

APPENDIX B

GLOSSARY

acute toxicity	An indicator of the adverse effects on living organisms that result from single or multiple exposures to a toxic substance in a short space of time (usually less than 24 hours). See also chronic toxicity .
alkalinity	A measure of the acid-neutralizing capacity of water. Bicarbonate, carbonate, and hydroxide are the primary causes of alkalinity in natural waters. Concentrations are expressed as mg/L of CaCO ₃ .
ammonia-nitrogen (NH₃-N)	Ammonia, naturally occurring in surface water and wastewater, is produced by the breakdown of compounds containing organic nitrogen. It is commonly referred to as ammonia-nitrogen which indicates the relationship to total nitrogen.
biochemical oxygen demand (BOD)	A measure of the amount of oxygen consumed in the biological processes that break down organic matter in water. The greater the BOD, the greater the degree of pollution.
BOD₅	The amount of dissolved oxygen consumed in 5 days by biological processes breaking down organic matter.
centroid	The midpoint of that portion of the stream width which contains 50 percent of the total flow.
channel	That portion of the landscape that contains the bank and the stream bottom. It is distinct from the surrounding area due to breaks in the general slope of the land, lack of terrestrial vegetation, and changes in the composition of substrate materials.
chemical oxygen demand (COD)	A measure of the oxygen required to oxidize all compounds in the water, both organic and inorganic.
chloride (Cl⁻¹)	One of the major inorganic ions in water, especially wastewater. Concentrations can be increased by industrial processes. High chloride concentrations can affect metal objects and growing plants.
chlorophyll <i>a</i>	A photosynthetic pigment that is found in all green plants. Its concentration is used to estimate phytoplankton biomass (all of the phytoplankton in a given area) in surface water.

chronic toxicity	An indicator of the adverse effects on living organisms as a result of long-term exposure to a toxic substance (months or years). See also acute toxicity .
contact recreation	Recreational activities involving a significant risk of ingestion of water, such as wading, swimming, waterskiing, diving and surfing. A use protected by the TSWQS. <i>E. coli</i> (freshwater) and enterococci (saline waters) are used as indicators of potential waterborne pathogens. See also indicator organisms .
contaminant	Any physical, chemical, or biological substance or matter that has an adverse effect on water, air, or soil.
criteria	Water quality conditions that are to be met in order to support and protect desired uses.
cubic feet per second (ft³/s)	A commonly used measure of the rate of flow.
decibel (dB)	A logarithmic unit of measurement that expresses the magnitude of a physical quantity (usually power) relative to a specified or implied reference level. Its logarithmic nature allows very large or very small ratios to be represented by a convenient number, in a similar manner to scientific notation. It is a dimensionless unit. Decibels are useful for a wide variety of measurements in acoustics, physics, electronics and other disciplines.
detritus	Decaying organic material.
dissolved oxygen (DO)	The oxygen freely available in water. Dissolved oxygen is vital to fish and other aquatic life and for the prevention of odors. Traditionally, the level of dissolved oxygen has been accepted as the single most important indicator of a water body's ability to support desirable aquatic life.
ecoregion	A relatively homogeneous ecological area defined by similarity of climate, landform, soil, potential natural vegetation, hydrology, or other ecologically relevant variables.
eddy current	A circular water movement formed at the side of a main current. Eddies may be formed where the main stream passes obstructions (logs, rocks).
effluent	Wastewater (treated or untreated) that flows out of a treatment plant or industrial outfall (point source), before entering a water body.

