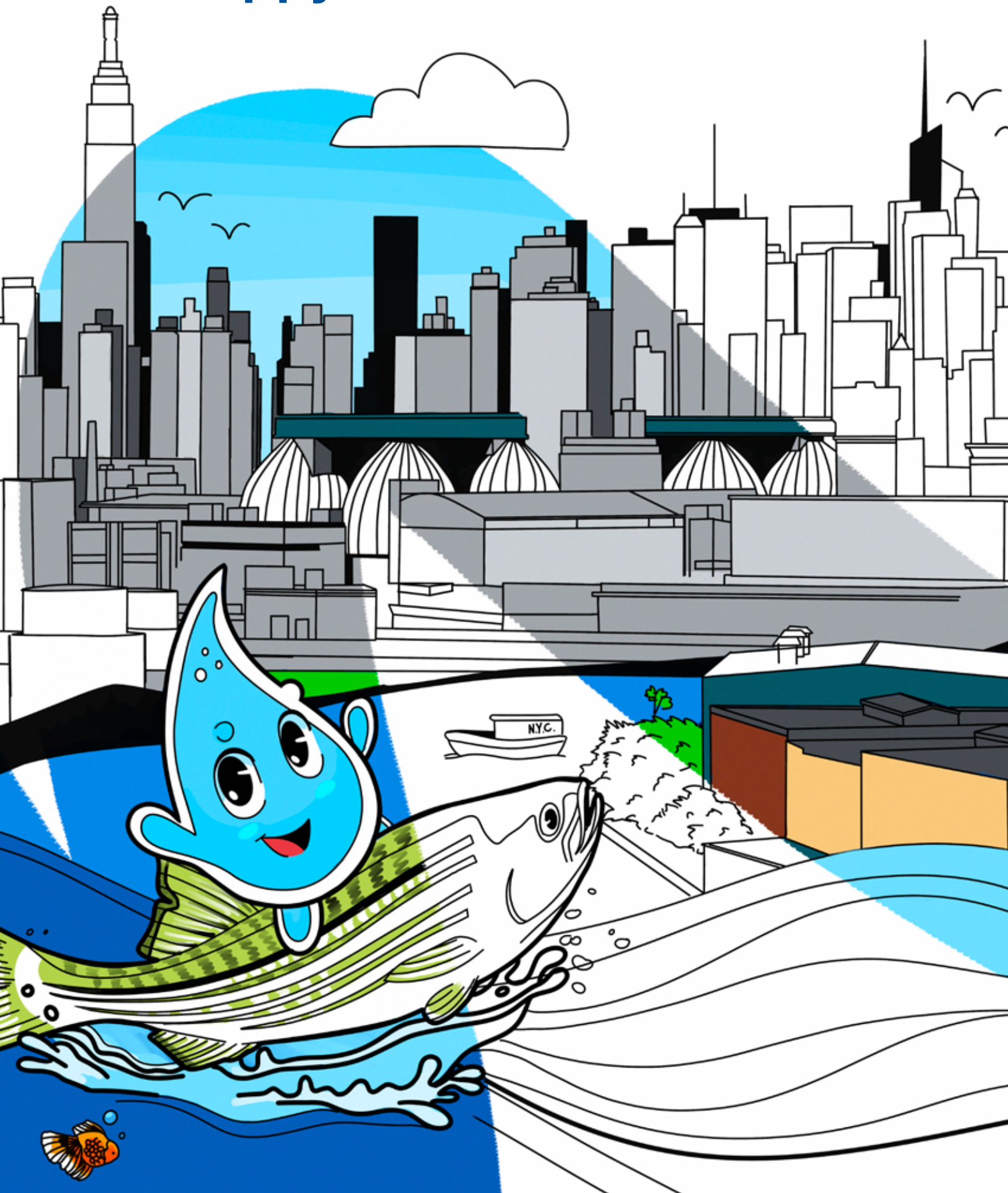
Drippy’s Water Adventure

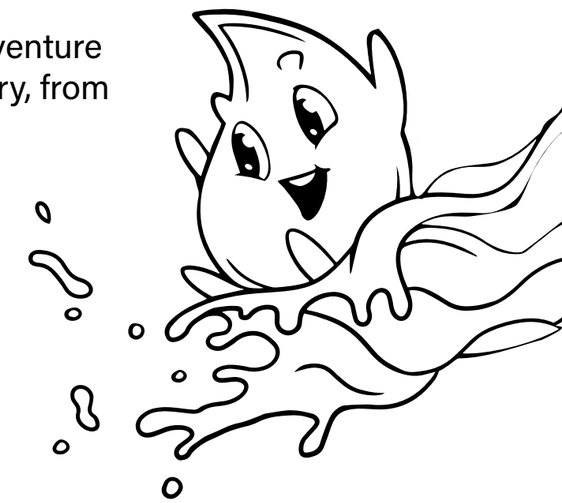


NYC Environmental Protection

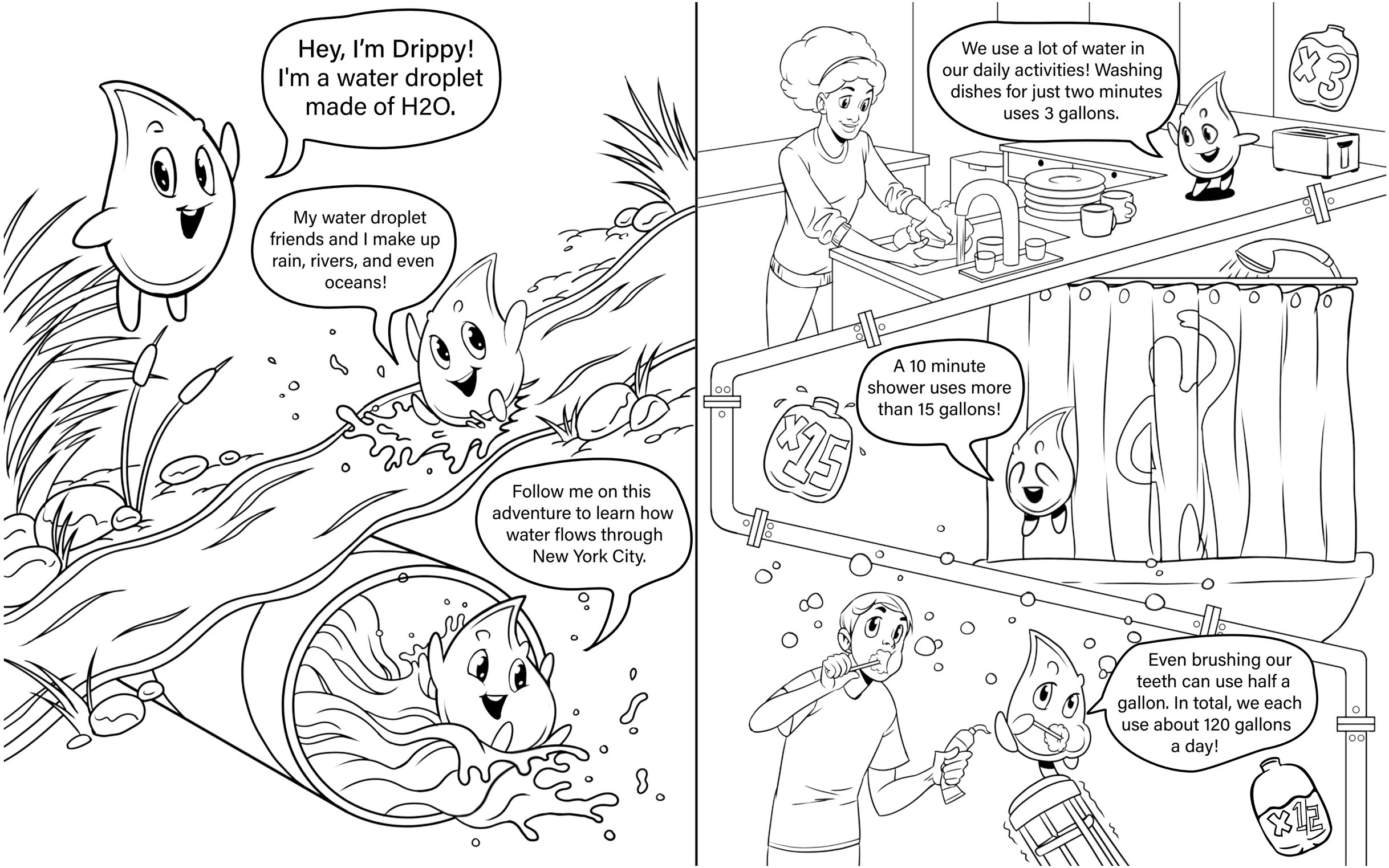
Drippy's Water Adventure

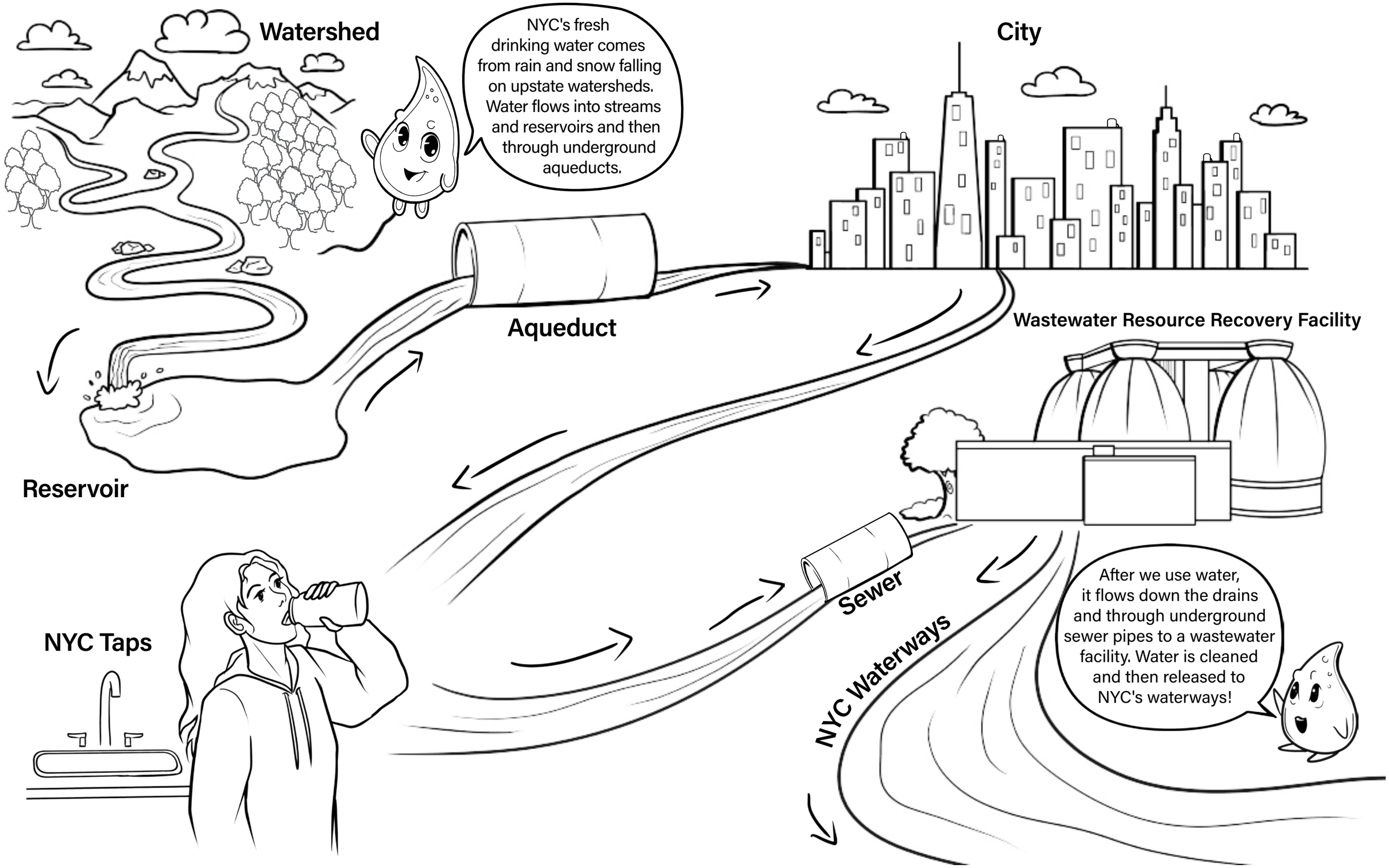
A Coloring Book of New York City's Water Story

Join Drippy and friends for a fun adventure exploring New York City's water story, from mountain top to sea.

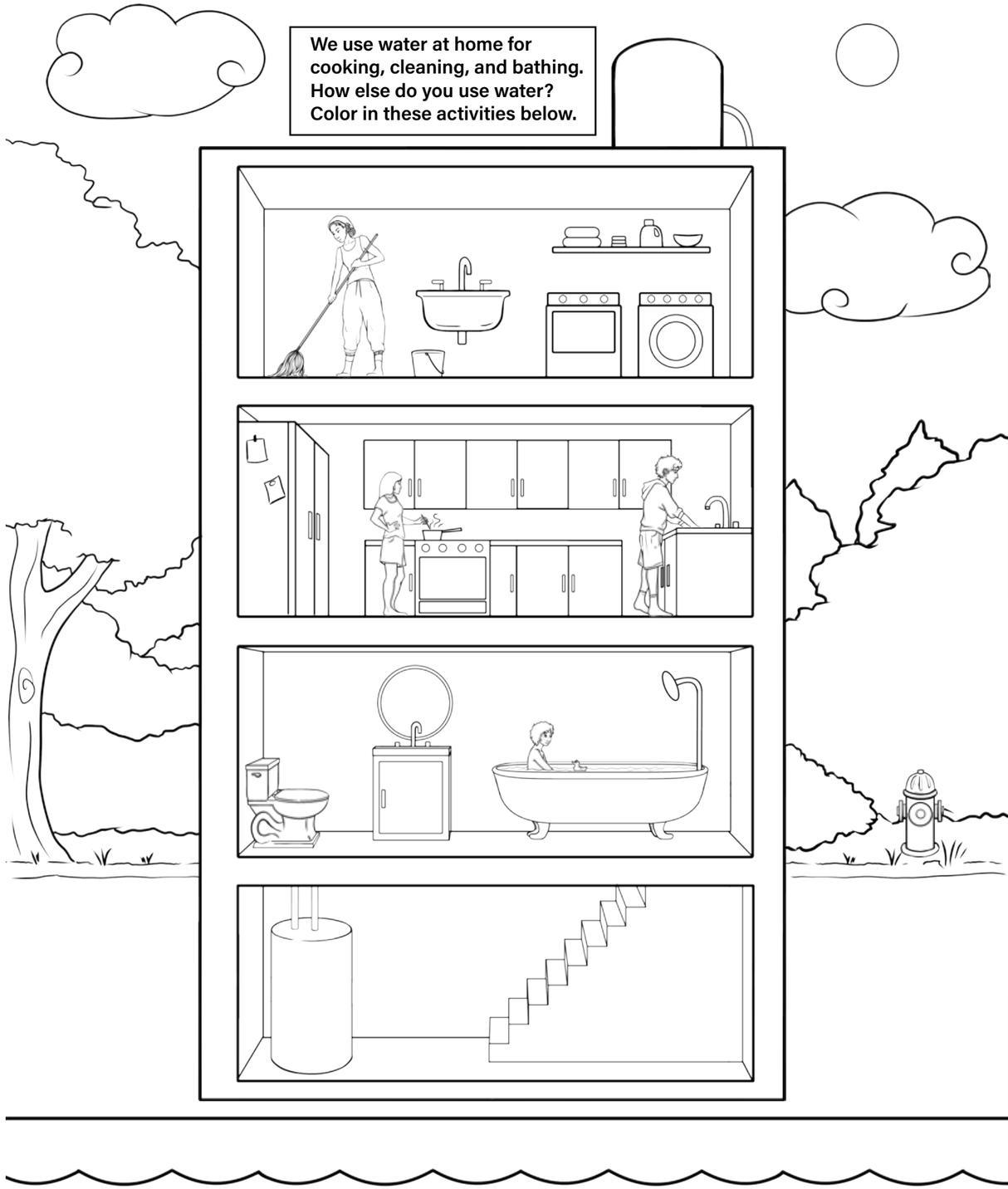


This coloring book belongs to: _____

