

# DISCOVER

## The Genesee River Watershed



To the people of the Haudenosaunee Confederacy, Genesee means “beautiful valley”. The Genesee River watershed spans this beautiful valley. If you live in Monroe County, you live in the Genesee River watershed or Lake Ontario watershed.

## Where is it?

Label these places of interest within the Genesee River Watershed on the map:



### 1. Lake Ontario:

One of the five Great Lakes



### 2. Lower Gorge:

A gorge in downtown Rochester with waterfalls, bridges, marshes and wetlands.



### 3. Hemlock and Canadice Lakes:

Two of the “Little Finger Lakes” within the Genesee River Watershed where many people receive their drinking water.



### 4. Mount Morris Dam:

The largest concrete gravity dam east of the Mississippi, it has helped to control flooding in Rochester and the surrounding areas.



### 5. Letchworth Gorge:

This gorge is called “The Grand Canyon of the East.”



To find your watershed address go here:

[www.h2ohero.org/watersheds](http://www.h2ohero.org/watersheds)



# Understanding the Genesee River Watershed

## What Does it Mean?

### **Rochester Embayment:**

The broad bay at the mouth of the Genesee River.

### **Watershed:**

The area of land that drains to a particular body of water, funneling water from a large area.

### **Tributary:**

Smaller rivers or streams that flow into the main river.

### **Gorge:**

A narrow valley between hills or mountains, usually with water running through it.

### **Wetland:**

An area with wet ground that is home to many different plants and animals. It acts as a big sponge that helps to clean and store water in the watershed.

### **Habitat:**

The natural environment for a plant or animal.

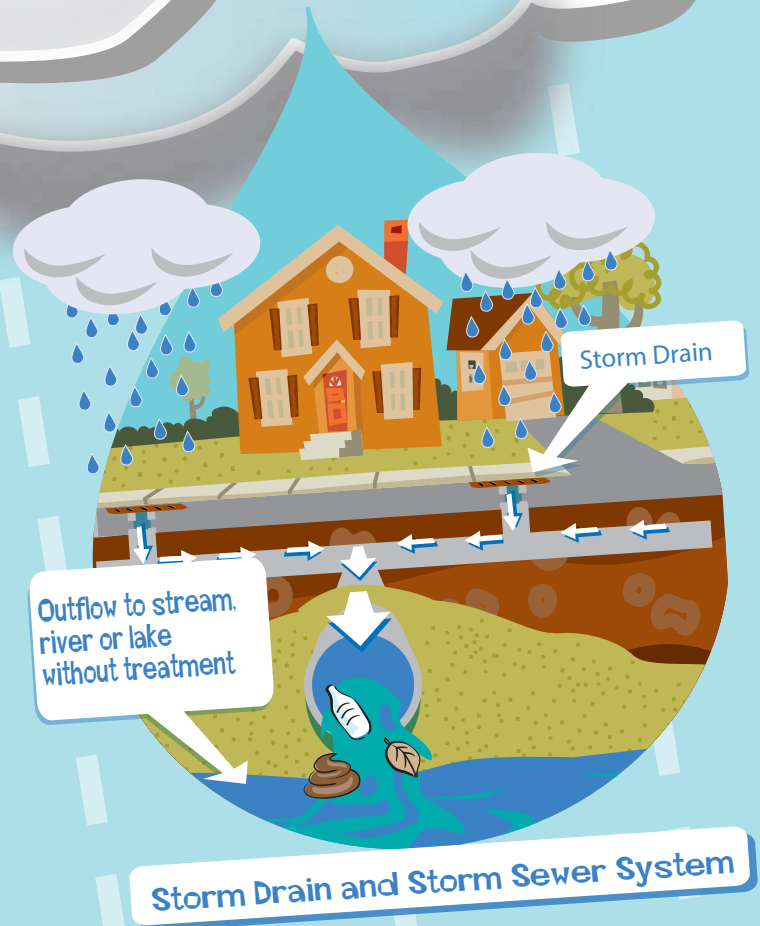
The Genesee River and its tributaries make up about 2,373 square miles of land within New York State. Our watershed includes many amazing features. Can you find some of them on the map? Right here in Rochester you can see the Lower Gorge of the Genesee River and waterfalls. You can also go for a walk, ride, or paddle along the Lake Ontario shoreline.

