



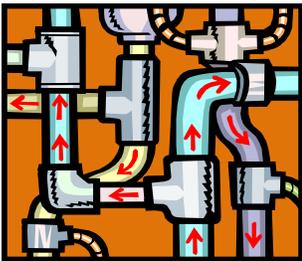
## Down the Drain



Imagine you've just eaten an ice cream sundae. Some strawberry ice cream is left in the bowl. You clean your dish and the leftover ice cream washes down the sink. Do you know what happens to that water after it goes

down the drain? All water that leaves our sinks, showers, bathtubs, toilets, dishwashers and washing machines, is called **wastewater**. This water has been used, and is no longer drinking water, or **potable water**.

## Where does Wastewater Go?



When wastewater leaves our drains, it connects to the city's **wastewater system**. This is a huge series of under-

ground pipes that is also called a **sewer system**. San Francisco has a **combined system**, which means that both wastewater and stormwater end up in the system. **Stormwater** is the rain that falls on our streets and sidewalks and goes down storm drains throughout the city. Since stormwater gets **polluted** or dirty with all kinds of things we need to make sure it gets cleaned. That's why stormwater and

wastewater are piped to a **Water Pollution Control Plant**. That's where the cleaning happens. First, the wastewater is **filtered**, using large screens to remove all solid things. Then the water is treated with good **bacteria** (tiny, one-celled creatures!) that eat and breakdown some of the waste still in the water. Oxygen is added to help them do this job. After the bacteria finish their work and settle out from the clear water, the water is tested to make sure that it is safe enough to be **discharged**, or sent to the San Francisco Bay and Pacific Ocean.

## Recycled Water



Instead of discharging all that water into the ocean and the bay, the City of San Francisco wants to take some of this water and recycle it! **Recycled water** is treated wastewater that has been **puri-**

**fied**, or cleaned through many different levels of filtering and treatment. Recycled water can be used to water, or **irrigate** parks, playgrounds, golf courses, schoolyards and **wildlife habitats**—natural areas where wild plants and animals live. It can also be used for toilet flushing, decorative fountains, commercial laundries, cooling and air conditioning in buildings, and street cleaning.

### Feeding the Grass



Unlike drinking water, recycled water can contain **nutrients** like nitrogen, phosphorous and potassium that help plants grow. That's why, when using recycled water to irrigate grass in

parks, golf courses, and baseball fields, little or no extra **fertilizer** is needed to feed the grass the nutrients it needs. It can get it from the water! Using recycled water this way helps us **conserve**, or save our drinking water supply, and the extra nutrients make lawns and plants **thrive** or grow in very healthy ways.

### The Right Water for the Right Job



The Hetch Hetchy Reservoir in Yosemite National Park supplies San Francisco with some of the best drinking water in the world. As

the water gets used for people, agriculture and the environment, it is replenished through the water cycle. We need to be careful with our water supplies or **resources**, so that they don't get used up faster than the water cycle is naturally refilling, or **replenishing** them with rain or snow. This is especially true during a period of **drought**, when little, or no rain falls in an area over a long period of time. Since California is a dry state that has droughts, we occasionally experience **water shortages**. This means we don't have enough water for all our uses. That's why we need to think about how we use our drinking water.

People in San Francisco use more than 60 million gallons of freshwater a day for drinking, cooking and other uses! Should we be using this high quality drinking water to irrigate our parks or clean our streets? Do we need this water to flush our toilets? Wouldn't it be smarter to use recycled water instead?

### Recycled Water in San Francisco



San Francisco started using recycled water more than 75 years ago! Back in the early 1900s, partially treated wastewater and groundwater were used to develop the Golden Gate Park area.

While recycled water is not currently used in Golden Gate Park, projects are under review to deliver recycled water to sites within the city. One day, San Francisco will use recycled water for other uses, such as flushing toilets!

### Doing Our Part



Water is one of the most precious resources on the planet. All living things need it to survive, no matter where we live. Although recycling water will provide us with more water to use, it doesn't mean it's okay to waste water! Instead we must conserve water whenever we can, and do our part to use water wisely. After all, isn't that the smart thing to do?



# Recycled Water

## Student Comprehension Questions

1. What is wastewater?

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2. What is a Water Pollution Control Plant?

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3. What is recycled water?

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4. What can recycled water be used for?

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5. How does using recycled water help us conserve our drinking water supply?

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6. What is the most interesting thing you learned about recycled water?

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1. What is wastewater?

*All the water that leaves our sinks, showers, bathtubs, toilets, dishwashers, and washing machines is called wastewater. This water has been used and is no longer potable or drinkable.*

2. What is a Water Pollution Control Plant?

*A Water Pollution Control Plant is where wastewater and stormwater go to get cleaned before being discharged, or sent to the San Francisco Bay and Pacific Ocean.*

3. What is recycled water?

*Recycled water is highly treated wastewater that has been purified, or cleaned through many levels of treatment so it can be used safely.*

4. What can recycled water be used for?

*Recycled water can be used to irrigate parks, playgrounds, golf courses, schoolyards and wildlife habitats; and it can also be used for toilet flushing, decorative fountains, commercial laundries, cooling and air conditioning in buildings and street cleaning.*

5. How does using recycled water help us conserve our drinking water supply?

*Using recycled water helps us conserve our drinking water supply by using it for things like watering the lawn or flushing toilets, instead of using our drinking water for these things.*

6. What is the most interesting thing you learned about recycled water?

*(subjective answer)*