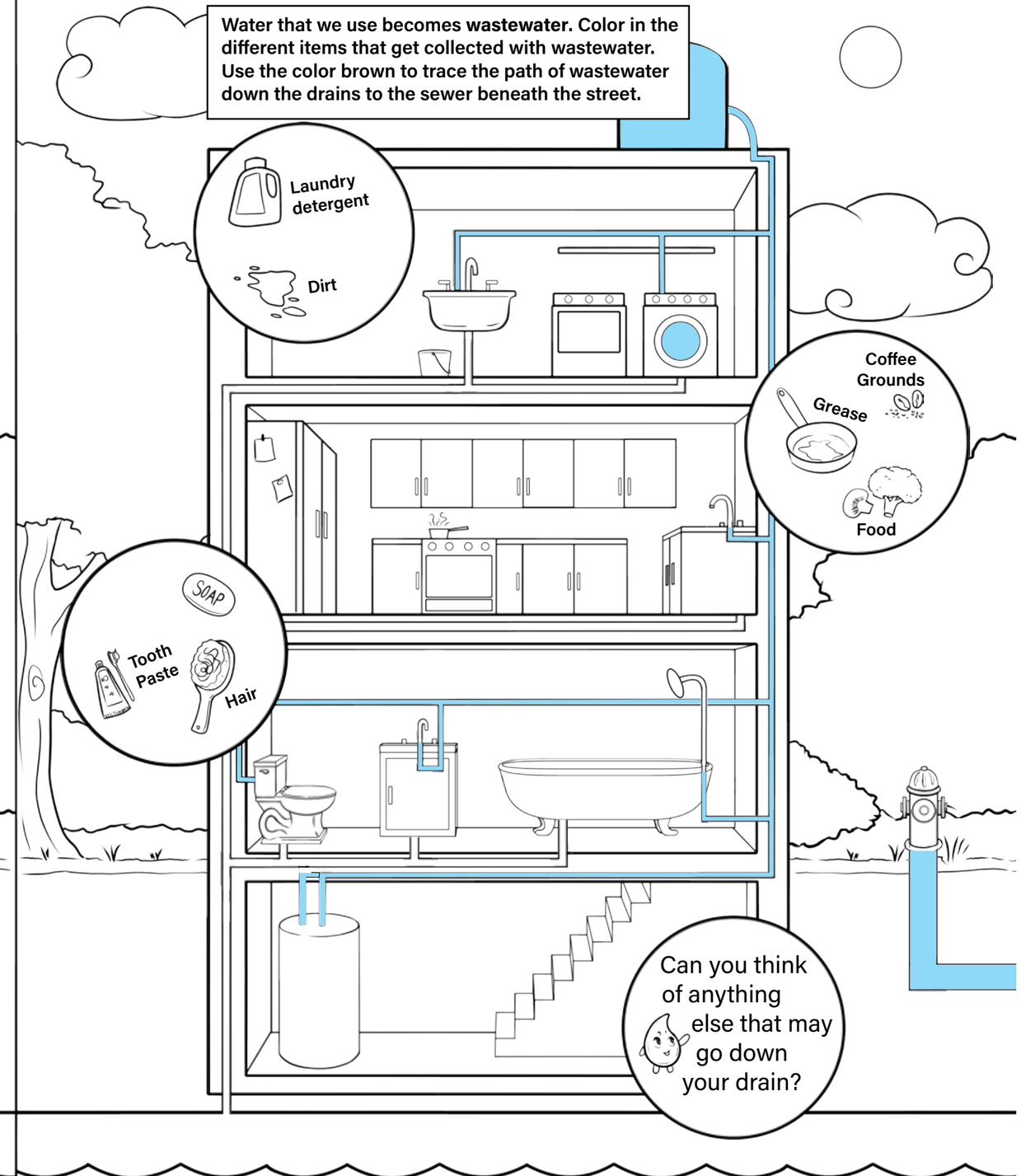

Hey, I'm Drippy! I'm a water droplet made of H2O.
My water droplet friends and I make up rain, rivers, and even oceans!
Follow me on this adventure to learn how water flows through New York City.
We use a lot of water in our daily activities! Washing dishes for just two minutes uses 3 gallons.
x3
A 10 minute shower uses more than 15 gallons!
x15
Even brushing our teeth can use half a gallon. In total, we each use about 120 gallons a day!
x12

