

PROTECTING OUR PIPES

What **NOT** to Flush



Hillsborough
County Florida

Tampa Bay
Times
NIE
newspaper in education
tampabay.com/nie

**FOUR DRINKING
WATER PLANTS PROVIDE
71 MILLION
GALLONS**
of clean, reliable drinking
water each day

**FIVE WASTEWATER
TREATMENT PLANTS TREAT
45 MILLION
GALLONS**
OF WASTEWATER EACH DAY

**29 MILLION
GALLONS
OF RECLAIMED WATER**
are delivered to residential and commercial
customers each day



**Hillsborough
County Florida**

About Hillsborough County Water Resources

Hillsborough County Water Resources provides more than 71 million gallons of drinking water to 704,285 people and treats about 45 million gallons of wastewater each day. In addition, 29 million gallons of reclaimed water are delivered to 27,412 residential and commercial customers each day. The County operates four major water plants, five wastewater treatment plants, a biosolids facility, a customer service center, an environmental laboratory, more than 850 sewage lift stations and over 5,900 miles of pipeline.

Water Resources contacts

🌐 Visit HCFLGov.net/water

☎ Call 813-272-5977

Request a presentation

Hillsborough County Water Resources offers complimentary educational presentations to schools, businesses, community groups and HOAs on the Unflushables Program, Cooking Oil Recycling Effort (CORE) and more! Presentations can be adjusted depending on your group needs. Most presentations are 15-20 minutes in length.

Visit HCFLGov.net/core and click on Request a CORE presentation to schedule.

Drop Savers Annual Poster Contest

Hillsborough County Water Resources and the City of Tampa Water Department invite K-12 students in Hillsborough County Public Schools to participate in the annual “Drop Savers” poster contest by creating a poster illustrating the importance of water conservation.

Winning students’ schools are awarded bottle-filling water stations and reusable water bottles for their art classes. Winning posters will appear on the Hillsborough County and the City of Tampa Drop Saver websites and are also submitted to the American Water Works Association’s Florida Section competition.

For more information, visit HCFLGov.net/water and click on Drop Savers Poster Contest.



Newspaper in Education

The Tampa Bay Times Newspaper in Education program (NIE) is a cooperative effort between schools and the Times Publishing Co. to encourage the use of newspapers in print and electronic form as educational resources – a living textbook.

Our educational resources fall into the category of informational text, a type of nonfiction text. The primary purpose of informational text is to convey information about the natural or social world.

NIE serves educators, students and families by providing schools with class sets of the Pulitzer Prize-winning *Tampa Bay Times* plus award-winning original educational publications, teacher guides, lesson plans, educator workshops and many more resources — all at no cost to schools, teachers or families. In 2020-2021, NIE provided more than 1 million print copies and 10 million digital editions of the *Times* to area classrooms.

**Tampa Bay
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For more information about NIE, visit tampabay.com/nie, call 727-893-8138 or email ordernie@tampabay.com. Follow us on Twitter at twitter.com/TBTimesNIE. Find us on Facebook at facebook.com/TBTNIE.

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Credits

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Florida Standards

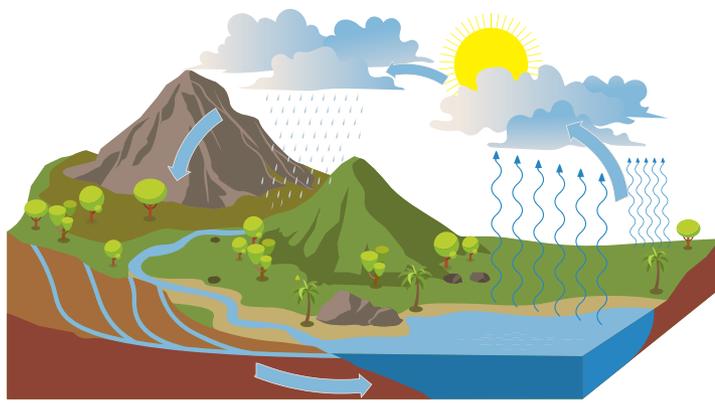
This publication and the activities focus on the following Florida Standards: Science: SC.68.N.1.1; SC.68.N.1.4; SC.68.N.1.5; SC.68.N.3.1; SC.68.CS-CP.3.2; SC.68.CS-CS.2.2; SC.68.CS-PC.2.8; SC.68.CS-PC.3.1; SC.68.CS-PC.3.3; SC.68.CS-

