



# Exeter Water Trail

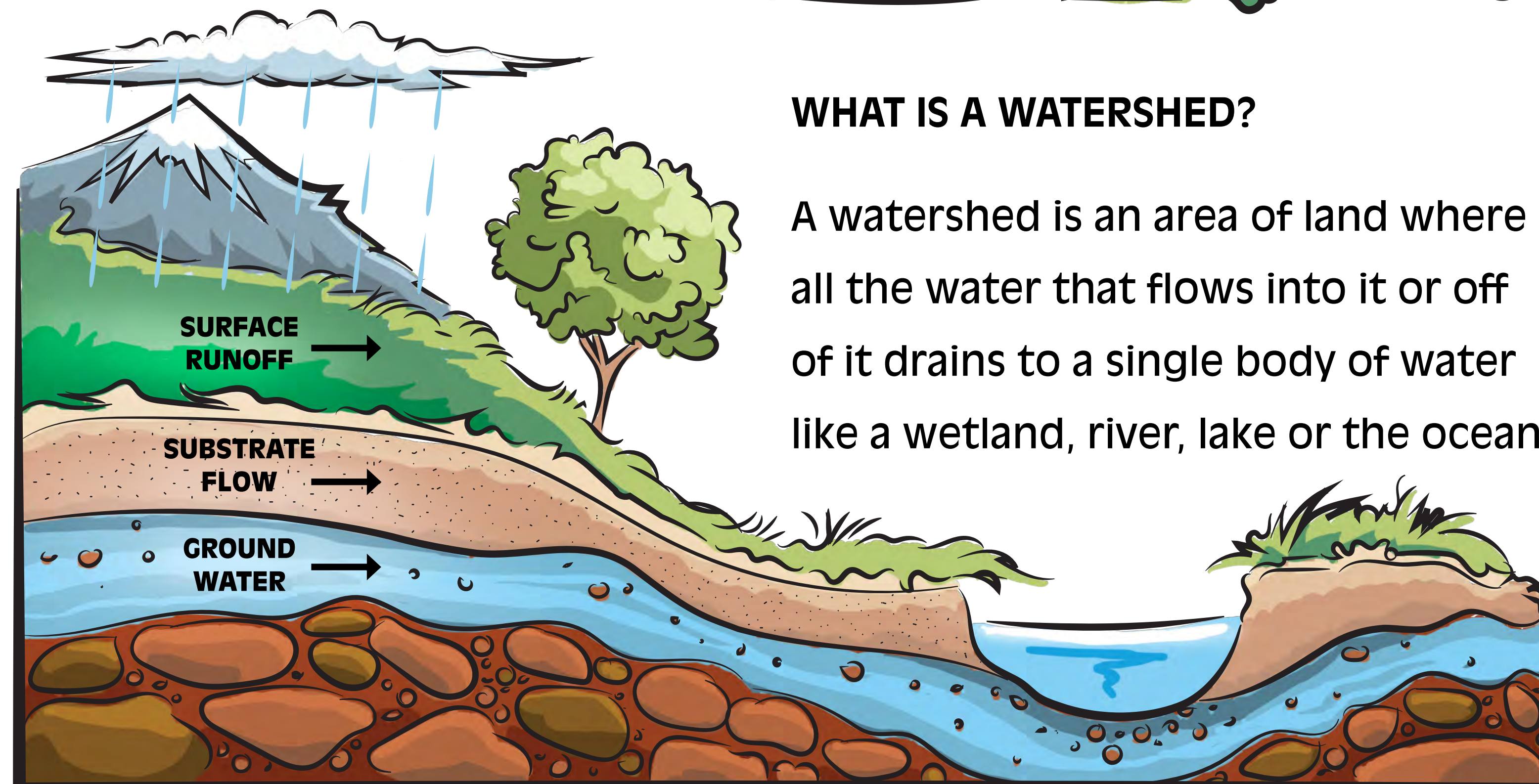
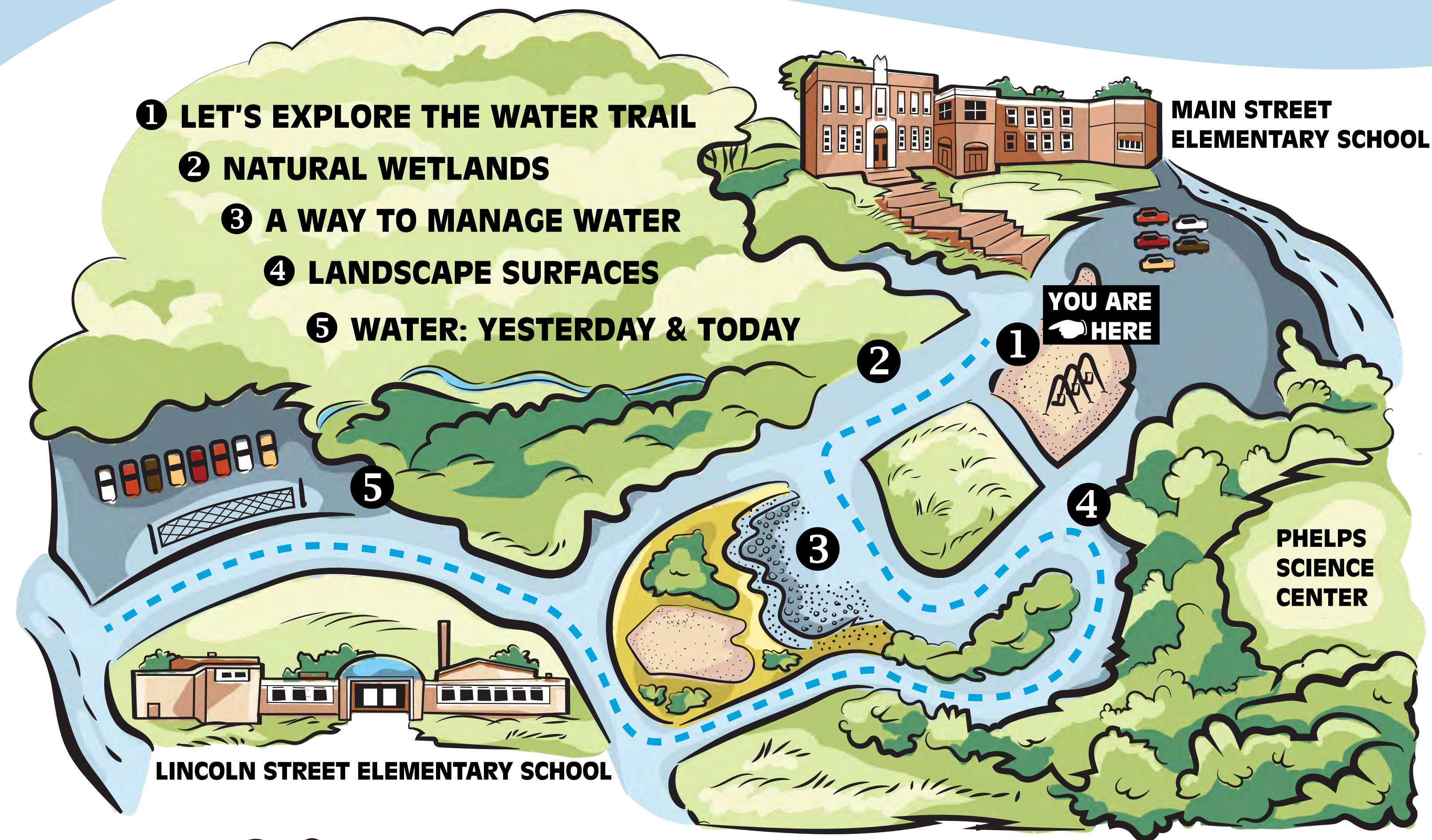
## LET'S EXPLORE THE WATER TRAIL

