

DRAINNY DAYS

Written by Leigh Simmons & Kris Bennett

Illustrated by Leigh Simmons



**ADOPT
A STORM
DRAIN**
A project of Hamline University

 Center for Global
Environmental
Education
HAMLIN UNIVERSITY

Drainy Days

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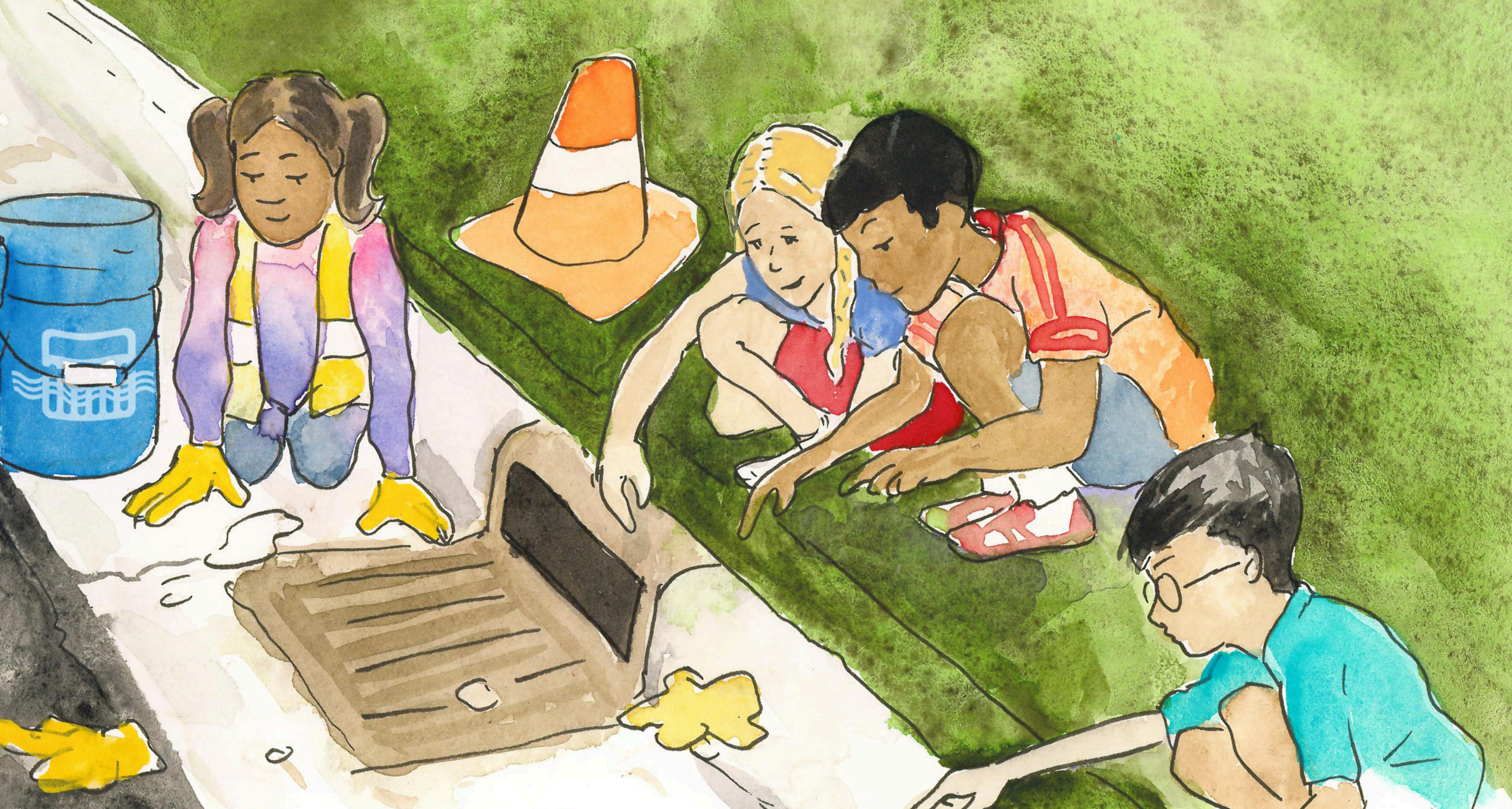
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Special thanks to Tracy Fredin, Brinkley Prescott
and the Adopt-a-Drain Team

Today, we kids in Ms. Rita's class are adopting the storm drain in front of our school. Ms. Rita says that adopting the drain will help our river stay clean. I don't know about that.

