

WATER QUALITY STEWARD
RIVER TOWN STORY & COLORING BOOK
Directions for Book Assembly

This is a book that has been designed for students to color, assemble, and read as an activity. The teacher may also assemble it as a book for reading circle.

- 1) This file has been formatted to print two sided pages. If you do not have a two sided option, follow these directions to assemble the book in the correct order. Print the following pages on 8"x11" paper first on side 1 then flip the same page over to print the assigned pages to side 2. This will allow you to have pages that will read like a book from page 1-26 when stacked one on top of the other and stapled. Please see the chart below to see which pages to print on sides 1 and 2 for each page of the book. Make a test print first to know which way to insert your pages into your printer to make sure you are printing your pages in the right direction (all page numbers at the bottom.)

Print: Side 1: The Water Quality Steward River Town Storybook &
Coloring Book (Cover)

Side 2: Pages 1 & 26

Print: Side 1: Pages 2-25

Side 2: Pages 3-24

Print: Side 1: Pages 4-23

Side 2: Pages 5-22

Print: Side 1: Pages 6-21

Side 2: Pages 7-20

Print: Side 1: Pages 8-19

Side 2: Pages 9-18

Print: Side 1 :Pages 10-17

Print: Side 2: Pages 11-16

Print: Side 1: Pages 12-15

Print: Side 2: Pages 13-14

- 2) Once the pages have all been printed, begin stacking them on top of each other in this order face down:
Cover page, Pages 2&25, Pages 4&23, Pages 6&21, Pages 8&19, Pages 10&17, Pages 12&15.
- 3) With a long stapler, staple at least two staples down the center of the book vertically to hold the pages together in book form.
- 4) Fold the pages in half to make a 4 1/4" x 5 1/2" book.

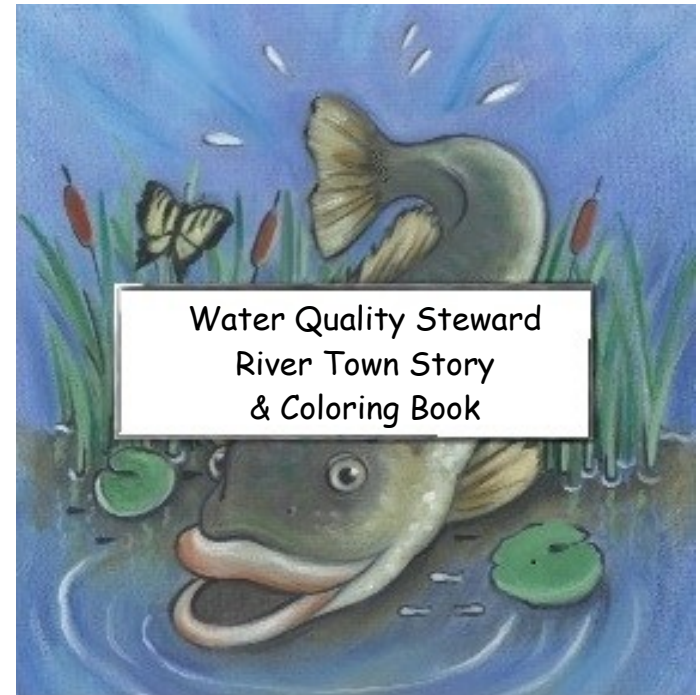


The Mississippi Department of
Environmental Quality



The United States
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Water Quality Steward
River Town Story
& Coloring Book

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This book is companion to
**The Environmental Education and Outreach
Mobile Classroom**
and
The Water Quality Steward Study Guide



The Mississippi Department of
Environmental Quality

RIVER TOWN STORY

(Definitions for words highlighted in bold italics may be found in the glossary in the back of this book.)

Well, hello there! I'm so glad you came to visit here on the Clear Bottom River. My name is Nancy, and I'm a member of River Town's Water Quality Steward Patrol. A ***Water Quality Steward*** is a volunteer citizen who helps their community to keep the water clean and healthy. It's my job to patrol the Clear Bottom River, because clean water is important to every living thing.