Welcome to the *Water Trail* at Main Street and Lincoln Street Elementary Schools! The Water Trail shows water in many settings as it moves across the landscape.

Water is everywhere — above ground, below ground, and in between!

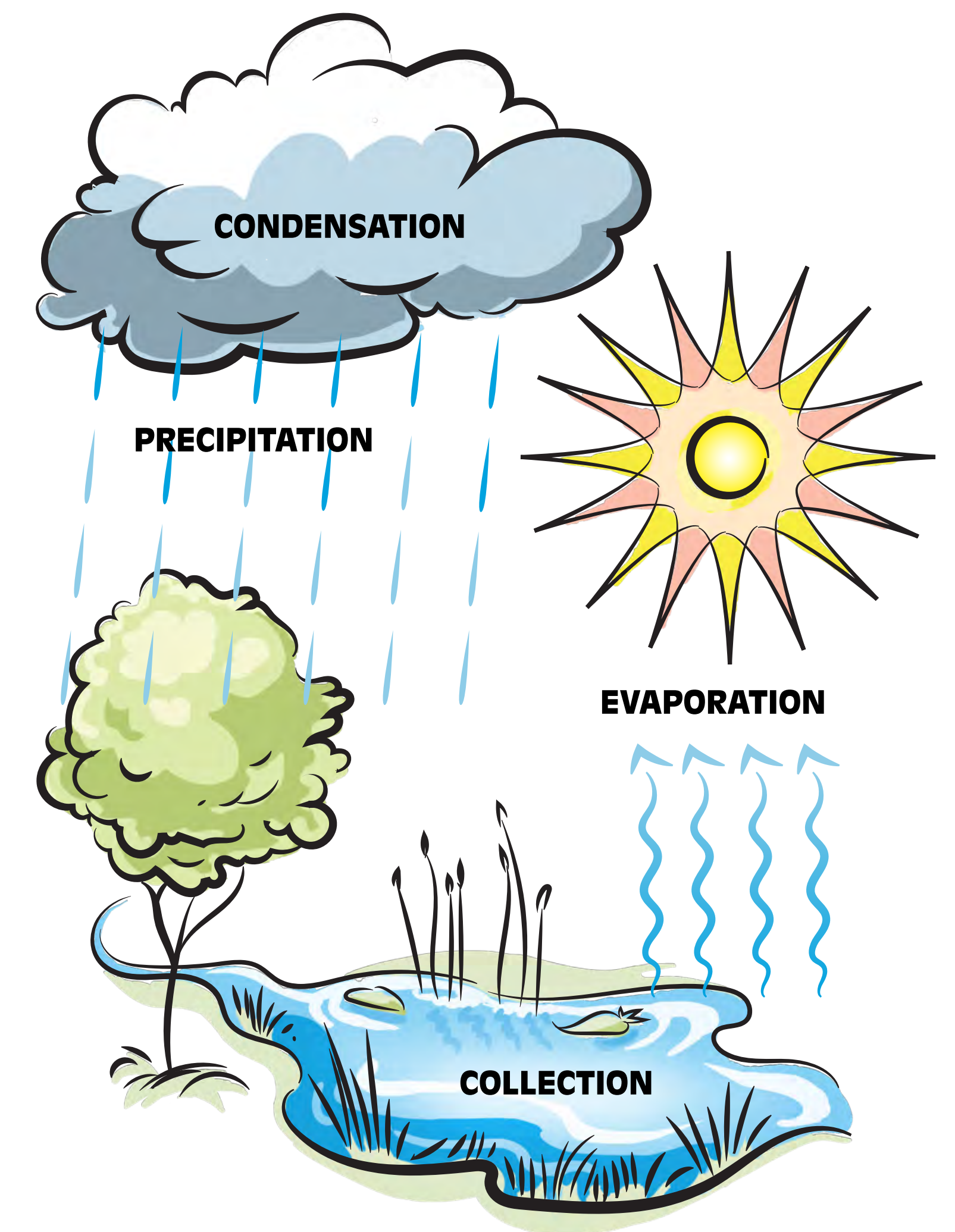


Follow the *Water Trail* markings around the playground and along the nature trail to the Lincoln Street Elementary School.



### WHAT IS A WATERSHED?

A watershed is an area of land where all the water that flows into it or off of it drains to a single body of water like a wetland, river, lake or the ocean.



### WHAT IS THE WATER CYCLE?

The water cycle, also known as the hydrologic cycle, describes the movement of water on, above, and below the surface of the Earth.