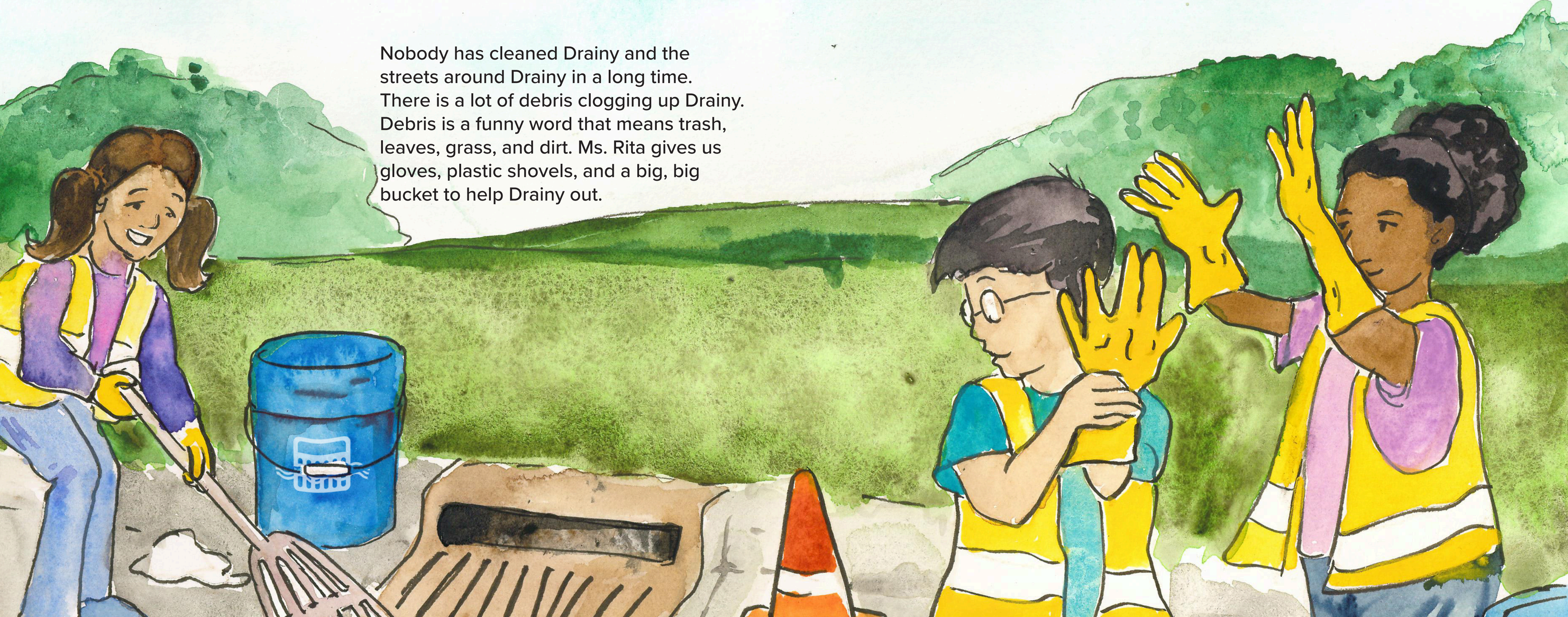




What I do know is that we get to go outside to meet our storm drain. The drain doesn't look like a drain in the bathtub or the sink. It is big, kind of like a hole in the street. Lots of water could go into it. And it is dark down there.