New York

Pennsylvania

# What is Stormwater?

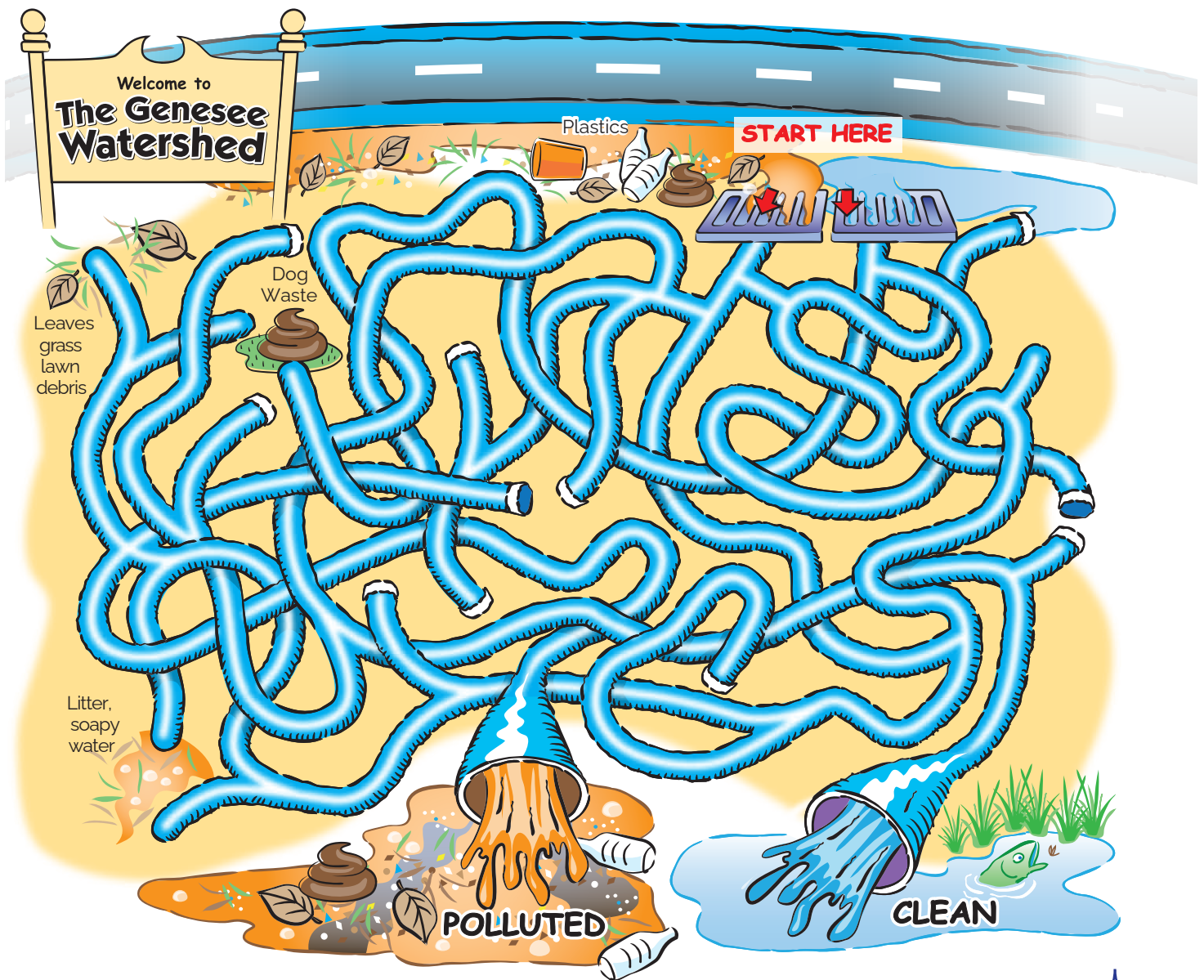
Stormwater is rainwater or melted snow that runs off streets, lawns, and other sites. It is important because it refills our lakes, streams, and wetlands and recharges the groundwater. But as the water flows over land, it picks up pollution (such as bits of plastic, pet waste, and chemicals from the landscape), and carries it to streams, rivers and lakes where it can cause water quality problems.



# Stormwater Maze

Find your way to the end of each maze and see how the water that enters our storm drains comes out into our rivers and streams.