PC.3.5; SC.7.E.6.6; SC.7.L.17.1; SC.7.L.17.3; SC.7.N.1.1; SC.7.N.1.2; SC.7.N.1.4; SC.7.N.1.5; SC.7.P.11.1; SC.7.P.11.2; SC.8.N.4.1
B.E.S.T.: ELA.68.C.1.3; ELA.68.C.1.4; ELA.68.C.2.1; ELA.68.C.3.1; ELA.68.C.4.1; ELA.68.R.2.2; ELA.68.R.2.3; ELA.68.R.2.4; ELA.68.V.1.1; ELA.68.V.1.3; ELA.612.F.2.1; ELA.612.F.2.2; ELA.612.F.2.3; ELA.612.F.2.4
Language Arts: LAFS.68.L.1.1; LAFS.68.L.1.2; LAFS.68.L.2.3; LAFS.68.L.3.4; LAFS.68.L.3.6; LAFS.68.RI.1.1; LAFS.68.RI.1.2; LAFS.68.RI.3.7; LAFS.68.RI.3.8; LAFS.68.RI.4.10; LAFS.68.SL.1.1; LAFS.68.SL.1.2; LAFS.68.SL.1.3; LAFS.68.SL.2.4; LAFS.68.SL.2.5; LAFS.68.SL.2.6; LAFS.68.W.1.1; LAFS.68.W.1.2; LAFS.68.W.2.4; LAFS.68.W.3.7; LAFS.68.W.3.8; LAFS.68.W.3.9; LAFS.68.W.4.10

Teach with the *Times* and win

Educators, share 100 words about how you used this resource in your classroom for a chance to win a \$15 gift card! Visit tampabay.com/nie and click on Resources, Information for Teachers for more information and to enter.

The water cycle



The world's water moves between lakes, rivers, oceans, the atmosphere and the land in an ongoing cycle called the water cycle. The water cycle describes how water evaporates from the surface of the Earth, rises into the atmosphere, cools and condenses into clouds, and falls again to the surface as precipitation.

Visit gpm.nasa.gov/education/videos/water-cycle-animation to watch an animation of Earth's water cycle.

Where does our home wastewater go?

After wastewater leaves your home – for example, down your sink, shower drain or toilet – it travels through your home's pipes before joining wastewater from other homes, businesses and industries in the County's sewers.

If you are on the County sewer system, all the drains in your house are connected to a single pipe that leads to the street. The pipe in the street collects the wastewater from all the homes in your area and flows to a larger pipe that collects water from other streets. The wastewater then flows into still bigger pipes that connect neighborhoods.

Eventually, all these pipes lead to one of the County's five wastewater treatment plants, where the wastewater is treated and cleaned so that it can be put back into the environment safely.

Sources: Environmental Protection Agency, Florida Department of Environmental Protection, Hillsborough County Water Resources, National Geographic Kids, Southwest Florida Water Management District, United States Environmental Protection Agency, United States Geological Survey

What is potable water?

Potable water is water that is safe to drink. In Florida, our drinking water comes from the state's systems of rivers, streams, wetlands, lakes, springs, aquifers and estuaries.

In the United States, the Environmental Protection Agency (EPA) sets national standards for drinking water quality. In Hillsborough County, you can find your water quality report by visiting HCFLGov.net/water and clicking Water Quality.

What is wastewater?

Wastewater is water that has been used in a home or business, including water from sinks, showers, bathtubs, toilets, washing machines and dishwashers. Wastewater also is produced by industries such as agriculture, manufacturing and mining.

Wastewater contains pollutants such as human and animal waste, food scraps, oils, soaps and chemicals.

If wastewater is not properly treated, these pollutants can find their way into waterways and the aquifer, which can harm the environment, wildlife and human health.