Helloooooo! Any monsters down there? I don't see any monsters. Duvante said we should name the drain 'Drainy.' I guess that is a good name for a drain.

Nobody has cleaned Drainy and the streets around Drainy in a long time. There is a lot of debris clogging up Drainy. Debris is a funny word that means trash, leaves, grass, and dirt. Ms. Rita gives us gloves, plastic shovels, and a big, big bucket to help Drainy out.



Today we find:



7 big sticks

We put these into
compost.

2 soda bottles

We put these into buckets for
recycling.



6 rocks

One of them is really cool.
Carlos hides them under a bush.



10 handfuls of leaves and grass

Off to the compost pile, too!



1 dog poop

Gross! Ms. Rita uses a bag
to put it in the trash.



3 cans

We put these into a bucket to take to
the recycling bins.



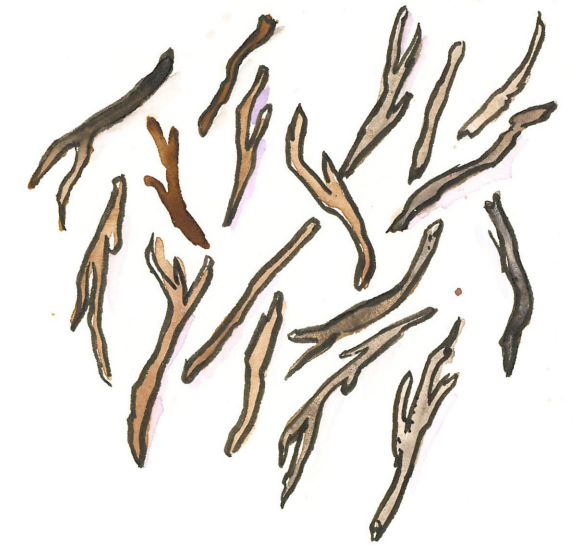
3 hamburger wrappers

We put these in our other
bucket for the garbage.



1 earthworm

Claire puts it in the grass.



17 small sticks

Even more compost!

