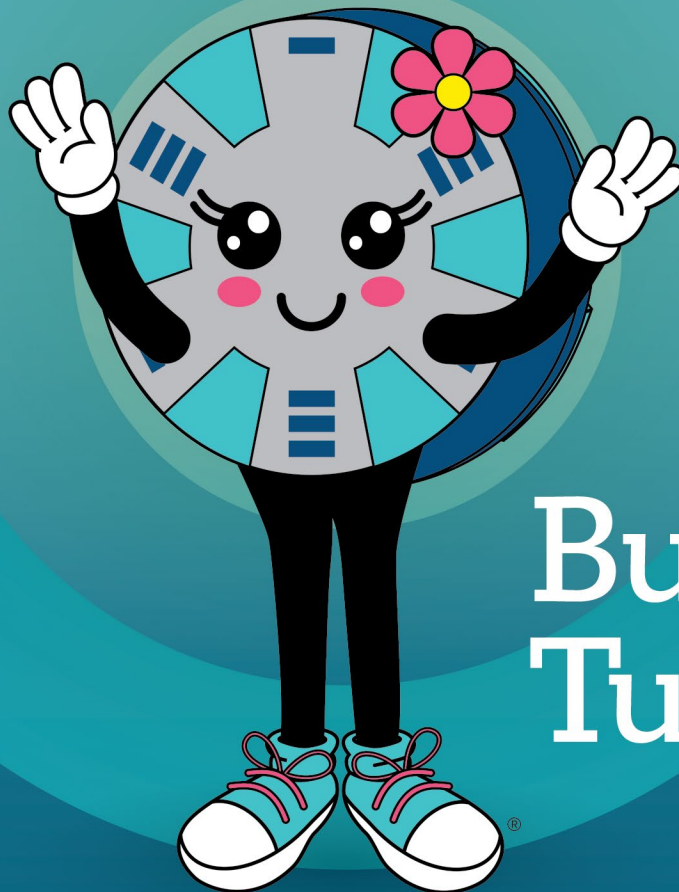


Cloe

THE TUNNEL BORING MACHINE



Builds a
Tunnel!

© 2021 Alexandria Renew Enterprises. All rights reserved.

No part of this book may be reproduced or used in any manner without written permission of the copyright owner, except for the use of quotations in book reviews.

First paperback edition: June 2021

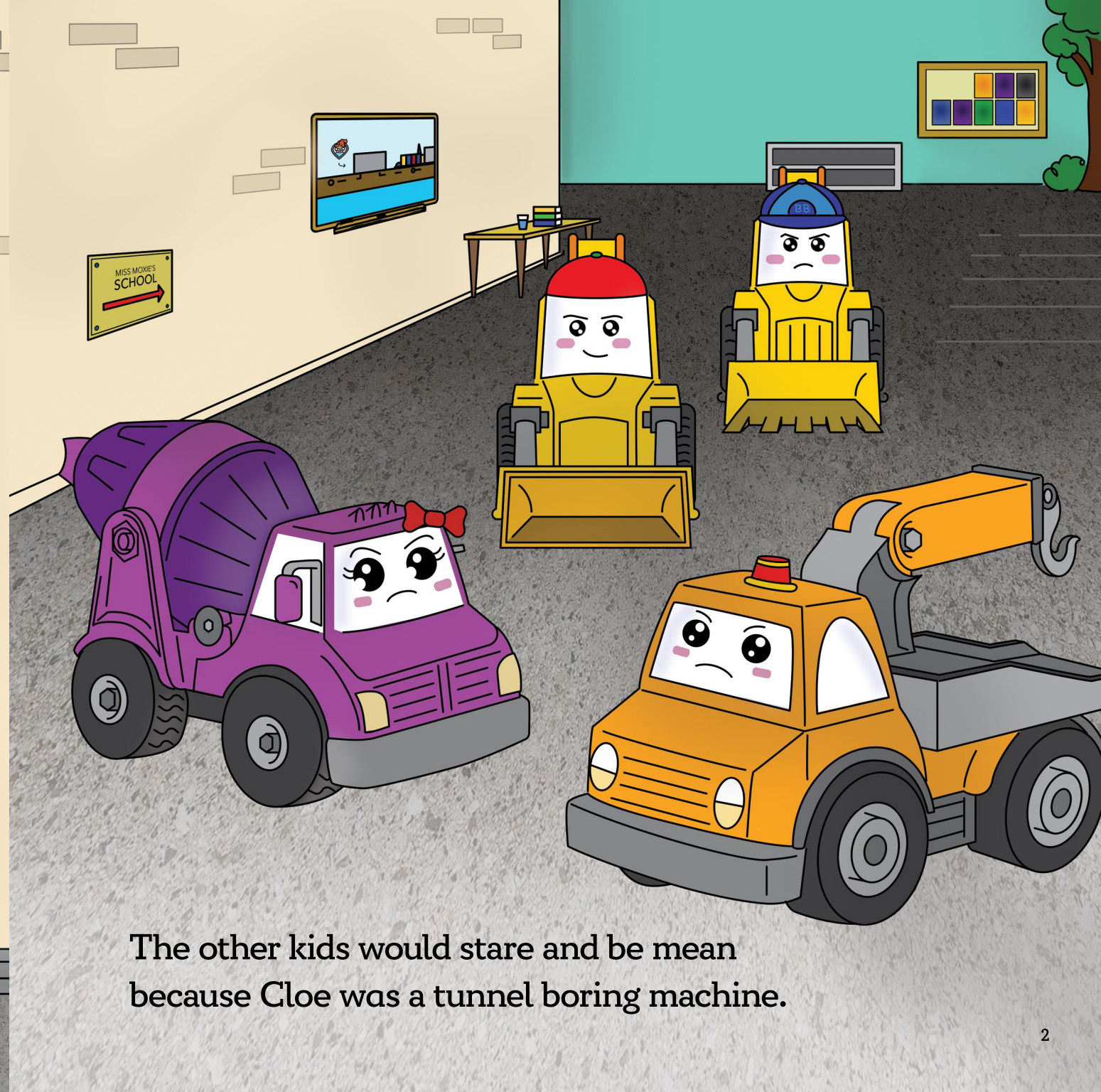
Book design and story by West Cary Group, LLC