Even Bobby Bass is happy about the river these days, but it wasn't always that way. You see, from its beginnings, River Town was a small town until the day a manufacturing company began building a plant here. It made better paying jobs available. Yes, as more people moved into town and more buildings were constructed, well...I don't think anyone considered how it would affect Bobby's river home. Some of us just didn't realize that whatever we dumped onto the land or into the water affected the ***water quality*** for everyone, even Bobby!

BAARRROOOM! Oh my! It sounds like it's going to rain! Come to think of it, it was another thunderstorm just like this that brought our attention to the problems down here on the river. You see, right in the middle of all that construction, a mighty storm came up one summer afternoon. BOOM! BAARRROOOM! You know, I think I'd better take cover while I finish telling this story.

WATER WISE WORDS

(Words that appear throughout the text in bold print are words that are listed in the Water-Wise Word list.)

Bamboozled	Mess up, confused
Best Management Practices (BMPs)	Practical solutions that keep pollutants from entering water bodies such as silt fences, grass and trees, catch ponds, and litter clean up
Blue Gill	A type of sun fish
Buffer Zone	A strip of trees and bushes planted along stream banks to prevent erosion
Catch-Water Basin	A pond that catches and filters polluted runoff through grass and trees
Environment	Surroundings including air, land, forests, and water
Filter	To purify water
Impact	To have an effect on something
Mulch	Organic matter loosely laid over soil to hold soil and keep plants moist
Murky	Cloudy
Natural Resources	Natural substances we use such as plants, air, water, oil, and gas
Pollutants	Chemicals or organic wastes that contaminate air, soil, or water
Polluted	Contaminated by chemical or organic waste
Polluted Runoff	Storm water pushing and pulling pollutants along with it
Pollution	Chemicals or organic waste on the land or in the water
Regulations	Rules, laws
River Pool	Deep, slow-moving water at the edges of a river
Watershed	An area of land that drains into a particular water body
Water Quality	The condition or state of water
Water Quality Steward	A person who helps to clean and protect a water body

BEST MANAGEMENT PRACTICES (BMPs) For Water Quality Stewards

Best Management Practices, or BMPs, are practical solutions that help keep pollutants from entering streams, rivers, and other water bodies.

Some of these practices include:

- * Let trees and shrubs grow along river banks
- * Plant grass, or *mulch* bare, loose soil
- * Fence cows away from the rivers and streams
- * Build a catch-pond, or catch-water basin
- * Install a silt fence to capture loose soil
- * Fence around trees during construction
- * Seal water wells to protect drinking water
- * Repair broken septic systems
- * Plant crops in contour rows (around the hill)
- * Recycle motor oil, paper, plastics, cans, etc.
- * Dispose of household chemicals at a collection center
- * Tell others what they can do to lessen polluted runoff





Now, let's back up a bit and begin at the beginning. During the winter that the manufacturing plant was constructed, Mayor Goodfellow and the citizens of River Town started making plans for new businesses and better public facilities. Mrs. Hope, an elementary school teacher, organized a committee to design plans for a new elementary school.

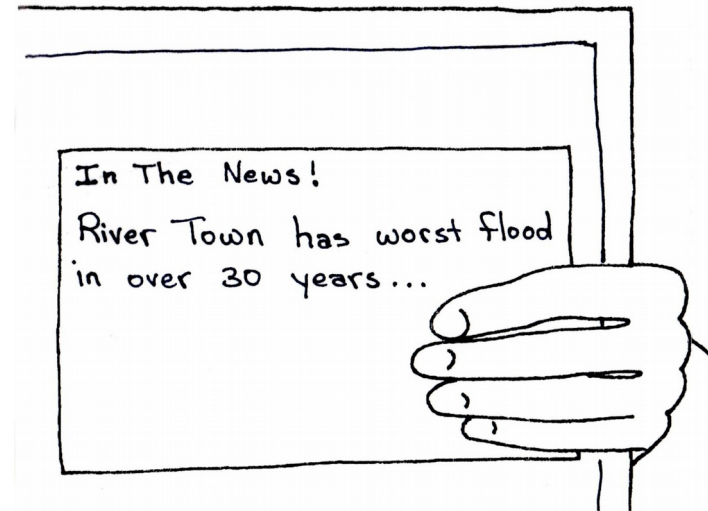
Then, when Mr. Daniels, the land developer, heard about the new workers moving to town, he bought all the timberland and farmland along the river that he could buy. He planned to build a brand new subdivision with rows of houses and paved roads. Acres of trees were pushed into piles and burned in a hurry for the houses to be built in time for the new buyers.



