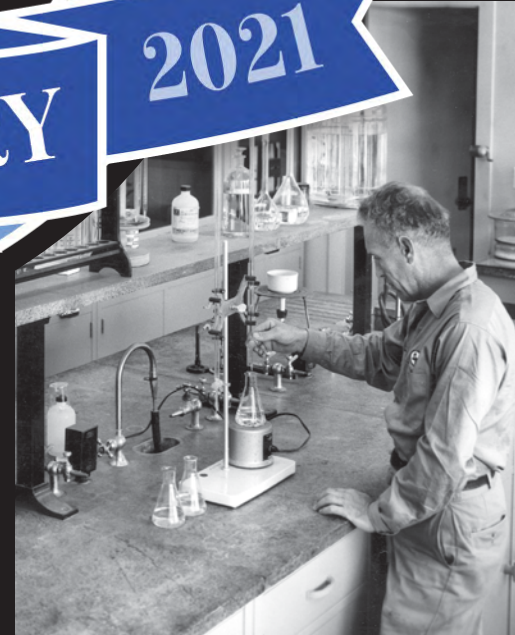


PIPELINE





GENERAL MANAGER'S MESSAGE

CELEBRATING 75 YEARS OF SERVICE

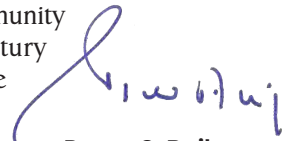


For 75 years, Central San has provided safe and reliable wastewater collection and cleaning for residents in central Contra Costa County.

Over those decades, Central San has seen tremendous changes: The growing population of our service area. Advances in the processes and technologies that we use to treat wastewater. The strengthening of environmental standards and requirements. We've built, operated, maintained, planned, rebuilt, innovated, and improved every part of our wastewater collection and cleaning system, all with the goal of providing exceptional service to our customers. In this special 75th Anniversary issue of *Pipeline*, we're proud to share a look back at our progress.

I also would like to invite you to visit our 75th Anniversary Experience at centralsan.org/75th. Our biggest regret is that, due to the pandemic, we can't celebrate this milestone year with our customers in person as we have in the past. However, our Anniversary Experience is the next best thing to being here. It provides a 360-degree inside look at how Central San works to prevent pollution and protect the environment, as well as tips on what you and your family can do to help. You can also discover more about our history, and see some of the projects we're working on to ensure our treatment plant and sewer system are ready for the future. I hope you'll drop by online, explore, click, and learn more about what we do.

Collecting and cleaning wastewater has never been a glamorous job, but we're proud of our role in helping to keep our community clean, healthy, and safe for three-quarters of a century and counting. As we begin our second 75 years, we look forward to continuing to provide you with the highest levels of reliability, service, and value.


Roger S. Bailey,
General Manager



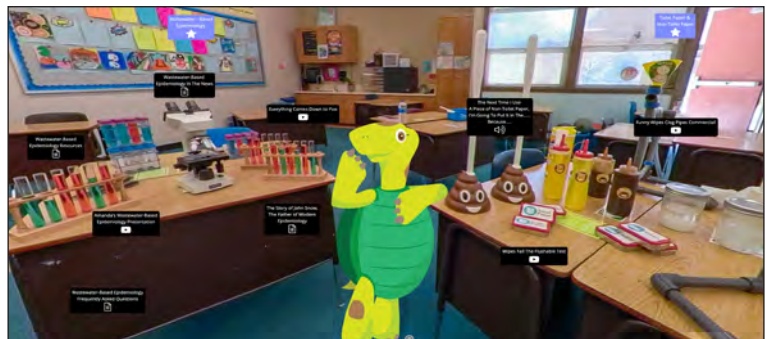
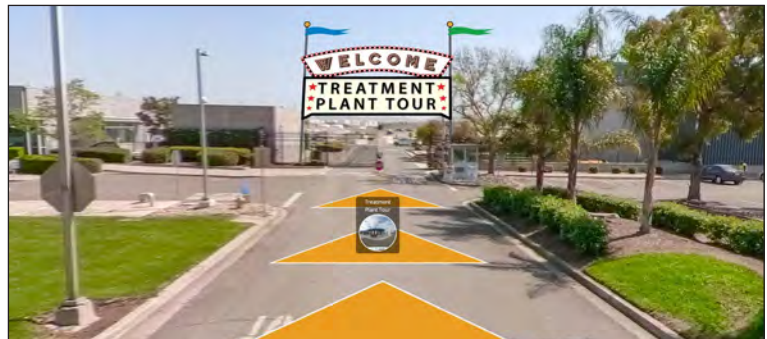