www.riverrenew.com

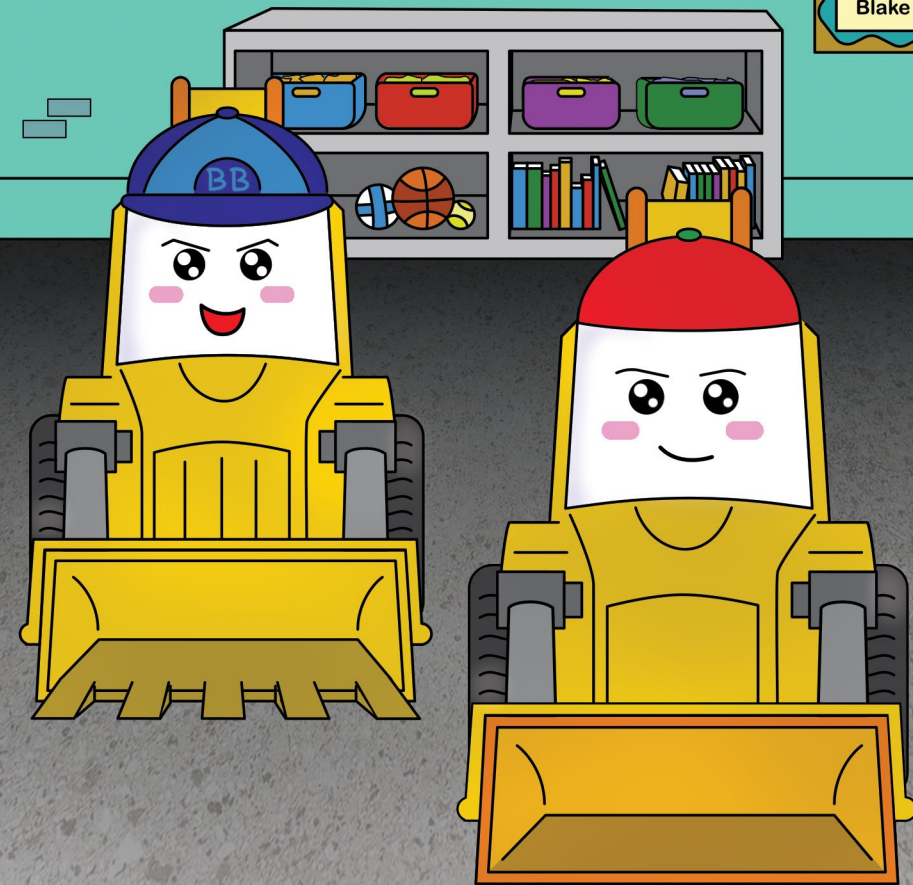
ISBN: 978-1-7355702-3-5



On the way into Miss Moxie's class,
Cloe the TBM was always last.

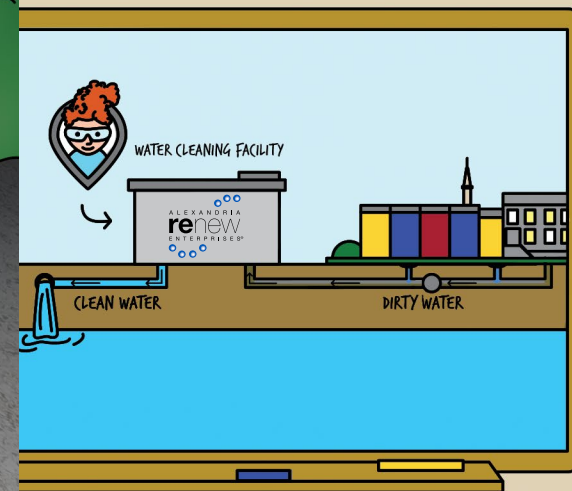


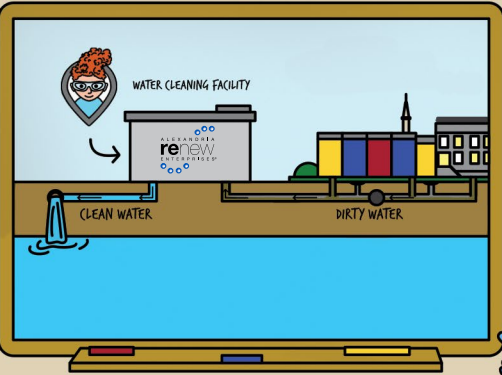
The other kids would stare and be mean
because Cloe was a tunnel boring machine.