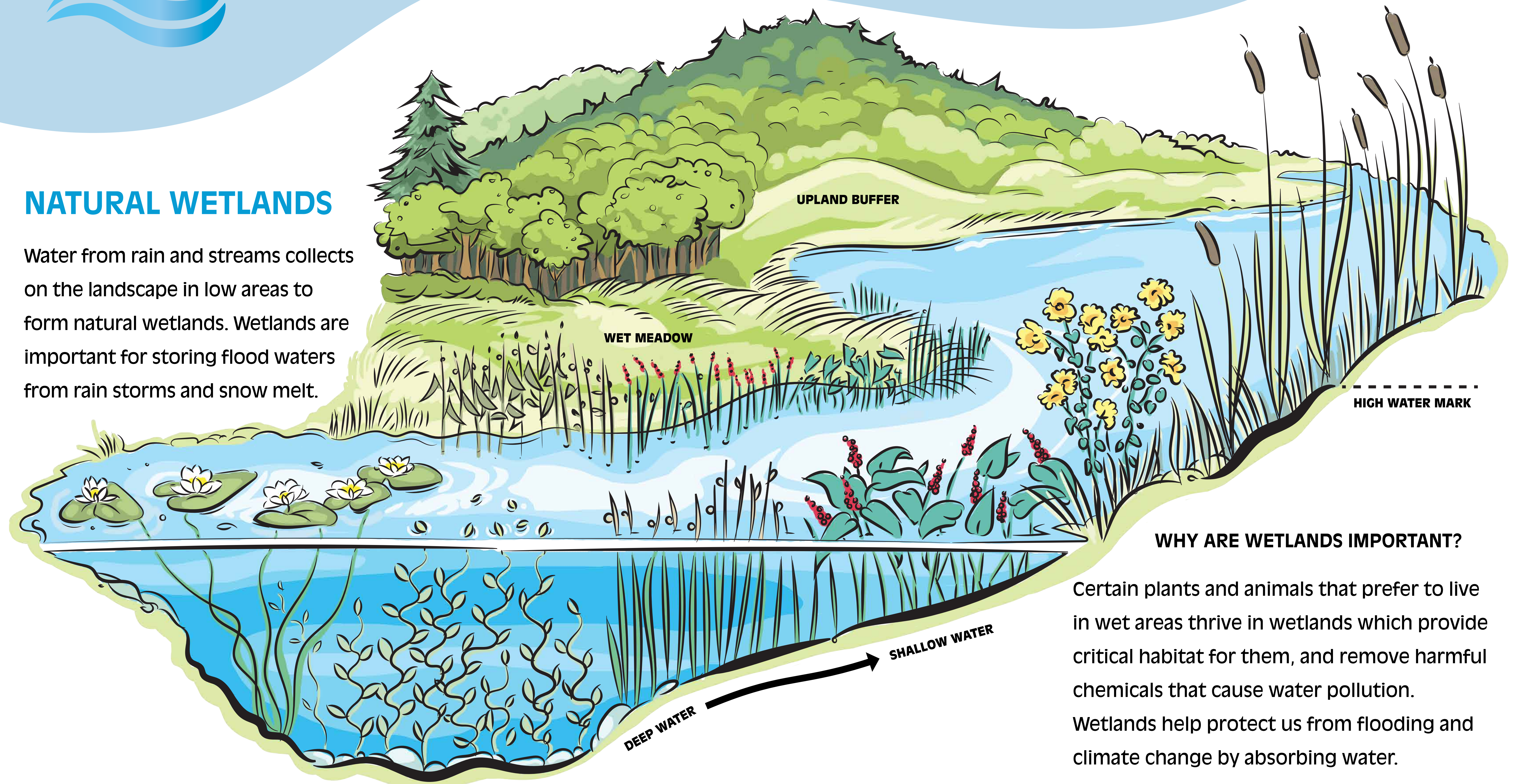




# Exeter Water Trail

## NATURAL WETLANDS

Water from rain and streams collects on the landscape in low areas to form natural wetlands. Wetlands are important for storing flood waters from rain storms and snow melt.



## WHY ARE WETLANDS IMPORTANT?

Certain plants and animals that prefer to live in wet areas thrive in wetlands which provide critical habitat for