

Waterways Watch Guide

The protection of our region's waters can only be achieved with the active and committed support of concerned citizens. Today, agencies charged with the responsibility of protecting water quality are often too busy, without help, to act as successful waterways watch dogs. Knowledgeable individuals who know who to call, when and what type of information needs to be communicated can help to overcome this limitation. By acting as waterway watchers individuals can provide an essential service, acting as eyes and ears for environmental resource agencies.

Below are some indicators which might indicate poor water quality. If something doesn't look right, that should be a signal to investigate further. If something is found, make careful observations on the color, odor and other relevant characteristics that might be informative. Next, inform the appropriate agency. Most likely, your county health department will be the appropriate response agency or will be able to tell you who to call. It is important to not approach suspected violators or attempt to investigate on private property if you don't have permission. **Most importantly: Be Alert and Act Responsibly.**

Land Use and Water Quality

The land use surrounding a waterway plays a major role in determining its water quality. Below are some land uses common to our area, and a brief description of what to look for to determine if land use is negatively impacting water quality.

Urban

Urban stormwater runoff and snow melt most often enter rivers and lakes through large concrete storm drains. During and after rains look for cloudy water, oily sheens and unusual colors and smells coming from these storm drains. Urban runoff contains contaminants such as road salt, litter and oil and grease from roads and parking lots. See fact sheet # 5.

Agricultural

Soil erosion and fertilizer runoff from croplands are the most common agricultural pollutants. Muddy water is a result of soil erosion. Green, algae filled water is common in waterways which receive too much plant nutrition from fertilizer runoff. Manure from barnyards and croplands also contributes to nutrient enrichment in turn leading to algal blooms. Fish kills can be a result of misapplied pesticides.

Residential

Waterways in residential and suburban areas commonly have problems of nutrient enrichment. Nutrients originate from over-fertilizing lawns, dumping grass clippings and leaves into waterways and overloaded or failing septic systems. See Fact Sheet #3.

Forestland

If road building, home construction or extensive forestry practices are occurring in the area, look for sedimentation and turbidity as evidence of upstream soil erosion. Fish kills may result from pesticide misapplication.

Industrial

In industrial areas watch for stream discoloration and unnatural odors. Industries are commonly permitted to discharge treated wastewater into nearby streams and ponds. What contaminants are being released into the environment can be learned from reviewing the business' NPDES (National Pollution Discharge Elimination System) permit. These permits are usually on file at your local health department or watershed council.

Fieldguide to Waterway Observations

Observation

Muddy Water

Trash & Litter

Oily Sheen

Green Water

Fish Kills

Rotten Egg Smell

Red-Yellow Water

Foaming Water

Brown Water

Possible Causes

Soil Erosion

Illegal Dumping
Careless Littering
Urban Runoff

Used Motor Oil Dumping
Runoff From Parking Lots
Floor Drains from Service Stations.

Excessive Nutrients From Fertilizers
Sewage Pollution
Farmyard Runoff

Suffocation
Pesticides
Industrial Pollution
Heat Stress

Swamp Gas (Methane)
Sewage Pollution

Industrial Waste
Naturally Occurring Bacteria

Decaying Plants
Soaps & Detergents

Acids From Decaying Plants

Things To Do

Investigate upstream. Record observations.
If erosion originates from agricultural lands, contact Soil Conservation Service
If erosion originates from a construction site, contact the local building department to insure that proper soil erosion controls are in place.

Erect anti-littering and dumping signs.
Organize annual waterway cleanups in your community.
Erect barriers to areas where dumping commonly occurs.
Phone County Health Department if dumping continues.

Investigate upstream to determine location of origin.
Promote used motor oil recycling in you community by identifying gas stations which will take used motor oil.

Contact Soil Conservation Service.
Prohibit duck and geese feeding in local parks
Promote wise fertilizer use and proper animal manure storage.

Contact Surface Water Division of Department of Natural Resources
Freeze fish sample for conservation officials.
Investigate if pesticide spraying has occurred near the waterway.
Limit nutrients which lead to algal blooms and deoxygenation
Plant trees and shrubs on waters edge to shade water and lower temperatures

Investigate further to pinpoint origin and nature of odor.
If origin is unnatural contact County Health Department.

Investigate upstream. Record observations.
Take a water sample if the water is believed to be polluted.
Call the County Health Department.

Check to see if the foam has the odor of soap or detergent.
If the odor has a perfume or soap smell then investigate upstream.
If origin is found then take a sample and call County Health Department.

Naturally occurring process. Do nothing.