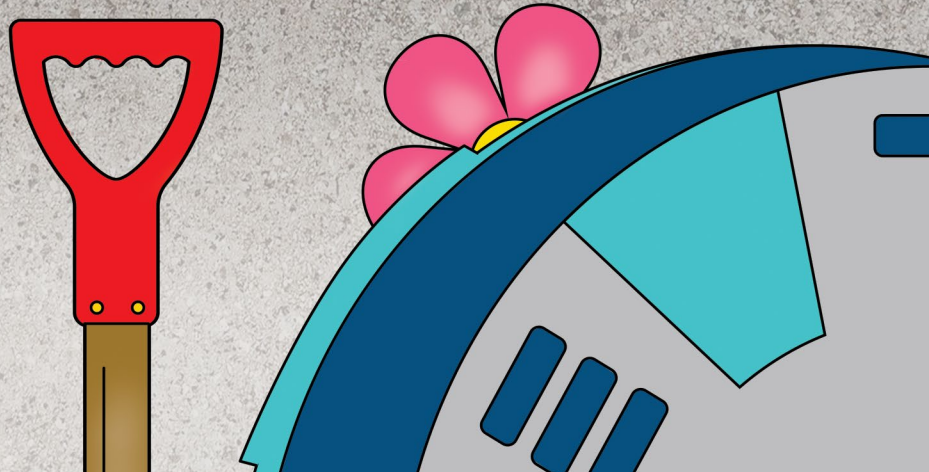
"You're boring," they said. "You're big and you're slow."
 "You aren't like us. You're dull. You should go."

"Come now," said Miss Moxie. "Pull up to your spots.
 There's work to be done and lessons to be taught."

