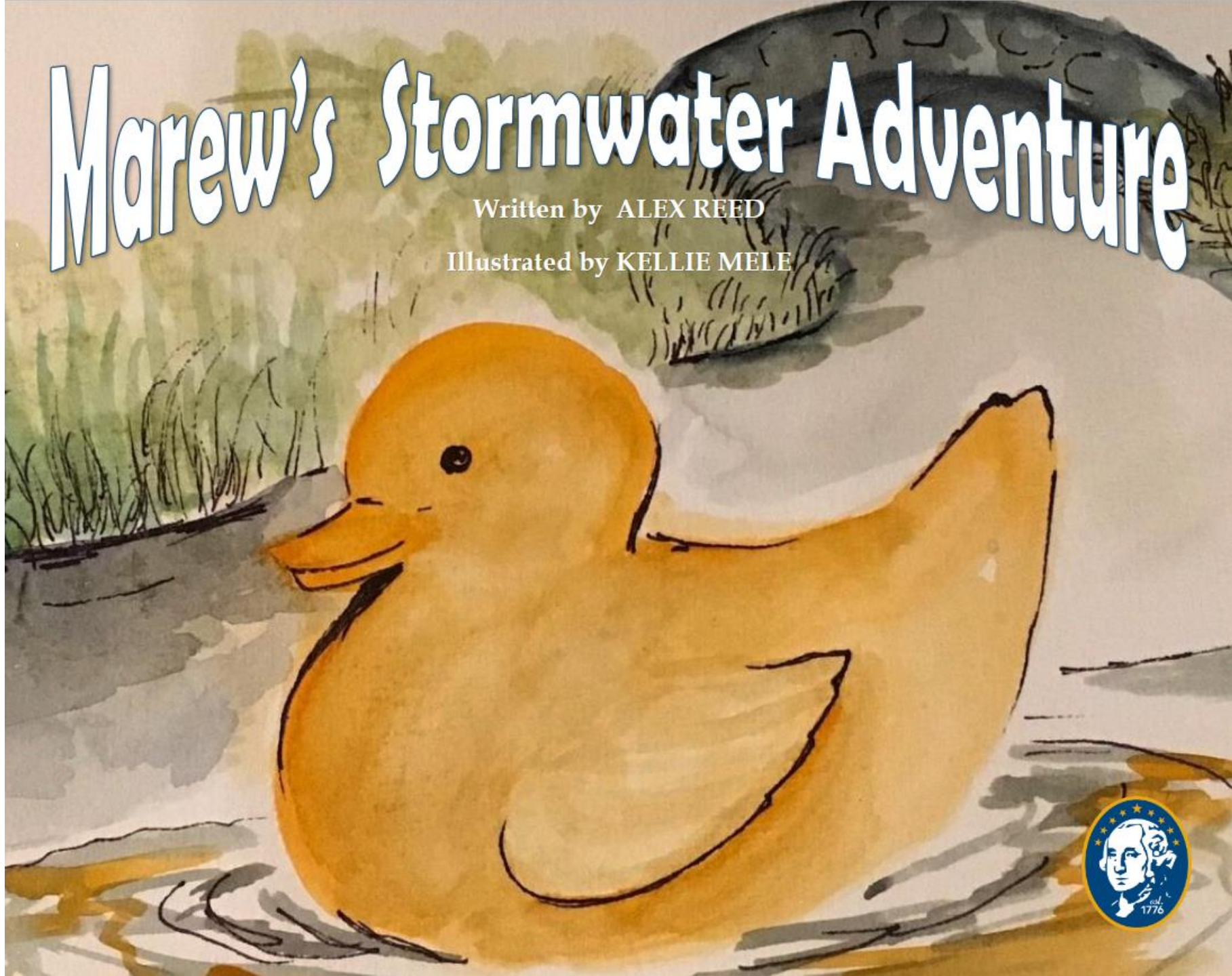


Marew's Stormwater Adventure

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Illustrated by KELLIE MELE





Washington County, MD has built a robust education & outreach program that has led to increased community engagement on issues related to local water quality. Through experience gained from working within our schools and local outreach events, a knowledge gap was discovered in the understanding of children and their community's stormwater drainage network. The "out of sight, out of mind" nature of underground drainage systems within an urbanized community has led to a disconnect between citizens knowledge of how runoff makes its way through an urban area to our local streams. The story of "MAREW'S STORMWATER ADVENTURE" was developed to teach children about the fundamental elements of stormwater drainage systems in a local hydrologic context and location.