EXPLORE OUR INTERACTIVE 75TH ANNIVERSARY EXPERIENCE

We're celebrating 75 years of service to the community, and we invite you to join us—virtually! Drop by online, explore, click, and learn more about what it takes to collect and clean more than 13 billion gallons of wastewater every year.

centralsan.org/75th

- ▶ Interactive 360-degree tour of our treatment plant and other facilities
- ▶ Learning hub with hands-on science activities for kids
- ▶ Behind-the-scenes videos, photo galleries, and drone flyovers
- ▶ Historical facts and images
- ▶ Pollution prevention resources for your home or business
- ▶ Hidden prizes, and much more



Online Guided Tour and Interactive Q&A Session

Wednesday, November 3, 2021, 5:30 - 6:30 p.m.

Where does the dirty water from your toilet, sink, or shower go? And what happens to all of the, um, stuff in it?

Here's your chance to get answers to your burning questions about how we do what we do. Join us for a guided tour through our 75th Anniversary Experience and hear directly from our wastewater

experts. Discover fun facts about your sewer system, and learn how you can help protect our pipes and environment. You may even win a prize! All ages welcome!

Register at: centralsan.org/75th

Questions? Contact Ben Lavender at blavender@centralsan.org or 925-768-2857.

NEIGHBORHOOD UPGRADES

Providing safe and reliable sewer service for 75 years and counting takes significant investments in our infrastructure.

Central San regularly maintains, repairs, or replaces sewer lines and other parts of our wastewater collection system to ensure trouble-free service for our customers. Our construction projects may cause short-term inconveniences, but they provide long-term benefits for you and your neighbors. We appreciate your understanding!

Here's what we're currently working on (estimated completion dates in parentheses).

SOUTH ORINDA, PHASE 8 will replace approximately 1.1 miles of sewers in the Lost Valley neighborhood. (January 2022)

WALNUT CREEK, PHASE 15 will replace approximately 1.75 miles of sewers primarily in the Walnut Knolls, Blackwood, and San Miguel neighborhoods of Walnut Creek and along Walnut Street in Lafayette. (April 2022)

PUMP STATION UPGRADES PROJECT, PHASE 1 will renovate or replace major mechanical, electrical, and controls equipment at three pump stations in Orinda and Moraga. (December 2021)

NORTH ORINDA, PHASE 8 will replace approximately 2.0 miles of sewers primarily in Camino Sobrante, Altarinda Road, and Bien Venida, as well as various locations in Orinda, north of Interstate 24. (May 2022)

To learn more about these or other construction projects, please contact Community Affairs Representative Chris Carpenter at (925) 229-7200 or ccarp@centralsan.org, or visit: centralsan.org/construction



Follow the flow by following us online:



@centralsan



@centralsandist



@centralsandist



@centralsandist

CENTRAL SAN BEGINNINGS

In the early 1940s, central Contra Costa County was a largely rural area of orchards, farms, and a few small towns. However, a post-World War II building boom led to a population surge—and a sanitation crisis. Most of the county depended on septic systems, which were often inefficient due to the area's heavy clay soil. With septic tanks overflowing, waterborne diseases like typhoid were becoming a threat.

In response, a group of concerned citizens and civic leaders led efforts to create a new agency to collect and clean the community's wastewater. In an election on June 25, 1946, the public voted to form the Central Contra Costa Sanitary District. On July 15, 1946, the County Board of Supervisors approved a resolution officially creating Central San.

When it was first established, Central San had a service area population of about 15,000 people, 16.5 miles of pre-existing pipe, and no treatment plant.