What is reclaimed water?

Reclaimed water is highly treated wastewater that can be used for industrial processes and the irrigation of lawns, landscapes and golf courses.



GOING BEYOND THE TEXT: Water pollution

MATERIALS NEEDED

- A glass
- Water
- Red or blue food coloring.
- A knife
- A stalk of fresh celery with leaves

PROCEDURE

- 1 Fill the glass with water.
- 2 Add two or three drops of food coloring to the water. Describe or draw what happens.
- 3 Wash the celery, leaving the leaves on.
- 4 Cut about one inch off the bottom of the celery stalk. Describe or draw what the stalk looks like at this point.
- 5 Place the celery stalk in the glass filled with colored water. Describe or draw what you think will happen. Leave the celery in the glass overnight.
- 6 In the morning, describe what the water looks like. Remove the celery stalk from the water. Describe or draw what the celery stalk looks like at this point.
- 7 Use the knife to cut the stalk into slices. What do you find in the stalk? In the leaves? Describe or draw what you observe.

If the food coloring represents pollution in our water, what does this experiment suggest about the way it spreads through the environment and enters the food chain? Create a poster illustrating the experiment, its results and your conclusions. Using the news articles in the *Tampa Bay Times* as models, write a brief science article focusing on what you have learned. Share your poster and main points from the article with your class.

Adapted from: Kids Ecology Corps, "When You Use Water, You Use Everything In It"

Florida Standards: Science: SC.68.N.3.1; SC.68.N.3.2; SC.68.N.3.3; SC.68.N.3.4
B.E.S.T: ELA.68.C.1.3; ELA.68.C.1.4; ELA.68.C.2.1; ELA.68.C.3.1; ELA.68.C.4.1; ELA.68.R.2.2;
ELA.68.R.2.3; ELA.68.R.2.4; ELA.68.V.1.1; ELA.68.V.1.3; ELA.612.F.2.1; ELA.612.F.2.2;
ELA.612.F.2.3; ELA.612.F.2.4 Language Arts: LAFS.68.RI.1.1; LAFS.68.RI.1.2; LAFS.68.RI.3.7;
LAFS.68.RI.3.8; LAFS.68.RI.4.10; LAFS.68.SL.1.1; LAFS.68.SL.1.2; LAFS.68.SL.1.3; LAFS.68.
SL.2.4; LAFS.68.SL.2.5; LAFS.68.SL.2.6; LAFS.68.W.1.1; LAFS.68.W.1.2; LAFS.68.W.2.4;
LAFS.68.W.3.7; LAFS.68.W.3.8; LAFS.68.W.3.9



A Hillsborough County Water Resources crew removes a sewer clog caused by people flushing “unflushable” items such as wet wipes down the toilet.

What not to flush

The only things that should ever be flushed down your toilet are the “Three Ps”: pee, poop and paper.

Sewers and wastewater treatment systems are designed to handle human biological waste and toilet paper only.

When other items are flushed, they clog pipes and pumps, causing sewage backups, forcing extra maintenance and repairs, destroying expensive equipment and driving up costs to utilities and consumers.

The largest problem facing sewer systems throughout the U.S. is “flushable” wipes. In recent years, baby, personal care and cleaning wipes have become common

household products. Although companies market these wipes as “flushable,” they do not dissolve in the toilet or sewer system like normal toilet paper. Instead, they stay intact, clogging sewer pipes and pumps and causing untreated sewage to back up into homes or overflow from manholes.

Untreated sewage can contain bacteria, viruses, parasitic organisms, intestinal worms and molds and fungi. As a result, it may cause diseases ranging from stomach cramps and diarrhea to life-threatening illnesses such as cholera and dysentery.

Sources: Environmental Protection Agency, Hillsborough County, Michigan State University Extension, Washington Post

Microplastics – harmful to our environment

Plastic debris that is less than 5 millimeters long (about the size of a sesame seed) is called microplastic.

Microplastics come from a variety of sources, including larger plastic debris that breaks up into smaller pieces.

