

Wastewater Fun Facts!

- Wastewater, sometimes called sewage, is the used water that goes down the drains of homes and businesses to the municipal sewer.
- Wastewater can contain a large number of disease-causing parasites including viruses, bacteria, protozoa, and fungi.
- Thanks to well-designed and well-operated wastewater and drinking water systems, waterborne diseases are rare in the United States.
- The first wastewater treatment plant in Clifton was built in 1957. This was 15 years before the Federal Pollution Control Act was instated.
- Clifton Sanitation District (CSD) maintains and operates two major systems: a sewer collection system, which conveys wastewater from homes and businesses to one location; and a treatment facility, where the wastewater is fully treated and clean water is discharged into the Colorado River to be used again downstream.
- The collection and treatment systems don't take holidays. Both are running 365 days a year.
- CSD serves approximately 21,000 people.
- CSD covers an area less than three miles across, yet maintains more than 80 miles of underground sewer pipe. Sewer pipes in far reaches of Clifton start out small, at 8 inches in diameter, and increase in size to 27 inches before entering the treatment plant.
- In 2008, the CSD's treatment plant was upgraded to a modern enhanced biological treatment facility. The plant was designed and built to treat Clifton's specific type and quantity of flow.
- There are nine full-time employees who work for the CSD.
- Like cheese, wine, and bread making, wastewater treatment plants use microorganisms to perform most of the work. Our job is to keep them happy and healthy so they can work day and night treating the wastewater.
- The water that enters the plant takes about three days to pass through the entire treatment process.
- Last year, the CSD treated 442 million gallons of wastewater; enough water to fill 670 Olympic-sized swimming pools. That is 1.2 million gallons of water a day.
- The treatment process removes garbage, solids, nutrients, and organic matter, while producing dried fertilizer and clean water.
- Producing clean water is important because downstream from the Grand Valley:
 - Almost 40 million people use the Colorado River for their drinking water supply.
 - The Colorado River flows into the two largest reservoirs in the United States.
 - The Colorado River provides thousands of miles of recreational water for boating, swimming, fishing, and hunting.
- The average household discharges 165 gallons of wastewater a day:
 - Toilet: 33%
 - Clothes washing: 26%
 - Bathing: 19.6%
 - Bathroom sink: 11.3%
 - Kitchen sink: 5.8%
 - Dishwashing: 2.5%
 - Garbage disposal: 1.8%
- The next time you run the faucet or take a shower, remember that the used water doesn't just disappear when it goes down the drain. That water is treated, then enters the great Colorado River where we, and many others, use it again and again.

Winter Average Billing Policy Notice

Clifton Sanitation District (CSD) has recently authorized a policy to establish wastewater service charges for commercial customers based on winter average water consumption. The winter average water consumption excludes estimated potable water used for irrigation, and which is not tributary to the sewer, from the calculation of wastewater service charges. Commercial customers who use a significant volume of potable water for irrigation during the summer growing season may benefit financially from this policy.

The water consumption surcharge creates a financial incentive for commercial customers to minimize water consumption. The water consumption surcharge also encourages commercial customers who have access to non-potable water from the irrigation districts in the Grand Valley to use the non-potable sources for irrigation instead of using drinking water.

For more detail on the winter average billing policy, please go to our Web site www.cliftonsanitation.com.

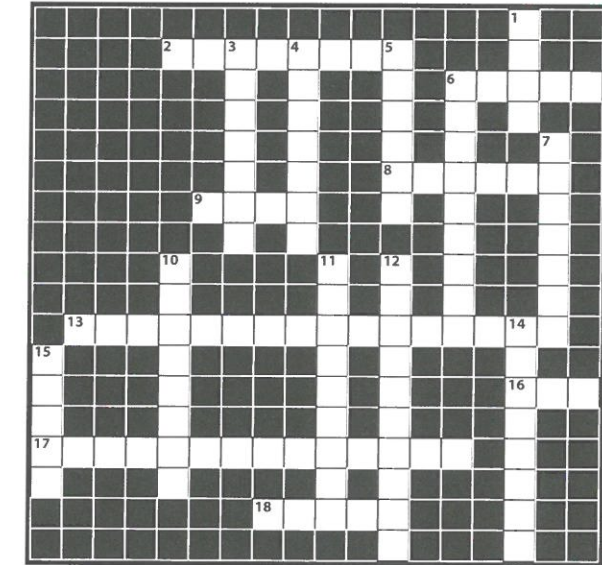
Puzzle

ACROSS

- Causes clumping
- Put grease in the ____, not down the drain
- Cooking oils, salad dressings, soups
- District sewer pipe
- Laterals, mains, trunk sewers (2 words)
- Fats, Oils, and Grease
- Clifton Sanitation Treatment Process (2 words)
- Another word for sewage