(Answers on back page.)



# Learn About Your Water Quality!

You can learn about the water quality of a stream, lake or pond near you by looking for aquatic invertebrates - small animals that live in the water and do not have a backbone. These animals can be insects, mollusks, crustaceans or worms that are an important part of our ecosystem and serve as food for larger animals.



# Identify and Match

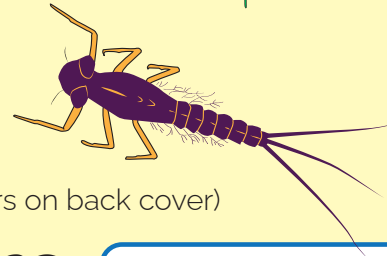
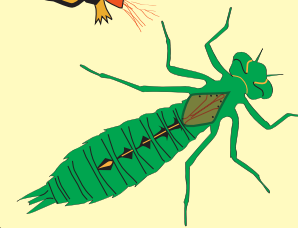
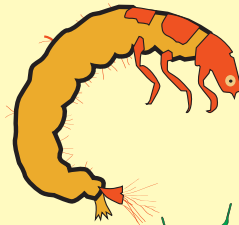
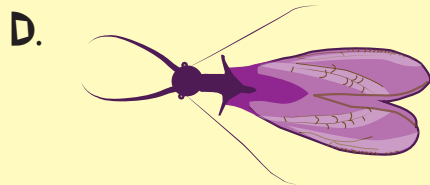
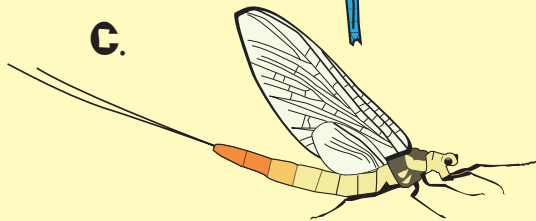
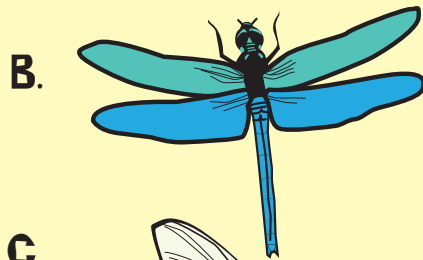
Match the **adult insect** to its **larvae** and identify the following:

## Adult Insect:

Dragonfly • Dobsonfly  
Mayfly • Caddisfly

## Larvae:

Dragonfly Larvae • Hellgrammite  
Mayfly Larvae • Caddisfly Larvae



(Answers on back cover)

## How to Use Macroinvertebrates as Indicators of Water Quality:

### What to do:

Hold a net flat on the stream bottom facing upstream to collect macroinvertebrates. You may also pick up rocks, hold them above the net opening and rub the rocks to detach any clinging macroinvertebrates. Transfer your macroinvertebrates into a pail with an inch of water in it to begin identifying what invertebrates you have found.

### What you will need:

- ✓ An adult
- ✓ A net
- ✓ Rain boots or water shoes
- ✓ Clothes you can get wet
- ✓ A bucket or container to hold water
- ✓ A magnifying glass
- ✓ Insect guidebook

### Excellent Water Quality:

- Mayfly
- Caddisfly
- Stonefly
- Fingernail Clam

### Good Water Quality:

- Water Penny
- Scud
- Dragonfly
- Aquatic
- Damselfly
- Sowbug
- Hellgrammite

### Poor Water Quality:

- Black Fly
- Flatworms
- Midge Fly
- Water Striders
- Crane fly
- Water Boatmen

# The New York River Otter Project



The river otter is a fun animal to look for in the Genesee River Watershed. River otters need water so they live in rivers, lakes, ponds, streams, marshes, and wetlands. River otters eat many different things, including fish, amphibians, crustaceans, and aquatic invertebrates. In the early 1900s, the river otter populations declined, because of hunting and water quality problems. In 1990, the New York River Otter Project helped river otters return to Western New York.

