

[illegible]

1. Loudoun's waterways run into this river

6. water that flows across the ground

9. our main watershed

2. slow-moving animals with shells
3. something we need water for
4. six-legged creatures that may live around streams or watersheds
5. saving resources
7. land that is saturated with water
8. an area of land drained by a stream or drainage way

"Lou"

Potomac River

MARYLAND

Loudoun County

"Ol' Blue"

Potomac River

Chesapeake Bay

VIRGINIA

My name is Lou (short for Loudoun) and I am a dragonfly. I live in and around healthy streams and watersheds. One of my good friends is Ol' Blue — he is a Blue Heron who lives in the Chesapeake Bay. Sometimes we visit each other.

All living things need _____
(tower) to live.

When water evaporates, it travels into the air and becomes

part of a _____ (dlocu).

Less than 1% of all the water on earth is fresh (sefrh) water.

We _____ (ikrdn) water in the liquid form.

Check for leaks and save hundreds of _____ (gilloans) of water a day.

You'll save water by taking a quick _____ (howser).

Wash bikes and cars with a _____ (kecbut) and a sponge instead of a running hose.

Ask your _____ (mfaiyl) to look for ways to save water.

CHESAPEAKE
DRAGONFLY
DRAINAGE
ENVIRONMENT
FISH
GROUNDWATER
INSECTS
POTOMAC
RUNOFF
STREAM
SWIMMING
TREES
WATERSHED
WETLANDS

P S T R E E S W R C R F Y
O T F Z Q P E A H D F L E
T R I Y N T P E D O F N S
O E S D L R S R N N V S W
M A H A K A A U O I F T I
A M N Z P I R G R S X C M
C D B E N V A O I X R E M
S F A A T R N J R I E S I
B K G Z D M O D X B M N N
E E C L E U R W L C F I G
A W I N W A T E R S H E D
G Y T E M V J R X X E H G
G R O U N D W A T E R T K



How much water do we use in a day?
Find the answers on our website at:
www.loudounwaterwatch.org

Taking a bath or shower	1/2 gallon
Watering the lawn	30 gallons
Washing the dishes	1 gallon
Washing clothes	15-30 gallons
Flushing the toilet	180 gallons
Brushing teeth	4-7 gallons
Drinking	15-60 gallons



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"Ol' Blue" used under the expressed written permission of the Maryland Department of Natural Resources.



Where does our
water come from?
How do we know if
our water is clean
and safe?
What can we do
to keep our water
clean?



We all depend on clean water for drinking, washing, swimming, fishing, and other activities. When a water environment is clean and safe, many plants, insects, animals, and other organisms can live in it and benefit from it. When a water environment is polluted or dirty, it can't provide clean water and good living conditions.

**X-Stream-ly
Awesome**

Inside —

Look at the map to find your watershed.

Find out what a watershed is and how Loudoun's watersheds and streams affect you.

Learn what **YOU** can do to protect your waterways and keep your water environment healthy.



X-Stream-ly Awesome

What is a watershed?

A watershed is an area of land that catches rain and

snow, sending it into a wetland, stream, river, pond, lake, or groundwater. Watersheds are also called drainage basins. We ALL live, work, and play in a watershed.

Interesting Watershed Facts

Rainwater that flows over the land, fields, lawns, and streets is called runoff. In towns and suburban areas it flows into storm drains. When a drop of rainwater falls on the roof of your house, it goes down the drainpipe to the driveway and out to the street gutter that empties into your local stream. If you live in the country, the water may soak into the ground or run downhill to the nearest stream.

Watersheds come in all shapes and sizes. They may contain farms, forests, wetlands, homes, small towns, and cities. Small watersheds or drainage basins consist of a single stream or creek. These flow into larger watersheds made up of several streams that in turn merge into larger watersheds.

Where is MY watershed?

The map on the other side shows all the major watersheds in Loudoun County.

- Look on the map to find all of Loudoun's watersheds.
- Look at the map and find the town or area where you live. Which watershed do you live in?

- Find the stream closest to your home. What is it called? _____
- Does it run into a larger stream? Which one? _____

Loudoun's Streams: Time for a Check-up

Checking Loudoun streams means taking some water samples out of the streams. Volunteer groups and agencies sample and survey Loudoun's stream life.

What kind of life does a healthy stream have? Well, it could have lots of fish and aquatic insects (*macroinvertebrates*). Samples from the stream bottom and from fish tissue would show no signs of toxic chemicals. A seriously sick stream has little or no stream life.

Loudoun Watershed Watch brings people, organizations, agencies, and government together to protect Loudoun's streams. One way to do that is to collect stream information. That data is kept in a countywide computer database. It is used to create a report card on the health of our streams. The report card will tell us if there are problems in our streams.

X-Stream-ly Awesome

What does Loudoun's stream report card look like now?