The first plant, constructed in 1948, was expected to handle the area's wastewater for at least two decades. But by the early 1950s, it was evident that demand would soon exceed capacity. So, from those humble beginnings, Central San began a series of expansions and improvements that have continued to this day.

Flash forward 75 years, and today Central San serves nearly 500,000 residents, maintains more than 1,500 miles of neighborhood sewer pipes, and cleans more than 13 billion gallons of wastewater every year. But we haven't just gotten bigger; we've also gotten better. Read on to learn how our work has evolved to keep up with advances in technology, meet increasingly rigorous environmental standards, and serve our growing community.



On November 10, 1947, Board Members attended a groundbreaking ceremony to mark Central San's first construction project—the main trunk sewer at the east end of Moraga Boulevard.

75 YEARS OF INNOVATION

Central San has a long history of finding better ways to do things. Our employees have been instrumental in developing equipment and processes that continue to shape the wastewater industry. Here's a look back at some ways Central San has helped lead the way.



Overflow protection device

In the 1950s, Central San employees Bob Hinkson and Clyde Hopkins came up with a solution to help prevent damage from overflows. They invented a device that could be installed on the lateral sewer cleanout of homes and businesses. In the event of a sewage backup, the device opened automatically, allowing the overflow to occur outside the building rather than inside.

Patented in 1960, this overflow protection device has prevented untold property damages and repair expenses, and is still used by wastewater utilities throughout the nation.

Bob Hinkson and Clyde Hopkins with their invention.

Household Hazardous Waste Collection Facility

As water quality regulations tightened in the 1990s, Central San became a leader in pollution prevention. To help control hazardous wastes at the source, in the early '90s Central San hosted collection events focused on batteries, oil, and paint—called “BOP Drops” (right).

To provide a more permanent solution, Central San partnered with Mt. View Sanitary District to construct the Household Hazardous Waste Collection Facility. Opened in 1997, the facility was the first of its kind in Contra Costa County. In the 24 years since then, we've served more than 630,000 customers and collected over 45 million pounds of hazardous waste for reuse, recycling, or safe disposal.



The Household Hazardous Waste Collection Facility when it opened in 1997 (above) and today.

Over the years, the facility has helped keep millions of pounds of pollutants out of the environment.



Trenchless sewer construction

In 1987, Central San became the first utility in the U.S. to use pipe-bursting construction technology to replace aging sewer pipes. The technique employed a state-of-the-art piece of equipment (affectionately nicknamed "the mole") that could disintegrate old pipe, push back surrounding earth, and pull in new pipe—all in one smooth operation.



Pipe bursting triggered a revolution in pipeline replacement by making long, deep trenches unnecessary. Today we use a variety of "no dig" technologies, including pipe bursting, directional drilling, and cured-in-place pipe. These techniques have significantly reduced construction impacts to roads, traffic, and our customers.

Ultraviolet light disinfection

Central San was a pioneer in the use of ultraviolet (UV) light for wastewater disinfection. The process relies on thousands of UV lamps submerged in channels to disinfect wastewater flowing around them. The UV light breaks the DNA chain in bacteria and viruses. This destroys their ability to reproduce and subsequently kills them.



Pilot testing ultraviolet light disinfection

In 1992, we began pilot testing the new technology as a safer alternative to chlorine. When our UV facility was completed and placed into operation in 1997, it was the largest UV disinfection plant in the United States.

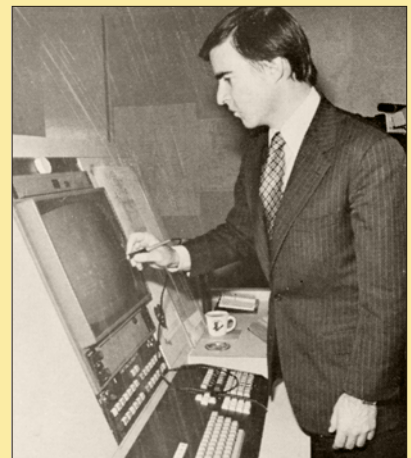


Computerized plant

During the 1970s, Central San significantly expanded and upgraded our treatment plant to meet new water quality requirements and serve our growing community. In 1978, we incorporated a computer system into the plant to help operators monitor and adjust the treatment processes.