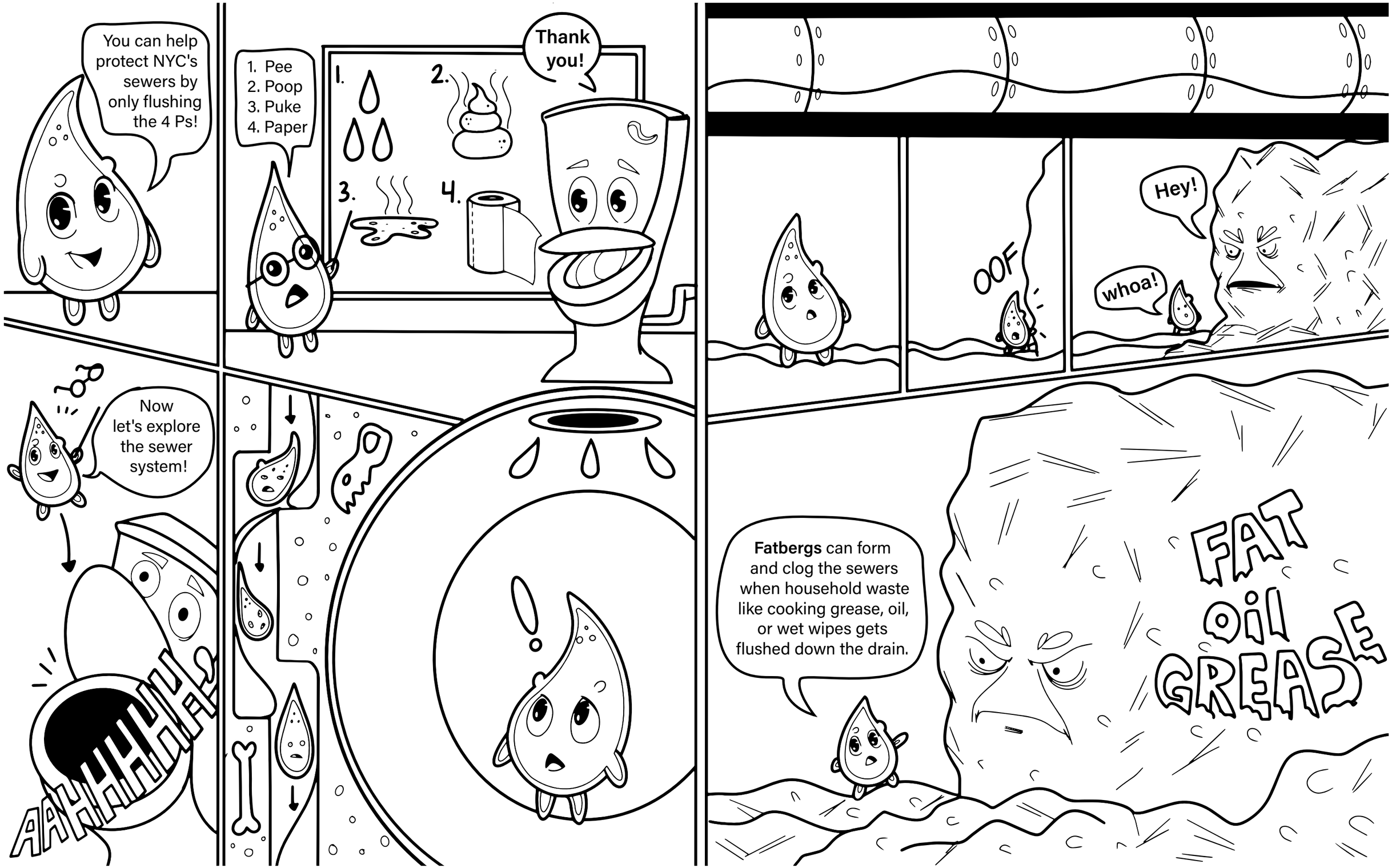

Watershed
NYC's fresh drinking water comes from rain and snow falling on upstate watersheds. Water flows into streams and reservoirs and then through underground aqueducts.
City
Aqueduct
Wastewater Resource Recovery Facility
Reservoir
Sewer
NYC Taps
NYC Waterways
After we use water, it flows down the drains and through underground sewer pipes to a wastewater facility. Water is cleaned and then released to NYC's waterways!

We use water at home for cooking, cleaning, and bathing. How else do you use water? Color in these activities below.



Water that we use becomes **wastewater**. Color in the different items that get collected with wastewater. Use the color brown to trace the path of wastewater down the drains to the sewer beneath the street.

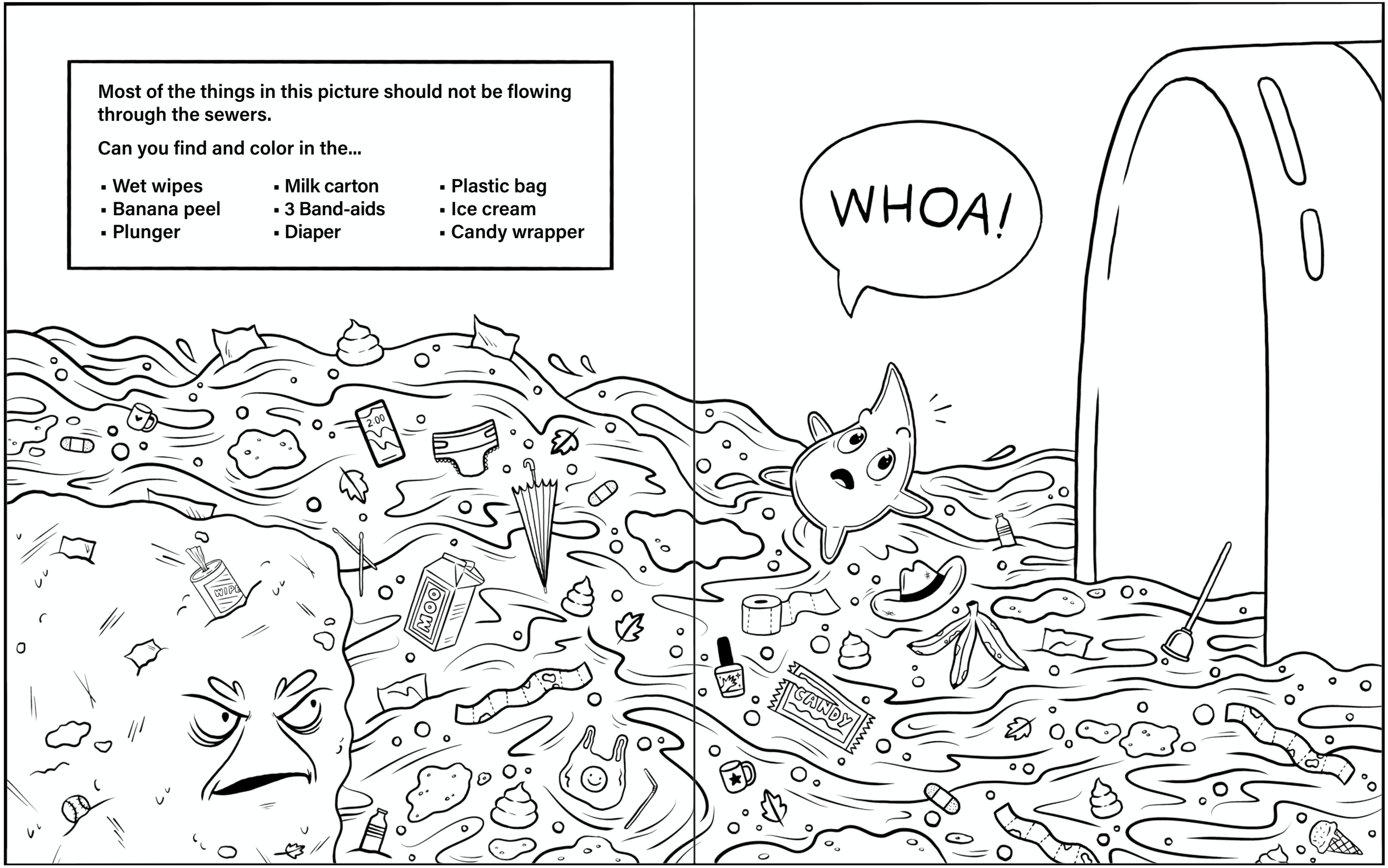



You can help protect NYC's sewers by only flushing the 4 Ps!
1. Pee
2. Poop
3. Puke
4. Paper
1.
2.
3.
4.
Thank you!
Now let's explore the sewer system!
AAHHHHHHH
OOF
Hey!
whoa!
Fatbergs can form and clog the sewers when household waste like cooking grease, oil, or wet wipes gets flushed down the drain.
FAT
OIL
GREASE

Most of the things in this picture should not be flowing through the sewers.

Can you find and color in the...

- **Wet wipes**
- **Banana peel**
- **Plunger**
- **Milk carton**
- **3 Band-aids**
- **Diaper**
- **Plastic bag**
- **Ice cream**
- **Candy wrapper**



Remember, only the 4 Ps (pee, poop, puke, and toilet paper) should be flushed down the drain! Other household waste should be disposed of properly and recycled if possible.