epilimnion	The warmer oxygen-rich region of a lake or reservoir that extends from the surface to the thermocline.
estuary	A region of interaction between rivers and ocean waters near the shore, where tidal action and river flow create a mixing of fresh and salt water.
indicator organisms	<i>Escherichia coli</i> (<i>E. coli</i>) and enterococci are used as indicators of possible contamination by the fecal material of warm-blooded animals. Although generally not harmful themselves, they indicate the possible presence of pathogenic (disease-causing) bacteria, viruses, and protozoans that also live in human and animal digestive systems. Their presence in water suggests that pathogenic microorganisms might also be present and that swimming and eating shellfish might pose a health risk. Since it is difficult, time-consuming, and expensive to test directly for the presence of a large variety of pathogens, water is tested for <i>E. coli</i> or enterococci instead. See also contact recreation .
inorganic	Lacking carbon.
nitrate-nitrogen (NO ₃ -N)	A compound containing nitrogen that can exist as a dissolved solid in water. Excessive amounts (>10 mg/L) can have harmful effects on humans and animals.
nitrite-nitrogen (NO ₂ -N)	An intermediate oxidation state in the nitrification process (ammonia, nitrite, nitrate).
nonpoint source	Any pollution source that is diffuse and does not have a single point of origin, or is not introduced into a receiving stream from a specific outfall. The pollutants are generally carried off the land by stormwater runoff. The commonly used categories of nonpoint sources are agriculture, forestry, urban, mining, construction, disposal, and saltwater intrusion.
nutrient	Any substance used by living things to promote growth. The term is generally applied to nitrogen and phosphorus in water and wastewater, but is also applied to other essential and trace elements.
oligotrophic	A water body characterized by few nutrients entering it, few shoreline aquatic plants (or none), and rare plankton blooms.
organophosphate pesticides	Pesticides that contain phosphorus; short-lived, but some can be toxic when first applied.

orthophosphate (O-P)	The most important form of inorganic phosphorus, making up 90 percent of the total. The only form of soluble inorganic phosphorus that can be directly used by plants, it is the least abundant of any nutrient and is commonly the limiting factor.
outfall	A designated point of effluent discharge.
pH	A measurement of hydrogen ion concentration used to describe the acidity or alkalinity of a solution. A pH value less than 7 is acidic, while a pH value greater than 7 is basic (alkaline). A pH value of 7 is neutral.
phosphorus	Essential nutrient to the growth of organisms and can be the nutrient that limits the primary productivity of water. In excessive amounts—from wastewater, agricultural drainage, and certain industrial wastes—it also contributes to the eutrophication of lakes and other water bodies.
point source	A specific location from which pollutants are discharged. It can also be defined as a single identifiable source of pollution (for example, a pipe or a ship).
salinity	The amount of dissolved salts in water, generally expressed in parts per thousand (ppt).
sediment	Particles or clumps of particles of sand, clay, silt, and plant or animal matter carried in water, which are deposited in reservoirs and slow-moving areas of streams and rivers.
segment	Waters designated by the TCEQ in the Texas Surface Water Quality Standards (TSWQS) that include most rivers and their major tributaries, major reservoirs, and lakes and marine waters. Segmented waters have designated physical boundaries, specific uses, and numerical physicochemical criteria (for example, DO, temperature, <i>E. coli</i> , chloride, sulfate) in the state's water quality standards.
specific conductance	A measure of the electrical current-carrying capacity, in microsiemens/cm ($\mu\text{S}/\text{cm}$), of 1 cm^3 of water at 25°C. Dissolved substances in water dissociate into ions with the ability to conduct electrical current. Specific conductance is a measure of salinity in water. Salty water has high specific conductance. Also used to estimate total dissolved solids.
7Q2 (seven-day, two-year low flow)	The lowest average stream flow for seven consecutive days with a recurrence interval of two years, as statistically determined from historical data.

sulfate (SO₄⁻²)	An ion derived from rocks and soils containing gypsum, iron sulfide, and other sulfur compounds. Widely distributed in nature.
surface water quality standards	Established limits of certain chemical, physical, and biological parameters in a water body; established for the different designated uses of a water body (for example, aquatic life, contact recreation, public water supply).
total dissolved solids (TDS)	The amount of material (inorganic salts and small amounts of organic material) dissolved in water. Measured by laboratory analysis or estimated using specific conductance times a conversion factor, typically 0.65.
total hardness	The sum of the calcium and magnesium concentrations, expressed as calcium carbonate in mg/L.
total suspended solids (TSS)	A measure of the total suspended solids in water, both organic and inorganic. In laboratory terms it is defined as the portion of total solids retained by a filter.
volatile organic compound (VOC)	A substance containing carbon, hydrogen, and oxygen that easily becomes a vapor or gas.
volatile suspended solids (VSS)	The portion of the TSS that is lost after ignition. This represents the organic part of the TSS.