This system made Central San's plant one of the world's first computer-controlled wastewater treatment plants. At the time, the plant's computer system ran on a mere 64 kilobytes of memory—a tiny fraction of the 8 gigabytes in a typical Central San PC today! With diligent care and maintenance, it proved remarkably reliable.

California Governor Jerry Brown (right) toured Central San's treatment plant in April 1978, declaring it a model operation for the entire state.

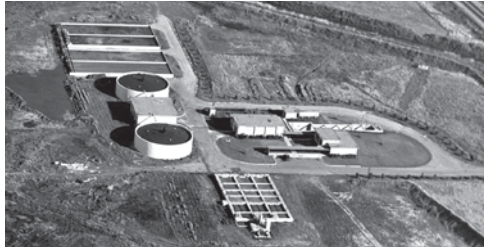


THEN & NOW

A lot can happen in 75 years! Although protecting public health and the environment has always been our reason for being, there've been some big changes in the facilities and tools we use to get the job done.

Plant Growth

Central San's first treatment plant became operational on September 8, 1948. Designed to serve a population of up to 45,000 people, the plant could process 4.5 million gallons of wastewater per day to a primary level. In the years since, we've upgraded and expanded the plant many times to meet increasingly rigorous water quality standards and serve our growing community. Today our treatment plant can clean up to 54 million gallons of wastewater per day and serves nearly half a million residents.



A Solids Foundation

Over the years, we've used different methods for managing the solids removed in the treatment process. In the beginning, sludge was pumped to drying beds to allow water to evaporate. The remaining solids were sold as a soil conditioner under the label "Special Rabbit Pellets." Since 1984, we've relied on two 4-story furnaces to reduce some 200 tons of sludge daily to 10-15 tons of sterile ash. Now, as we look to the future, we're planning significant improvements to our solids handling by adding anaerobic digestion. This process uses microorganisms to break down the solid waste, yielding renewable energy and biofertilizer. The upgrades will ensure we can continue to provide reliable service while protecting the environment.

Maintaining the Flow

Our collection system has expanded almost 100-fold in the past 75 years, from 16.5 miles of preexisting pipe Central San acquired upon our creation in 1946 to the more than 1,500 miles we maintain today. In the early days, maintenance relied solely on hard labor and hand tools. Today we use power equipment such as rodding and hydrovac trucks, along with computers to precisely schedule and track maintenance—helping us achieve one of the best reliability records in the state.





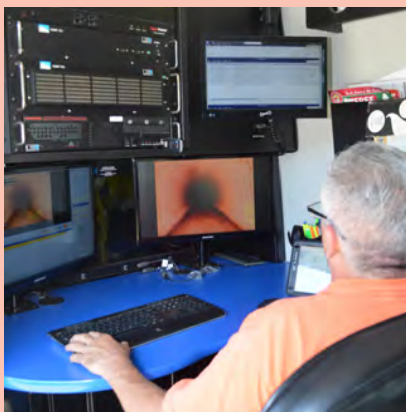
Great Chemistry

In the 1960s, Central San's laboratory—considered state of the art for its time—required only one or two technicians to perform all necessary testing procedures. Since then, water quality standards and laboratory techniques have evolved significantly. Today our chemists conduct thousands of tests every month, monitoring every stage of the treatment process. Using sophisticated equipment, they can detect pollutants at extremely low levels—even down to the range of parts per quadrillion. That's the equivalent of one postage stamp on a letter the size of California and Oregon!



What Lies Beneath

As early as the 1940s, Central San used a custom-made sewer camera to inspect underground pipes. The camera was mounted on a sled and pulled with cables between maintenance access holes. The photographs helped Central San identify and correct problem pipes. By 1972, Central San was helping to pioneer the use of television pipeline inspection. Today, we inspect over 150 miles of pipe every year and are piloting new technology to assess the condition of our largest sewers, including lidar and 3D underground mapping.



