



Environmental Advisory Committee Information Sheet Tea Coloured Water

Does tea-coloured water in a lake mean it is polluted?

No. The colour of water in a lake is not related to bacterial pollution or unsanitary conditions. It is caused primarily by decaying organic matter such as leaves, bark, humus and aquatic plants. Metals such as iron and manganese that occur naturally in the soils of the watershed and lake sediments may also contribute to a waterbody's colour.

Highly coloured waterbody's frequently have extensive wetlands along their shores or within their watersheds. It is the decomposition of the organic matter produced in these wetlands that contributes to the colour. Tea colour is often associated with shallow lakes with mucky lake bottoms. These lakes receive organic debris and they tend to fill in over geologic time. Large, deep lakes with sandy/rocky bottoms tend to have clear water.

Water colour can be influenced by any number of factors: some colours occur naturally; some may be human-induced or result from a combination of circumstances. For example, heavy rain events are known to wash organic substances into the water where they dissolve and act as a dye; seasonal algae blooms can result in such high concentrations of algae that the water becomes tinted with the colouration of the algal cells; or wind events may stir up fine particles off the bottom, re-suspending them into the water column. Colour may also be the result of inorganic materials (e.g., clay particles, etc.) from storm-water runoff or shoreline erosion.

Lakes that are surrounded by coniferous forests (evergreens such as pine, spruce, hemlock and fir trees) are generally brown in colour because pine needles that fall to the ground are very slow to degrade. This is also true of lakes surrounded by wetlands, where plants decompose very slowly. Decomposing plant and animal matter can give surface water and groundwater a tea-like yellow-brown hue, as well as a musty smell. The brown colouring comes from tannins leaching into runoff water from tree roots and decaying vegetation. This colouration is common, and can be observed in places like swamps or stagnant ponds.

(All information gleaned from various internet sources)