



TAKE CARE OF TEXAS: EDUCATOR MATERIALS

HANDOUT

Water Pollution

Name: _____ Date: _____

1. Examine the topographic map of the survey area. Name all of the possible types of pollution that could occur within the watershed boundary and name potential sources for those types of pollution.

Factory

School

Gas Station

House

Hospital

Auto Shop

Pollution Types

Potential Sources



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As an environmental investigator, you receive a phone call about possible pollution in a stream. Using your Reference Tables, enter the possible pollutant(s) and its source for each of the water pollution scenarios below. The pollutants can be nutrients, oxygen-demanding substances, suspended solids, sedimentation, or toxic substances.

#	Scenario	Possible Pollutant(s)	Possible Pollutant Source(s)
1	A rainbow film is on the surface, and a nearby ditch carries stormwater from the highway into the stream.		
2	There is a musty odor; animal feedlots and construction sites are nearby.		
3	A storm caused trees to fall into the stream over a month ago; the water now resembles coffee.		
4	There is a faint odor of bleach; aquatic plants near an outfall are very light colored.		
5	Water is bright green; next to the stream are very lush residential yards and a construction site.		
6	A stream near a construction site is very turbid and light brown. Also nearby is a residential area.		
7	There is a smell of rotten eggs; a road and an old residential area (that uses septic systems) are next to the stream.		
8	An unusual smell is coming from the stream, very sharp and pungent. Nearby are a city and outfalls for both an industrial source and a wastewater treatment plant.		
9	The stream contains fungus that feels slimy and resembles the texture of cotton. It is found near an outfall.		
10	The bottom of a stream became very muddy, and the water is turning green. Nearby are forests and croplands.		

Answer Key

Responses will vary.
See responses below.

#	Scenario	Possible Pollutant(s)	Possible Pollutant Source(s)
1	A rainbow film is on the surface, and a nearby ditch carries stormwater from the highway into the stream.	Toxic substance (motor oil)	Motor oil leaking from highway vehicles (nonpoint source)
2	There is a musty odor; animal feedlots and construction sites are nearby.	Oxygen-demanding substance (organic materials)	Manure from the animals (nonpoint source)
3	A storm caused trees to fall into the stream over a month ago; the water now resembles coffee.	Oxygen-demanding substance (organic materials)	Decaying leaves from the trees (nonpoint source)
4	There is a faint odor of bleach; aquatic plants near an outfall are very light colored.	Toxic substance (chlorine)	Chlorine from the wastewater treatment plant; using too much disinfectant (point source)
5	Water is bright green; next to the stream are very lush residential yards and a construction site.	Nutrients (nitrogen and/or phosphorus compounds)	Overfertilized residential yards (nonpoint source)
6	A stream near a construction site is very turbid and light brown. Also nearby is a residential area.	Suspended solids (particles like clay and silt)	Soil erosion from the construction site with inadequate erosion and sediment controls (nonpoint source)
7	There is a smell of rotten eggs; a road and an old residential area (that uses septic systems) are next to the stream.	Oxygen-demanding substance (raw sewage or organic materials)	Raw sewage coming from leaking septic systems in the residential area (nonpoint source)
8	An unusual smell is coming from the stream, very sharp and pungent. Nearby are a city and outfalls for both an industrial source and a wastewater treatment plant.	Toxic substance (chemicals or pesticides)	Chemicals from an industrial source (point source) or from the city (nonpoint source)
9	The stream contains fungus that feels slimy and resembles the texture of cotton. It is found near an outfall.	Oxygen-demanding substance (organic materials)	An outfall from a wastewater treatment plant or an industrial source; did not remove enough organic materials (point source)
10	The bottom of a stream became very muddy, and the water is turning green. Nearby are forests and croplands.	Sedimentation (organic and inorganic particles) and nutrients (nitrogen and/or phosphorus compounds)	Soil erosion and fertilizer from the croplands (nonpoint source)