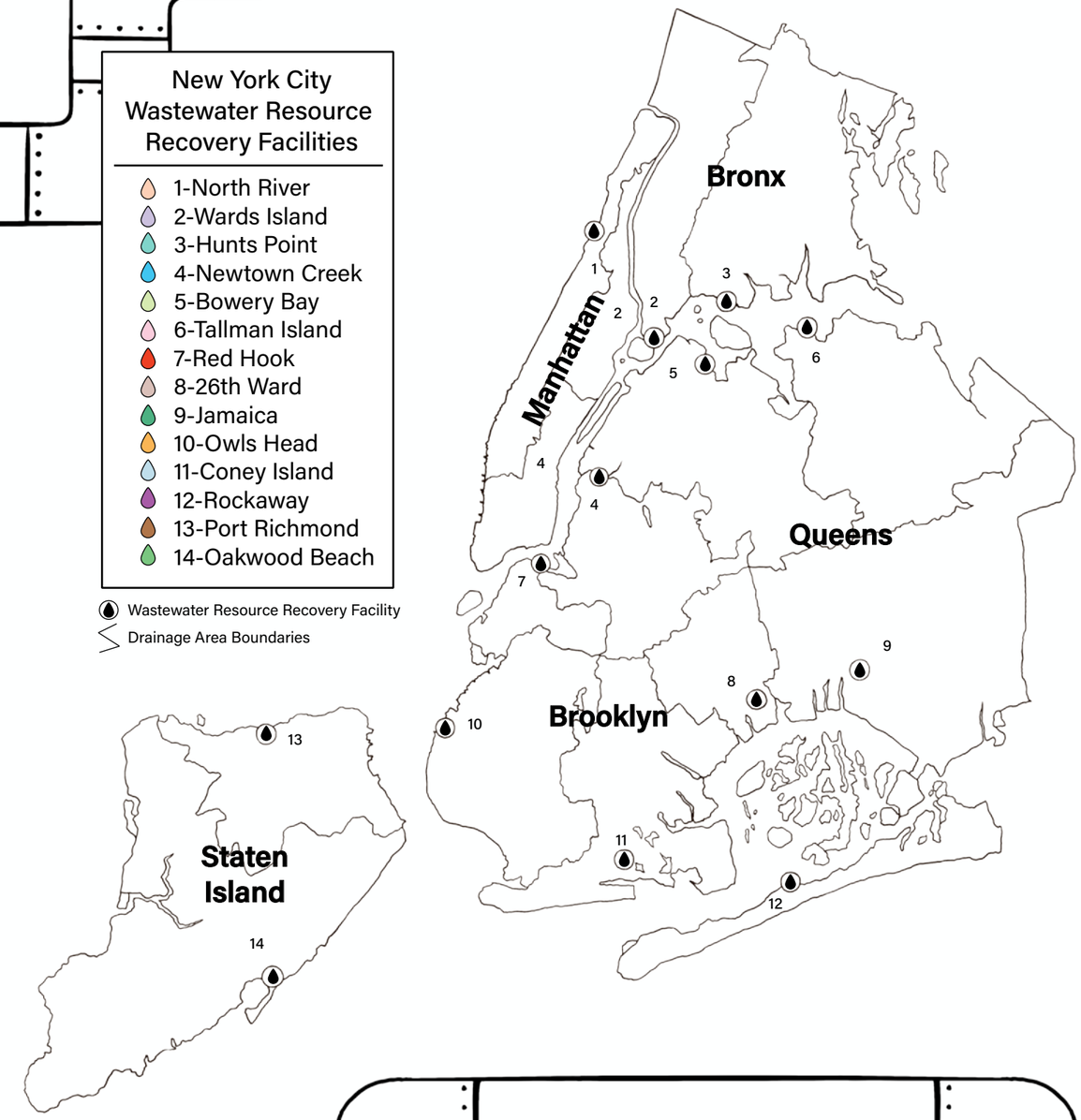
Plastics, glass, metal, cartons, paper, cardboard, food scraps, and yard waste can all be separated into bins and recycled or composted.

Did you know?

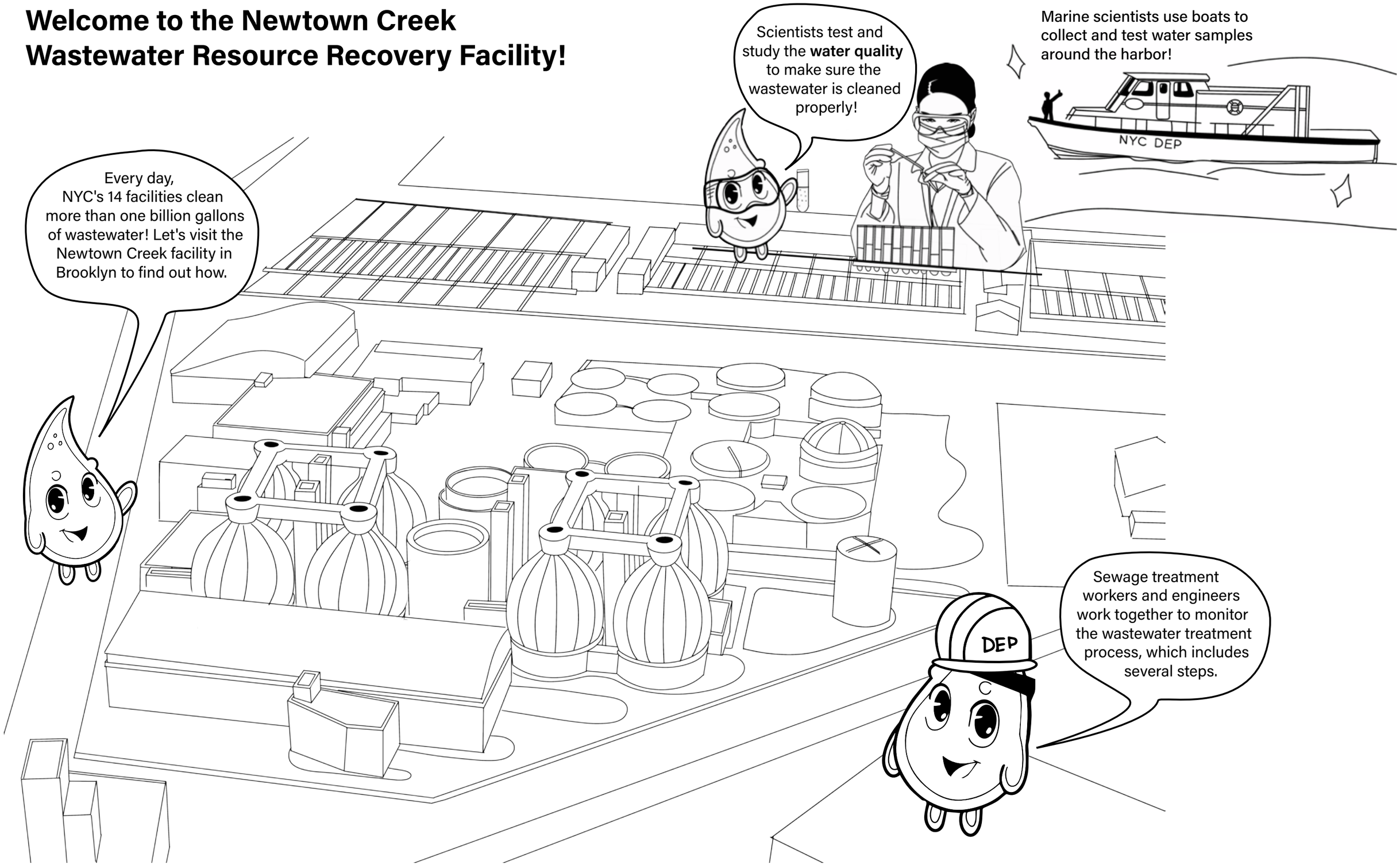
NYC has 14 **wastewater resource recovery facilities** where wastewater goes to be cleaned. During this process, we turn your waste into valuable resources like energy and nutrient-rich soil!

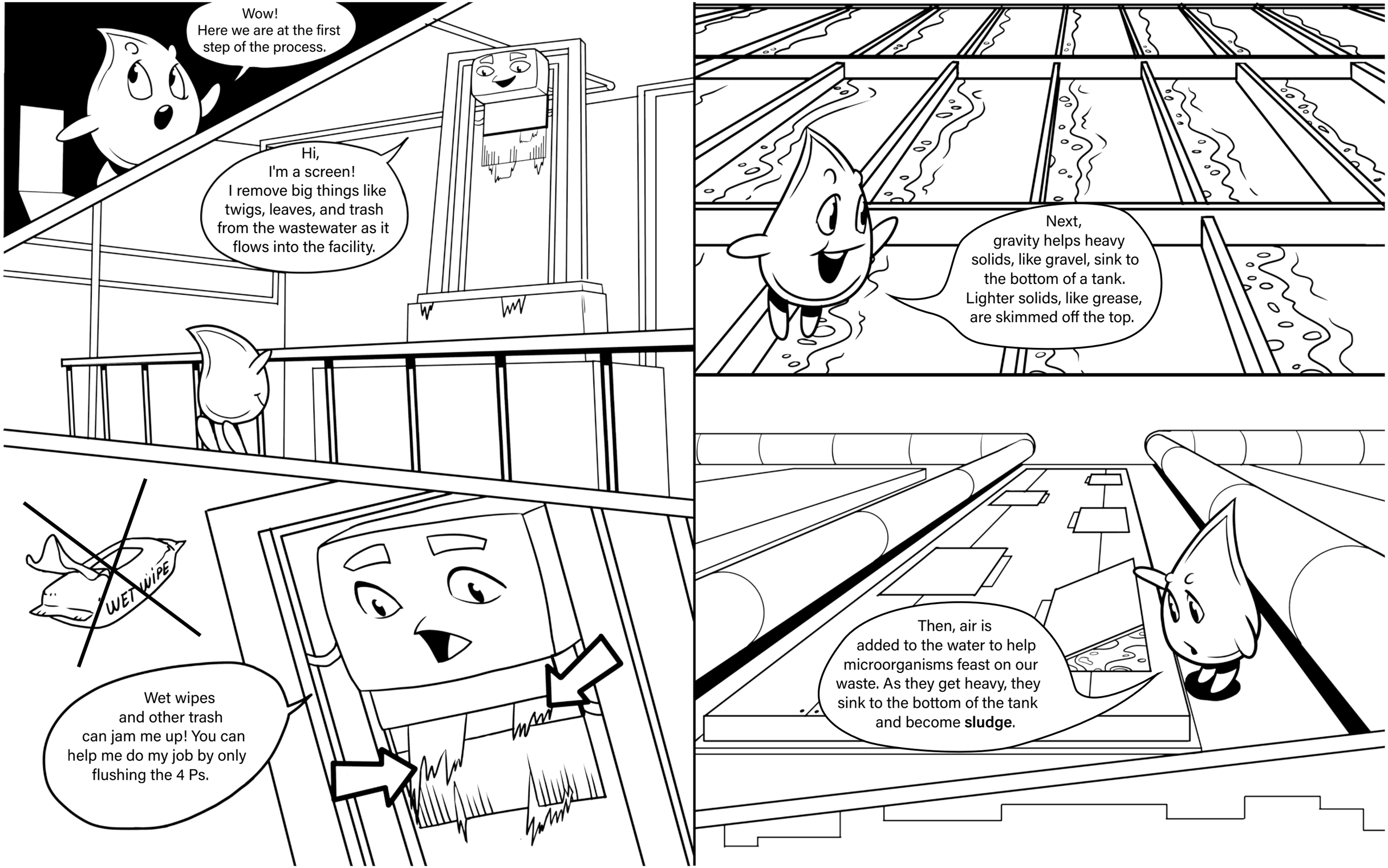
Can you find which facility your wastewater goes to?