# The Return of the Lake Sturgeon



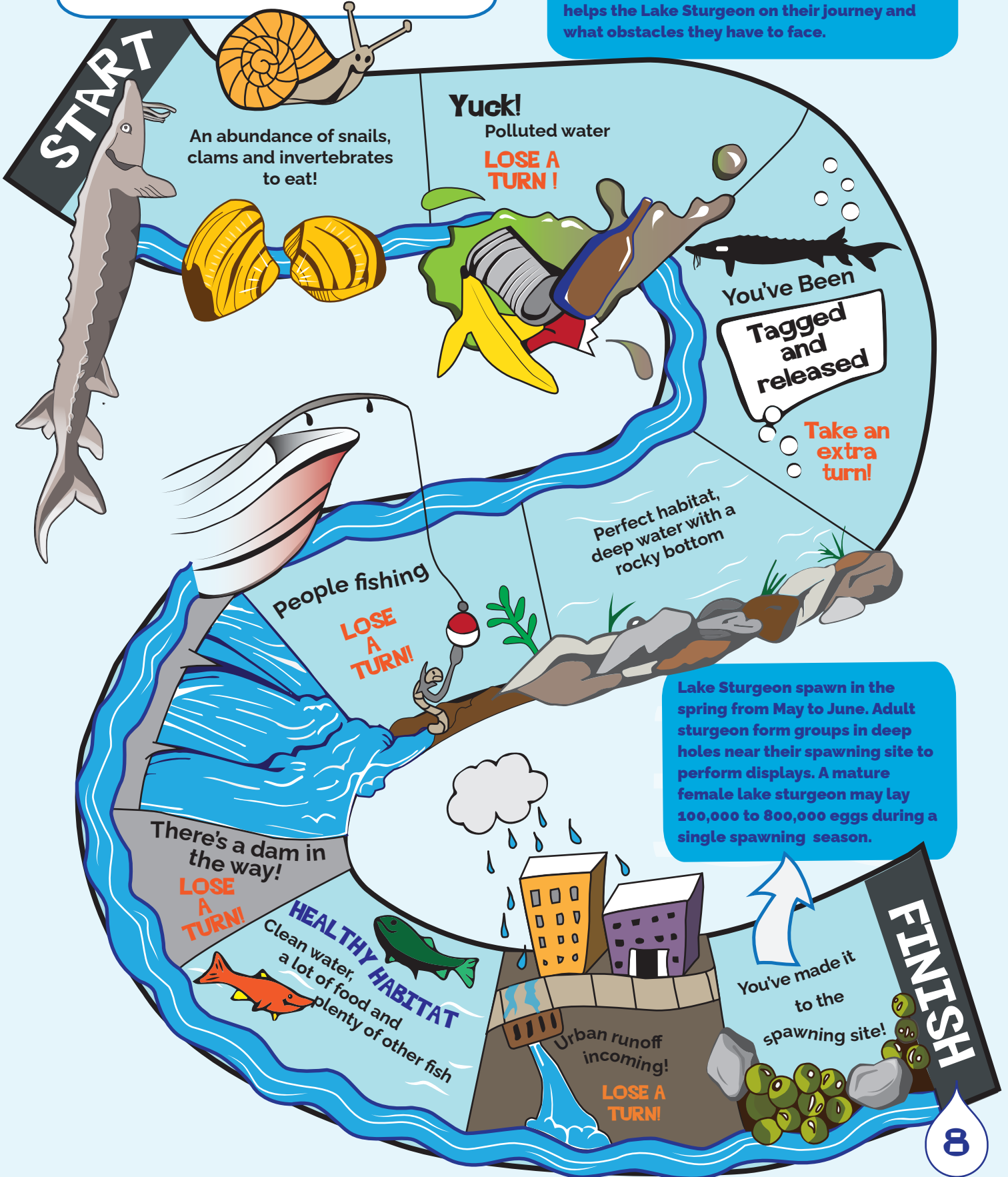
Lake sturgeon are one of New York's largest freshwater fish. Lake sturgeon can live long lives of up to 100 years. In the past, humans made it difficult for this fish to survive, so their population in the Genesee River Watershed greatly decreased. Since 2003, scientists have been working hard to reintroduce Lake sturgeon into the Genesee River. Now, they are thriving and their population is increasing in the Genesee River and Lake Ontario.



# What you need:

- Dice
- Game pieces  
(Pennies, small paper fish, etc.)