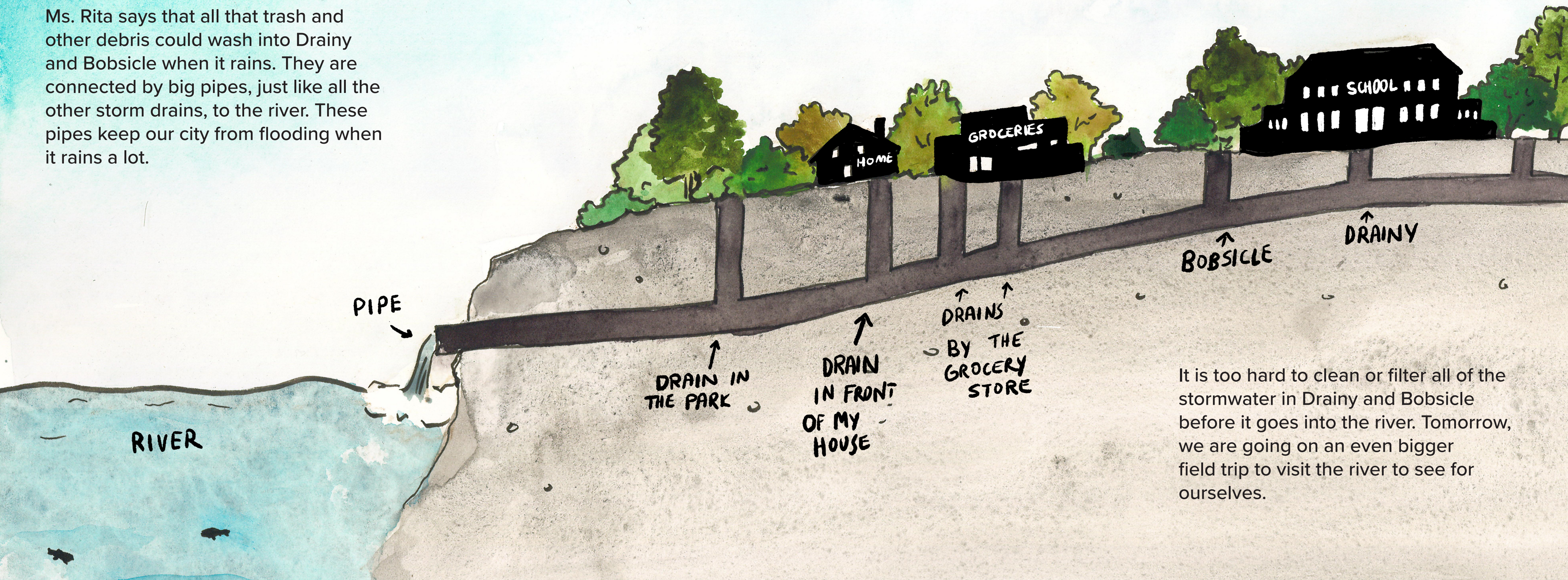


All in all, we fill three 5 gallon buckets!
And we even report all of our data online!

When we are finished cleaning Drainy, we see a nearby drain on our street that needs our help too. It is clogged with lots of leaves and grass. We even find a red popsicle wrapper hanging from it! Jackson says we should name the storm drain Bobsicle.



Ms. Rita says that all that trash and other debris could wash into Drainy and Bobsicle when it rains. They are connected by big pipes, just like all the other storm drains, to the river. These pipes keep our city from flooding when it rains a lot.



It is too hard to clean or filter all of the stormwater in Drainy and Bobsicle before it goes into the river. Tomorrow, we are going on an even bigger field trip to visit the river to see for ourselves.

Today is the day!

Today we are going on a field trip to the river!

We get to see where Drainy and Bobsicle connect to the river. It is a big, big pipe. There are some big sticks, lots of leaves, and some trash coming out of the pipe. The water by the pipe smells really funny.



We don't want the trash in the river. We don't want the stinky stuff in the river.
We don't want too many leaves in the river.



The people in boats don't like it.

The people swimming don't like it.



The people smelling it don't like it.



The ducks don't like it.



The bugs don't like it.

We don't like it!

