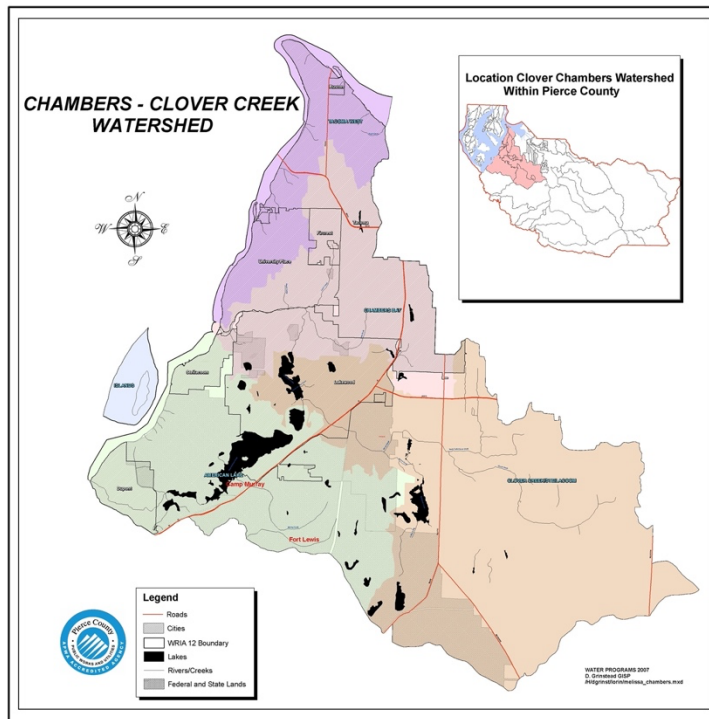


Watershed Scavenger Hunt: Titlow Park

8425 6th Avenue, Tacoma, WA 98465

This scavenger hunt allows you to explore a part of the Chambers Clover Creek Watershed in Pierce County, WA which includes 7 towns and 3 military bases.



What is a watershed? A watershed is an area of land that catches rain and snow, which drain into streams, rivers, lakes, marshes, bays, lagoons, soil, or groundwater beneath the surface. Watershed drainage systems are often interconnected. Watersheds combine water runoff with groundwater.

Why is a watershed important? Watersheds not only supply water for human consumption and services, but they also provide fish and wildlife habitat, contribute to water quality maintenance, help to moderate flooding, and can stabilize shorelines.

Titlow Park Facts:

- The 75-acre park includes Puget Sound shoreline, a pocket estuary or lagoon (the tidal mouth of a freshwater creek), wetlands, a grassy park and play area, a central forest (above and east of the beach), and a north forest (above the grassy park to the east).
- The lagoon is a part of an estuary restoration project intended to protect juvenile salmon.
- There are three beaches: South, Hidden, and North.
- An ephemeral creek (its sole source of water is from precipitation) runs through the property resulting in a variety of soils and supporting filtration systems.
- Crystal Springs originates from groundwater seeps higher up from slopes higher up from the park which flow about ½ mile into the lagoon.
- Streams, springs, and other bodies of water help to recharge the aquifers beneath us. As water seeps through soil and roots of plants and through the earth, pollutants are removed.

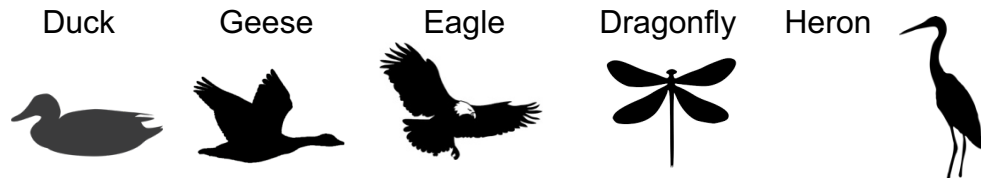
This scavenger hunt is designed for individuals or families to explore and discuss the natural features of our watershed.

