

Riparian Forest

Like a ribbon running across our watershed, riparian zones are areas where land and water meet. They border rivers, creeks and wetlands across the floodplain and contain an array of water loving plants and animals. Calgary is home to two river systems, the Elbow River and the Bow River which merge west of downtown next to Fort Calgary. These rivers eventually flow into Lake Winnipeg and the Hudson Bay as part of the South Saskatchewan Watershed.

About Riparian Zones

Riparian zones may only occupy a small area of our land, but they are an essential ecosystem. This region provides an abundance of habitats for many aquatic and terrestrial species, and contributes to the overall health of our watershed. Acting as a transition area between water and land, riparian zones provide a number of benefits to the ecosystem, including water purification, riverbank stabilization, and flood prevention. Floods are a natural phenomenon that are important to the rejuvenation of riparian areas. During flood events, large volumes of water and silt can carry seeds (like balsam poplar trees) downstream and provide them with a nutrient rich environment to grow and establish.



Wildlife and Plant Life

Riparian forests are incredibly biodiverse, with trees and shrubs ranging from trembling aspens to wolf willow (silverberry). Common birds in our riparian forests include warblers, woodpeckers, hawks, and osprey. Mammals such as porcupines, deer, beavers, and muskrats are often seen as well. In our rivers and streams you can spot an extraordinary number of fish, including trout and suckers, and other aquatic species like diving beetles and dragonfly nymphs.



Did You Know?

Many of Calgary's busiest parks are located along or near our rivers. Along the Elbow River, parks include Weaselhead Flats, Griffith Woods, and Lindsay Park. Along the Bow River, parks include Bowness Park, Bowmont Park, Edworthy Park, and Prince's Island Park.



Riparian Forest Study

Overview

Students will learn the importance of the riparian zone along the Bow and Elbow rivers. They will observe and discuss how riparian areas differ from their schoolyard by looking at the biodiversity, soil quality, and land formations that exist. Exploring how Indigenous peoples view water, students will gain a further understanding of the importance of this valuable resource and its effects on the landscape. Lastly, students will discuss how floods can impact and reshape these ecosystems.

Activity 1: Area Comparison

Riparian areas are home to a wide array of life. Compare your school field to the riparian area you are at. As you are comparing the two sites, identify a few of the species that you see in each location. Compare the texture and moisture of the soil, and scan the water for fish or invertebrates. You should notice that the biodiversity is higher in the riparian zone. What is the value of these areas for humans and for wildlife?

Activity 2: Honouring Water

Many Indigenous peoples recognize water as the most life-sustaining gift Mother Earth has given, and riparian areas here in Treaty 7 territory are important hunting, gathering, and ceremonial locations. Fort Calgary and St. Patrick's Island, at the confluence of the Bow and Elbow rivers, holds great historical significance. Look around the riparian zone and reflect on how it makes you feel. Consider the importance of this area in the past 100 years, both to the ecosystem itself and to the people who lived and worked here. How might this area change or be used differently in the next 100 years?

Activity 3: Human Use

The riparian area that you see today is not the same as it was in 1897, when Calgary had its first major flood. Many of the parks along the riparian zone in Calgary have been modified for human use. Important trees and shrubs have been removed and replaced with non-native grasses, pathways, homes, and even office buildings. Look at our flood history on maps.calgary.ca/RiverFlooding and scroll down to the 2013 Calgary flood map to compare the before and during [flood] satellite image. Would you be underwater where you are standing now? How have the plants and animals living in riparian areas adapted to flood events? Floods are a natural process, but can be costly and devastating to infrastructure. What can cities do to plan and be resilient to natural events such as this? What can you personally do to prepare for them?

Activity 4: Living Connections

Plants and animals have close relationships; as one part of the ecosystem changes, so do many others. Provide each student with a plant or animal image. Have students share which species they have with their classmates, and then gather into groups with other species theirs has some connection with. This could be eating similar foods, living in similar habitats, or displaying similar adaptations. Then, encourage students to share the connections they made with a classmate from a different group.



Visiting a Riparian Forest Park?

What you need to know.

Park Etiquette — [Click here for bylaws related to parks and pathways](#)

- Stay on designated trails at all times, unless otherwise posted. This helps to protect the habitat of plants and animals that live in the park.
- Use quiet voices. Running and yelling will scare away wildlife and reduce the opportunities to view these species.
- Do not disturb or feed wildlife, including birds.
- Look but do not remove vegetation (including flowers and berries). These plants could be food, nesting material, or a rare native species.
- Do not litter. Place all garbage, recycling, and compost in appropriate bins or take them back to your school.

Nature Kit Information

Calgary Parks would like to encourage you to explore the amazing landscapes of riparian forests. To enhance your experience, we have a free learning kit available for you to use which includes:

- A map of the park or region
- Biofacts (bone clone mammal/bird skulls, track and scat molds, egg replicas)
- Bird plushes with audio of bird call or song
- A tree cookie (cross section from a known tree species)
- Alberta natural history field guides and booklets relevant to the topic of the kit
- Printed resources to supplement the park study activities
- Various laminated photographs and information on local plant and animal species
- Nature BINGO activity page

Renting a Nature Kit

- Kit is available for a one-week duration FREE of charge.
- User is responsible for picking up and dropping off the kit at the designated location.
- If the kit is not returned, or materials are missing or damaged, the user will be charged a replacement fee.