Well, it all comes back to the river, doesn't it? I'm surely glad to see the bottom of the river again and see that Bobby and his friends are happy. This happened because of the special effort we concerned citizens made by informing the residents of River Town about the new regulations. We made special effort to ensure that the water would stay clean and healthy. Why, we even gave ourselves a name: "The Water Quality Steward Patrol".

That stormy day taught us that it's everyone's responsibility to keep the water healthy. That's why I want to invite you to become a Water Quality Steward in your community. Remember that you are a very important person in your community, for when one person makes a positive change, it affects everyone and everything around them for the better. It is also important to remember that whoever lives upstream affects the water quality for those who live downstream.

If we all work together, we can have a clean, healthy, and beautiful watershed for every living thing!



Spring passed. As summer approached, River Town was really looking like a new place. However... have you ever had a time when you were so excited about having a new friend that you almost forgot about an old one? Well, everyone was so excited about the new growth and development of River Town that they had forgotten about a very important old friend, the RIVER! You see, right in the middle of all that cutting down and building up, "IT" happened - the worst storm to hit in over 30 years!

The rain water became a powerful force as it moved across the land and down the hills. The water pulled soil, chemicals, and litter as it flowed down to the river. When you think of all that "stuff" pouring down from the town, it's not hard to imagine how that **pollution** affected Bobby's home on the river.



"My gills! My gills! I've got mud in my gills!" cried Bobby Bass as he bobbed up and down in his *river pool*. "What has happened to my pool? You know, it's been looking pretty *murky* here lately, but THIS is RIDICULOUS!" Bobby gasped as pieces of *litter* bobbed up and down alongside him.

"Maybe your gills are getting too old!" called Molly Mockingbird from the magnolia tree. "You've been swimming around this pool a long time, Bobby, a long time!"



Well, it's an amazing thing to see what people can do when they work together. Very soon after the emergency meeting, the concerned citizens helped to make new *regulations* and establish *BMPs*. It became the concerned citizens' job to assist the mayor in finding the problem areas and apply the *Best Management Practices*.

Mayor Goodfellow had a *catch-water basin* constructed next to the new shopping center parking lot to catch and *filter* the runoff through the roots of plants and trees during a storm. At the construction site, Mr. Daniels quickly put up *silt fences* to prevent the loose soil from washing away. He also planted trees and bushes along the riverbank to create a *buffer zone* that would hold the soil in place and filter polluted runoff.

At the same time, Mrs. Hope helped to organize a cleanup at the river pool. This made Bobby and his friend happy, because all of these efforts helped the Clear Bottom River to regain its health. Over many months, Bobby's river friends began to return to the healthy river. Eventually, the river was reopened for fishing and swimming.



"Oh, that's wonderful!" Mrs. Hope exclaimed. "I'll let the concerned citizens know right away. See you there!" Mrs. Hope gave a wave of her hand and turned toward the path.

"So long!" the mayor called back. From only a few feet away, two observers had overheard the meeting - one from the pool and the other from the magnolia tree. They watched the mayor take a long look around Bobby's pool and sigh a long sigh. Then turning himself, he also began up the path toward town.

"Yep!" Bobby said. "It's up to the people now, Molly."
"Looks hopeful! Looks hopeful!" Molly called back.



"No, Molly! It's not my gills, it's my POOL! Look at the water in my pool - it's murky; it's full of mud! Why, I can't even see down to my fins! And what's all this other...stuff?" Bobby grumbled as he flipped a plastic cup with his tail.

"Litter! Litter! The humans use that stuff in the town...in the town!" cried Molly.

"Look, Molly, it's everywhere!" Bobby looked around his river pool and began to sing a sad song as he swam between the bits of litter and oily patches.