them, and remove harmful chemicals that cause water pollution. Wetlands help protect us from flooding and climate change by absorbing water.





# Exeter Water Trail

## A WAY TO MANAGE WATER

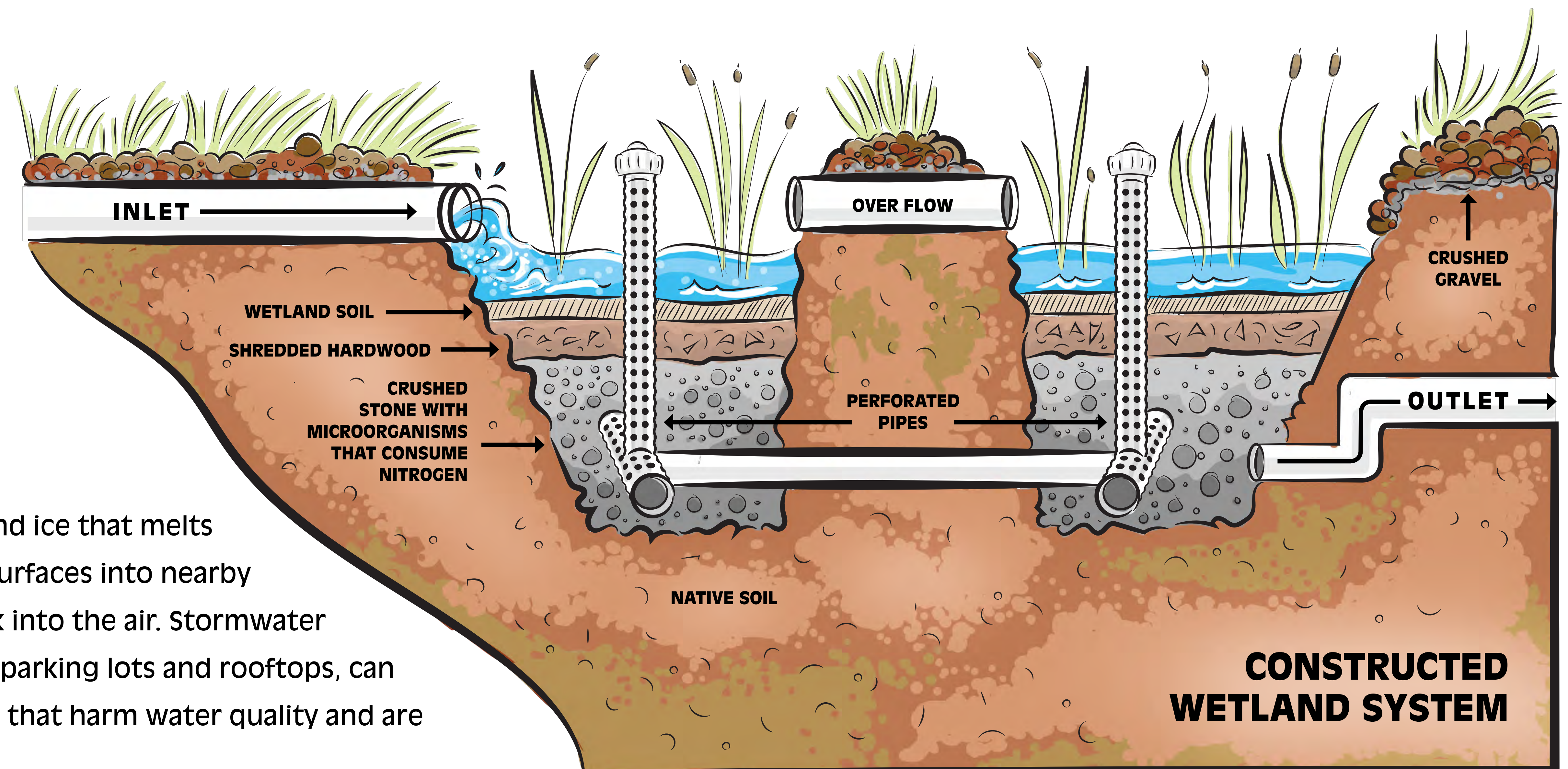
This stormwater collection area holds water that comes from the 177 acre Lincoln Street watershed. Some of the water travels underground in pipes and some flows across the land.