DOWN

- Tertiary treatment filter
- Home sewer pipe
- Digester gas
- Undigested solids
- Leading cause of sewer blockage (2 words)
- Reuse
- Disinfectant
- Processed waste
- Sewage
- Final output flow of a wastewater treatment plant
- Process of removing contaminants



ANSWERS	
Across:	2. Polymers
	6. Grease
	8. Trash
	9. Main
	13. Collection System
	16. FOG
	17. Advance Primary
	18. Waste
Down:	1. Coal
	3. Lateral
	4. Methane
	5. Sludge
	6. Tree Roots
	7. Reclaim
	10. Chlorine
	11. Biosolids
	12. Wastewater
	14. Effluent
	15. Treat

Board Members

After 33 years on the Clifton Sanitation District's (CSD) Board of Directors, Greg Martin has decided to step down from his position as a Board member. CSD would like to wish Greg well in his future endeavors and thank him for his time and service. Greg brought his passion, insight, knowledge, and experience to the table in order to help govern and move CSD forward. Thank you, Greg.

- Chairperson – Dave Stassen
- Secretary/Treasurer – Kent Brumback
- Director – Walt Hoyt
- Director – Mike Konn
- Director – Dale Welch

These members bring a variety of experience and expertise to the Board and CSD looks forward to their contributions to the Board and the efforts they will catalyze for our community.

CSD would like to re-introduce our current Board members and welcome our new Board member, Walt Hoyt. CSD is very pleased to have them as part of the organization.

Dirty Words

Advance Primary Treatment: So much for "Dirty Words"—these three really make things clean! Chemicals called "polymers" are added to wastewater to help waste particles clump together in large enough chunks to settle out.

Biosolids: This is one of our favorite words because it is so fun to say. Try it now. Say Biosolids. Biosolids are processed waste, which can be used for beneficial reuse, such as fertilizer or covering trash at a landfill.

Cogeneration: The making of electrical and thermal energy.

Collection System: Wastewater is collected via a system of pipes made up of laterals, mains and trunk sewers. A lateral pipe connects your home to the District's main pipe, which connects to a larger trunk sewer before it reaches the Clifton Sanitation Wastewater Treatment Plant where it is cleaned and discharged.

Digestion: Organisms break down sludge in the digestion process, creating as by-products, methane gas, carbon dioxide, solid organic material and water. Sound similar to another process you know? It's true! You produce methane the same way, too!

Disinfection: During the third (or tertiary) stage of wastewater treatment process, chlorine is added to

kill harmful organisms.

Effluent: Treated "cleaned" wastewater which flows out of a treatment plant.

FOG: Funky Odor Gone (bad). No, not really. FOG stands for Fats, Oil and Grease, all of which should be put in the trash not down the drain.

Grit Chamber: Tank in which the flow of wastewater is slowed, allowing heavy solid materials such as pebbles, sand, coffee grounds and eggshells to sink to the bottom.

Influent: Untreated wastewater when it flows into a treatment plant.

Influent Screens: Wastewater filters through a screen, but large solid objects such as rocks, cans, plastic bags and sticks are stopped.

Inorganic Material: Non-living things (e.g. rocks, toilet paper).

Lateral: Home (or business) sewer pipe that connects to the District's sewer main.

Main: District's sewer pipe.

Methane: Digester gas (also found in landfills, coal mines, swamps and the intestines).

Organic Material: Organic or living things (e.g. bacteria, tree roots, table scraps—stuff that Sparky isn't supposed to eat).

Polymers: Chemicals that can draw particles together like a magnet.

Raw sewage: Untreated wastewater.

Reclaim: To reuse.