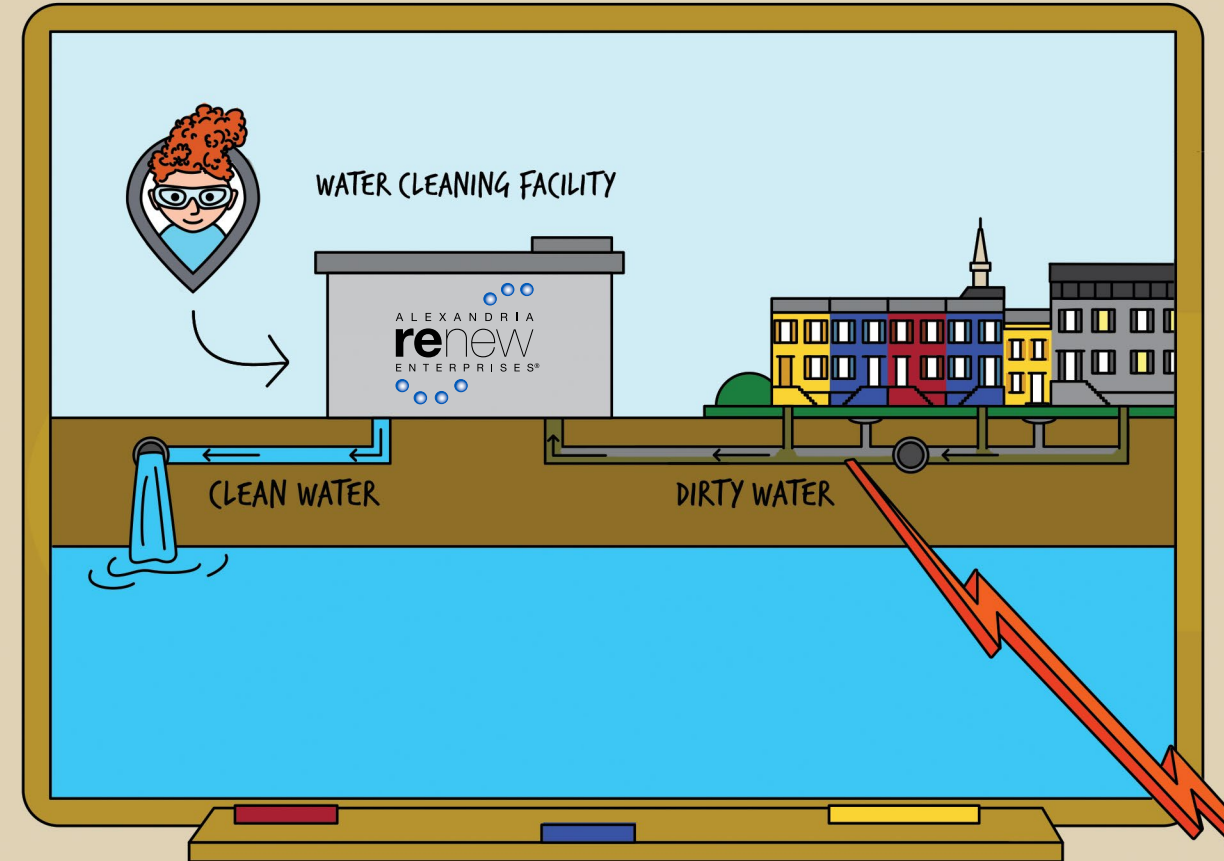


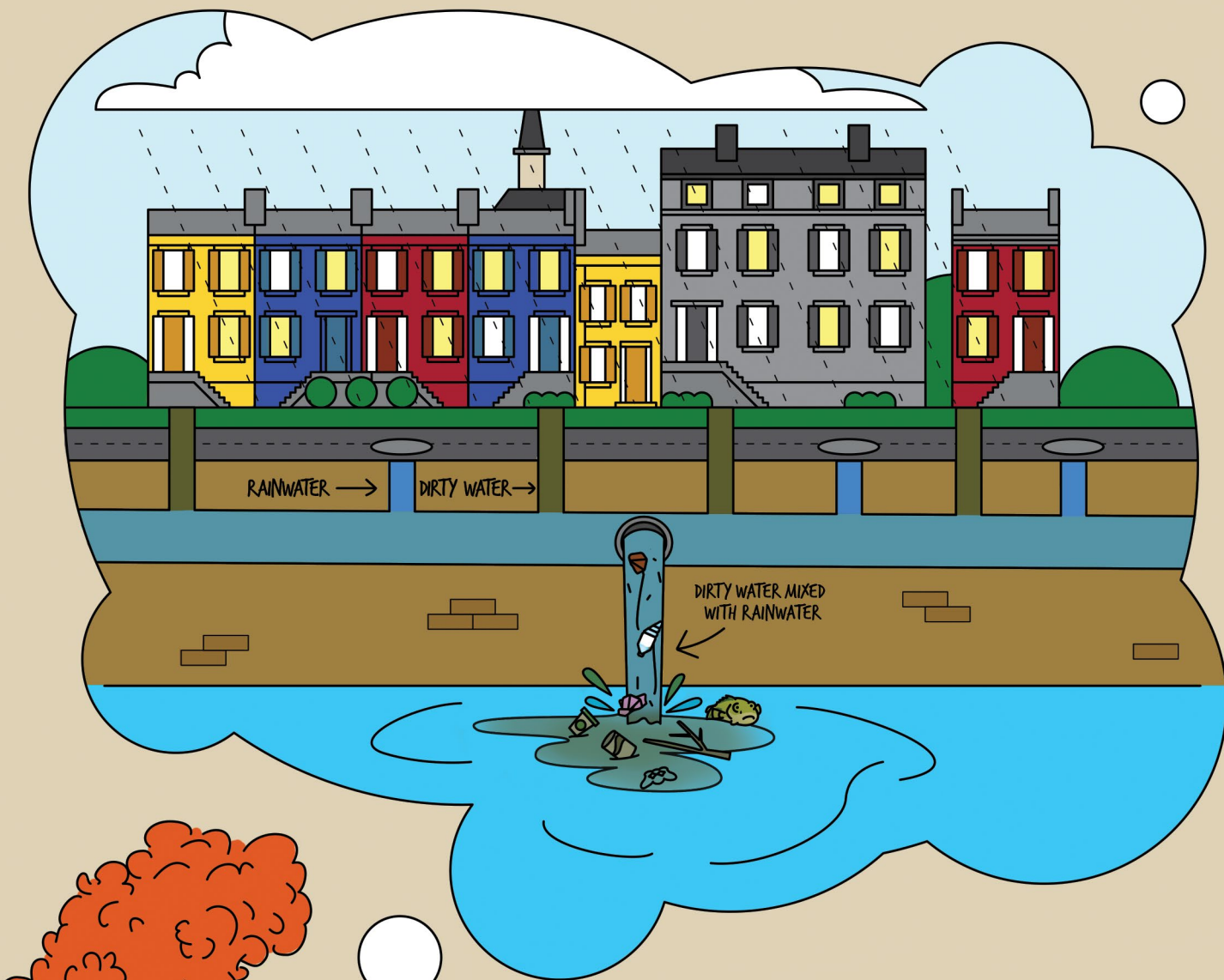


"Class, it is my job to make dirty water clean. But there is a problem with my cleaning machine."



"I bring in dirty water used all over the city. And, with my special mixture, it turns clean and pretty!"