"Yes, Molly, turtles moving on, frogs...it makes a bass kind of lonesome. Why, even old Farmer Jones doesn't come around here anymore! Remember, Molly, how old Jonesy used to sneak up on my pool with his fancy man tricks? Ha! Ha! I remember one time I gave him a good jerk on his fishing line and pulled him slap into the river. Hee! Hee! He was sputtering and hollering so...had me laughing so hard I thought I was gonna bust a gill! But even Jonesy doesn't come around here anymore. Hmm..."

"Bobby, thought you knew, thought you knew! Old Jonesy moved away. Forest's gone! Farm's gone! Dust everywhere! Not much for a mockingbird's breakfast, that's for sure."



It wasn't long before news spread about the river. Citizens became upset to realize that their beautiful Clear Bottom River was polluted and would be closed to swimming and fishing for a while. Mrs. Hope helped organize some of the concerned citizens to make an inspection of the town to identify the problems that were contributing to the polluted runoff. At the river pool, she reported the findings to Mayor Goodfellow.

"You know, Mrs. Hope, I'm coming to realize that progress is not what we originally thought it to be. Progress doesn't always mean MORE and BIGGER; real progress is making a healthier and more productive community for everyone and everything."

"Yes, Mayor, you're right! We should have planned ahead for potential problems and thought about how our new growth would *impact* our *environment*."

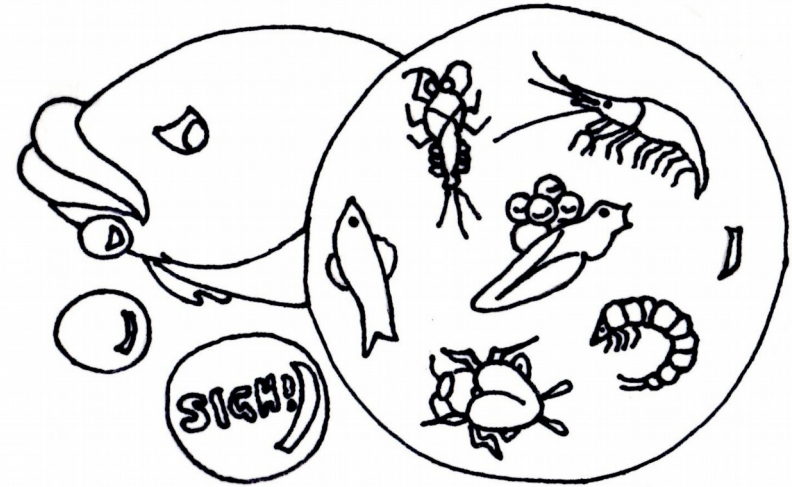
"Better planning sure would have made our NEW growth SMART growth," he said. "We need to learn how to make the best use of our *natural resources* such as soil and water. In fact my new friends at the Department of Environmental Quality have told me that we need to enforce some BMPs in River Town as well."

"Well, that sounds wonderful! But Mayor Goodfellow, what is a BMP?"

"Well, *Best Management Practices* (or BMPs), are practical solutions that help keep pollutants from entering streams, rivers and other water bodies."

"Oh! I see!" Mrs. Hope nodded.

"Tomorrow," the mayor continued, "we will hold an emergency meeting with our new friends from the DEQ and discuss an emergency plan for River Town."



BOBBY'S SONG

"What have they done to my river
when the rain came pouring down?
All this mud and this litter - the water is turning brown!
I miss the shrimp and the minnows and the gizzard shad,
the most delicious snacks that I've ever had.
What have they done to my river?
I'm the saddest bass in town!"

"Moved away? When did he do that?" Bobby asked with surprise.

"Don't know for sure. Just flew uphill for a stretch of the wings and they were gone!"

"Well, how do you like THAT?" Bobby exclaimed. "Even old Jonesy moved away!" Bobby waded thoughtfully. "Hey!" Bobby suddenly shouted, startling Molly. "Wait a minute, Molly. Did you say old Jonesy's farm was UPHILL from my pool?"

"Yes! Yes! Sure as the crow flies!" Molly called from the tree, eyeing the new subdivision.