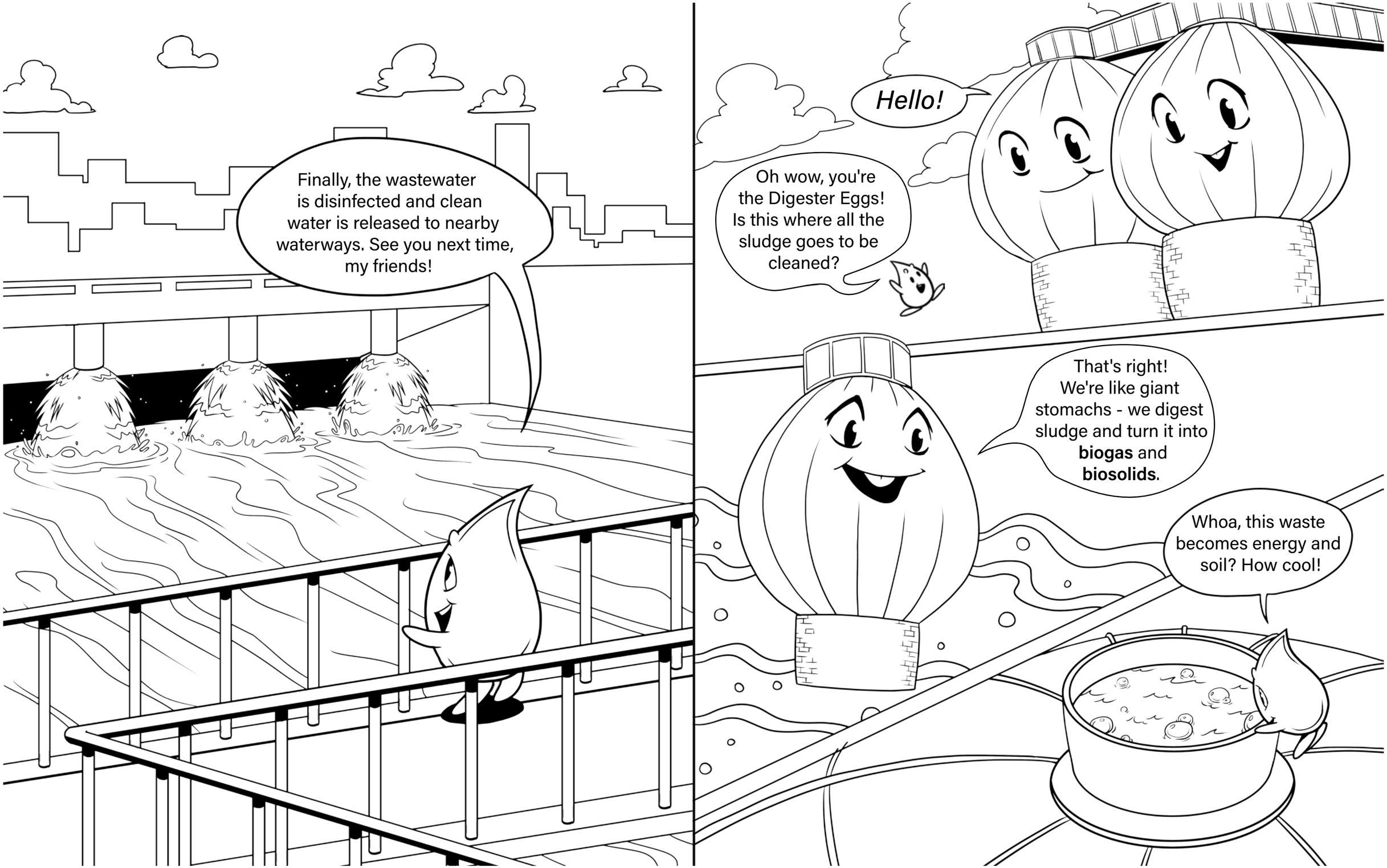
Color by Number: Use the key to color in the different areas that drain to the 14 facilities.

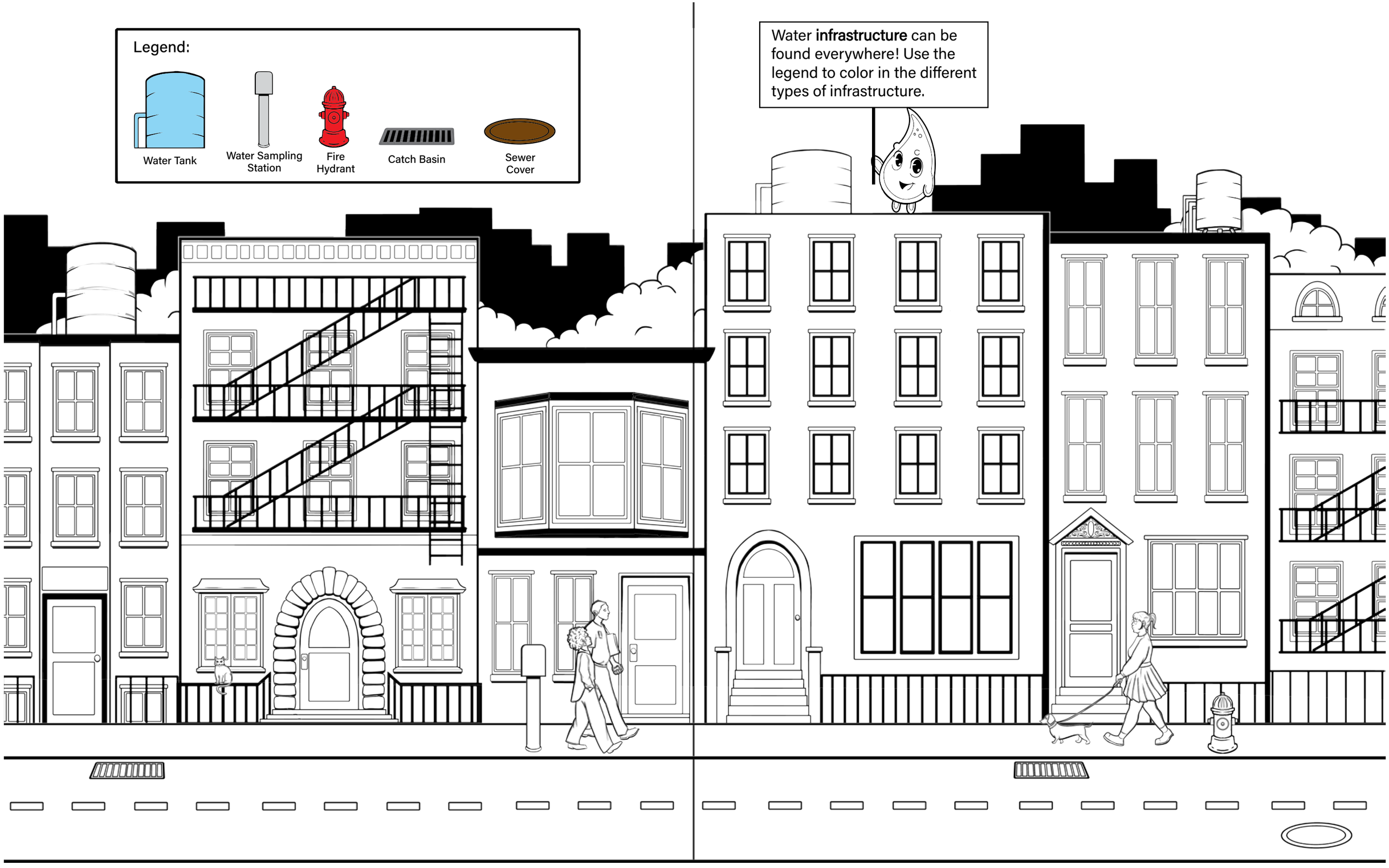


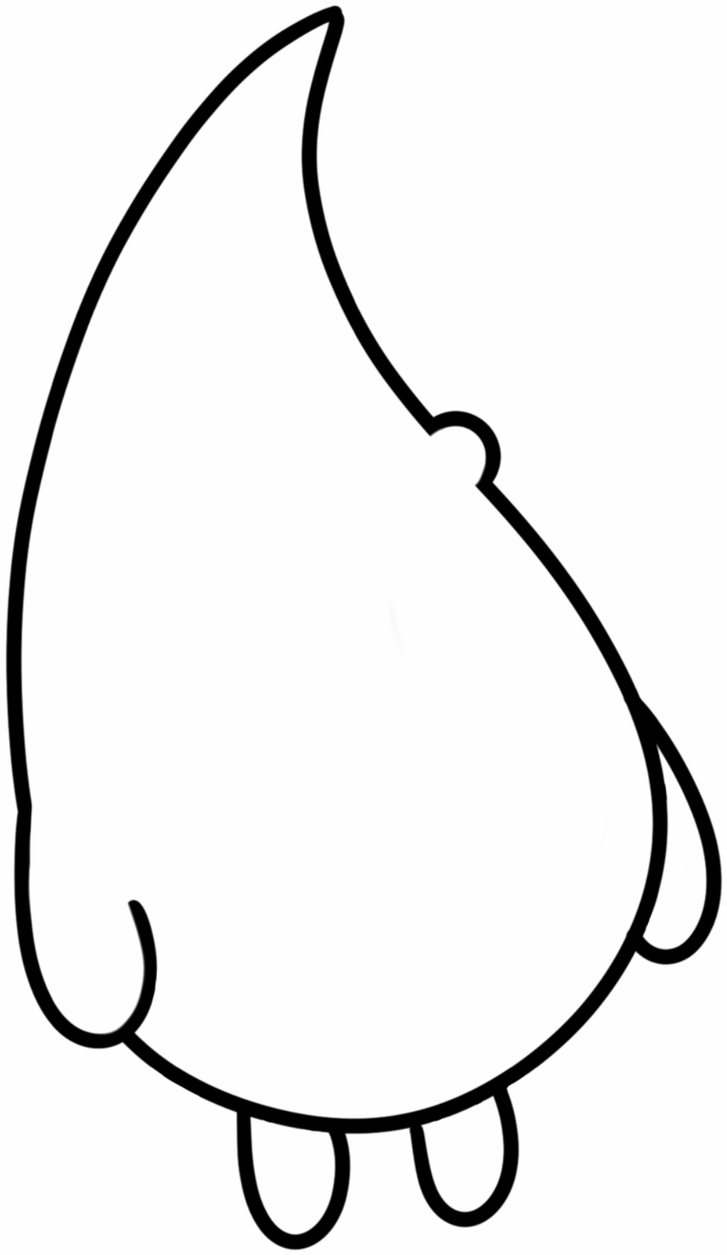
Welcome to the Newtown Creek Wastewater Resource Recovery Facility!