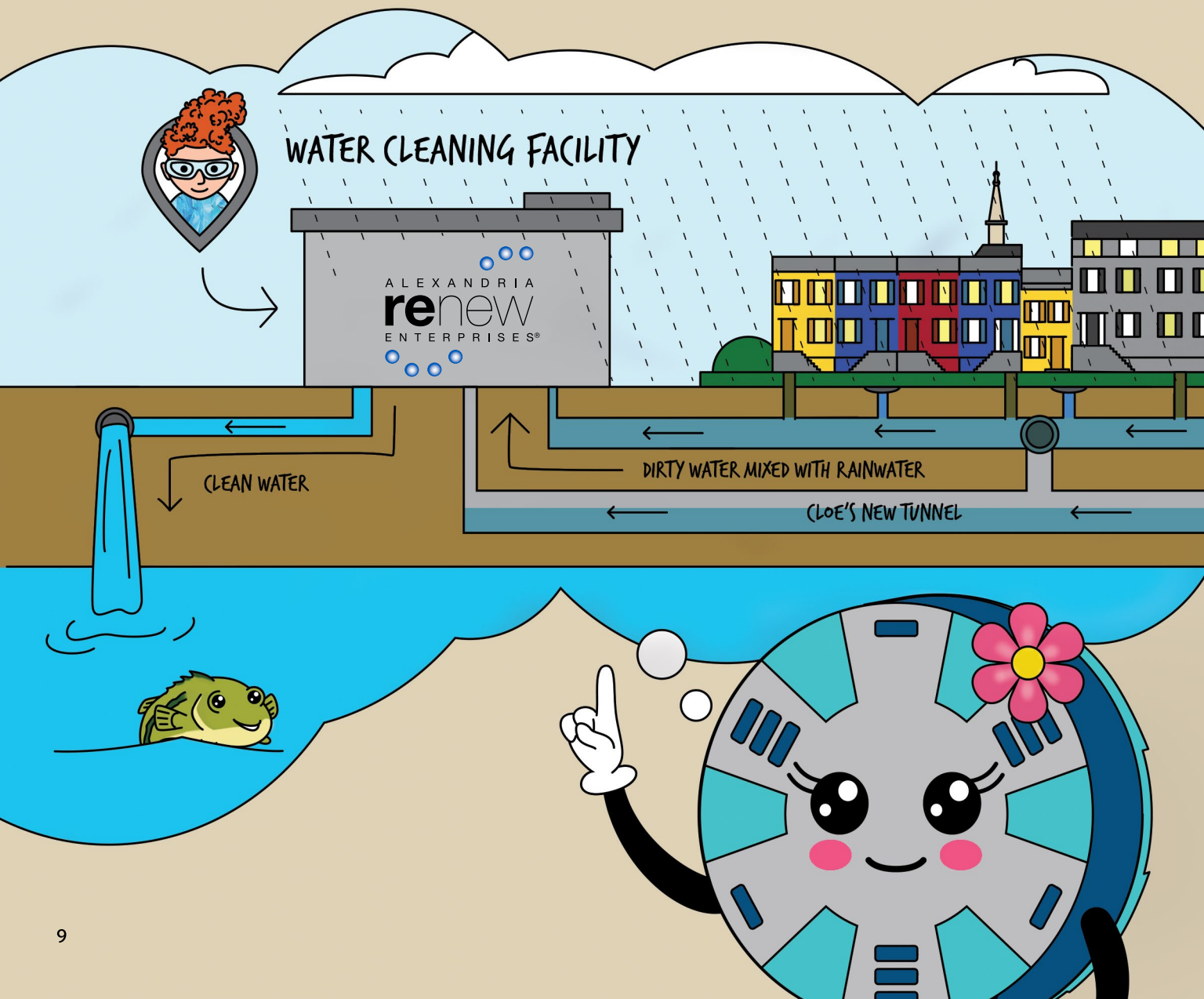


"But there's too much water when rain starts to fall, so some of it cannot get to me at all."

"It goes to our rivers and makes them dirty, too.
Class, we need to fix this! What can we do?"



"Well," Cloe said, from the back of the room,
"could we build a big tunnel to get it to you?"

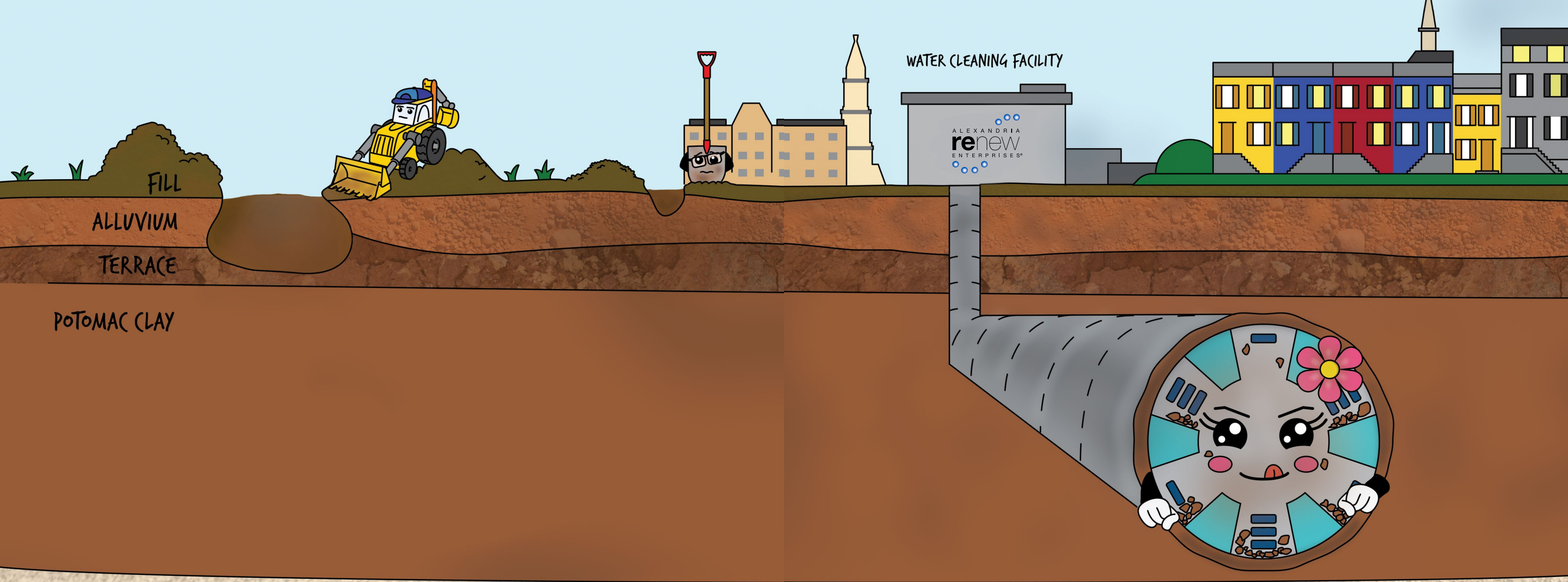


"That's a great idea," said the Backhoe Brothers.
"We'll scoop out a tunnel before all the others."