Reclaimed water: Water produced by a three-stage treatment of wastewater for irrigation, landscaping and industrial uses (e.g. golf courses, cooling towers).

Scum: Scum is the stuff floating on top of the wastewater made up of mainly fats, cooking oil, grease and shampoo.

Secondary Treatment: Biological treatment process in which bacteria (that's right, "bugs") consume organic matter, then settle out as sludge.

Sedimentation: Solid materials settle out of the wastewater into the sedimentation tanks.

Sewage (or wastewater): Sewage is your waste, everyone's waste. It's the used water and added waste of a community which is carried away by toilet, sink and bathtub drains to the sewers.

Sludge: The solid waste material which settles out in the wastewater treatment process.

Tertiary (Third) Treatment: Anthracite coal is the tertiary treatment filter used by the Wastewater Plant.

2015 Rates

In 2011, the District adopted a transition to cost-of-service rates over a multi-year period, to mitigate financial impacts to customers and to remain fiscally sound while paying for capital improvements and meeting regulatory laws and regulations. The 2015 rate structure for residential and commercial service fees has been adopted. For residential customers, the District intends to continue its historic method of assessing flat rates. For commercial and industrial classifications, the District is transitioning to a consumptive use method of assessing rates and charges. This will result in rate increases for most customers and rate decreases for some. These fees are the fourth step of a five-year transition to cost-of-service rates. The following table reflects the 2014-2015 rate structure.

CUSTOMER TYPE	2014	2015
Residential, per EQU	\$28.10	\$28.90
Nonresidential (EQU<=1)		
First 4,000 gallons, per bill	\$28.10	\$28.90
Over 4,000 gallons, per Kgal	\$2.90	\$3.91
Nonresidential (EQU>1)		
Base Charge, per EQU	\$15.60	\$12.10
Volume Charge, per Kgal	\$2.90	\$3.91
Schools (Inside District)		
Base Charge, per EQU	\$7.80	\$8.00
Volume Charge, per Kgal	\$4.64	\$4.83
Whitewater, per Kgal	\$7.00	\$7.24



Clifton Sanitation District
3217 D Road
Clifton, CO 81520





BOARD MEMBERS:

- Dave Stassen**
• Chairperson
- Kent Brumback**
• Secretary/Treasurer
- Walt Hoyt**
• Director
- Mike Konn**
• Director
- Dale Welch**
• Director

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“Don’t Flush”

All the items listed below have been recovered from municipal sewer systems and caused costly damage and sewer backups. Always avoid putting these items down a drain. For a more complete list of items, please visit our Web site at www.cliftonsanitation.com

- | | |
|---|--|
| <ul style="list-style-type: none"> Automobile Fluids Bandages  Cigarettes and Butts Cleaning Supplies Cosmetics Cotton Balls and Swabs Condoms Diapers  Dental Floss Facial Tissue Garbage Kitchen Grease | <ul style="list-style-type: none"> Over-the-counter Drugs Paper Towels  Pesticides Photographs Poison Prescription Drugs Rags Sanitary Pads Solvents Syringes  Tampons & Applicators Wet Wipes |
|---|--|

Questions or Comments?

If you have any questions, comments, concerns, or need more information about the facility, please contact the District at 434-7422 or stop by the office at 3217 D Road in Clifton. You may also submit comments online at our Web site www.cliftonsanitation.com. We value your input and comments.

On the Web Visit our Web site

www.cliftonsanitation.com for frequently asked questions, such as sewer backups and how to avoid future backups. You can also find upcoming meetings, rates, services, and other information. If you don't have access to a computer, please call us at 970-434-7422.

IN CASE OF EMERGENCY 970-434-7422 OR 911

For any questions about the rates please contact
Clifton Sanitation District
970-434-7422



For billing questions please contact
Clifton Water District
970-434-7328



PIPELINE

DECEMBER 2014

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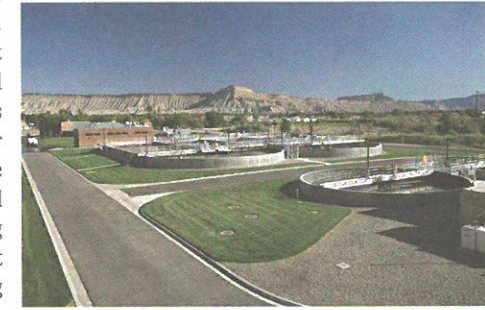
“Don’t Flush” Tips

Our Mission...