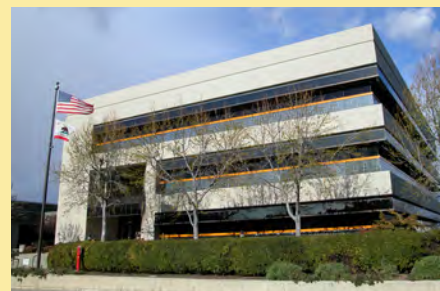
Bit by Bit

Since we installed our first mainframe in 1978 (see page 7), computers have transformed the way we work—including for our crews in the field. In 1992, we began testing field computers for logging facility inventory and maintenance history. Today, our teams use mobile devices that allow them to access sewer maps, maintenance records, and inspection reports wherever they're working. They can also complete work orders on location in real-time, which means less paperwork and more time for taking care of our pipes.



Home Base

Central San opened its first headquarters on Mt. Diablo Boulevard in Walnut Creek in 1948 (*below left*). By 1956, Central San had outgrown the original space and built new facilities on Springbrook Road to house its offices and corporation yard. The property is still home to our Collection System Operations Division. However, in 1983 the Engineering and Administrative Departments moved to the newly constructed Headquarters Office Building (*below right*) at our treatment plant site in Martinez.



POLLUTION PREVENTION WINNERS

Congratulations to our Pollution Prevention Award Winners and Recycled Water Champions! Every year, Central San teams up with Sustainable Contra Costa to celebrate those who are helping keep our community healthy, beautiful, clean, and resilient. This year's winners were honored (virtually) at Sustainable Contra Costa's annual Sustainability Awards Celebration in September.



POLLUTION PREVENTION AWARD WINNERS

City Center Bishop Ranch San Ramon



Before City Center Bishop Ranch broke ground on their new multi-use development, they considered the water environment in their design. Architects and engineers met with Central San early to properly design the sanitary sewer and stormwater systems at the site. Today, the collaboration between Central San and City Center continues, ensuring compliant operations. Collaborative relationships such as this are critical to preventing pollution and protecting local waterways. Pictured: Ashley Lyons, Chuck Martinez, Marilou Jocson.

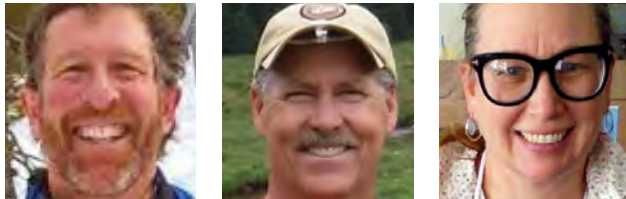
O'Brien Iron Works

Concord

O'Brien Iron Works practices pollution prevention in multiple ways. They use an oil in their machinery that produces less waste, they do not discharge any wastewater to the sanitary sewer, and they cover all of their exterior waste containers to prevent storm drain pollution. These simple actions add up to a big win for the environment.



POLLUTION PREVENTION PARTNERS



Lafayette School District

Lafayette

The Lafayette School District went above and beyond this past school year to support their students. By partnering with Central San’s distance learning programs, they ensured that every elementary student across the entire school district—all 2,094 of them—got to experience hands-on wastewater science. This monumental achievement would not have been possible without the science specialist teachers from the district’s four elementary schools: Jonathan Winter, Cathy Bornfleth, Mallory Pierce, Molly Shannon, and Scott Westphal.

RECYCLED WATER CITIZEN CHAMPION

Thom Sullivan

Martinez

From July 2020 to June 2021, Thom Sullivan visited Central San’s recycled water fill station 248 times. But it’s his commitment to recycled water that makes him stand out. Since he does not have a vehicle that can handle a large water container, he picks up about 40 gallons per visit in 5-gallon plastic water jugs. Way to go, Thom!



Pharmaceutical Disposal Partners

Contra Costa County Office of the Sheriff

City of Clayton

City of Concord

Town of Danville

City of Lafayette

City of Martinez

Town of Moraga

City of Orinda

City of Pleasant Hill

City of San Ramon

City of Walnut Creek

Starting in February 2009, Central San partnered with ten cities and the Contra Costa County Office of the Sheriff to provide pharmaceutical disposal bins within our service area. The bins, located at City and County facilities, provided a safe and convenient place for households to dispose of their unwanted or expired medications, keeping them out of the water environment. Since the program’s inception, more than 149,000 pounds of pharmaceutical waste have been collected.