But, try as they might, the brothers could not.
They dug down a bit before their claws got caught.



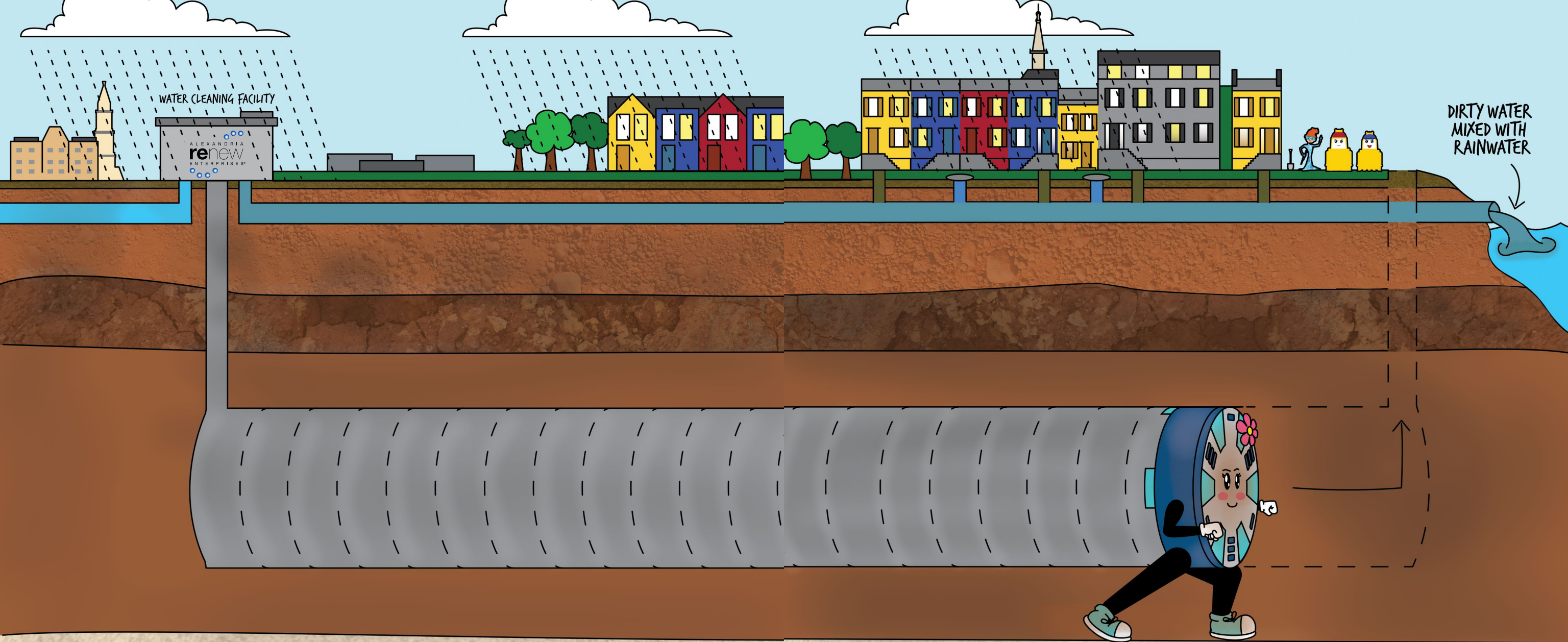
"I know I can do it!" yelled the shovel named Stu.
But it took far too long for his blade to get through.



POTOMAC SANDS

Even if the students dug deep really well,
the dirt around them always toppled and fell.