...to provide excellent wastewater service of the highest possible standards at the lowest practical cost in keeping with sound business practice and the public trust. We will conduct cooperative affairs with the highest degree of integrity. We will serve the needs of consumers fairly and impartially. We proclaim district development in the best interest of public health and to improve harmony with the natural environment.

Treatment Plant Upgrade

The Clifton Sanitation District's (CSD) wastewater systems are operated in accordance with a host of federal, state and local public health and environmental regulations and standards. These mandates continue to evolve and become more stringent. New discharge limits for the nutrient phosphorus are being implemented across the state. The projected limits will ensure a high level of water quality and prevent harmful algae blooms in Colorado's rivers and lakes. Although CSD is not yet being regulated for phosphorus, the District has been preparing for the upcoming discharge limits. For several years, funds have been set aside to construct anaerobic selectors that will remove phosphorus and increase sludge settleability for improved water quality. The project will cost an estimated \$2,200,000 to complete. Thanks to two grants from **State of Colorado Department of Local Affairs (DOLA)** totaling \$610,000, plus funds that have been set aside, CSD



will be able to fully fund the project without placing the burden on customers. This project will put CSD ahead of the curve, saving the residents of Clifton money for years to come. In addition to phosphorus removal, the construction of anaerobic selectors will create conditions that limit the growth of troublesome filamentous bacteria. CSD has used \$110,000 of the grant money from **DOLA** for engineering services to design anaerobic selectors and a chemical precipitation system to enhance phosphorus removal and limit the growth of filamentous bacteria. The rest of the grant will be used for the construction of the new system. Construction of the project is underway and should be completed in the spring of 2015. Once complete, CSD will continue to produce consistently high-quality water to be discharged into the Colorado River for the life of the treatment facility.

In Appreciation

Clifton Sanitation District would like to expressly thank **Mesa County Federal Mineral Lease District (MCFMLD)** for awarding the District with a \$300,000 grant to assist the District with the E-1/4 Road System Upgrade. This generous grant, combined with a \$100,000 grant from **State of Colorado Department of Local Affairs (DOLA)**, allowed the District to perform an upgrade consisting of replacement of approximately 1,400 feet of the District's aging collection pipe and one lift station, as well as the installation of approximately 3,600 feet of new sanitary sewer interceptor into a new service area that has a history of failing individual septic systems. The new infrastructure expanded capacity enough to allow for a new service area encompassing several hundred acres. This project is an integral part of the long-range objectives of the Mesa County Planning Department and provides the only viable option to replace failing individual septic systems in the area. The construction costs alone were \$983,000. Without the benefit of these grant dollars, the District could have been required to reduce services and/or eliminate equipment that has been identified as important in delivering safe and effective collection and treatment of the wastewater in Clifton and the surrounding communities. The benefits of this project are numerous and include reduction of failing septic systems, public health and safety, improved water quality, and support of the overall planned growth and development of our community. We greatly appreciate **MCFMLD's** and **DOLA's** support of this project.

Clifton Sanitation District would additionally like to thank **Mesa County Federal Mineral Lease District (MCFMLD)** for awarding the District an additional \$60,000 grant to assist in upgrading the existing digital closed caption television system (CCTV) and optimizing the GIS (Geographic Information System). The CCTV system is an aid in inspecting and evaluating underground infrastructure, pipelines, and confined spaces. The CCTV inspections evaluate and identify locations and causes of public and private sources of structural defects, operational defects, and help provide conceptual designs to improve sewer system performance and minimize potential sewer backups. The District maintains a GIS where the data from the camera inspection is manually entered and maintained. This project optimized the existing GIS system, allowing the District access to all data and other system information (such as age, service history, future inspection and maintenance schedules) necessary to seamlessly integrate as much information on sanitary and storm sewer assets as possible, and to actively participate with other similar agencies in our community, creating inter-agency cooperation, utilizing and sharing one resource among many, thus reducing the need to duplicate services. We, once again, thank **MCFMLD** for their assistance with this project that would have otherwise left the District with sub-standard equipment and information systems.