RECYCLED WATER BUSINESS CHAMPION



Pleasant Hill Library

Pleasant Hill

The brand new Pleasant Hill Library will have lots of changes when it fully reopens, including one big change underground. The City of Pleasant Hill recently extended the length of purple pipe that brings recycled water from Central San to the community. This recycled water will be used for landscaping and beautification at the new library building. Kudos to Pleasant Hill for their ongoing commitment to using recycled water! Pictured: Pleasant Hill Senior Civil Engineer Ananthan Kanagasundaram and Mayor Sue Noack.

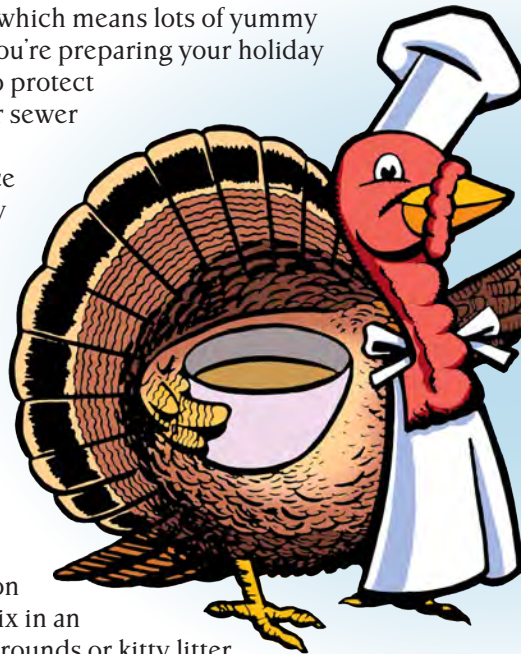
THIS HOLIDAY SEASON: STUFF TURKEYS, NOT DRAINS

The holidays are approaching, which means lots of yummy foods to look forward to! As you're preparing your holiday treats and feasts, remember to protect your household pipes and our sewer system. Fats, oils, and grease (FOG) should never go down the drain, since they can clog pipes and create messy sewage back-ups. Here are some simple tips to prevent a FOG clog from ruining your holidays:

▶ Before washing the dishes, scrape any remaining food into the compost or garbage, and wipe off greasy plates and pans with a paper towel.

▶ To dispose of small quantities of FOG, pour them into a disposable lidded container, such as a milk carton or coffee can. Freeze to solidify, or mix in an absorbent material like used coffee grounds or kitty litter. Then, place the container in the trash.

▶ Even better, bring your used cooking oil or grease to our Household Hazardous Waste Collection Facility. It will be recycled to produce low-emission, sustainable biofuels, so you'll be protecting your pipes and the planet, too!



HOUSEHOLD HAZARDOUS WASTE COLLECTION FACILITY



4797 Imhoff Place, Martinez, CA 94553
1-800-646-1431

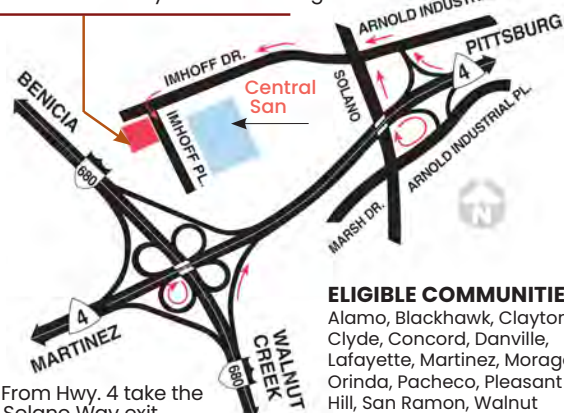
RESIDENTS: Monday–Saturday, 7 a.m. – 2 p.m.

REUSE ROOM: Monday–Saturday, 7 a.m. – 1:30 p.m.