Microplastics are dangerous to wildlife because they can be mistaken for food and eaten. Not only is plastic not nutritious, it also can be contaminated with toxins and metals from polluted water. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), plastic debris causes the deaths of more than a million seabirds and more than 100,000 marine mammals every year.

Scientists don’t know yet what the long-term impact on human health of plastics in our food chain will be.

Since plastics are largely nonbiodegradable, microplastic pollution is a long-term environmental problem.

In the last few years, wet wipes and facemasks have become significant microplastic pollution sources. Wipes and masks include plastic fibers, which easily fragment into billions of microplastic fibers.

Sources: Encyclopaedia Britannica, Environmental Protection Agency, Environmental Science and Pollution Research, The Lancet Planetary Health, National Oceanic and Atmospheric Administration, New York Times, TeachEngineering



Never flush

- ✘ Baby, personal care or cleaning wipes
- ✘ Kitchen paper towels
- ✘ Cloth or disposable diapers
- ✘ Feminine hygiene products
- ✘ Cotton balls, swabs or Q-tips
- ✘ Dental floss
- ✘ Family planning products

- ✘ Rubber gloves
- ✘ Plastic bags
- ✘ Coffee grounds
- ✘ Hair
- ✘ Contact lenses
- ✘ Medications
- ✘ Cat litter

NO DRUGS down the drain

Unused or unwanted medications should never be flushed down the toilet or poured down the drain.

Public sewer and water systems were not designed to filter out the chemical and biological elements found in drugs. Prescription and over-the-counter drugs poured down the sink or flushed down the toilet can pass through the treatment system and enter rivers and lakes.

As these chemicals make their way from our toilet to our waterways, they can affect the health and behavior of wildlife, such as insects, fish and birds, and ultimately end up in our drinking water.



How to dispose of medications

Drug take-back collection events and sites

The U.S. Drug Enforcement Administration's National Prescription Drug Take Back Day is held annually in October. Year-round drug disposal is also available at some medical facilities and pharmacies. Visit dea.gov/takebackday for more information.

Drug disposal locator tool

The National Association of Boards of Pharmacy offers an online drug disposal locator tool to find permanent drug disposal boxes in your area. Visit safe.pharmacy/drug-disposal for more information and to search by ZIP code or address.

Sources: Environmental Protection Agency, Florida Department of Environmental Protection, Florida Department of Health, U.S. Geological Survey

To Flush or Not to Flush annual high school video contest

Florida high school students in grades 9-12 are invited to submit public service announcements (PSA) or videos that creatively explain what does or does not belong down our toilets. Cash prizes between \$200 and \$700 are awarded to winning students and their teachers.

This contest is sponsored annually by the Florida Water Environment Association (FWEA). For more information, visit fwea.org/video_contest.php.

Strawberry Crest High School students are 2021 First Place winners

Congratulations to Strawberry Crest High School students Leo Meng and Hubert Pilichowski, who won First Place in the 2021 Florida Water Environment Association video contest with their public service announcement, "Toilets Tonight."

Watch the winning video by visiting HCFLGov.net/water and clicking on Don't Flush It!



GOING BEYOND THE TEXT:

Flushable or not?

In this activity, you will measure the speed at which common products break down in the presence of water. From these observations, you will be able to make suggestions about materials that should or should not be flushed down the toilet.

MATERIALS NEEDED

- Five one-quart jars, such as mason jars or empty mayonnaise jars.
- Materials to test:
 - Single-ply toilet paper
 - Double-ply or super-soft toilet paper
 - Wipes labeled as flushable
 - Kitchen paper towels
 - Cotton balls, swabs or Q-tips

PROCEDURE

- 1 Predict what you think will happen to each sample material. Write your predictions down.
- 2 Fill each jar with tap water and put one type of sample material in each. Label each jar with the name of the material it contains.
- 3 Shake each jar to mix the contents. Shake each jar with the same force and for the same number of times.
- 4 Over a period of two to six weeks, observe, draw and describe the changes in the materials. Create graphs of the changes in the materials over time.
- 5 At the end of the observation period, draw conclusions based on your results. Are there any materials that completely dissolved? Are there any that did not appear to change in any way? Based on your observations and knowledge, which materials should be flushed? Why? Which should not be flushed? Why?
- 6 Using the articles in the *Tampa Bay Times* as your models, write a special news report about what you have discovered. Enhance your article with a graph, chart or infographic.

