

Guide to the Physical Survey

Indicators--Water Appearance

Green: may indicate an overabundance of algae caused by enrichment of the stream. Fertilizer runoff from fields, inadequate sewage treatment, and animal wastes are common sources

Orange/Red: may indicate acid mine drainage, oil well runoff, natural staining due to source headwaters in swamps rich in tannin or iron, or blood from processing plants

Foam: if white and higher than 7-8 cm. above water surface, foam is generally caused by detergents. Thinner surface foam may be a mixture of natural oils and soil particles or pollen.

Muddy/Cloudy: may indicate erosion and sedimentation in those streams and rivers that are not naturally muddy. Construction sites, dredging activities, activity of bottom feeders like carp, farmland erosion, logging, and road-building are common contributors.

Milky/White: may indicate glacial sources of water, pulp and paper mill discharges, or dairy operations.

Multi-Color: may indicate oil floating on the surface from human dumping or oil well operations

Dark reds, purples, blues, and blacks: may indicate dyes from leather tanning, printing operations, clothing manufacturing, etc.

Indicators--Odors

rotten egg (sulfur): indicates sewage pollution

musky: indicates the presence of untreated sewage, livestock waste, or excess algal growth and decay

harsh/bitter/acrid: indicates industrial wastes

chlorine: the smell of chlorine may indicate excessive chlorination of waste effluent