BUSINESSES: Monday–Saturday, by appointment

HOLIDAY CLOSURES: Nov. 11 & 25–26, Dec. 24–31,
Jan. 1 & 17, Feb. 12 & 21

Household Hazardous Waste Collection Facility
& Residential Recycled Water Filling Station



ELIGIBLE COMMUNITIES

Alamo, Blackhawk, Clayton, Clyde, Concord, Danville, Lafayette, Martinez, Moraga, Orinda, Pacheco, Pleasant Hill, San Ramon, Walnut Creek, and unincorporated Central County areas.

- From Hwy. 4 take the Solano Way exit.
- From I-680 take Hwy. 4 East to Solano Way exit.

KIDS' PAGE:

WHAT HAPPENS TO OUR FOOD WHEN WE SEND IT DOWN THE SINK?

TRY THIS TEST!



Hi Kids! I'm Piper, and I'm a Pipe Protector!

Have you ever wondered what happens to all the food left on our plates and silverware when we wash our dishes? Maybe you've wondered if everything we send down the drain is safe for our pipes? Here's an activity you can do using simple items that you can find around your home.

1 Take a clear container (recycled food jars work great) and fill it about halfway with water.



2 Take a food that might go down your kitchen sink. This could be ketchup or mayo or ranch dressing or whatever you can find. Squeeze a small amount into the container. Make sure to do this slowly so you can watch closely what happens.



3 Take a spoon (or other stirring tool) and spin your food item gently in the container, making sure not to spill. Go slowly. That way you can watch what happens while you stir.



4 Put your container down in front of you and look closely at what happened. If you like, you can draw a picture or write about what you see.



After you do this activity with one type of food, you might want to try it with other types of food, too. All foods are a little different, but you might start to notice some patterns. What do you think happens to all this food when it goes into our pipes? Are there any foods you tried that seem like they don't belong in our pipes?

To learn more, check out our digital workbook by going to: centralsan.org/distance-learning

We can also mail a free copy directly to you! Just send an email requesting a Kitchen Sink workbook to blavender@centralsan.org or call 925-768-2857.

KIDS' PAGE: WHAT ARE MAINTENANCE ACCESS COVERS?

Central San has more than 1,500 miles of pipes underneath the ground. These pipes carry wastewater from homes, schools, and businesses all the way to our treatment plant. But how do we reach those pipes to keep them working well?

Maintenance access covers (*sometimes called "manholes"*) let us access, inspect, and clean the pipes we have underground. You've probably seen them on the streets around your neighborhood. We have more than 36,000 maintenance access covers in our service area. Wherever you are, there is probably one nearby!

It's hard to tell just from looking, but below our maintenance access covers is a big underground world. Each cover sits on a frame set into the street. Below the frame is a cone section that gets wider as it goes down. This gives our crew members enough space to climb down to where our sewer pipes are to check on them. We can also send down special cameras and tools to help us see inside our pipes and fix any clogs.

Our maintenance access covers have to be very heavy to support the weight of all the cars that drive over them every day. **Each cover weighs 127 pounds!** Our crews use a tool called a pick to lift and move them. They also wear special steel-toed shoes to protect their feet. We wouldn't want to accidentally drop a cover on our toes—ouch!

You may have noticed that all of our maintenance access covers are round. That's no accident. **No matter which way you turn it, a round cover can't accidentally fall down the hole.** The shape ensures that the covers will always go back to sitting perfectly on their frames.