Florida Standards: Science: SC.68.N.3.1; SC.68.N.3.2; SC.68.N.3.3; SC.68.N.3.4 B.E.S.T.; ELA.68.C.1.3; ELA.68.C.1.4; ELA.68.C.2.1; ELA.68.C.3.1; ELA.68.C.4.1; ELA.68.R.2.2; ELA.68.R.2.3; ELA.68.R.2.4; ELA.68.V.1.1; ELA.68.V.1.3; ELA.612.F.2.1; ELA.612.F.2.2; ELA.612.F.2.3; ELA.612.F.2.4 Language Arts: LAFS.68.RI.1.1; LAFS.68.RI.1.2; LAFS.68.RI.3.7; LAFS.68.RI.3.8; LAFS.68.RI.4.10; LAFS.68.SL.1.1; LAFS.68.SL.1.2; LAFS.68.SL.1.3; LAFS.68.SL.2.4; LAFS.68.SL.2.5; LAFS.68.SL.2.6; LAFS.68.W.1.1; LAFS.68.W.1.2; LAFS.68.W.2.4; LAFS.68.W.3.7; LAFS.68.W.3.8; LAFS.68.W.3.9

Cooking Oil Recycling Effort

Residential Cooking Oil Recycling Effort (CORE)

Used cooking oils, fats and grease are a serious problem for home plumbing and Hillsborough County's wastewater collection system.

Cooking oil, fat or grease that is poured down the drain gels and solidifies inside pipes, sewage lines and sewage lift stations, constricting water flow. That can back up home plumbing and cause equipment to malfunction, leading to sewage spills, overflows onto streets, and foul odors in homes and neighborhoods.

Cooking oil DOs and DON'Ts

- **DON'T** put cooking oil or grease down the drain, even if you follow it with hot water or soap.
- **DON'T** flush cooking oil or grease down the toilet.
- **DON'T** put greasy foods down the garbage disposal.
- **DON'T** place used cooking oil in your blue recycle cart.
- **DO** scrape leftover food into the trash before washing pots, pans and dishes.
- **DO** use a fine-mesh strainer in your sink to prevent debris from going down the drain.
- **DO** clean out leftover foods from your sink and put it in the trash.
- **DO** recycle used cooking oil, fats and grease!

How to recycle your used cooking oil

All cooking oils, including frying oils and bacon and hamburger drippings, can cause problems in home plumbing and the sewage collection system. Here's what to do:

1. Carefully pour cooled cooking oil into a large, sturdy plastic or glass food-grade container with a lid. Do not use containers that held petroleum products (such as motor oil).
2. Close the container and store in a cool, safe location.
3. Don't mix the oil with any other liquids or products.
4. Once the container is full, bring it to a CORE station or to a Household Hazardous Waste Collection Center.



CORE knowledge

- Visit HCFLGov.net/core
- Call 813-272-5977, ext. 43515
- Email GotGrease@HCFLGov.net
- Scan the QR code at left

Where to recycle your used cooking oil

Recycle your used cooking oil, fat and grease 24 hours a day, seven days a week at CORE collection stations throughout the county. Look for the freestanding cabinets with the Cooking Oil Recycling Effort identification.

CORE Cabinet locations

LIBRARIES

- **South Shore Regional Library** - 15816 Beth Shields Way, Ruskin, FL 33584
- **Bloomingdale Regional Library** - 1906 Bloomingdale Ave., Valrico, FL 33596
- **Riverview Branch Library** - 9951 Balm Riverview Dr., Riverview, FL 33569
- **Seffner/Mango Branch Library** - 410 N Kingsway Road, Seffner, FL 33584
- **78th Street Community Library** - 7625 Palm River Road, Tampa, FL 33619
- **Austin Davis Public Library** - 17808 Wayne Road, Odessa, FL 33556
- **Maureen B. Gauzza Regional Library** - 11211 Countryway Blvd., Tampa, FL 33626
- **Jimmie B. Keel Regional Library** - 2902 W Bearss Ave., Tampa, FL 33618
- **Brandon Regional Library** - 619 Vonderburg Road, Brandon, FL 33511