### WHAT IS STORMWATER?

Stormwater comes from rain, snow, and ice that melts and soaks into the soil, runs off hard surfaces into nearby streams and rivers, or evaporates back into the air. Stormwater that flows over land, and surfaces like parking lots and rooftops, can pick up toxic chemicals and pollutants that harm water quality and are harmful to people, animals, and plants.

### WHY DO WE MAKE WETLANDS?

If a natural wetland no longer exists, man-made wetlands can be created to collect rain water and stormwater into a large basin. Once in the basin, dirt particles settle to the bottom and plants clean the water by taking in pollutants and extra nutrients from the water. These wetlands also store water and help reduce flooding.







# Exeter Water Trail

## LANDSCAPE SURFACES

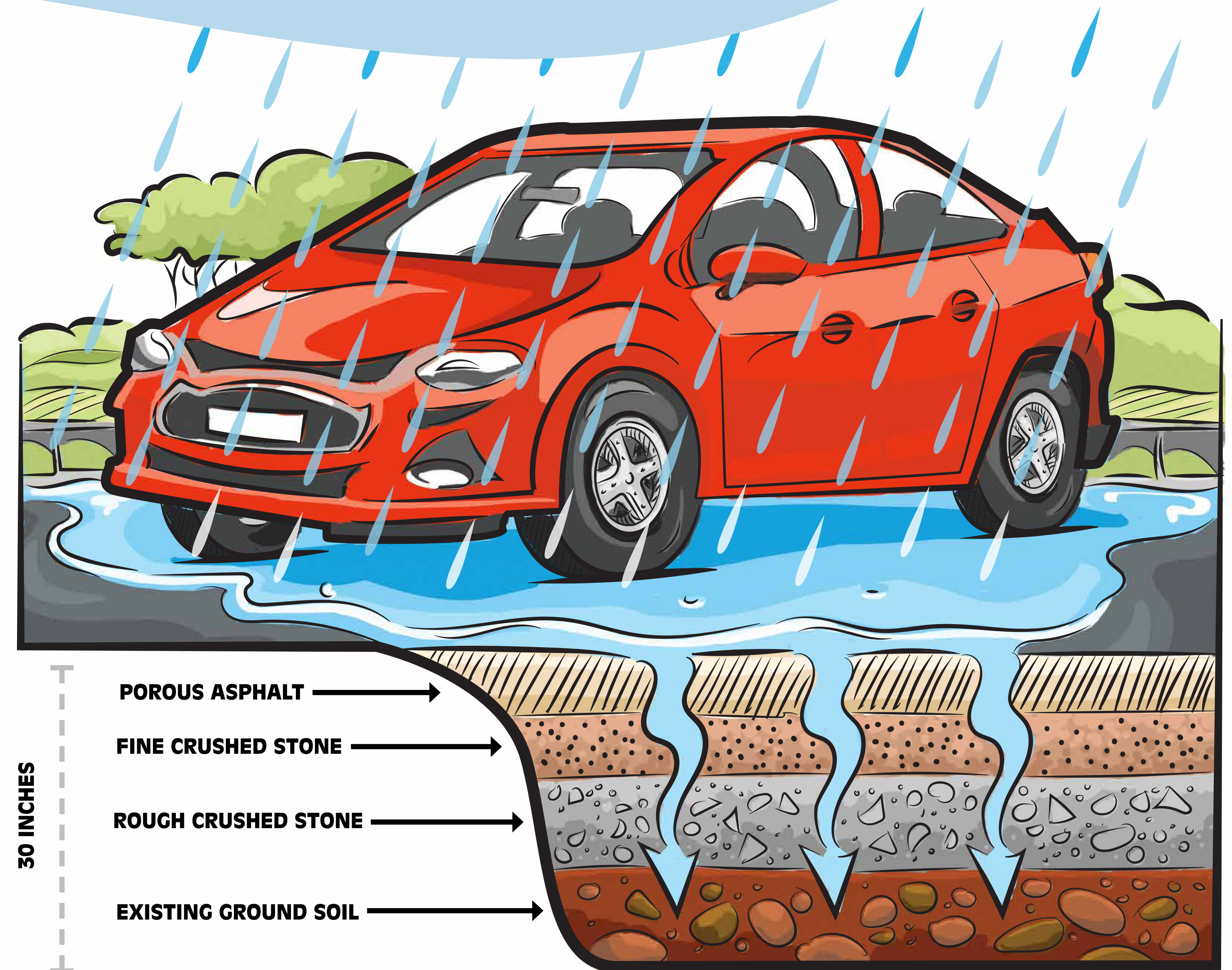
The Main Street Elementary School campus is composed of many different types of surfaces — a wood chip playground, grass, pavement, and forest. Water moves differently over these types of surfaces. Wood chips, grass, and forests can absorb water while other surfaces, like pavement, shed water which runs off and flows to a low area nearby. Some of this water is collected in drains and piped underground into the town's stormwater systems.