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For more information on this book or to learn more about what Washington County is doing to improve our local water quality and environment contact us by email at cleancounty@washco-md.net or by phone at (240) 313-2600.





Once upon a time in the town of Boonsboro there lived a little rubber ducky named Marew. Marew was the favorite toy of a nice little girl who loved taking him everywhere.

Marew and the little girl played inside and outside, giving Marew the opportunity to explore the town. Marew liked the buildings downtown when they were decorated for the holidays and the way the trees and flowers in Shafer Park looked in the spring time.



When it was warm outside, the little girl would play with Marew in the sprinkler and they would both have so much fun that they wouldn't care how muddy they got! When it rained, Marew loved to float on the little muddy ponds and puddles that formed in the holes that the little girl would dig in the yard.



Item 1:

What happens if the small ponds that the little girl builds cannot hold all of the rainwater?





At night the little girl would take Marew into the bath to play and get clean. Marew loved playing in the baths because he liked to use his imagination and pretend he was sailing around the Antietam Creek or the Chesapeake Bay!



Item 2:

What is the difference
between a creek and a
watershed?

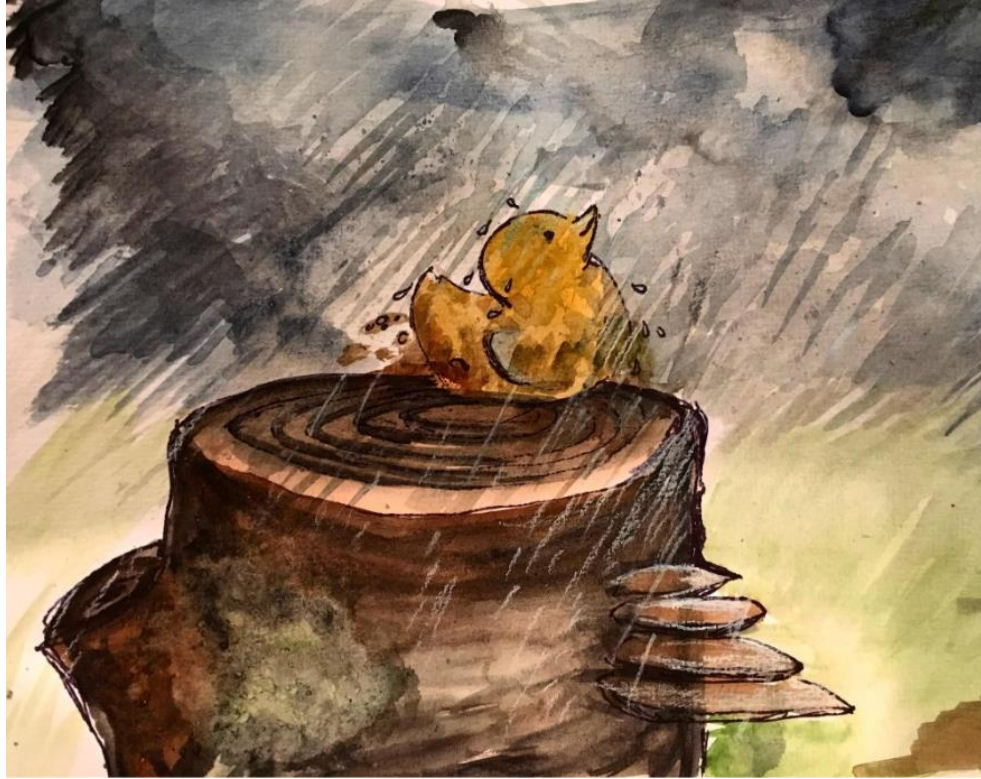




Item 3:

Antietam Creek is a _____ of
the Chesapeake Bay.





Marew was excited when it started to rain. The warm rain felt good and it washed the mud off him, making him look yellow once again. As the rain continued, puddles formed fast and at first, Marew was having a lot of fun riding the water into the puddles.