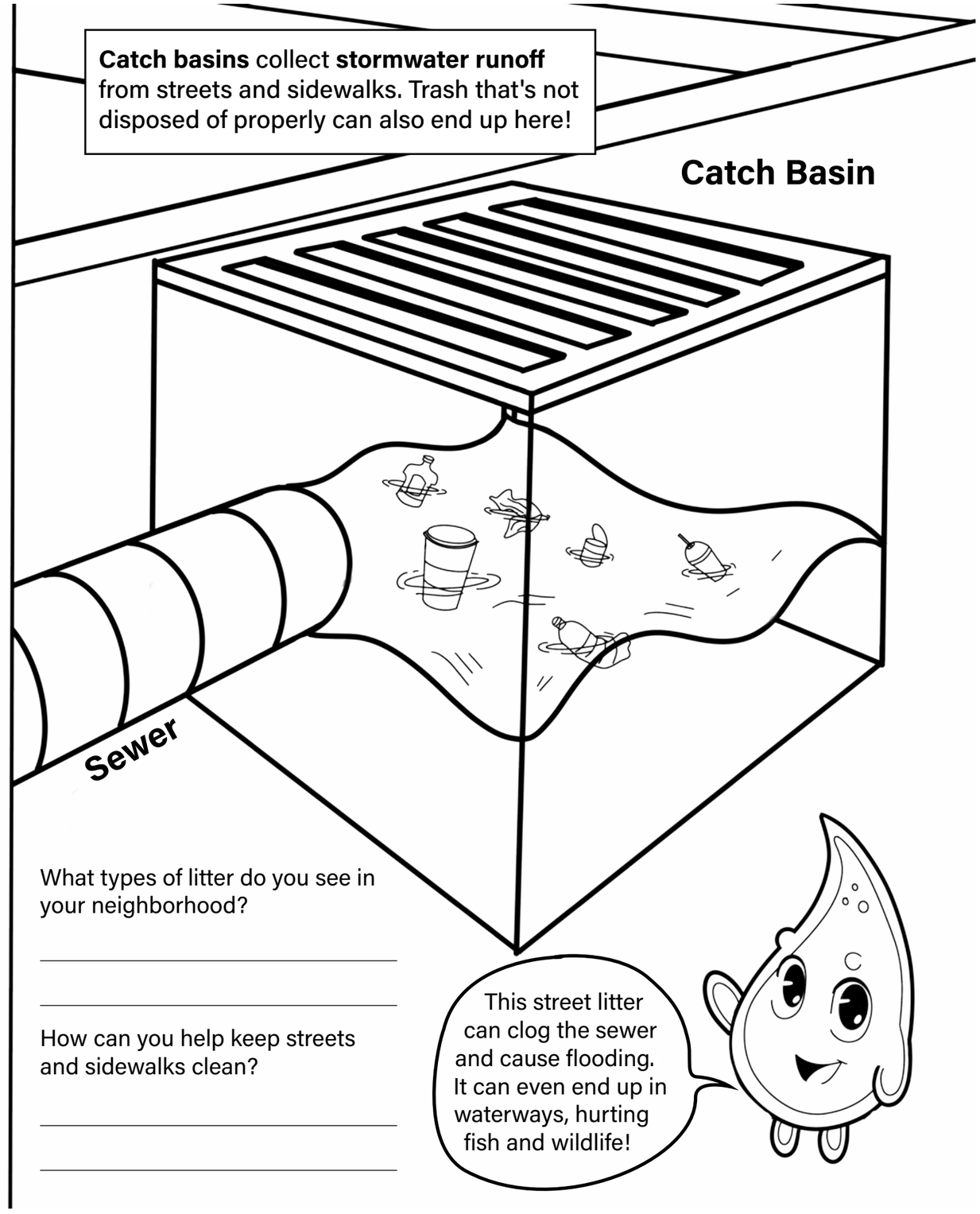

Wow!
Here we are at the first step of the process.
Hi,
I'm a screen!
I remove big things like twigs, leaves, and trash from the wastewater as it flows into the facility.
WET WIPE
Wet wipes and other trash can jam me up! You can help me do my job by only flushing the 4 Ps.
Next,
gravity helps heavy solids, like gravel, sink to the bottom of a tank.
Lighter solids, like grease, are skimmed off the top.
Then, air is added to the water to help microorganisms feast on our waste. As they get heavy, they sink to the bottom of the tank and become **sludge**.


Finally, the wastewater is disinfected and clean water is released to nearby waterways. See you next time, my friends!
Hello!
Oh wow, you're the Digester Eggs! Is this where all the sludge goes to be cleaned?
That's right! We're like giant stomachs - we digest sludge and turn it into **biogas** and **biosolids**.
Whoa, this waste becomes energy and soil? How cool!


Legend:
Water Tank
Water Sampling Station
Fire Hydrant
Catch Basin
Sewer Cover
Water **infrastructure** can be found everywhere! Use the legend to color in the different types of infrastructure.



Draw your own Drippy



What types of litter do you see in your neighborhood?

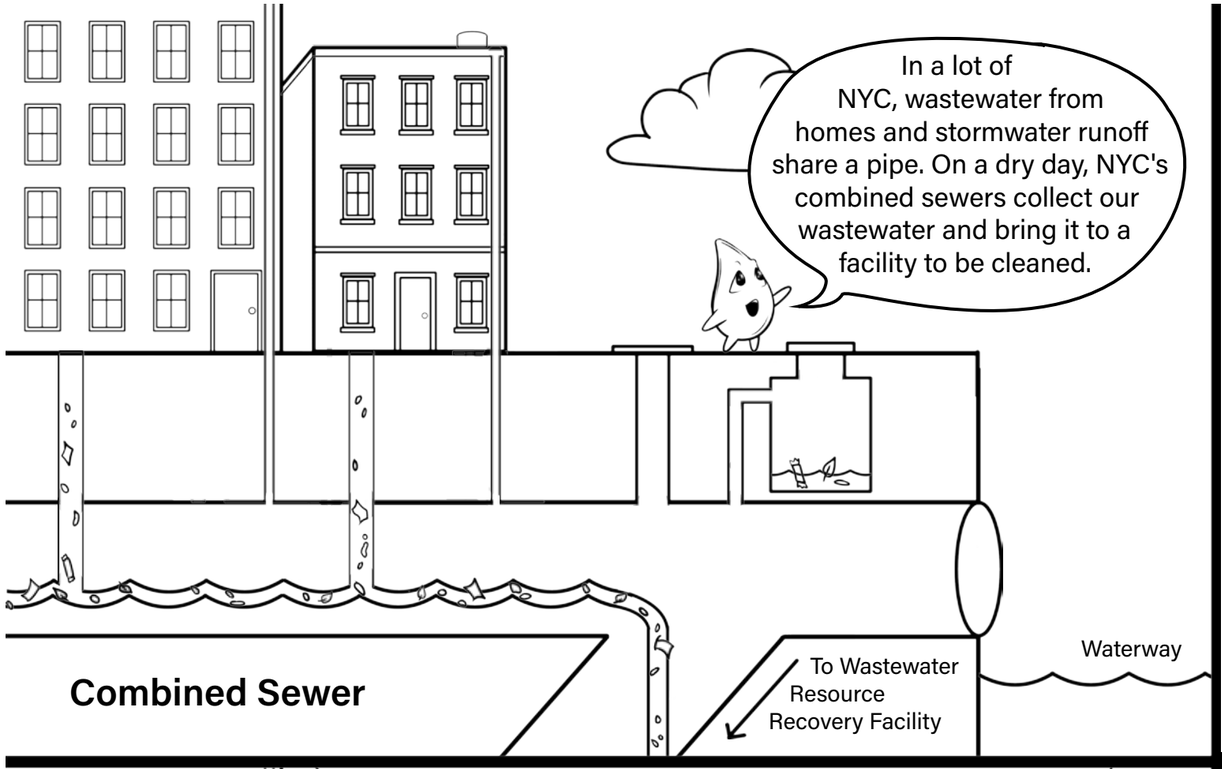
_____

_____

How can you help keep streets and sidewalks clean?

_____

_____



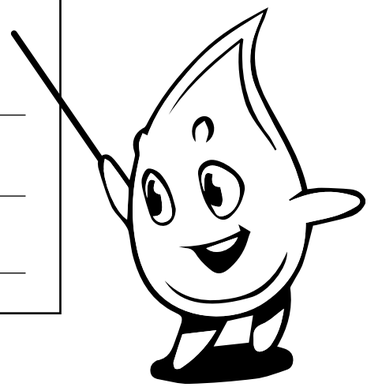
NYC's sewer system collects wastewater and stormwater runoff. There are two types of sewer systems in NYC, combined and separate. Let's see what happens when it rains.

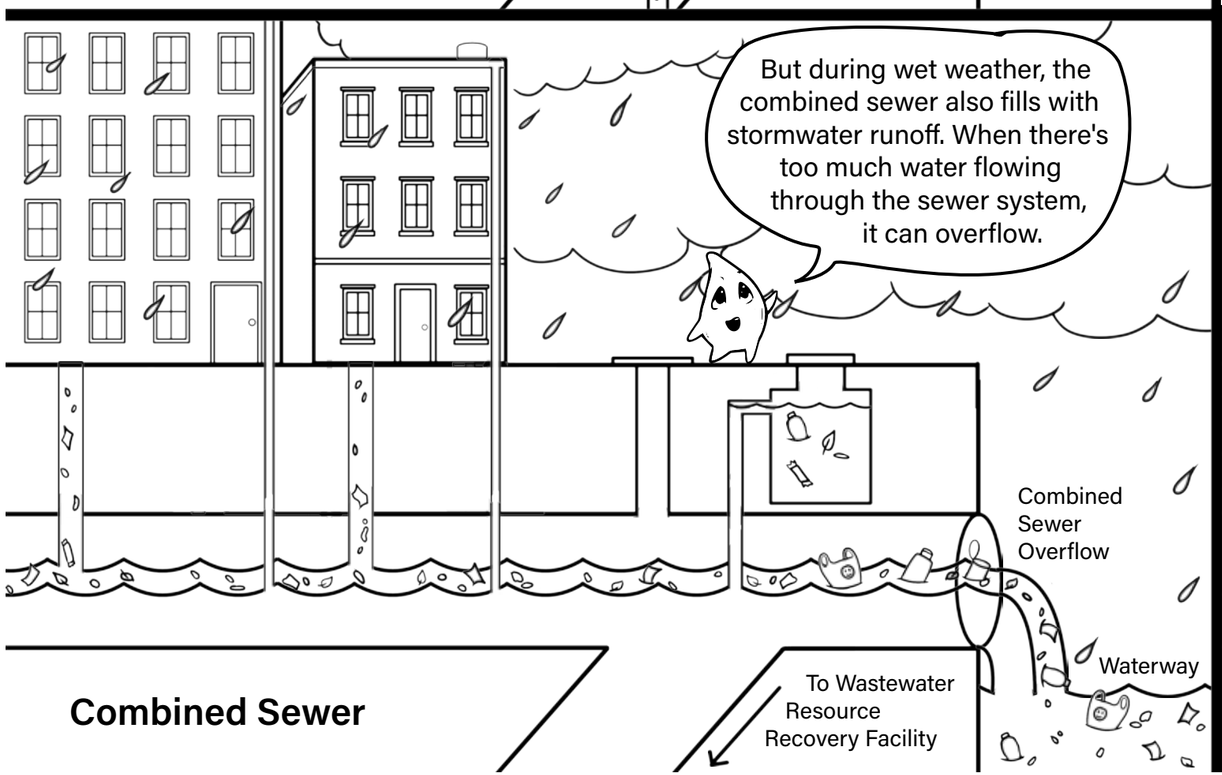
What do you think NYC can do to help protect the waterways when it rains?

