

Session 1

Watershed Detectives

Learner's Guide



What happens when the natural flow of a watershed meets the areas of land where people have established and expanded towns and cities?



Today's Big Question:

What is our direct connection to the watershed?

Introduction

Welcome to this learning project. It is called *Best Water Ways*, and it is about watershed literacy, stewardship, and restoration. It is focused on the exploration of our place in the world, through inquiry, research, and local hands-on projects.

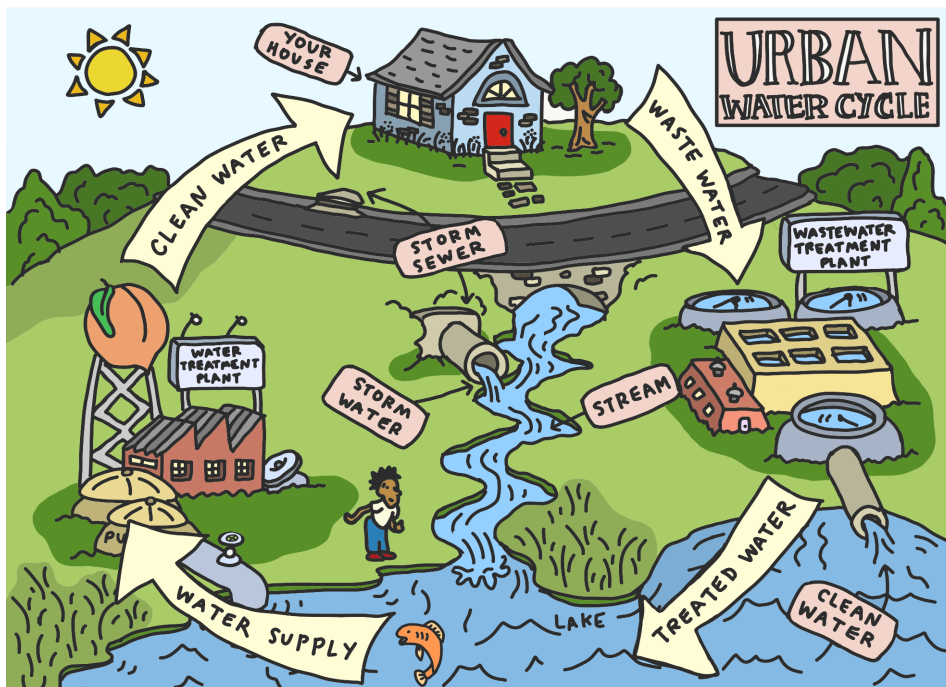
What is a watershed?

Do you know that you live in, and are an active part of a living system? It is called a watershed. We will explore the big picture of watersheds in future sessions, but today we are going to focus on your connection to your watershed. We are going to explore where you are right now, in the neighbourhood where you spend most of your time each day. You will not have to go far to find a clue that connects you to the watershed, even if there isn't a river, lake, or stream in sight.

Everywhere that rain falls, and water flows on the earth, is part of the earth's big water collection, storage, and distribution cycle. So, when you see drops hit the pavement outside your house or drip down the gutters of your home, you are in the watershed.

Watersheds are important to Indigenous peoples, as they offer food, medicine, and natural protection. A common belief held by many Indigenous peoples is that 'all things in life are connected'. This means that what we humans do impacts other parts of life around us, and that, in turn, has an impact on us.

What happens when the natural flow of a watershed meets the areas of land where people have established and expanded towns and cities? Complete the following *Watershed Detective* activities to explore this question.



Source: Diane Kelment,
Watershed Learning Network,
University of Georgia:
[http://wln.ecology.uga.edu/
index.php/potentially-useful-images-
video-links/](http://wln.ecology.uga.edu/index.php/potentially-useful-images-video-links/)



Quadrant counting of eelgrass in a local estuary.

Photo: Stephanie Cottell



Activity 1: Watershed Detectives

In this activity, you are going to explore parts of the watershed closest to you and how you are connected to it.

Part I

Break into groups of two or three. In these groups, look up the session's words and terms (listed below) to prepare you for your detective work.

Your Words and Terms

Research each of the following words and terms. What do they mean?

- | | |
|----------------------|-----------------------------|
| › Interconnectedness | › Impervious or Impermeable |
| › Culvert | › Perimeter drain |
| › Ditch | › Pervious or permeable |
| › Bridge | › Storm drain |
| › Dike | |

Part 2

Now, you are all set to stake out the neighbourhood around your school and identify the features of the watershed around you. If possible, split into groups of three and go in different directions.

Look for any rivers, streams, creeks, ditches, culverts, dikes, and storm drains. Take pictures (if possible) of these watershed features, and make notes of their locations.

1. Check out the surrounding landscape. Did you see any storm drains marked with yellow fish icons?
2. Are there any identifiable riparian areas?
3. Do you see any presence of fish?
4. Is there evidence of flooding or blocked water flow? If so, what does it look like?
5. What else draws your attention?
6. Why are watersheds important to Indigenous peoples?

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

What is a riparian area?

A riparian area refers to the area of land that is next to a water body. A healthy riparian area is made up of a community of plants, shrubs, and trees that help protect the water body and provide a healthy habitat.

Part 3

After you return from your walk, each group will share what they have discovered. You will also compare what you have seen to the local maps provided by your teacher. Consider and answer the following questions:

1. How does what you have detected compare with what you see on the maps?

2. Do you notice any differences in where rivers and streams flow on the map compared to what you saw in your exploration? What are these differences?

3. How do you think the watershed might be affected by human activity in your area?



Activity 2: Watershed Wiz Quiz

For this session's "Watershed Wiz Quiz", you will take turns selecting a vocabulary word or term card. These are the words or terms you researched today. Match the word or term with an example from your exploration and explain a bit about it in your own words.



Activity 3: Watershed Reflection

Write or draw about facts and ideas that stood out for you in today's session about watersheds. Include your thoughts on what you have learned.

In your reflection, touch on three or more of the following themes:

- › How you are connected to the watershed
- › The difference between a ditch and a culvert
- › The purpose of a storm drain
- › The purpose of a perimeter drain
- › Why we build bridges and dikes

Watershed Reflection: *Watershed Detectives*

Labels for mapping *Watershed Detectives* discoveries

River	River	River
Wetland	Wetland	Wetland
Stream/Creek	Stream/Creek	Stream/Creek
Culvert	Culvert	Culvert
Culvert	Culvert	Culvert
Ditch	Ditch	Ditch
Ditch	Ditch	Ditch
Bridge	Bridge	Bridge
Bridge	Bridge	Bridge
Dike	Dike	Dike
Dike	Dike	Dike
Perimeter Drain	Perimeter Drain	Perimeter Drain
Perimeter Drain	Perimeter Drain	Perimeter Drain
Storm Drain	Storm Drain	Storm Drain
Storm Drain	Storm Drain	Storm Drain

Notes

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