"Well, then...THAT'S IT! Between the STUFF flowing down from the people in the town and the dust from Jonesy's farm, my poor river has been *bamboozled* right before my eyes. Well, that settles it, Molly. I gotta DO something!" Bobby smacked the river with his fin. "A bass can't just float around and watch his friends get sick. I gotta DO something to help my poor old river!"

"What'll you do? What'll you do?" Molly's head cocked giving him a questioning look.

"Don't know yet," Bobby said thoughtfully. "But when the moment's right, I'LL KNOW!" Bobby quietly swished his tail in the water. "Hey, Molly, will you help me keep watch and let me know if you see anything...ummm...UNUSUAL?"

"Will do! Will do! Toddleloo!" Molly called back over her wing. Bobby watched Molly quickly wing her way toward the town. He was thankful to have Molly as his river friend.



All the while, Mrs. Hope had been sitting near the water's edge and Hunter had been standing close enough to Bobby's log that Bobby knew his next move would be easily seen. He also knew that this was his opportunity to get their attention to help his river friends. Bobby mustered up all of his energy and began popping up and down on the surface of the water, opening and closing his mouth, looking very distressed.

Hunter, being nearest to him, heard all the splashing and called out to Mrs. Hope, "Mrs. Hope! Mrs. Hope! There's a noise coming from near this hollow log. Come see!"

Mrs. Hope cautioned Hunter to be careful as they all peered over the side of the log. There was Bobby, bouncing up and down with all his might, opening and closing his mouth on the surface.

"Oh my, children, look! That fish is gasping for air! The soil in the water has clogged his gills."

"Mrs. Hope, will he die?" Hunter asked with alarm.

"Hunter, I don't know, but I can see that he must be struggling to breathe in this polluted water."

"Mrs. Hope, can we help him? It makes me sad to see the river like this with the animals in trouble," Charity said sadly.

"Yes, Charity, that's a very good idea." Mrs. Hope closed her notepad, quickly picked up her pack, and gathered the children. "Let's go see the mayor right away. He needs to hear about what we've found here today and he may have some suggestions about how to help our river."

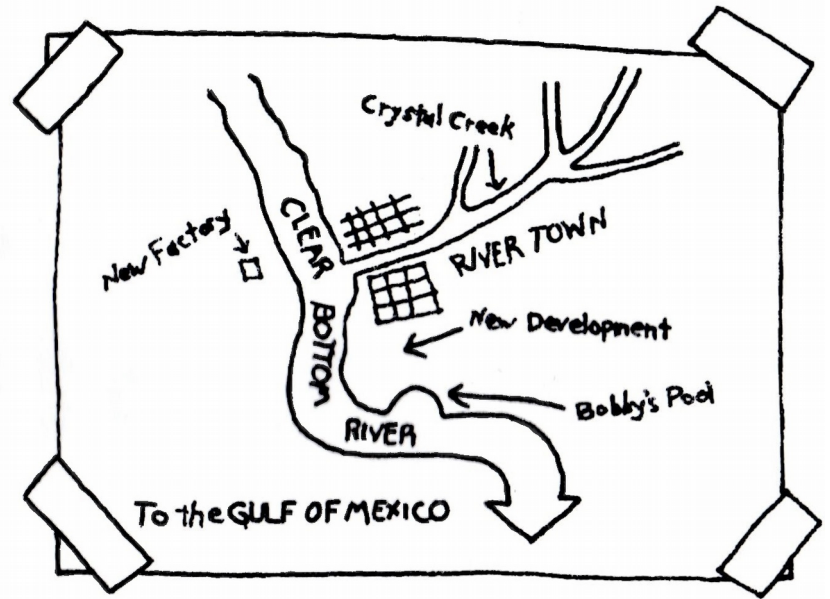
With that, Mrs. Hope and the children trotted back up the path.

Bobby bobbed breathlessly in the water. Together he and Molly watched Mrs. Hope and the students mount the hill back to town.

"Well," Bobby said, "It's up to them now."

"Sure enough! Sure enough!" Molly exclaimed.





