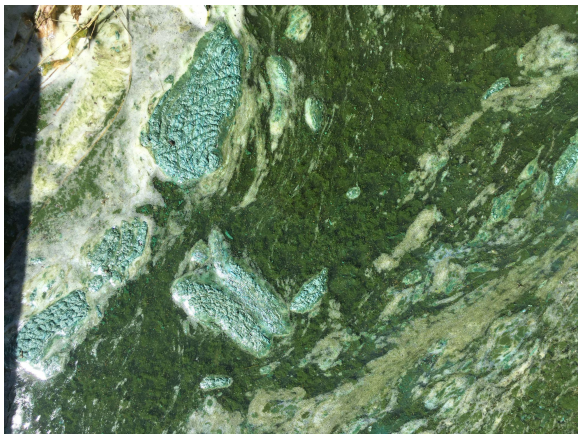
LakeObserver - Information Sheet

LakeObserver is a program from the Pigeon Lake Watershed Association (PLWA) designed for citizen scientists to monitor water quality and shoreline observations. Your observation will help us better understand the health of our lake. Observations are taken from the shoreline, ideally from your deck or dock. Please complete the form once a month or after a significant event to monitor changes in the lake. Have family and friends help for fun and to make a difference at Pigeon Lake!

WATER QUALITY

Clear water: is characterized by low concentrations of suspended soil particles and/or algae, where you are able to see through to the lake bottom.

Cloudy water: is marked by high levels of suspended particles that cloud visibility, where you are not able to see through to the lake bottom.



Blue-green algae: green scum on the surface of the water which turn may bluish when dry.

Gloeotrichia: numerous hair-like filaments creating a fuzzy appearance.

SHORELINE

Algae residue: algae blooms that have been pushed up onto the shoreline.

Erosion: erosion/removal of sediments from the shoreline caused by a number of factors including storms, wave action, rain, ice, winds, runoff, and loss of trees and other vegetation.

Undercut bank: a bank that rises vertically and overhangs the water. It is the result of soil erosion caused by water. The water cuts away soil from a stream or river bank and leaves an overhang behind.

Ice quake: the rapid movement of ice can create a tremendous bang and damages to the shoreline occur when there is a sudden release of energy from ice under stress. As ice is formed under dropping temperatures, the internal stresses are released by cracking of the ice.

INVASIVE PLANTS

Himalayan balsam: An escaped ornamental, this aggressive fast growing annual is found in shorelines. It grows 0.6 to 2 meters tall, rapidly outcompeting native species. This plant has shallow root systems so they can be controlled by hand pulling them out.

Flowering rush: Growing to 150 cm tall, flowering rush resembles a large sedge. It can be found submerged in or adjacent to water. The beautiful umbel of pink and white flowers make it appealing - but, remember that this plant is a prohibited noxious species and should under no circumstances be grown.

Common tansy: Can reach 1.5 m tall, with narrow toothed leaves and clustered yellow flowers. Control by repeated stem removal by mowing or hand cutting. If seeds are present, immediately bag to prevent chance of spread.

Oxeye daisy: Grows up to 1 m. Lower leaves are toothed with narrower upper leaves. Flowers are white with yellow centers. Control with removal by hand and digging before it goes to seed while removing the fibrous roots and rhizomes. Take care not to overly disturb the soil. Process will have to continue over years.

https://www.plwa.ca/preventing-noxious-weeds

INVASIVE AQUATIC SPECIES

Zebra or Quagga mussels: Both Zebra and Quagga Mussels are around 2-2.5 cm and will filter water by removing organisms such as plankton and algae. This process can result in increases in ammonia, nitrates and phosphates and lead to algae blooms.

Goldfish: This common aquarium fish has been introduced into Alberta water bodies, causing many negative effects which harm not only native fish, but also water quality.

Eurasian watermilfoil: The submerged stems, feathery leaflets, and spike of raised flowers of Eurasian Milfoil are features shared with the native Northern Watermilfoil. To tell the difference between them look at the number of leaflet pairs (12-16) means they are invasive.

Curly leaf pondweed: The fine serrations on the wavy leaves of the Curly Leaf Pondweed are a key identifying feature of this submerged plant. This plant grows in dense beds and remains evergreen throughout the winter.

https://www.plwa.ca/aquatic-invasive-species