PUBLIC UTILITY SERVICE CENTER

- **South-Central Brandon Support Operations Complex** - 332 N Falkenburg Road, Tampa, FL 33619

PARKS AND RECREATION CENTERS

- **Woodlake Park** - 9207 Woodlake Park, Tampa, FL 33615
- **Jackson Springs Community Center** - 8620 Jackson Springs Road, Tampa, FL 33615
- **North Lakes Recreation Center** - 2640 N Lakeview Dr., Tampa, FL 33618
- **Northdale Park** - 15550 Spring Pine Dr., Tampa, FL 33624

OTHER COUNTY LOCATIONS

- **Covington Garden Pump Station** - 6505 Covington Garden Dr., Tampa, FL 33572
- **FishHawk Pump Station** - 15455 FishHawk Blvd., Lithia, FL 33547
- **Durant Rd. Pump Station** - 5125 Durant Road, Dover, FL 33527
- **EPC** - 3629 Queen Palm Dr., Tampa, FL 33619
- **Hamilton Pump Station** - 4116 W Hamilton Ave., Tampa, FL 33614
- **Fairway Meadows Pump Station** - 10704 Fairway Meadows Dr., Riverview, FL 33579
- **Golf & Sea Pump Station** - 6071 Golf and Sea Blvd., Apollo Beach, FL 33572
- **Summerfield Pump Station** - 13393 Summerfield Blvd., Riverview, FL 33579
- **South Regional Service Center** - 410 30th St. SE, Ruskin, FL 33570
- **NW Transfer Station** - 8001 W Linebaugh Ave., Tampa, FL 33625
- **6th Street Utility Pump Station** - 1306 Sixth St. SE, Ruskin, FL 33567



Household Hazardous Waste Collection Centers

Used cooking oil also is accepted at Hillsborough County's three Household Hazardous Waste Collection Centers.

FIRST SATURDAY OF THE MONTH

Sheldon Road Household Hazardous Waste Center

Accepts HHW on the first Saturday monthly, 8 a.m. – 2 p.m.
9805 Sheldon Road, Tampa, FL 33635

SECOND SATURDAY OF THE MONTH

South County Solid Waste Facility

Accepts HHW on the second Saturday monthly, 8 a.m. – 2 p.m.
13000 U.S. 41, Gibsonton, FL 33534

THIRD SATURDAY OF THE MONTH

Hillsborough Heights Solid Waste Facility

Accepts HHW on the third Saturday monthly, 8 a.m. – 2 p.m.
6209 County Road 579, Seffner, FL 33584

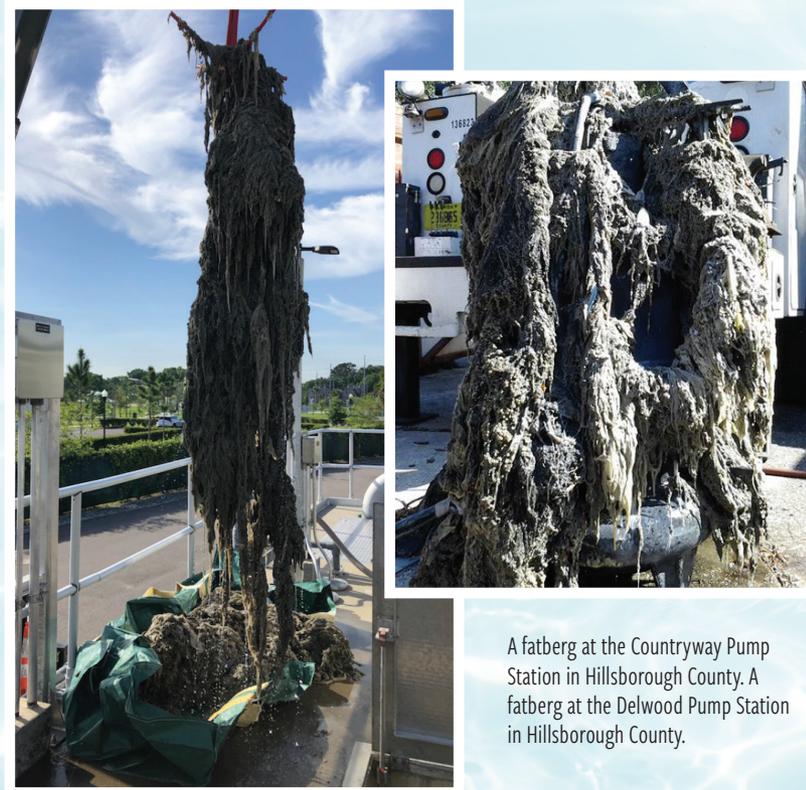
Hillsborough County's HHW Collection Centers are for use by all Hillsborough County residents. Commercial or excessive quantities of waste will not be accepted. Residents must show a valid photo ID. To learn more about this program, visit HCFLGov.net/HHW.



