main flushing is the process of cleaning or “scouring” the interior of water distribution main pipes by sending a rapid flow of water through the main pipes. The benefits of flushing include: reducing bacterial growth; identifying missing or broken valves; ensuring that fire hydrants are operational; dislodging and removing sediments and deposit build-up; and, reducing taste and odor problems. If after flushing, your water is discolored, try running only the cold water at one faucet for about 5 minutes and you should see that the water becomes clear. (Note that running the hot water, rather than cold water, pulls from the hot water heater and may delay or cause the water to not run clear.) If the water doesn’t clear up after 5 minutes, wait for a few hours and try running the cold water only again. If the water is still discolored, please contact us so we can investigate why the water continues to have discoloration. Even if you are in an apartment or don’t pay your water bill direct, it’s important to let us know.

ACWWA flushes the water mains approximately once per year, in the spring. Look for signs that flushing will occur at the entrances to your neighborhood. The schedule will be updated frequently.

Occasionally, weather may delay / hinder the flushing process and emergencies may arise where ACWWA’s staff is called away from flushing for a day or two. Please call the office at 303-790-4830 or check ACWWA’s web page for updates.

2022 Flushing Schedule

<u>DATE</u>	<u>LOCATION</u>
April 4-7	ELKHORN
APRIL 11-14	ELKHORN
APRIL 18-21	CHAPARRAL – ESTANSIA - ANTELOPE
APRIL 25-28	FOX FIELD - RIVER RUN - COYOTE RANCH THE LANDING – THE COLONY
MAY 2-5	SOUTH CREEK – LADERA - COURTNEY DOWNS – THE RESERVE - SAVANA
MAY 9-12	BRONCOS TRAINING – THE JAIL – CENTENNIAL AIRPORT – COUNTY OFFICES – FED X -CENTENNIAL LEASING – TOP GOLF – OTHER COMMERCIAL
MAY 16-19	DOVE VALLEY - CENTENNIAL EAST – HINSDALE LOOP – FOX RUN - POTOMAC
MAY 23-26	SANCTUARY - VCC - ORCHARDS
JUNE 1-3	ALL BUSINESS NORTH OF ARAPAHOE ROAD