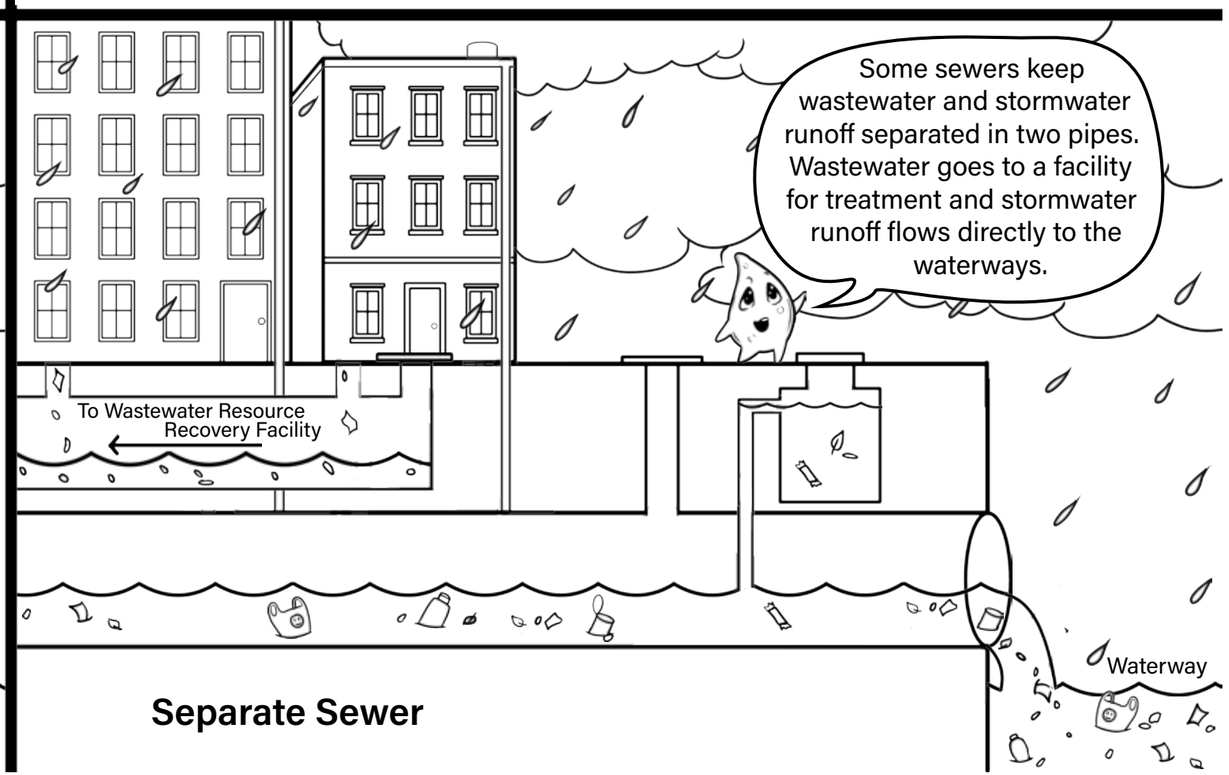
_____

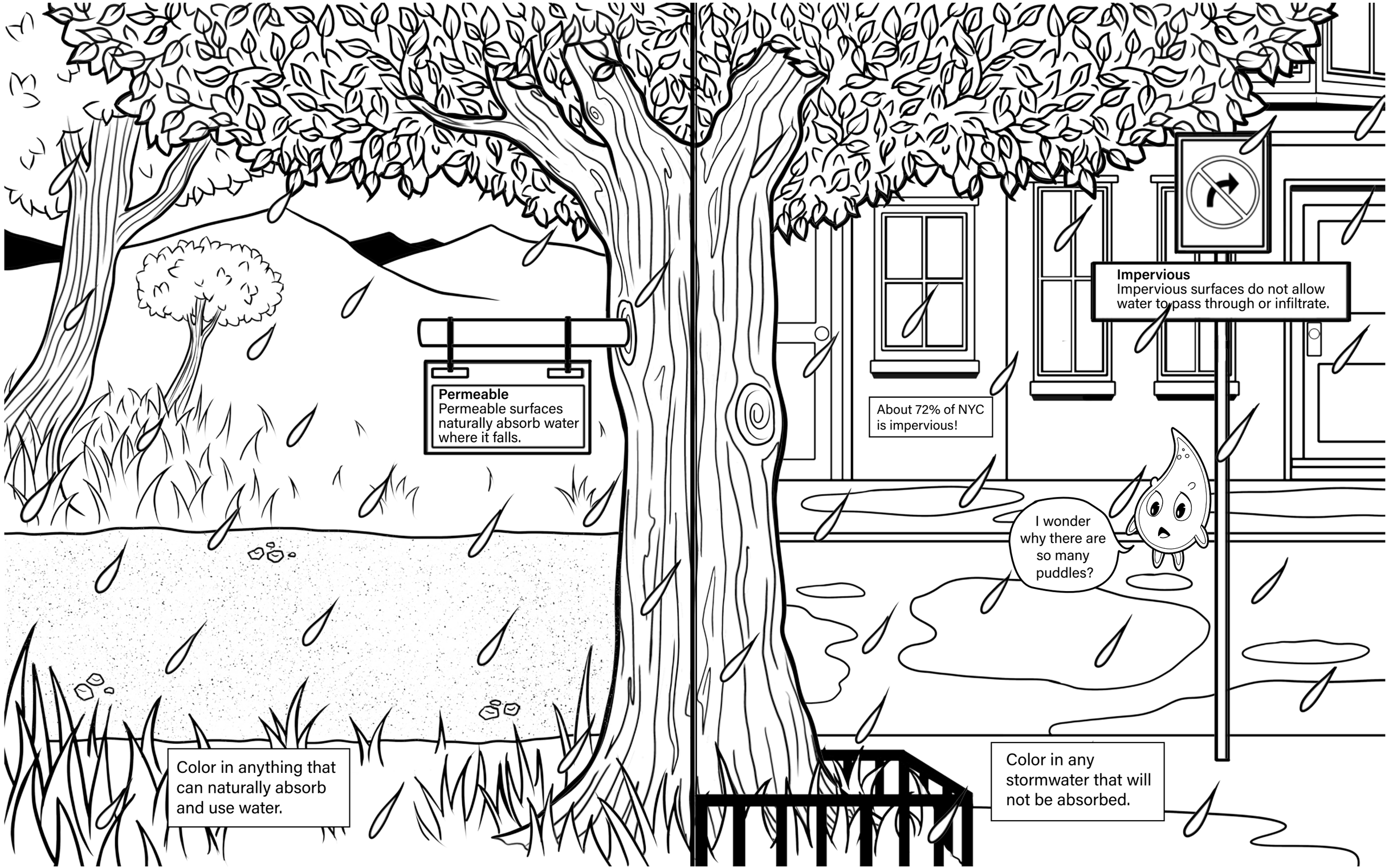
_____

_____








Permeable
Permeable surfaces naturally absorb water where it falls.
Color in anything that can naturally absorb and use water.
Impervious
Impervious surfaces do not allow water to pass through or infiltrate.
About 72% of NYC is impervious!
I wonder why there are so many puddles?
Color in any stormwater that will not be absorbed.

Trees and Plants: help absorb water, keep soil in place, and release water through evapotranspiration!

Stone Buffer: helps control the flow of water that enters and exits the rain garden.

Look for this blue label to identify rain gardens in your community.

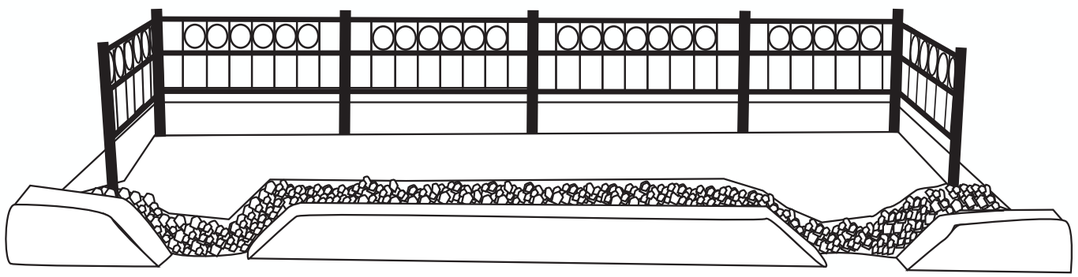
RAIN GARDEN

Tree Guard: works as a barrier to protect the tree and plants.