NEVER DOWN THE DRAIN HOUSEHOLD HAZARDOUS WASTE (HHW)

Products that contain ingredients that are toxic, flammable, corrosive or reactive are known as household hazardous waste (HHW). Common examples of HHW include cleaners, solvents, paints, stains, pesticides, herbicides, antifreeze, motor oil, nail polish remover and pool chemicals.

HHW should never be put down a household or storm drain or poured out on the ground. Instead, take HHW to one of Hillsborough County's three Household Hazardous Waste Collection Centers for proper disposal.



A fatberg at the Countryway Pump Station in Hillsborough County. A fatberg at the Delwood Pump Station in Hillsborough County.

GOING BEYOND THE TEXT:

Fatbergs

When things that shouldn't be flushed down the toilet or dumped down drains are anyway, they can form fatbergs: large lumps of fat, oil and grease that combine with other insoluble items in the sewer, such as wipes and paper towels.

Read the *Tampa Bay Times* article "Pipe-busting waste called 'fatbergs' are growing in Tampa during the pandemic" at tampabay.com/news/tampa/2020/04/27/pipe-busting-waste-called-fatbergs-are-growing-in-tampa-during-the-pandemic.

Next, watch the Great Lakes Now video "Episode 1007: Waters Infected" at <https://www.greatlakesnow.org/waters-infected-episode-1007/#videos>.

Working in small teams, create a public service announcement (PSA) informing people about fatbergs and explaining which materials should or should not be flushed down the toilet. You can create a video, image, radio announcement or infographic about fatbergs. Use the videos "The Clog Monster" and "Don't Flush It" on the Hillsborough County Water Resources website at HCFLGov.net/water as examples. Your PSA should include:

- Description of what a fatberg is and why they are a problem
- Explanation of how fatbergs are formed
- Summary of the findings from fatberg experiments
- Call to action for what the public should do, or not do, as a result of this knowledge

Present your PSA to your class.

Adapted from: "Fatberg, Right Ahead!", Great Lakes Now

Florida Standards: Science: SC.68.N.1.1; SC.68.CS-CC.1.1 B.E.S.T.; ELA.68.C.1.3; ELA.68.C.1.4; ELA.68.C.2.1; ELA.68.C.3.1; ELA.68.C.4.1; ELA.68.R.2.2; ELA.68.R.2.3; ELA.68.R.2.4; ELA.68.V.1.1; ELA.68.V.1.3; ELA.612.F.2.1; ELA.612.F.2.2; ELA.612.F.2.3; ELA.612.F.2.4 Language Arts: LAFS.68.RI.1.1; LAFS.68.RI.1.2; LAFS.68.RI.3.7; LAFS.68.RI.3.8; LAFS.68.RI.4.10; LAFS.68.SL.1.1; LAFS.68.SL.1.2; LAFS.68.SL.1.3; LAFS.68.SL.2.4; LAFS.68.SL.2.5; LAFS.68.SL.2.6; LAFS.68.W.1.1; LAFS.68.W.1.2; LAFS.68.W.2.4; LAFS.68.W.3.7; LAFS.68.W.3.8; LAFS.68.W.3.9

Water work



Are you interested in exploring career paths that have to do with researching, conserving or working with water? A career in water offers the opportunity to deliver, clean and renew our world's most essential resource.

