

AQUATIC ECOSYSTEM

TOOL KIT

ECOSYSTEM ASSESSMENT

1

GUIDING QUESTIONS

- *What types of aquatic ecosystems are found in Alberta?*
- *What type of aquatic ecosystem am I visiting?*
- *How are humans connected to aquatic ecosystems?*

INTRODUCTION

There are many different types of water bodies in Alberta including:

- **Wetlands** (*peatlands and non-peatlands*)
- **Rivers & streams**
- **Lakes**
- **Groundwater**
- **Stormwater ponds in our cities and towns**

No matter where it is found, we know that water is essential for life and all the types of water bodies work together to make up the entire system of water, sometimes called a watershed. A **watershed** is an area of land that drains into a body of water. It is important to understand that whether you live in a city or rural area, we all live in a watershed and our actions affect aquatic ecosystems.



MATERIALS FROM KIT


- **Alberta Watershed Map**
- **Aquatic Ecosystem Identification Chart**

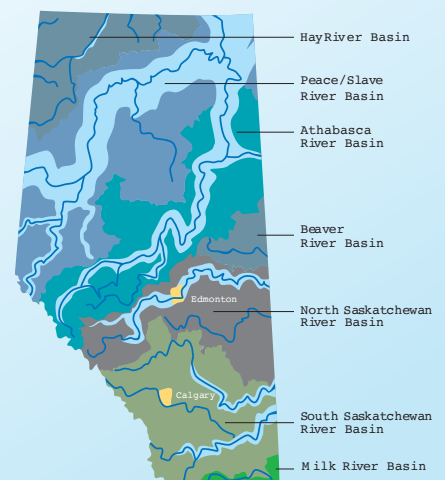
ADDITIONAL MATERIALS

- **Field Journal & Pencil**

DID YOU KNOW
that 80% of the water in Alberta is found in the northern part of the province!

Alberta's Seven Major River Basins

 represents the amount of water that flows through Alberta's major rivers. Notice how much water flows in the north.



FIELD OBSERVATIONS

Part 1

1. Observe the area around you.
What do you see, hear and smell?
Record your observations in your journal.
2. Sketch the aquatic ecosystem in your journal; be sure to include the water, plants, animals and the surrounding area.
3. Consider how humans use this area.
Circle the things in your sketch that are **not** a natural part of the environment
(for example: dams, storm drains, trails, paths, boats, fences, bridges, farms, buildings etc.)

TYPE OF AQUATIC ECOSYSTEM

Part 2

1. Use the **Alberta Watershed Map** to figure out which watershed you are in.
2. Look at the water body at your site and answer the questions below.
 - Is there open water? **YES / NO**
 - Does the area have lots of peat (*spongy ground*)? **YES / NO**
 - Are there trees growing out of the water? **YES / NO**
 - Are there other plants, like cattails, growing out of the water? **YES / NO**
 - Is the water shallow (<1.5 metres deep in the middle)? **YES / NO**
 - Is the water deep (>1.5 metres deep / over your head)? **YES / NO**
 - Is the water flowing? **YES / NO**
3. Compare your answers to the **Aquatic Ecosystem Identification Chart** to find out what type of aquatic ecosystem you are visiting today.

GRADE 4-6 EXPLORATION

- Based on the type of aquatic ecosystem you are visiting today what kinds of plants and animals do you expect to find living here?
- What other types of aquatic ecosystems have you visited? How are they similar or different?
- How has this aquatic ecosystem been changed by humans?

GRADE 7+ EXPLORATION

- How does the type of water body influence the plants and wildlife you expect to find in this aquatic ecosystem?
- Considering that most of the water is in the northern part of the province but most of the population is in the south, how might this change how water is used in different parts of Alberta?