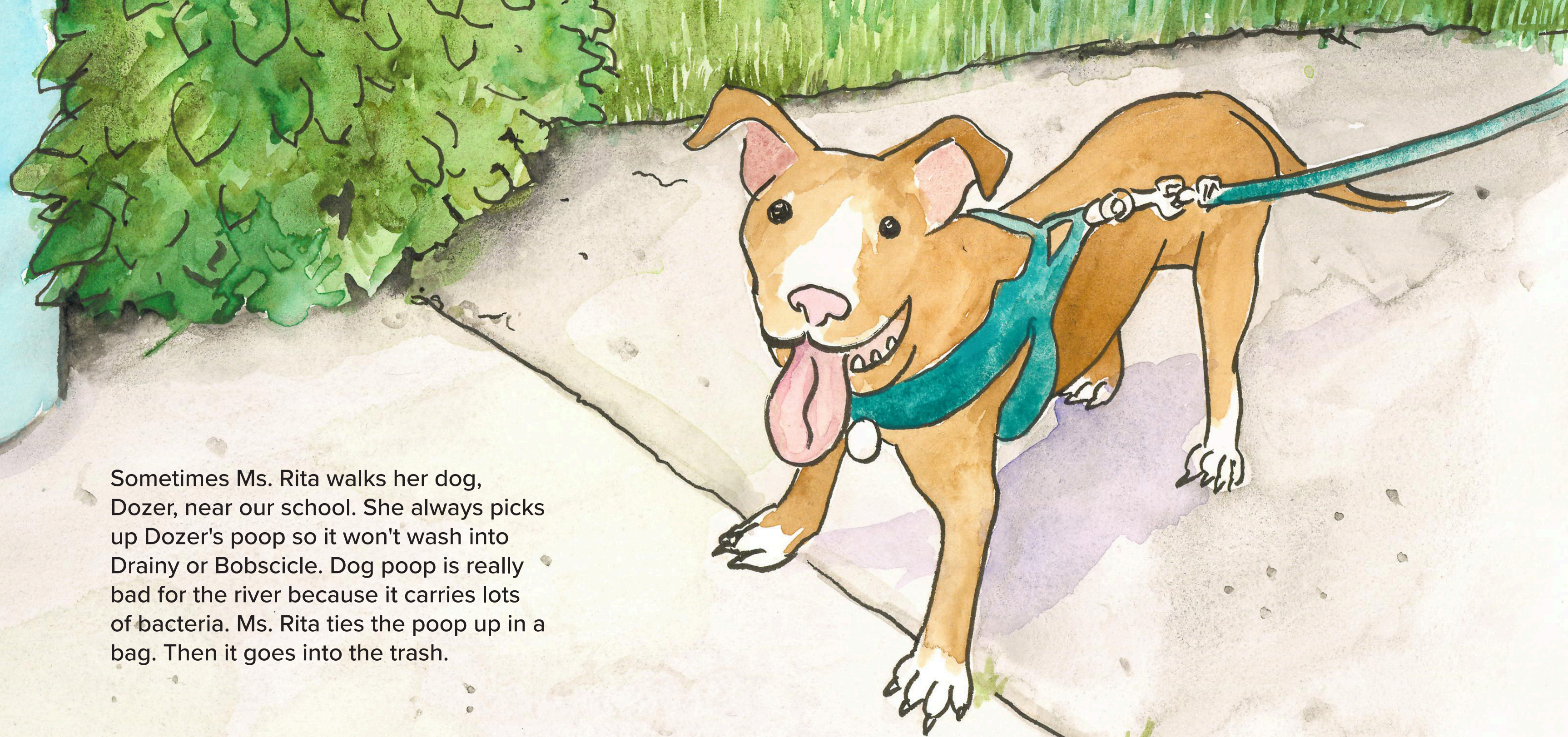
We are going to keep Drainy

(and Bobsicle) clean!

Every Wednesday we get to go outside and take care of Drainy and Bobsicle. We call it Water Wednesday. This Wednesday, we do not get to clean our drains because it is raining and raining so hard! Ms. Rita says that because we took care of our drains for so many weeks, they can do their job of keeping our streets from flooding. Look at Drainy! Look at Bobsicle! Look at our street! No flood here!



Sometimes Ms. Rita walks her dog, Dozer, near our school. She always picks up Dozer's poop so it won't wash into Drainy or Bobscicle. Dog poop is really bad for the river because it carries lots of bacteria. Ms. Rita ties the poop up in a bag. Then it goes into the trash.



All fall, we clean up leaves that fall into Drainy and Bobsicle or anywhere near them. Our teacher says that some leaves in the water are natural. But storm drains can carry lots and lots of leaves into the river that would normally stay on land. Too many leaves makes the water icky and green from too many nutrients. These nutrients are called nitrogen and phosphorus and too many of them cause algae blooms.





We collect so many leaves!!
Probably millions!

It seems like they will never end.

We fill seven 5 gallon buckets
every week.

**None of
these leaves
make it to the
river!**

Instead, we compost them
so they turn back into soil.

When it is winter, Drainy and Bobsicle are covered by snow. And ice. And more snow. And more ice. How do we help Drainy, Bobsicle, and the river now?

Ms. Rita says one way is to scrape and sweep our sidewalks so they are not icy. That way people won't need to use very much salt on the sidewalks to melt the ice. Salt makes the fish **VERY** unhappy! Instead, people can scatter salt just where it is needed. It doesn't take much! She says to aim for three inches of space between salt granules. Or use gravel instead.





On Water Wednesdays, we shovel the snow if it is soft. But the ice is hard to get rid of.

Until today...

Today is warmer. Today the ice is melting. But Drainy and Bobsicle are still hiding under it all, and cannot do their job.