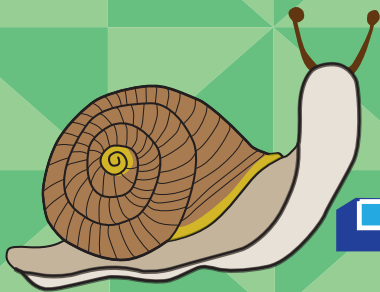
Help the Lake Sturgeon return to the tributaries where they spawn. Roll a die to move your fish up river to their spawning grounds. See what helps the Lake Sturgeon on their journey and what obstacles they have to face.



Lake Sturgeon spawn in the spring from May to June. Adult sturgeon form groups in deep holes near their spawning site to perform displays. A mature female lake sturgeon may lay 100,000 to 800,000 eggs during a single spawning season.

# Food Chains

The many plants and animals of the Genesee River Watershed form food chains, where organisms rely on each other for food. See if you can fill in some of the food chains for the Genesee River Watershed:



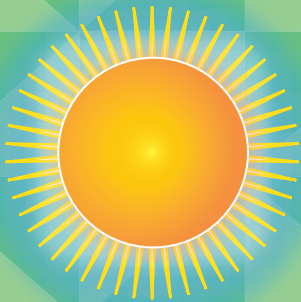
Snail



Leech



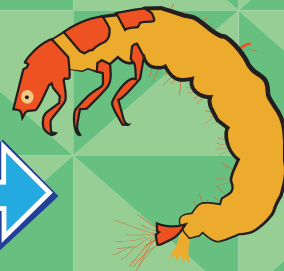
(Fill in fish - Sturgeon, Catfish or Snake, Frog, Bird)



Sun



(Fill in plants, leaves, algae)



Caddisfly Larva



(Fill in insect)



Green Frog



Great Blue Heron

# Here are a few things you can do to help reduce pollution in your watershed.

## ☘ Scoop the poop!

The bacteria in pet waste pollute our water.

## ☘ Put Plastics in Their Place!

Reduce, Reuse, and Recycle!

### Words to Know:

**Stormwater:** Rainwater or melted snow that runs off streets, lawns, and other sites.

**Permeable surface:** A surface that allows water to soak into the ground, like grass or gardens.

**Impermeable surface:** A surface that does not allow water to soak into the ground, like roads, driveways, or roofs.

**Runoff:** Stormwater that flows over impervious surfaces rather than soaking into the ground.



And remember—  
**Only Rain  
Down the  
Drain!**

For more ideas and to learn how to be an H2O Hero go here:  
[www.h2ohero.org](http://www.h2ohero.org)

Writer: Stephanie Hildreth  
Illustrator: Anne Smoral

# Learn More!



To find out more, scan:  
And remember,  
**Be An H2O Hero**



## Only Rain Down the Drain!

# Get Involved!



## Storm Drain Marking

Remind your family, friends, & neighbors to never dump anything into the storm drain.



## Watershed Cleanups

Volunteer to help keep our water clean!



## DIY PROJECT: Make a Rain Garden!

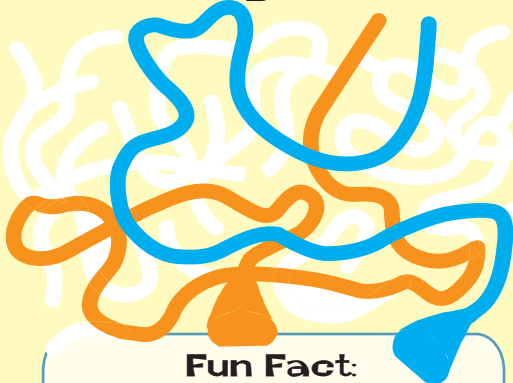
Rain Gardens absorb stormwater. To find out how to make one visit:

[www.h2ohero.org/diy-projects](http://www.h2ohero.org/diy-projects)

For more ways to get involved, visit: [www.H2OHero.org](http://www.H2OHero.org)

# Answers

Page 4:



**Fun Fact:**

Mayflies live most of their lives in the larval stage - adults live 90 minutes to a few days and do not eat.

Page 6:

- A. Caddisfly → 2. Caddisfly Larvae
- B. Dragonfly → 3. Dragonfly Larvae
- C. Mayfly → 4. Mayfly Larvae
- D. Dobsonfly → 1. Hellgrammite