As the rain fell harder, puddles began to overflow and Marew could see that the water he was floating on was beginning to flow over the front yard toward the road. Marew wasn't afraid as he began floating across the yard in the runoff like a boat on the Antietam Creek.



Item 4:

If the water was carrying
Marew into Antietam Creek,
the land in the area would be
part of the Antietam
Creek _____.





Suddenly, Marew saw a group of other rubber duckies floating down the street, just like him. They had all been washed away by the rain and were now floating toward a storm drain.

“I didn’t know that rain water could be this dirty!” said one of the rubber duckies.

The other duckies agreed, one saying she would rather float in dirty bath water. Another ducky said that they had heard about water pollution, which is when water is too dirty. That made Marew wonder if real ducks and fish didn’t like pollution as much as the rubber duckies did.



Item 5:

What is a term that describes harmful matter in stormwater?





Item 6:

What kinds of pollutants
would be harmful to ducks
and fish?



Item 7:



Think about the size of the rubber ducks. What objects of similar size have you seen in yards and streets that could be carried by runoff?





Right before Marew reached the storm drain, all of the things like leaves and candy wrappers in the water began to clog the drain and the water began to make a big, deep puddle right there in the road.

All of a sudden, the drain opened with a *SWOOSH* and all of the dirty water, trash, and rubber duckies started to circle the drain. Marew had felt this spinning before when the little girl would drain their bath water, but this time there was no little girl to pick him out of the water and save him from the drain! One by one the duckies got sucked down the drain into the big pipes that went beneath the streets.



The rubber duckies rode through the underground pipes like a waterslide at a waterpark. Even though this was fun for the duckies, there was still a lot of dirt and trash floating with them, some of which got stuck to the duckies.

As the rain slowed, so did the water coming through the street drains. Marew and the rubber duckies floated through the pipes, unsure of where they were when suddenly there was a bright light. The light got bigger as they floated closer to it and Marew realized that they were going to come out of a big pipe at Shafer Park. He told the duckies that he knew where they were, and they were all very happy.



Item 8:

What is stormwater?





Item 9:

What caused the water coming through the street drains to slow?

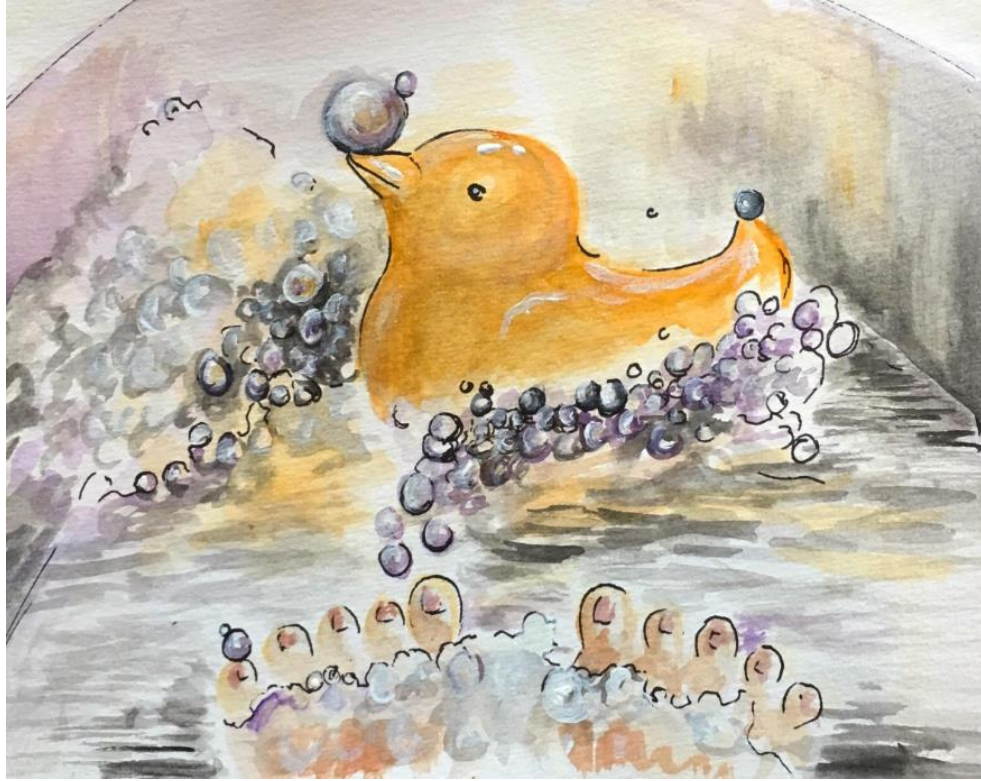




As the duckies left the pipe, they saw their families waiting along the stream to pick them out of the water. As the duckies got closer, the crowd cheered in happiness!