### WHAT IS POROUS PAVEMENT?

Porous pavement is made of marble-sized particles of gravel coated in asphalt (a sticky tar coating). When these particles are stuck together, spaces form between the particles. When stormwater flows across the porous pavement surface it sinks into these spaces and flows down below the ground instead of pooling on the parking lot or road. Porous asphalt acts like a sponge by soaking up stormwater to reduce flooding.

### WHY DO WE NEED TO MANAGE STORMWATER?

Stormwater is managed to help clean the water and allow water to flow where we want it to. When stormwater is not managed properly, it can flood landscapes, roads, buildings, natural places and animal habitats. Too much water is as harmful as not enough water.



Continue through the nature trail to the Lincoln Street Elementary School and the last stop on the Water Trail!





# Exeter Water Trail

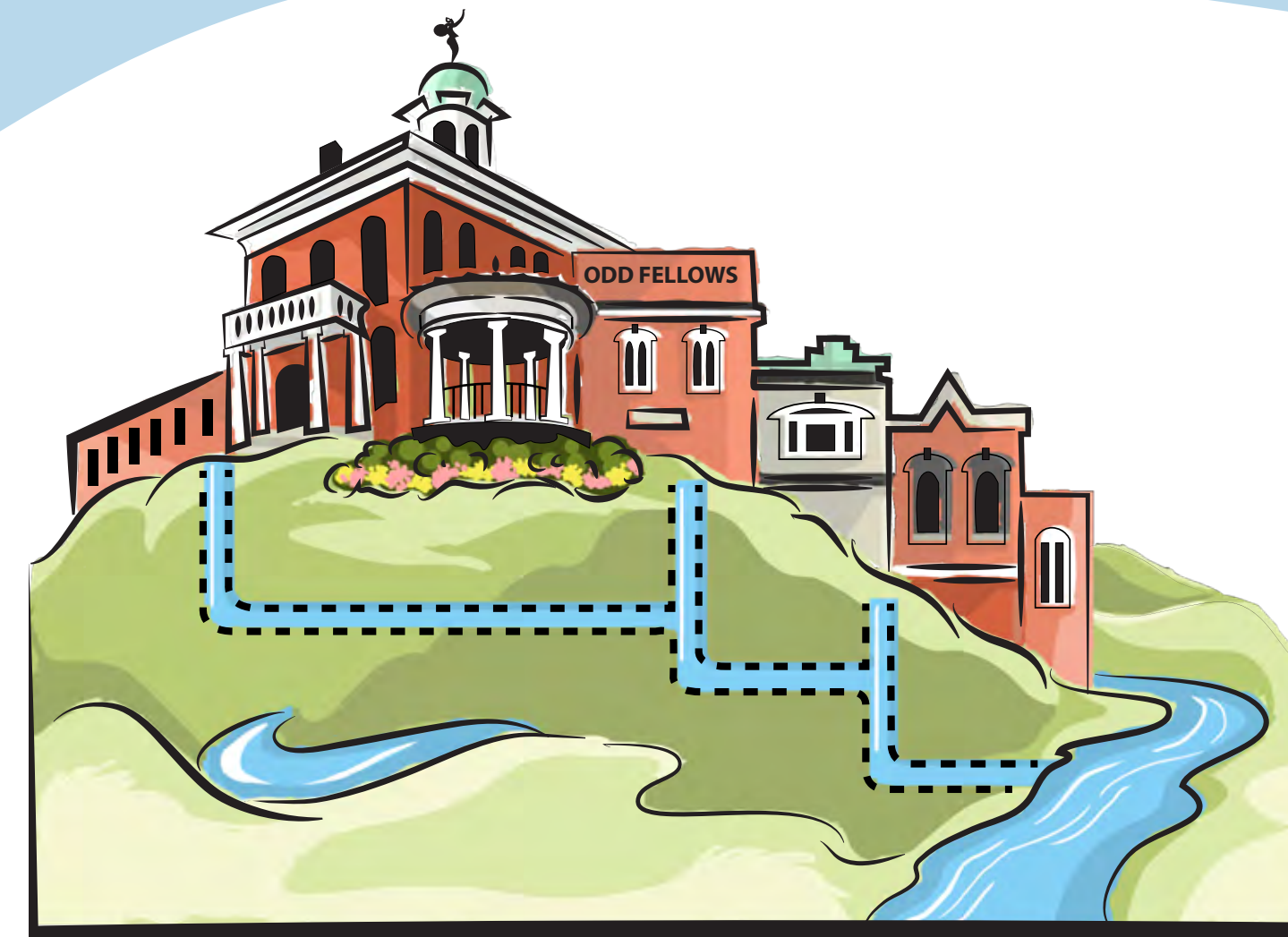
## WATER, YESTERDAY & TODAY

Water once flowed around the Lincoln Street Elementary School through a natural stream, but today water flows through pipes underground.

Water is everywhere — above ground, below ground, and in between!