We have our boots and our coats and our snow pants on. We have our gloves and our shovels. While Ms. Rita breaks the ice with a big tool, we scoop the ice and snow with our plastic shovels. Soon we see Drains! Soon we clear Bobsicle! Spring is coming! Now the drains can do their job again!



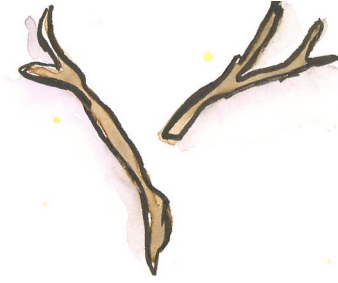
When the snow and ice are finally gone, we discover piles of mashed-up, old leaves mixed with sediment and salt from the winter roads. This debris is not good for anything! Not for our lakes, not for our rivers and not even for our compost. Yuck. We collect it and measure it and throw it in the trash.

In the summer, we want to keep looking after our drains. We take turns visiting Drainy and Bobsicle when school isn't in session. Drainy and Bobsicle still need our help. There is a drain in front of my house too. My family and I adopt it and clean up the grass and sticks and trash that fall nearby...

Today we find:

4 rocks

Two of them are really cool.
We hide them under a bush.



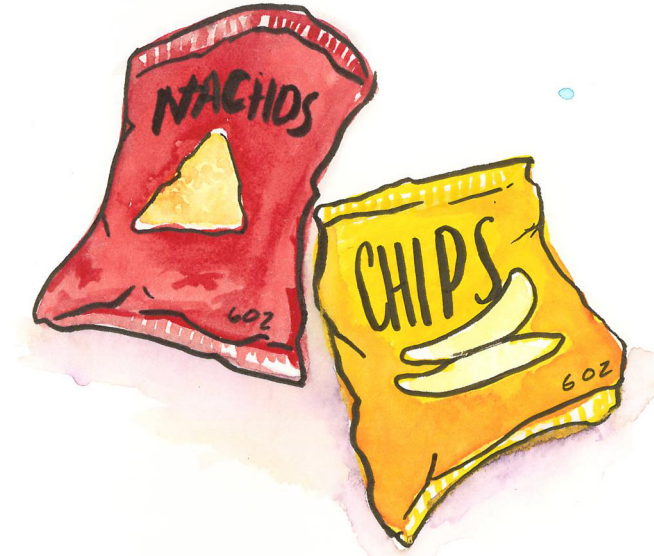
2 small sticks

We put these into compost.



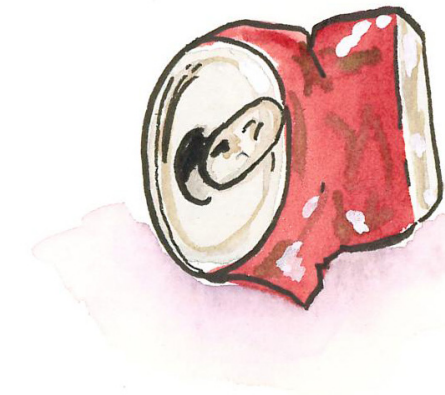
1 bucket of leaves and grass

We also put it into compost.



2 chip bags

We put them in the trash.



1 can

We put it in the recycling bin.



1 candy bar wrapper

In the trash it goes.