The little girl was so happy to have her favorite toy back, and when she picked Marew out of the water, she held him up to look at the dirt that covered him.

“I didn’t know rain water could get so dirty!” the little girl exclaimed. She had never seen her ducky this dirty.



By the time the little girl took Marew home it was time for a bath. The little girl took her favorite toy in the bath with her and cleaned him off. Marew had never liked a bath so much. The clean, soapy water was so much better than the dirty stormwater. The girl had never been happier to have her toy back, but she wondered how he got so dirty and why there was so much trash and dirt in the water.



That night before bed, the little girl thought about how dirty Marew and the water had been and wanted to learn how it got that way. She read out loud to Marew about what pollution was and how it got into the water. Pollution is anything that gets into the water and makes the water yucky.

Pollution can be mud, trash, chemicals, or anything else that is lying on the ground. Most pollution gets into our water the same way that Marew did – by being washed away into the drain by rain. That gave the little girl an idea, and she made a plan for the next day.



Item 10:

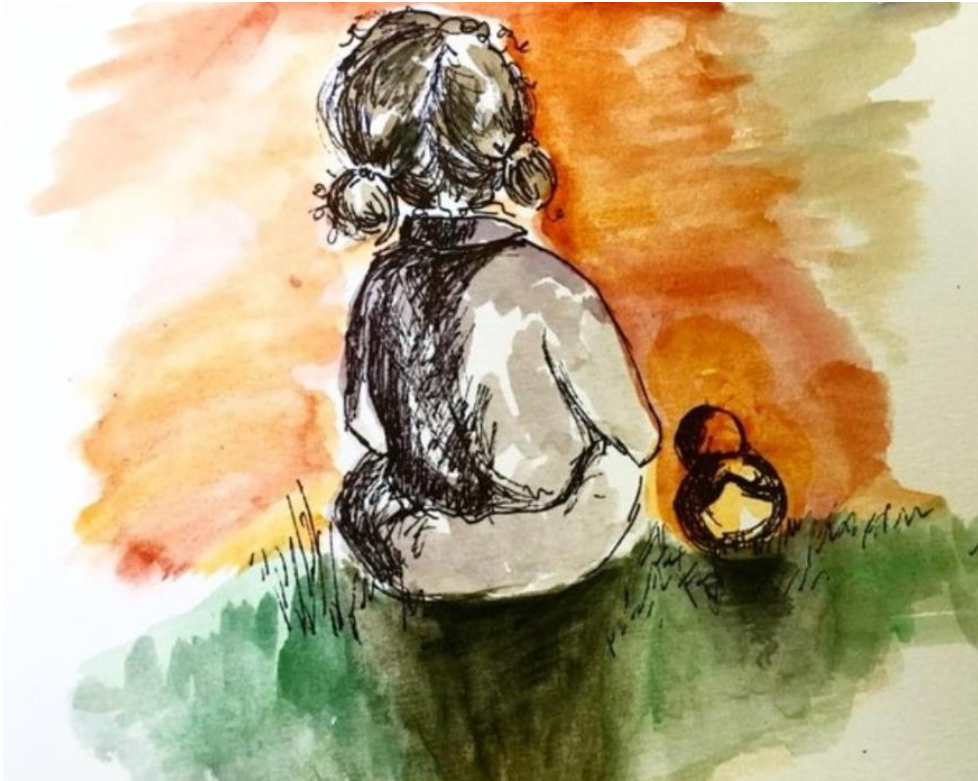
What are some things people can do to minimize pollution in stormwater?





With the yard cleaned up and no muddy puddles in the front yard to worry about, the little girl and Marew couldn't wait for the next rain storm to play in and would always remember the time that Marew got to learn about water pollution the dirty way!

The end.



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