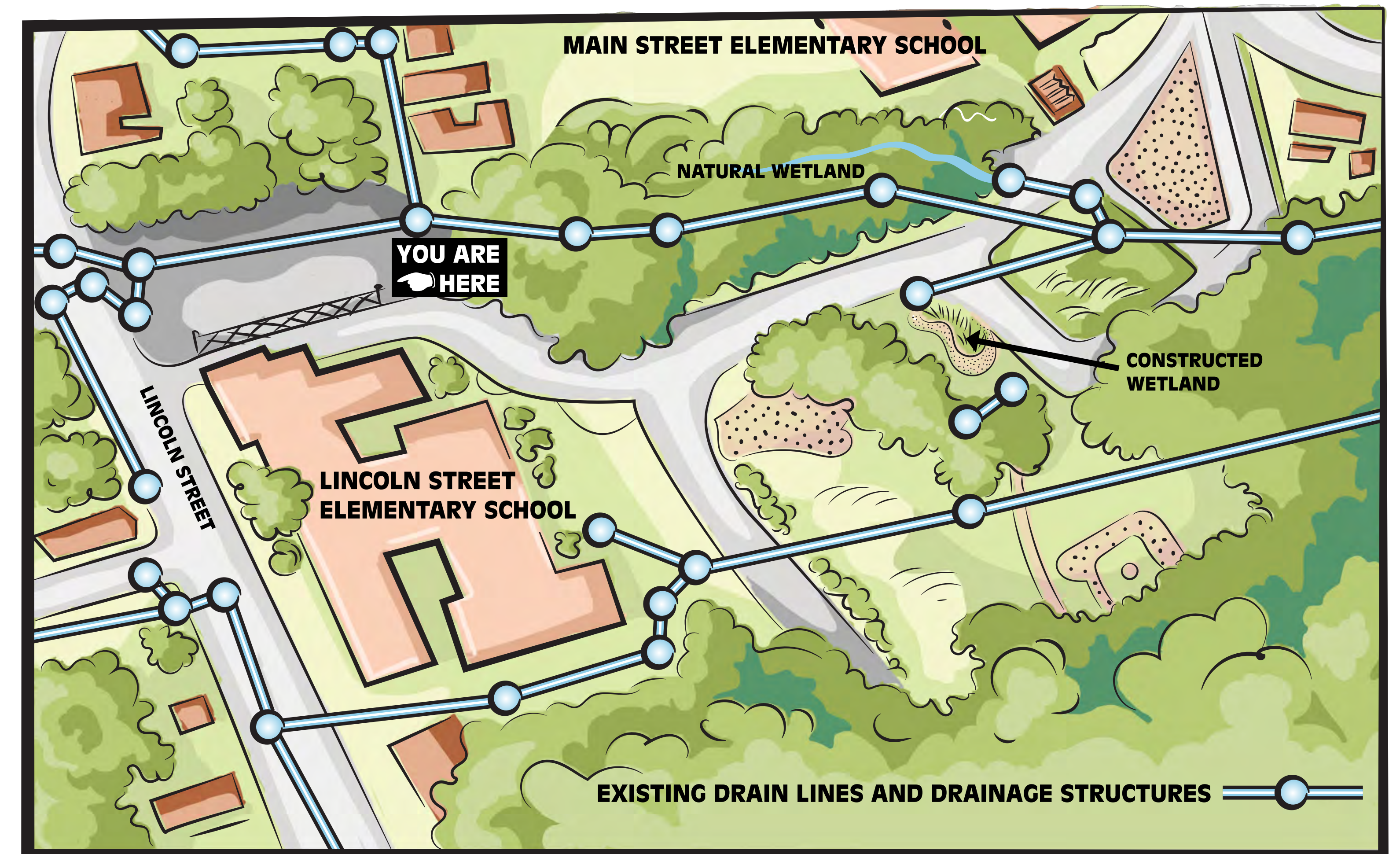


Follow the Water Trail markings along the parking lot and through the woods to the Main Street Elementary School.



### WHAT IS AN URBAN WATERSHED?

Some watersheds have natural landscapes like forests, meadows, and native plants and animals. Other watersheds are located in places where many people live and the land is developed with roads and buildings. These developed or “urban” watersheds have some, but not many, natural places where water flows over the land. In urban watersheds, much of the water is collected and piped underground for long distances until it flows into a river or the ocean.



### WHAT IS BURIED BELOW THIS PARKING LOT AND THE PLAYING FIELDS?

Water from the upper parts of the Lincoln Street watershed flows underground in pipes below Lincoln Street, then it continues under the parking lot and below the playing fields at the Lincoln Street Elementary School. One pipe reaches the land surface to allow water to flow into a wetland for a short distance before entering an underground pipe at the Main Street Elementary School.