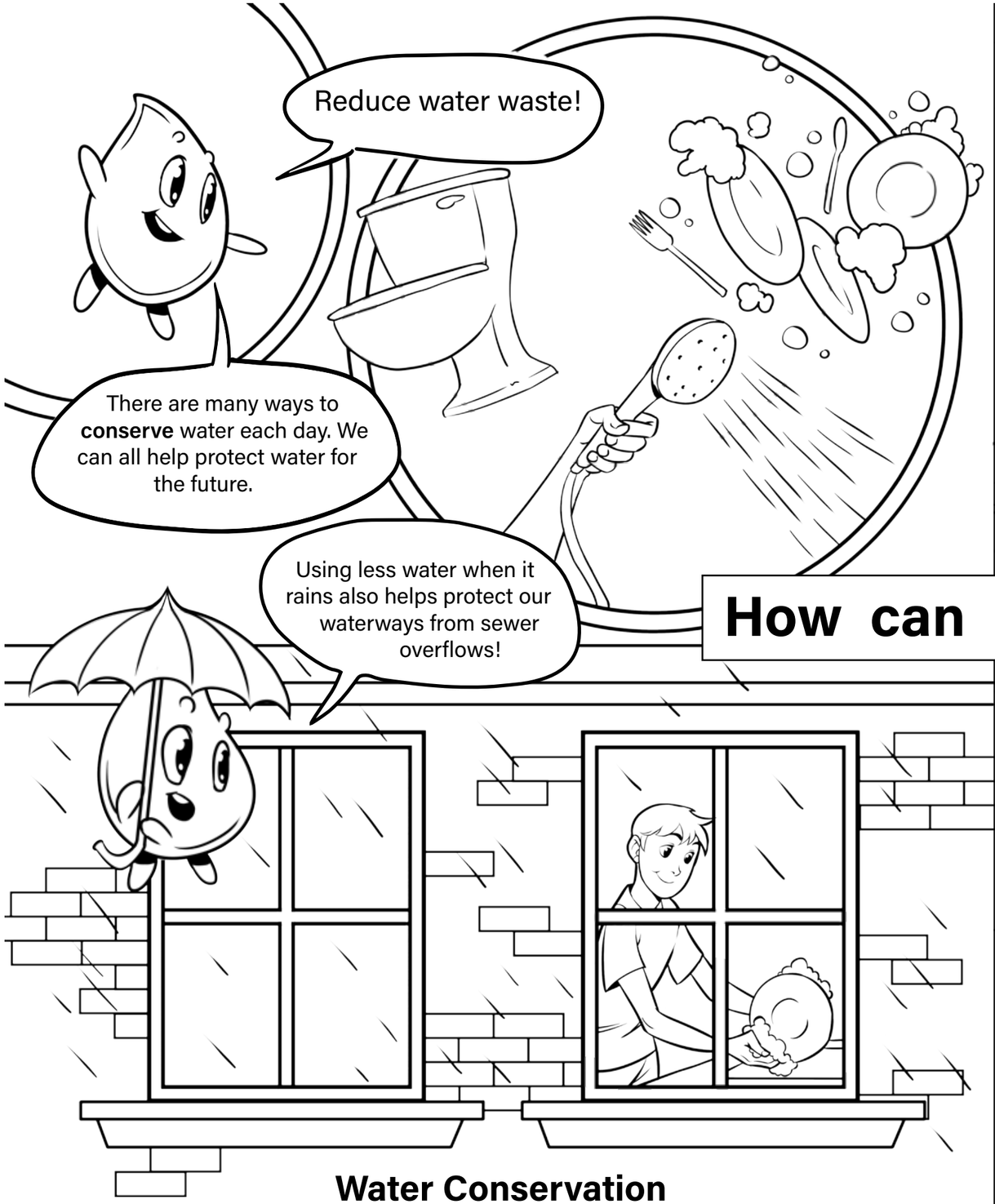
Inlet and Outlet: curb cuts that allow water to enter and leave the rain garden.

Rain Gardens are a type of green infrastructure. Their special layers of soil and plants can absorb more than 2,000 gallons of water when it rains! In the space below, draw your own rain garden.

Remember to include a variety of plants and the pollinators they attract!



How can we help?



Water Conservation

Harbor Protectors

I ♥ New York Harbor!
What do you love about the harbor?
N.Y.C.

Word Search

R T L M G S B I D M P X U X C H K H O X
A L D C H T S W F C Y B W V O U N Q T V
I Z M H F O T A L L V E C D N P F P T W
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R E A S W C A T C H B A S I N D J K C S

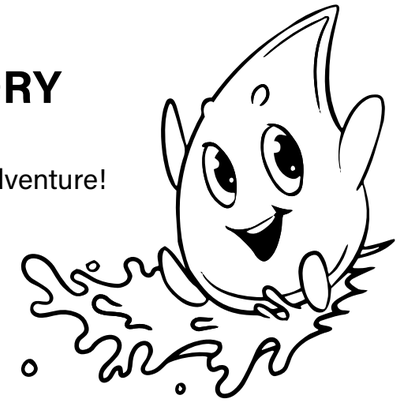
Stormwater runoff	Water quality	Conservation	Infrastructure
Impervious	Rain garden	Wastewater	Catch basin
Permeable	Watershed	Reservoir	Pollution
Biogas	Biosolids	Aqueduct	Fatberg
Sludge			

Vocabulary

1. **Aqueduct:** a tunnel or structure designed to carry water over a long distance, usually by gravity.
2. **Biogas:** the gas recovered from sludge digestion that can be used as renewable energy.
3. **Biosolids:** the solids recovered from the wastewater treatment process that can be composted or added to agricultural soils.
4. **Catch basin:** a type of drain next to the curb that collects and directs stormwater runoff to the sewer system to prevent street flooding.
5. **Conservation:** the careful preservation and protection of Earth's natural resources.
6. **Fatbergs:** A combination of the words "fat" and "iceberg" to describe the masses of grease and personal hygiene products that can clog sewer pipes and damage wastewater treatment equipment.
7. **Impervious surface:** a surface or area that does not allow water to pass through or infiltrate
8. **Infrastructure:** the systems and structures that provide essential services for the operations of a city, state, country, or region.
9. **Permeable surface:** a surface or area that naturally absorbs water where it falls.
10. **Pollution:** harmful substances such as oils, chemicals, sediments, and trash that can contaminate or dirty water, air, and land.
11. **Rain garden:** a planted area designed to collect and manage stormwater runoff from streets and sidewalks.
12. **Reservoir:** a natural or artificial lake or basin used to store water.
13. **Sludge:** the solids in wastewater, such as food, poop, and paper fibers, that are removed during the treatment process.
14. **Stormwater runoff:** water from precipitation that flows over streets, sidewalks, and other impervious surfaces.
15. **Wastewater:** used water mixed with solid waste that flows down the drains from homes, schools, and businesses.
16. **Wastewater Resource Recovery Facility:** a facility designed to treat wastewater and stormwater runoff before releasing clean water into a nearby waterway.
17. **Water quality:** a measure of a waterway's health and ability to support aquatic life.
18. **Watershed:** an area of land that drains and collects water in rivers, lakes, streams, and underground.

CREATE YOUR OWN WATER STORY

Take Drippy, or another water droplet friend, on a new adventure!
Where will they flow? Down a mountain? Into your cup?
Share your story below!



This coloring book was developed in partnership by the Fashion Institute of Technology (FIT) and the NYC Department of Environmental Protection through the NYC Department of Design and Construction's Town+Gown program.

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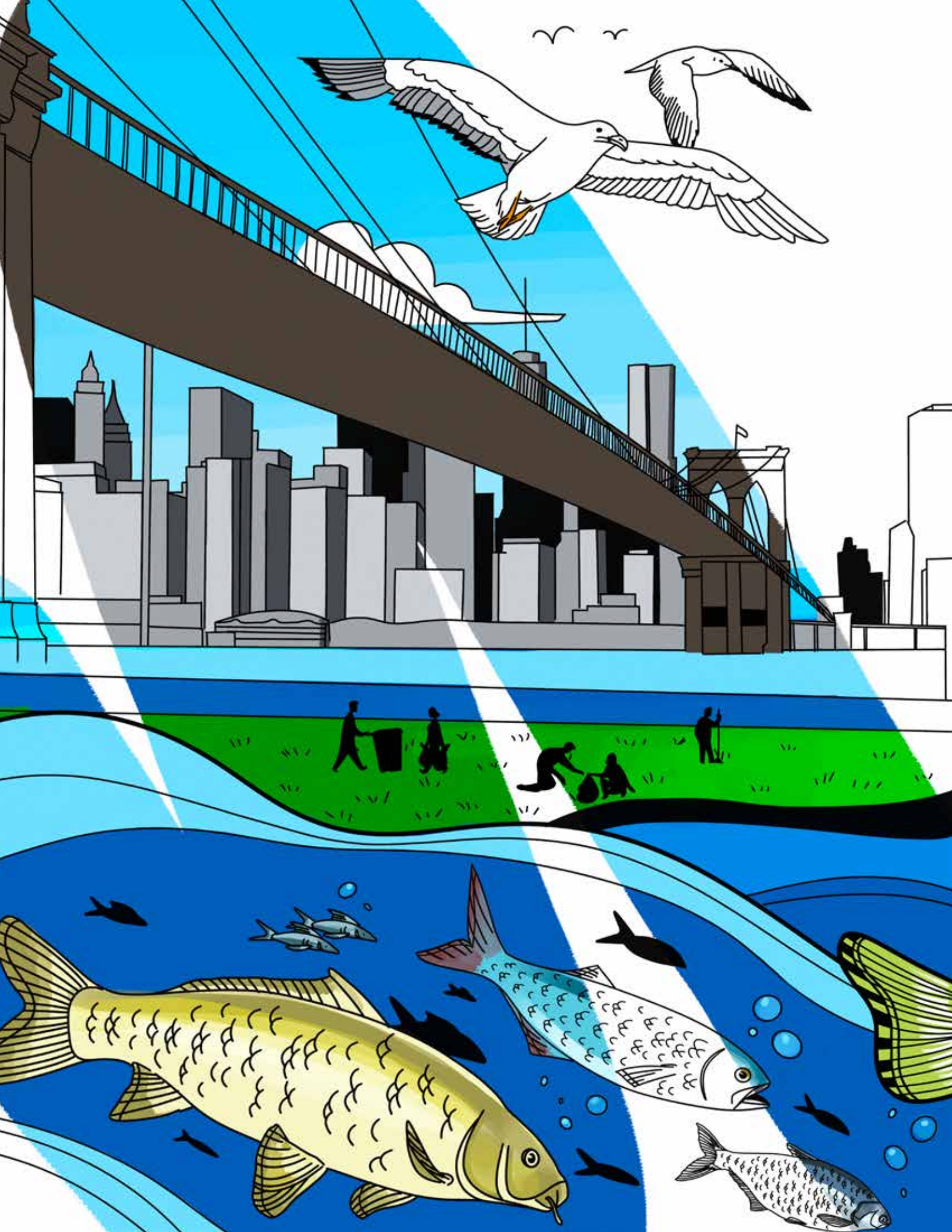
Illustration BFA program at FIT is a rigorous four-year undergraduate program rooted in the fundamentals of drawing, painting, conceptual thinking, and creative curiosity. Students go on to work as editorial and book illustrators, animation artists, art directors, and designers, just to name a few. The Illustration MFA program is for working professionals with several years of experience in the field of illustration and visual storytelling. Students elevate their skills, entrepreneurial spirit, and visual voice culminating in a cohesive body of work and written thesis.

The NYC Department of Environmental Protection (DEP) manages New York City's water supply, providing one billion gallons of drinking water each day to nearly 10 million residents. The water is delivered from a watershed that extends more than 125 miles from the city, including 19 reservoirs and three lakes. Approximately 7,000 miles of water mains, tunnels, and aqueducts bring water to homes and businesses throughout the five boroughs, and 7,500 miles of sewer pipes and 96 pump stations take wastewater to the City's 14 wastewater resource recovery facilities. DEP also protects the health and safety of New Yorkers by reducing air, noise, and hazardous waste pollution.