



Conducting a Visual Water Quality Survey



A visual water quality survey can be done as part of daily IPM scouting on a golf course, or while doing routine yard work at home.

A Visual Survey of water quality requires little or no equipment and takes a minimal amount of time. It simply involves surveying the conditions of a stream, river, lake, or wetland, looking at the water and surrounding land, and noting what you see. Despite its simplicity, it is an important aspect of environmental monitoring.

By collecting information on a regular basis, you can develop a baseline of normal conditions and record changes over time. Any unusual conditions can be detected sooner and promptly followed-up with further testing. Thus, costly and damaging pollution problems can be avoided or minimized.

The following simple chart can be carried with you in the field or posted in a central location to provide essential information about water quality conditions that you see.

e-Source

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Visual Survey

If the water is...	It could be...	You should...
Green or blue-green	Nutrients released into the water causing an algae bloom	Check for possible fertilizer or manure run-off, sewage discharge or septic failure.
Orange-red	Acid drainage or the presence of synthetic dyes	Check for industrial waste or for landfill seepage draining into the water.
Grey/Black	Sewage or livestock waste	Check for sewage discharge or animal populations.
Light brown (muddy or cloudy)	Sediment deposition caused by erosion	Look for disturbed ground left open to rainfall (<i>e.g.</i> , construction).
Yellow-brown to dark brown	Acids released from decaying plants. Also common in streams draining from a marsh or swamp	If it's not fall, search upstream for some foreign item in the water
If you can smell...	It could be...	You should...
Rotten egg odor	A natural occurrence in swampy or marshy land or sewage pollution	Look for sewage or septic inputs.
Musky odor	Untreated sewage, livestock waste, algae or other conditions	Check your watershed for sewage/septic input and animal populations
Chlorine	Over-chlorination of sewage input water or swimming pool discharge	Look for sewage input or a recently drained swimming pool.
Fishy Odor	Excess algal growth or presence of dead fish	Search for dead fish or look for cause of excess algae.
If you notice...	It could be...	You should...
Fish kill	Naturally occurring, (accompanies annual spawning) or toxic dumping/nutrient overloading	Check upstream for discharges or seepage; check fish lifecycle in your area. Check dissolved oxygen levels in the water. Depressed dissolved oxygen levels are the primary cause for fish kills.
Increase or decrease in wildlife sightings	Many reasons: habitat changes, water quality changes, natural population increases during breeding season or decreases after migration	Have any changes, such as construction or development, occurred since you last monitored? Note the time of year. Can this be correlated with breeding or migration?
If the water is...	It could be...	You should...
Increase or decrease in water flow	Weather-related or possible obstruction or discharge into stream	Note weather conditions such as temperature and recent rainfall. Check upstream for blockage and/or discharge source.
If surface or bottom has...	It could be...	You should...
Yellow coating (bottom)	Sulfur or natural color	Check for industrial waste.
Multi-color reflection (surface)	Oil or a natural algae	Check for a petroleum smell. If so, look for road runoff or canisters of oil.
White cottony masses	"Sewage fungus"	Check for sewage or septic inputs.
White or cream-colored foam	A natural occurrence (cream-colored) or detergent or industrial waste	If higher than 3 inches and white, check for industrial or residential discharge.