3 earthworms

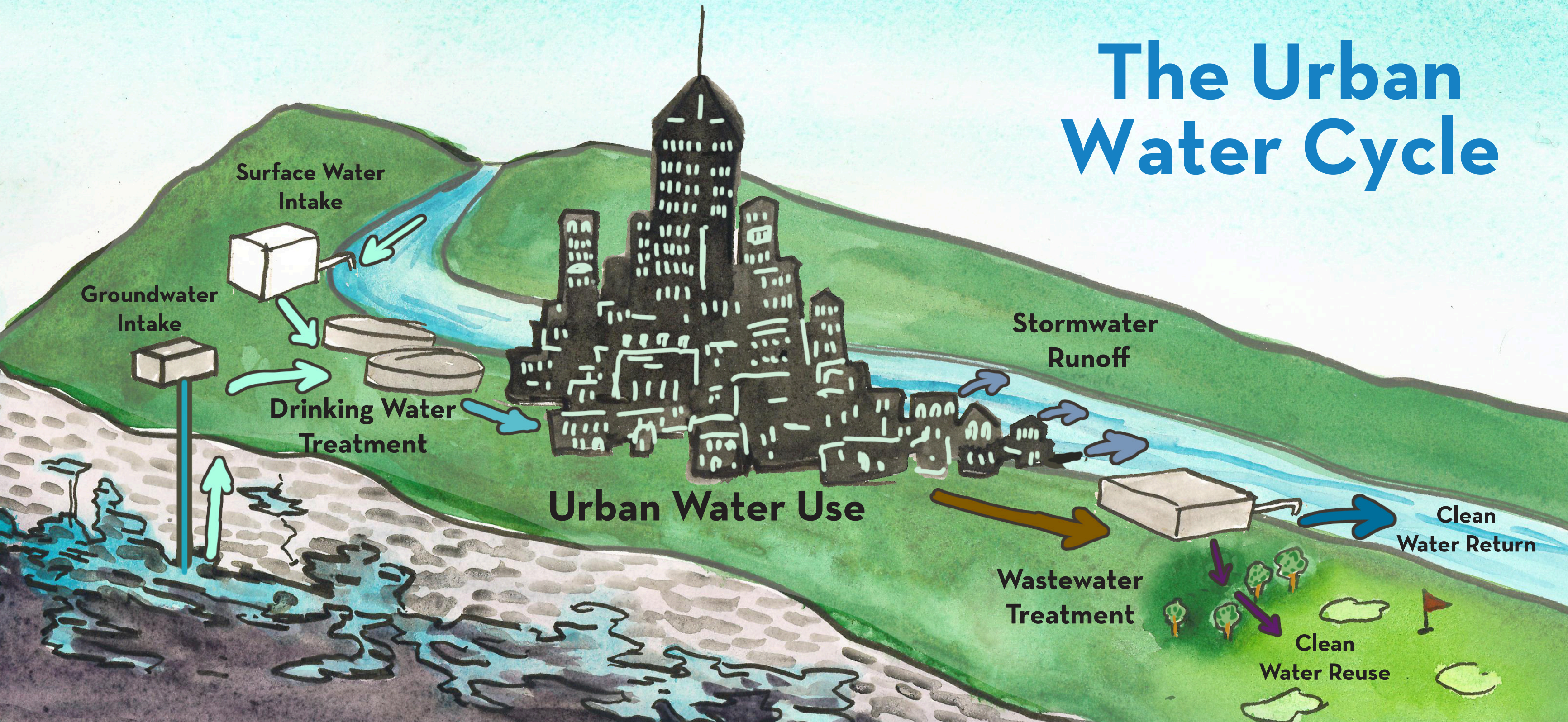
We park them in the grass.



We Love
DRAIN!!

(and Bobsicle too!)

The Urban Water Cycle



DID YOU KNOW?

The urban water cycle includes a series of engineered systems that manage water in urban areas.

Stormwater: Cities collect rain runoff from streets and sidewalks through a series of storm drains and pipes and deliver it back to our waterways.

Drinking Water: Cities collect groundwater and surface water, from rivers and other sources, then clean it, and pipe it to buildings for us to use.

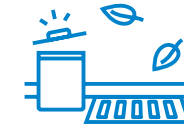
Wastewater: Cities then collect all the water we use, clean it, and deliver it back into the environment to be reused again.

Adopt a Storm Drain!

Citizen science and service learning program

Adopt-a-Drain K-12 helps educators teach students to adopt storm drains and keep them clear of leaves, trash, and debris to reduce water pollution. Students participate in community action and encourage families to protect waterways in their own neighborhoods by adopting a drain and reporting online!