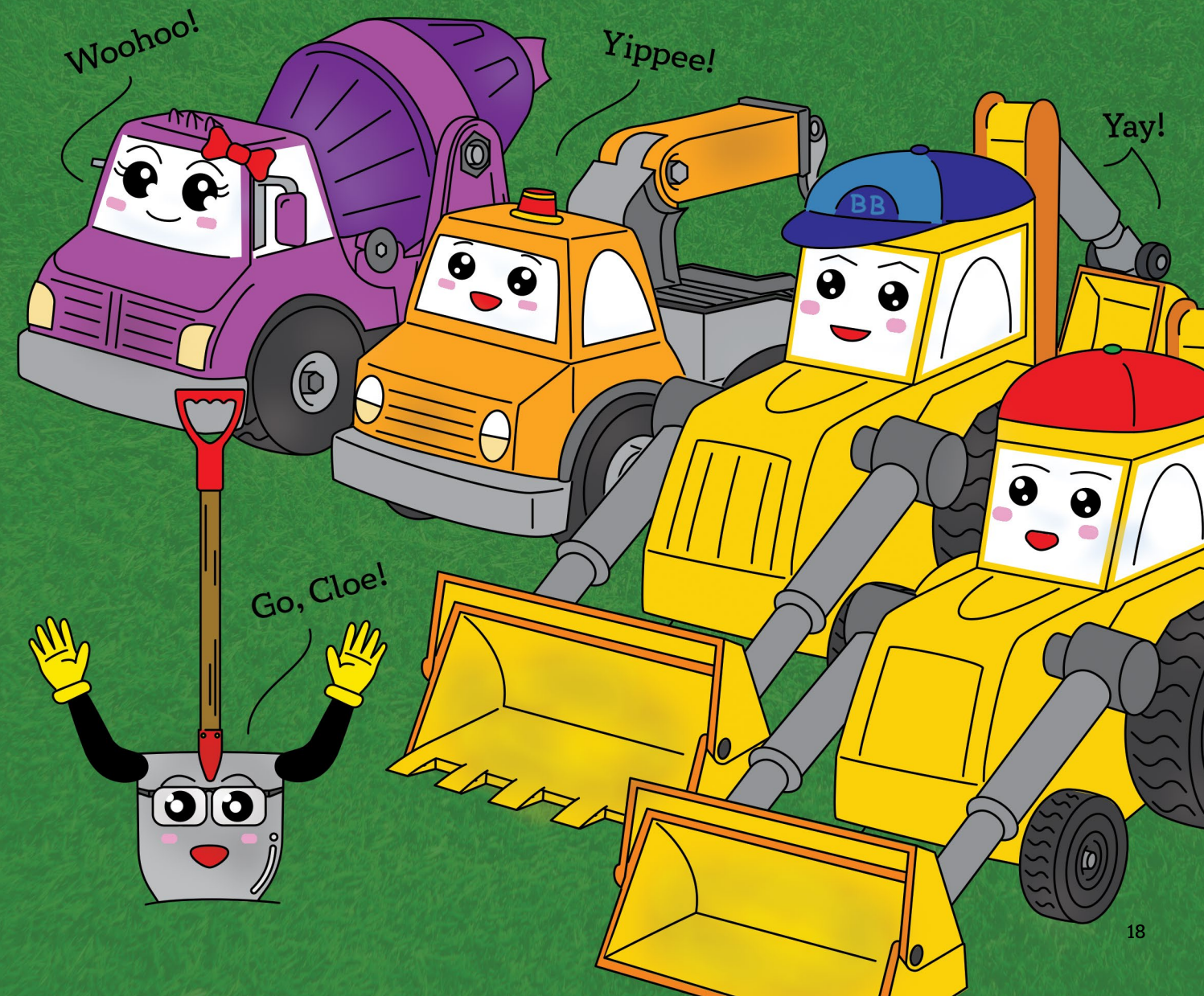
But look! While the others got tired and sad,
Cloe was digging like no one else had.



“My tunnel is strong,” Cloe said, feeling proud.
“I know how to make them because I live underground.”

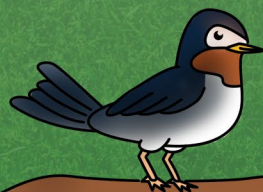
“I’m sturdy and tough. And, see? No dirt fell!
I may be quite slow, but I’m careful, as well.”

Miss Moxie was happy. She cried out with glee:
“Thank you, Cloe, for helping
my cleaning machine!”



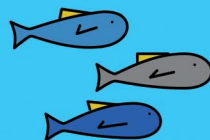
Pendleton Street →

← N Union Street

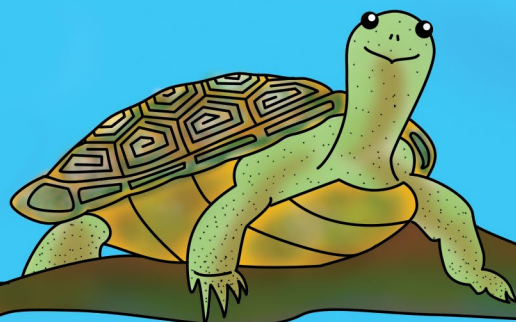


BARN
SWALLOW

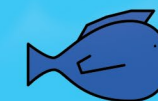
And the fish could swim happily wherever they roamed.
Cloe took dirty water away from their home!



DIAMONDBACK
TERRAPIN



LARGEMOUTH
BASS



Moxie's Reading Recap

Words to Know

- **Clean Water:** Water that has been cleaned at AlexRenew's Water Cleaning Facility to be returned to the Potomac River
- **Dirty Water:** The Water that you (and everyone in Alexandria) flushes down the toilet, drips down the shower, or swirls down the sink
- **Rainwater:** The Water that falls from the sky during a rain, hail, or snow storm
- **TBM:** Short for "Tunnel Boring Machine," a big piece of equipment used to dig tunnels underground
- **Water Cleaning Facility:** AlexRenew's wastewater treatment plant, which uses processes, equipment, and people to clean dirty water every day from all over the city

Wildlife Common to Our Watershed

- **Barn Swallow:** A small species of bird that nests and feeds near water bodies like the Potomac River
- **Diamondback Terrapin:** A species of turtle that lives in rivers and streams on the East Coast, like the Potomac River and Hunting Creek
- **Largemouth Bass:** A species of fish that lives in the Potomac River and other waterways across Virginia

What's Under Your Feet in Alexandria?