From the Titlow parking lot, walk along the lagoon sidewalk and then continue to the Lagoon Loop Trail. Stop at each location and answer the questions.

Location 1: Which of the following can you see as you look out over the lagoon?
Large lagoon High tide. Does the water meet the plants along the shore?
No Low tide. Is there a muddy beach?
Swimming Green algae. Is there a floating green mass on the water surface
sign. or on the shoreline? This is why there is no swimming.

Location 2: Continue on the Lagoon Loop. Just past the bench on the right, turn left by the picnic table and walk to the water.

2A. What wildlife do you see?



2B. Observe the riparian zone (between the water's edge and where you are standing) in this smaller part of the lagoon. This area is an active place for wildlife and water filtration. Check each of the following that you observe.

- Vegetation along the bank. This can serve to capture and filter pollutants and serve as protection for fish, insects, and birds.
- Trees and shrubs. These not only provide habitat and filtration of toxins, but they also provide shade keeping the water temperature livable for water inhabitants.
- Logs, rocks, or other natural materials in the water. These materials provide places for water critters to shelter, birth their young, and find safety against predators.

Location 3: Continue walking north on the Lagoon Loop.

3A. As you leave the lagoon area and walk along the shady trail you are entering historical wetlands which now fluctuate over the seasons. Check all that you observe along the trail. Take a sharp left turn when you reach where the paths cross split.

- Ephemeral creek outflows. These occur several places along the trail and help to filter water into the ground. You may hear running water.
- A tree tunnel. Notice how trees and shrubs make a tunnel over the trail, conserving water and lowering the air temperature.
- Wooden bridges or a boardwalk. These structures help preserve the wetland beneath them.

3B. After taking a sharp left turn at the cross paths, take five slow steps and count how many different plants you see: _____. This part of the path has rich biodiversity which makes an attractive

habitat, helps to filter pollutants, and protects the sensitive soil of the wetland.

3C. Stop at the boardwalk and examine the wetland underneath. This part of the wetland area merges with the smaller lagoon. Note what you observe:

- Running water. This indicates an oxygenated environment for invertebrates and fish.
- Stagnant, barely flowing water. This means that oxygen diffusion is insufficient and not a livable habitat for some species.

Location 4:

Turn right when the Lagoon Loop ends at the large lagoon.

4A. Walk to the fenced in tide gate which was designed to control the tidal flow from Puget Sound into the lagoon. What do you see?

- Water rushing into the lagoon (the tide gate is open)
- Little or no water moving through the tide gate (the tide gate may be closed or the tide is out)

4B. Depending on the time of the year, you will see different conditions in the lagoon. What is currently present?

- A lot of geese. They love the grass and the lagoon for food.
- Green algae. The seasonal growth of algae is common in water that has direct sunlight and often nutrient enrichment sometimes from fertilizer runoff.
- Water above the shoreline. This may be due to flooding from water draining into the lagoon, heavy rains, or strong tides.
- A smelly odor. This may be due to algae growth.

There are many other ways water is filtered, supports habitat, and recharges the aquifers for water we rely on for everyday activities and a healthy ecosystem. As you continue around the park, look for the following:

- Beach shoreline** – The rocky surface of the beaches can serve as a nursery for fish and crustaceans, and the rising and ebbing tides bring plants and animals that are a food source for wildlife. The rocks can also protect erosion in conjunction with the algae beds just offshore. You may see a variety of seaweeds on the shore from these beds. Be on the lookout for seals, various fish, octopus, various sea birds, and even a whale.
- Forested areas** – These areas help clean our air through carbon sequestration and help to move surface water into the ground for filtration. Look for a variety of plants and mushrooms. Notice the many levels of plant populations from tall to ground level attracting a variety of wildlife. You may see some dead trees or ‘snags’ which provide birds and mammals shelter and a place to raise their young.

Further Exploration:

Pierce County Surface Water Quality – <https://www.tpchd.org/healthy-places/surface-water-quality>

Pierce County Watersheds - <https://www.piercecountywa.gov/1859/Watersheds>