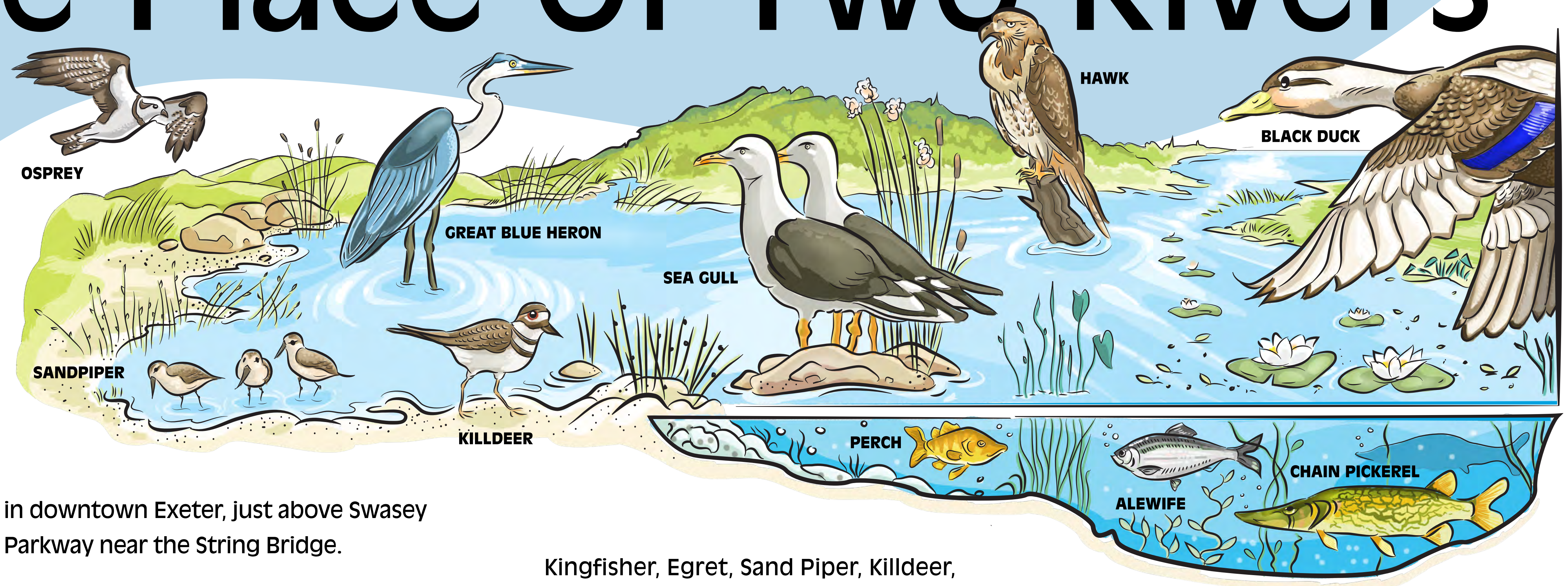


# The Place Of Two Rivers

## THE EXETER-SQUAMSCOTT RIVER



The Exeter River is a 128-square mile (81,726 acre) freshwater watershed which drains all, or portions of, 12 towns in the seacoast area of New Hampshire. The Squamscott River is a tidal tributary of the Great Bay Estuary which drains to the Atlantic Ocean. The Exeter River and the Squamscott River meet



in downtown Exeter, just above Swasey Parkway near the String Bridge.

### WHAT TYPES OF FISH AND WATERFOWL LIVE HERE?

In 2016, the Great Dam on the Exeter River was removed, restoring 21 miles of habitat for anadromous fish, which are fish that live in salt water but travel each year up the Exeter River to spawn. Species of anadromous fish include Alewife and Blueback Herring. The Exeter-Squamscott River provides habitat for over 17 fish species including Brook Trout, Small and Large Mouth Bass, Yellow Perch, Smelt, and Chain Pickerel.

A variety of shorebirds feed on animals and fish that live in the saltmarshes including the Mallard Duck, Black Duck, Blue-Wing Teal Duck, Green-Wing Teal Duck, Osprey, Bald Eagle, Great Blue Heron,

Kingfisher, Egret, Sand Piper, Killdeer, Cormorant, and many kinds of hawks, owls, and seagulls.

### WHAT IS THE IMPORTANCE OF A TIDAL SALTMARSH?

Saltmarsh is abundant along the shores of the Squamscott River. Flooded by the tidal waters of the Great Bay Estuary, it is a complex ecosystem containing a variety of plants and animals. A saltmarsh has low marsh grass which is submerged at high tide, and high marsh grass along its upper fringe. Saltmarsh plays an important role in protecting roads, buildings and homes by storing tidal floodwater during highest annual tides and during storm events. However, because of its proximity to development, saltmarsh is threatened by pollution running off of the land.

### WHAT IS SEA-LEVEL RISE AND HOW MAY IT EFFECT THE RIVERS AND THE ESTUARY?

Sea levels adjust locally and globally to changes in the Earth's environment. Sea-level rise is caused by several factors, including the melting of glaciers and sea ice, and an increase of ocean temperatures. Research in N.H. reports that sea levels may rise up to several feet, or more, by 2100 and projections range from a low of 1.7 feet to a high of 6.6 feet. In a natural environment, saltmarsh is able to move inland with rising sea levels, but in a "built" environment where obstacles such as roads and buildings prevent this process from happening, an increase in sea level could transform saltmarsh into mudflats or open water.