Fill: The top layer of soil, like what you see when you dig in a garden

Alluvium: A loosely packed layer left behind by flowing water

Terrace: The third layer of soil, filled with big boulders

Potomac Clay: A TBM's favorite layer of soil, stiff and holds its shape

Potomac Sands: A deep soil layer full of dense, crumbly sand



How the Tunnel Helps Alexandria's Waterways

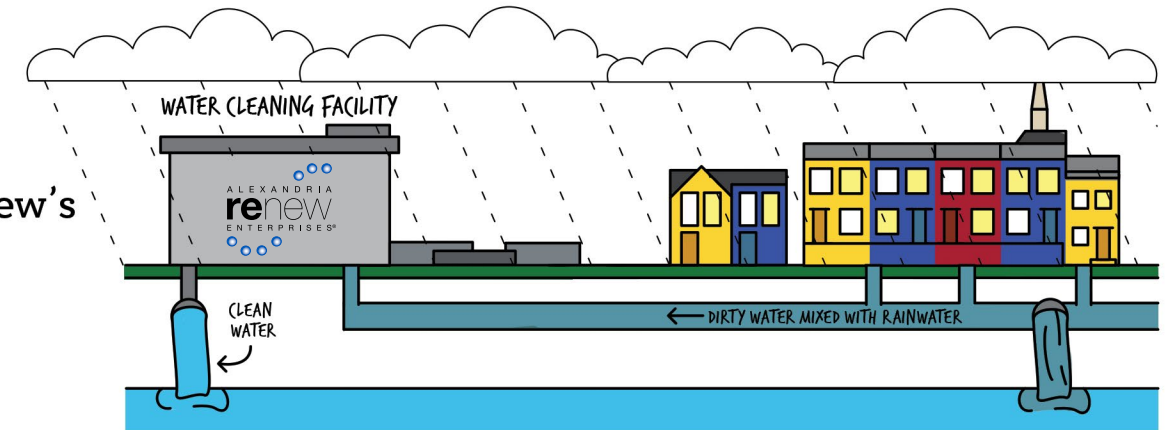
When it rains in Old Town Alexandria, the **rainwater** flows down storm drains and into underground pipes like the ones you saw on Moxie's whiteboard.

Those pipes also carry **dirty water** that leaves homes and businesses in the neighborhood. When all this water mixes together, it becomes too much for the pipes to handle. When the pipes are full, not all of the **dirty water** mixed with **rainwater** can get to AlexRenew for cleaning. Instead, it overflows into Alexandria's rivers and streams through four outfalls in the Old Town area of the city.

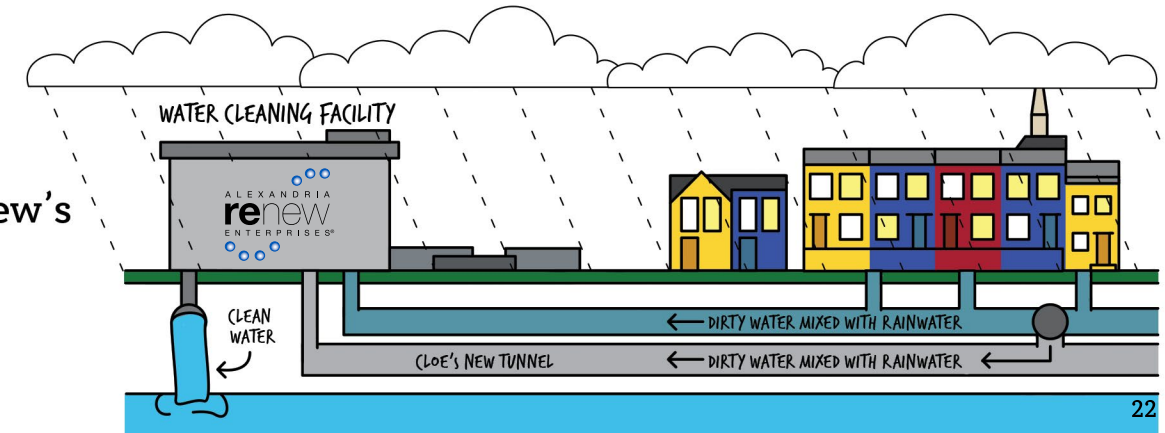
To help fix this problem, AlexRenew is building the RiverRenew tunnel and other infrastructure, the biggest project of its kind in Alexandria's history. When RiverRenew is complete, Cloe's tunnel will bring more **dirty water** mixed with **rainwater** to AlexRenew for cleaning than ever before!

This will make Alexandria's rivers and streams cleaner and healthier so the animals, plants, and people who live here can be happier and healthier, too.

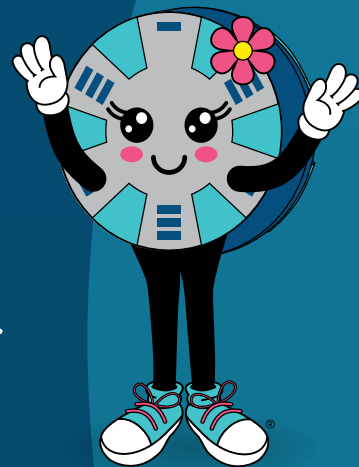
Before RiverRenew's Tunnel



After RiverRenew's Tunnel



Join Gloe the Tunnel Boring Machine on her journey to protect the waterways she loves. Along the way, you'll meet new friends, learn how a tunnel is built, and discover how RiverRenew will improve the health of the rivers and streams that connect our community.



Learn and play with Gloe and her crew at
RiverRenew.com/Community/Cloes-Corner

ISBN: 978-1-7355702-3-5