It's not too bad. There are no dead streams — streams with no life forms. But there are impaired streams that need some help!

Three top pollutants put Loudoun County on the EPA's impaired waters list. What are they?
Dirt, Bacteria & Nutrients
To find out more about these, check out www.loudounwatershedwatch.org

Having Fun in My Watershed

What do watersheds give us besides water for drinking, washing, and other everyday activities?

Aquatic Life

Pond water often holds many tiny plants and animals that you can see only by using a microscope. These micro-organisms are an important beginning link in the food chain that includes aquatic insects, fish, aquatic birds, reptiles, amphibians, and mammals. Many of the animals in a stream are aquatic insects. Have you ever turned over a mossy rock in the water and seen small insects clinging to it? Or maybe you've seen bugs scooting around on or in the water? These adult and young insects (called larvae and nymphs) have interesting names such as **dragonfly, mayfly, caddisfly, whirligig beetle, water boatman, and water strider**.

Many families enjoy bird-watching and butterfly walks along Piney Run, Catoctin Creek, and at Banshee Reeks Nature Preserve along Goose Creek, as well as hiking along Sugarland Run to the Potomac River. See if you can find these areas on the map.

Wildlife Habitat

Forest areas along streams are called buffers. They provide animals with homes, with sheltered pathways, and with cover from predators. Animals living in these forest buffers include raccoons, ducks, turtles, deer, foxes, eagles, and beaver, to name a few. **If you have a chance, go to a nearby park and try to find a deer trail that follows a stream.**

Recreation

Forest buffers and streams can provide fun for kids and families.

If you want to fish, you might be able to walk on a **"fisherman's path"** along a stream to get to a deep hole where the bass and bluegill hang out. How about canoeing or kayaking down Goose Creek in the early summer when the water is still high enough?

Keeping My Watershed Healthy

Clean water in streams and ponds is important to people, to our community, and to our environment. Our watersheds provide water for drinking, agriculture, and industry. People enjoy lakes and streams for their beauty and for boating, fishing and swimming. Wild animals need healthy watersheds for food and shelter.

To keep our water clean and our watershed healthy, we need to take care of the land along our streams. As rainwater and melting snow run downhill, they carry sediment and other materials that people put on the ground into our streams, lakes, wetlands and groundwater. **Too much runoff can harm the streams.**

It is often hard to protect the land along streams. People want to build houses, plow the land to grow crops, and let cows and horses use the stream. Sometimes there is a conflict between what is nice and convenient for people and what is healthy for the watershed.

We need to let trees grow along streams, keep farm animals out of streams, use fertilizers and pesticides wisely, and prevent dirt and debris from construction projects from getting into the streams. This is the way to keep unwanted things like **sediment, bacteria, too many nutrients, and trash** out of our streams.

Exploring a Stream

Let's explore a stream. See how many of the following life forms you can identify.

They live under, on, or near the water.

Connect a line from the drawing to the right word.



Snail



Dragonfly



Goose



Crayfish



Turtle



Water Beetle

Frog

The list below contains some things that can be harmful or healthy for a watershed. Place an X by those items that are HARMFUL, and a √ by those that are HELPFUL.

Check the Map!

- _____ Fish that eat insects that live in the stream
- _____ Muddy water that carries sediments, nutrients, and toxic substances
- _____ Fences that keep cows out of streams
- _____ Using too much fertilizer on lawns and golf courses
- _____ People wasting water when they wash their cars or water their lawns
- _____ Storm drains that send runoff into holding ponds before going into streams
- _____ People dumping used oil onto the streets
- _____ Cutting down trees and filling in wetlands
- _____ Fungi, insects, and crustaceans that eat leaves in the stream
- _____ Birds and mammals that eat fish and crustaceans in the stream
- _____ Trees and bushes along stream banks that prevent soil from washing away
- _____ Wetlands that soak up water to help prevent flooding
- _____ Silt fencing along construction sites that prevent sediment runoff from going into nearby streams
- _____ Throwing litter and trash into a creek or stream

Why do I need to know about Loudoun County's watersheds?

- If you know about your watershed, you can pay attention to the quality of the water where you live.
- You can join efforts to monitor the health and safety of our water.
- You can learn how to help keep water safe and healthy.
- You can help make the Chesapeake Bay healthier because what you do in Loudoun affects the Bay.

What can I do?

- Learn about your watershed, what's in it, how people use it, and what kinds of things make it either healthy or not so healthy.
- Get involved with a Loudoun Watershed Watch partner organization. Volunteer to clean up, monitor, restore and protect our streams and watersheds.
- Go to www.loudounwatershedwatch.org/partners for a complete list of all Loudoun Watershed Watch partners and lots of other fun information.
- Use water wisely both inside and outside.
- Don't throw trash into streams and ponds.
- Know where your drinking water comes from.