Water utility workers keep our water supply clean and safe by operating, maintaining and managing critical infrastructure. Many water utility careers are open to workers with only a high school diploma and offer on-the-job training. Water utilities jobs are stable, well-paying and often offer better job prospects than other comparable fields.

Environmental engineers use the principles of engineering, soil science, biology and chemistry to develop solutions to environmental problems. This job typically requires a bachelor's degree in environmental engineering or a related field, such as civil, chemical or general engineering.

Environmental science and protection technicians monitor the environment and investigate sources of pollution and contamination. This job typically requires a minimum of an associate's degree or two years of postsecondary education.

Environmental scientists and specialists analyze environmental problems and develop solutions to them by gathering and analyzing data and monitoring environmental conditions. This job typically requires a minimum of a bachelor's degree in a natural science or science-related field.

Industrial machinery mechanics, machinery maintenance workers and millwrights install, maintain and repair industrial machinery. These jobs typically require a high school diploma or equivalent and on-the-job training. Most millwrights go through an apprenticeship program.



Plumbers, pipefitters and steamfitters install and repair piping fixtures and systems.

Most plumbers, pipefitters, and steamfitters learn on the job through an apprenticeship. Some attend a vocational-technical school before receiving on-the-job training.

Water and wastewater treatment plant and system operators manage a system of machines to transfer or treat water or wastewater. This job typically requires a minimum of a high school diploma or equivalent and includes on-the-job training.

Wastewater Collections Operators prevent sewage overflows and blockages by performing skilled construction, repair and maintenance of wastewater system facilities. This job typically requires a high school degree or equivalent and 1-2 years of relevant experience.

Source: U.S. Bureau of Labor Statistics, *Work for Water*

To learn more about careers in water, visit these online resources:

- **American Water Works Association:** careercenter.awwa.org
- **Hillsborough County Water Resources:** hillsboroughcounty.org/about-hillsborough/jobs
- **U.S. Department of Labor Occupational Outlook Handbook:** bls.gov/ooh
- **Water Environment Federation:** wef.org/about/careers
- **Work for Water:** workforwater.org

GOING BEYOND THE TEXT:

Career search

Research careers in water using the websites on this page. Select one or more occupations that seem interesting to you and answer the following questions:

- How does the occupation fit your skills and interests?
- What will you be doing in the occupation?
- What is the necessary education and/or training?
- How many jobs are there in the occupation currently?
- Is the occupation projected to grow, decline or remain unchanged? Why?
- How much does this occupation pay? What do the top 10 percent earn? The bottom 10 percent?

Prepare a report or presentation using the information collected above to assess whether you would pursue a career in the selected occupation and why or why not. Present your findings to your class.

Adapted from: U.S. Bureau of Labor Statistics, "Choosing a career: activity"

Florida Standards: B.E.S.T. ELA.68.C.1.3; ELA.68.C.1.4; ELA.68.C.2.1; ELA.68.C.3.1; ELA.68.C.4.1; ELA.68.R.2.2; ELA.68.R.2.3; ELA.68.R.2.4; ELA.68.V.1.1; ELA.68.V.1.3; ELA.612.F.2.1; ELA.612.F.2.2; ELA.612.F.2.3; ELA.612.F.2.4 Language Arts: LAFS.68.RI.1.1; LAFS.68.RI.1.2; LAFS.68.RI.3.7; LAFS.68.RI.3.8; LAFS.68.RI.4.10; LAFS.68.SL.1.1; LAFS.68.SL.1.2; LAFS.68.SL.1.3; LAFS.68.SL.2.4; LAFS.68.SL.2.5; LAFS.68.SL.2.6; LAFS.68.W.1.1; LAFS.68.W.1.2; LAFS.68.W.2.4; LAFS.68.W.3.7; LAFS.68.W.3.8; LAFS.68.W.3.9