Follow these steps to get started:



#1. Adopt your storm drain online. Visit adopt-a-drain.org to find a drain to adopt. You'll be able to see which drains have already been adopted and what people have named them.



#2. Name your drain. Choose something fun and snazzy so that students feel ownership of their drain. It is REALLY fun for students to name their own drain!



#3. Select "School or Classroom" as the "Type of Organization." This important step helps us see how many drains are adopted by schools.



#4. Clean up and collect data. Distribute "Data Collection" cards for students to collect data as they clear debris from neighborhoods and storm drains.



#5. Record data online. Enter data from "Data Collection" cards in your account at adopt-a-drain.org.



#6. Reward students. Share stickers, pencils, and tattoos with students to celebrate a job well done!



#7. Use online K-12 classroom resources. Discover engaging and interactive water videos and modules at cgee.hamline.edu.



#8. Share your stories. Email your inspiring classroom stories and photos to us at k12@adopt-a-drain.org.



#9. Get families involved. Send the "Safety Tips" brochure home with students to encourage families to adopt drains at home.



#10. Order K-12 support materials. Order, review, or share materials with teachers at ms4.adopt-a-drain.org/educators.

Teach students to protect local waterways

adopt-a-drain.org

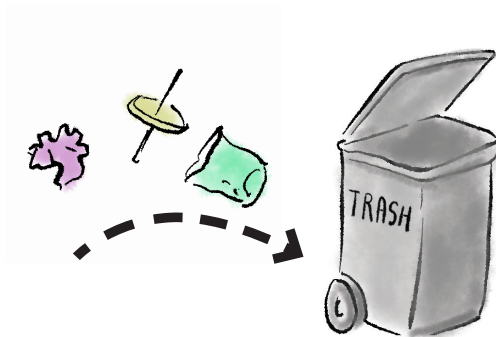
Keep these pollutants out of streets and storm drains. Protect local waterways and report debris data online to track your impact!



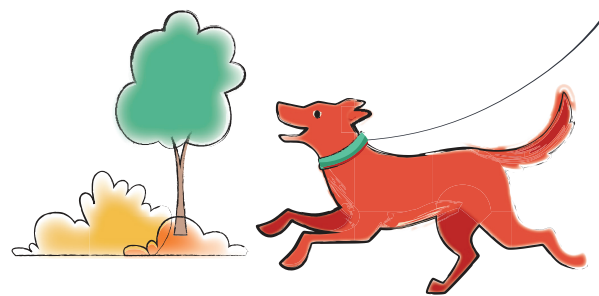
Leaves, grass, and dirt contain phosphorus, which feeds the algae that turn lakes green. Keep them off streets and sidewalks.



Salt is harmful to waterways and aquatic life. Just one teaspoon pollutes five gallons of water forever. Sweep up leftover salt and reuse it.



Trash clogs drains and pipes, causing flooding. Put it in the garbage.



Dog poop carries harmful bacteria and phosphorus. Pick up after your pet!



The Hamline University Center for Global Environmental Education, in Saint Paul, Minnesota, was formed in 1990 to foster environmental literacy and stewardship in people of all ages. The Center has built a tradition of educational excellence, innovation, and leadership via four programs: Teacher Professional Development, K-12 Resources, Multimedia Production and Community Outreach, including the Adopt-a-Drain program.



The Adopt-a-Drain program began in 2014 in Minnesota with support from Metro Watershed Partners. Seven years later, the Adopt-a-Drain K-12 program was designed to help educators flexibly integrate this program into their curriculum, school, and community. Teachers receive training, newsletter support, access to online K-12 learning resources, printed classroom materials, supplemental resources, and cool swag!



This story was inspired by the real adventures of a dedicated group of Adopt-a-Drain students and teachers in Minneapolis Public Schools. It was adapted to include ideas from many classrooms around Minnesota and hopefully inspires teachers and classrooms everywhere to help keep our waterways clean!

Sweep up! Rake up! Pick up!

adopt-a-drain.org