Mrs. Hope looked up at the children thoughtfully. "Well, children, I've been concerned that our new growth in River Town might cause some problems. I'm afraid that what we're looking at is **polluted runoff**. That's when water moving over and through the ground carries natural and man-made **pollutants** into our waterways, such as our streams, rivers, and eventually, even into the Gulf of Mexico! You see children, everyone lives in a **watershed**."

"What's a watershed?" Hunter asked as he jumped off of the log.

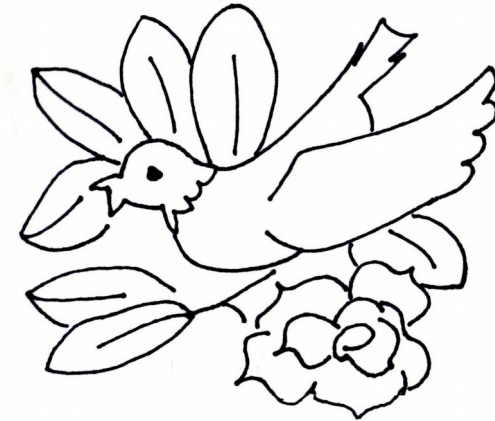
Mrs. Hope knew how important it was for the children to understand how River Town's watershed had carried the polluted runoff to the river pool. She drew the town's watershed on her notepad and explained how it flowed to the river.

Mrs. Hope's Song

Here's a good example of a watershed,
water flows from the town to this riverbed.
Rainwater drains from the ditches beside our school,
flowing down to the creek and joins with this pool.
You see from the high to the low, wherever you go,
a watershed drains when the rainwater flows.

Leaky cars on streets and broken septic pipes,
very loose soil at construction sites,
too much fertilizer on lawns and farms,
even soap from washing cars can all cause harm.

Never dump anything, for we should all know,
a watershed drains when the rainwater flows."



Later that afternoon, Bobby sadly floated near his hollow log. Two of his **blue gill** friends had just bid him farewell to find a better feeding spot, and Molly had not returned from town. He was concerned that the cloudy skies might be a sign of more trouble for his river.

"FIELD TRIP! FIELD TRIP!" Molly's cry suddenly pierced through the air.

"Hey, Molly! What's that?" Bobby called to her as she circled overhead.

"FIELD TRIP! To the river! TO THE RIVER!
Humans...children...teacher!"

"MY river?" Bobby asked.

"Yes! Yes!" Molly urgently cried.

"When?"

"On the way! ON THE WAY!" Molly swooped to her limb in the magnolia tree.

"Oh, thanks, Molly! I'd better hide! Oh...over here by the log. I'll hide by the log." Bobby dove and splashed.

"Thanks, Molly! You'd better hide too!"

"Will do! Will do!" Molly nestled breathlessly, cocking a keen eye toward the path.

"Look, children!" Mrs. Hope pointed to the edge of the river pool as she and her students, Hunter and Charity, walked to the end of the path. "This is the beautiful Clear Bottom River that flows right through River Town. It begins up above Highland Hill and winds down to here just below the new subdivision." The children's eye followed her arm as she gestured down the hill. "This is an historic site, here on the river. Many folks have traveled and fished it for generations."

"Mrs. Hope, why do they call it the Clear Bottom River?" Hunter asked.

"Well, Hunter, the river has very clean water and in some locations the river is so shallow that you can see clear to the bottom."

Curious, Charity walked closer to the edge and peered in to the water. "Mrs. Hope, I can't see the bottom. I kind of just see that cloudy-looking brown stuff."

Mrs. Hope joined Charity by the river pool and looking down, she gasped: "What has happened to the river?"

Why it DOES look cloudy, and look at this MESS!" She flung her arms wide to draw attention to all the *litter* scattered on the river bank. "Children, this is very serious, very serious indeed. I don't understand how it could have gotten this bad so quickly. This *polluted* water is very dangerous for the animals, the vegetation, and everyone in town. We must report this to Mayor Goodfellow right away!" Mrs. Hope sat beside the river pool, took a notepad out of her pack, and began to make notes.

"Mrs. Hope, how did all of this stuff get down here to the river anyway?" Hunter asked, standing on the hollow log to gain a better view.