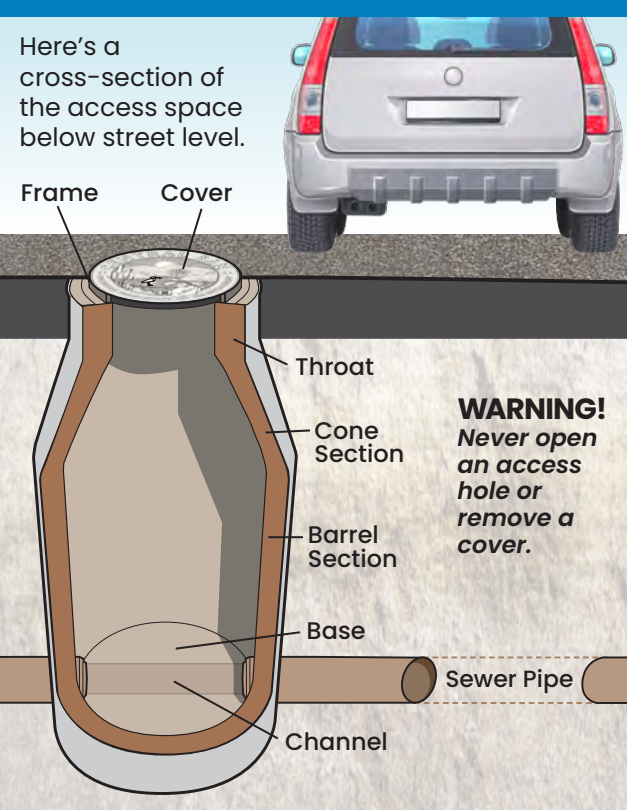
Now that you know a little bit more about maintenance access covers, you might start noticing them everywhere you go! Remember to stay safe by staying out of the street and just looking at them from the sidewalk. If you are lucky, you may even see our crew members working near a maintenance access cover. If you do, feel free to give them a friendly wave to thank them for keeping our pipes clean!



This photo: A tool called a pick helps our crews lift and move the heavy covers.

Right: Equipment like this power rodding truck helps us keep our pipes clean and clear.

What's Below the Cover?



KIDS' PAGE: COLOR ONE OF OUR COVERS!

This year is Central San's 75th birthday! To help celebrate, we've created a new design for our maintenance access covers. Will you help us decorate it?

Use your creativity to color the cover below. You can use crayons, paint, colored pencils, or anything else you like. If you want, you can add other plants and animals that depend on clean water, too.

Send us your finished picture, and we'll send you a plantable seed bookmark. Your picture may even be published in our next issue of *Pipeline!* If yours is the 75th entry we receive, you'll win a special prize!



Cut out your art and send it to:
Coloring Contest
Central San
5019 Imhoff Place
Martinez, CA 94553

Age: _____

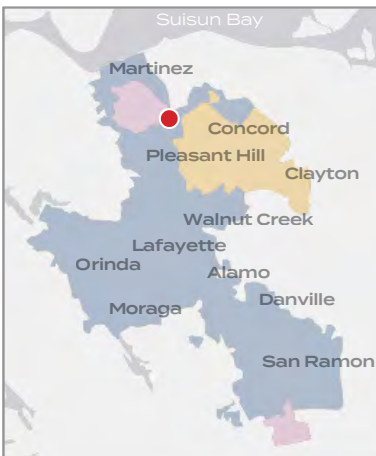
Name: _____

Address: _____

WE ARE HERE TO HELP

General Information	(925) 228-9500 or CentralSan.org
Sewer Overflows	(925) 933-0990
Recycled Water Fill Station InfoLine	(925) 335-7717
Treatment Plant InfoLine (Report Odors)	(925) 335-7703
Household Hazardous Waste InfoLine	(800) 646-1431 or CentralSan.org/HHW
Sewer connection permits/Permit Counter	(925) 229-7371
To report illegal discharges into sewer system	(925) 229-7288 (during business hours); (925) 229-7214 (after hours)
Environmental Compliance	(925) 229-7288
Employment Opportunities	CentralSan.org/Careers
Student Education Programs	(925) 335-7723 or CentralSan.org/Learn
Community Information Line	(925) 335-7702

Board meetings are open to the public and are usually held on the 1st and 3rd Thursday of each month at 1:30 p.m. in the Central San Board Room, 5019 Imhoff Place, Martinez. Meetings can be live-streamed at centralsan.org



Central San serves nearly half a million customers within its 146-square-mile service area.

- Wastewater collection & treatment; Household Hazardous Waste (HHW) disposal.
- Wastewater treatment & HHW disposal in Concord & Clayton by contract.
- HHW disposal only.
- Central San headquarters, treatment plant, HHW Facility & Residential Recycled Water Fill Station.

The Central Contra Costa Sanitary District **Pipeline**

Written and designed by Central San staff to communicate pollution prevention messages to the people and communities we serve.

Ann Vallée, Editor, Writer
Charles Waltmire, Graphic Designer
View archived issues at CentralSan.org



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