

Glossary

Acceptable Management Practices (AMP) - methods of silvicultural activity generally approved by regulatory authorities and practitioners as acceptable and common to that type of operation. AMPs may not be the best methods, but are acceptable.

Accepted Agricultural Practices (AAP) - land management practices adopted by the Secretary of Agriculture, Food and Markets in accordance with applicable State law.

Aggradation – a progressive buildup or raising of the channel bed and floodplain due to sediment deposition. The geologic process by which streambeds are raised in elevation and floodplains are formed. Aggradation indicates that stream discharge and/or bed-load characteristics are changing. Opposite of degradation.****

Alkalization – to make or cause a pH value to increase to greater than 7.

Anadromous – a fish species that feeds and grows to maturity in the ocean, then migrates into freshwater rivers and lakes to spawn.

Aquatic biota - all organisms that, as part of their natural life cycle, live in or on waters.

Atmospheric deposition – the transfer of airborne pollutants onto the land and into surface waters, usually by being carried down in precipitation.

Basin - one of seventeen planning units in Vermont. Some basins include only one major watershed after which it is named such as the White River Basin. Other Basins include two or more major watersheds such as Basin 10 including the Ottauquechee and Black Rivers.

Best Management Practices (BMP) - a practice or combination of practices that may be necessary, in addition to any applicable Accepted Agricultural or Silvicultural Practices, to prevent or reduce pollution from nonpoint source pollution to a level consistent with State regulations and statutes. Regulatory authorities and practitioners generally establish these methods as the best manner of operation. BMPs may not be established for all industries or in agency regulations, but are often listed by professional associations and regulatory agencies as the best manner of operation for a particular industry practice.

Bioassessment - surveys of the macroinvertebrate and fish communities of lakes, wetlands, rivers, and streams in order to evaluate the biological health, or biological integrity, of the resource surveyed. This type of survey is called biomonitoring or biosurveying.

Biological Integrity – See Chapter 1.

Causes – the pollutants or conditions that stress, impair or otherwise have an impact on the aquatic biota, the aquatic habitat, swimming, fishing, the fishery,

boating, drinking water supply, fish consumption or other uses of the river or stream.

Channelization – the process of changing (usually straightening) the natural path of a waterway.

Classification - a method of designating the waters of the State into categories with more or less stringent standards above a minimum standard as described in the Vermont Water Quality Standards.

Conductivity – a measure of the water's ability to conduct an electrical current, directly related to the total dissolved ions in the water. *

Contact recreation (Primary) – this water classification protects people from illness due to activities involving the potential for ingestion of, or immersion in, water. Primary contact recreation usually includes swimming, water-skiing, skin-diving, surfing, and other activities likely to result in immersion. (EPA Water Quality Standards Handbook, 1994)

Designated use - any value or use, whether presently occurring or not, that is specified in the management objectives for each class of water as set forth in §§ 3-02 (A), 3-03(A), and 3-04(A) of the Vermont Water Quality Standards.

Direct Discharge – the introduction of pollutants to waters of the US from any point source through a defined conveyance or system such as, outlet pipes, sewers and ditches; a point source.

Dissolved Oxygen – the concentration of free molecular oxygen dissolved in water.*

Dystrophic - a lake or pond having brownish acidic waters, a high concentration of humic matter, and a small plant population.***

Easement – a restriction placed on a piece of property to protect its ecological and open-space values. It is a voluntary, legally binding agreement that limits certain types of uses or prevents development from taking place now and in the future. In a conservation easement, a landowner voluntarily agrees to donate or sell certain rights associated with his or her property, such as the right to subdivide, and a private organization or public agency agrees to hold the landowner's promise not to exercise those rights.*****

Eutrophic - A high level of nutrient availability and biological productivity in

Existing use - a use that has actually occurred on or after November 28, 1975, in or on waters, whether or not the use is included in the standard for classification of the waters, and whether or not the use is presently occurring

Fluvial erosion hazard - refers to the endangerment of human investments and public safety resulting from land use choices and expectations that conflict with the dynamic and oftentimes catastrophic physical adjustments of stream channel and flood plain dimensions, elevations, locations and longitudinal slope, in response to rainfall/runoff events and sometimes ice jams.

Fluvial geomorphic equilibrium - the condition in which the physically dynamic nature of fluvial systems is freely expressed over time in response to the range of watershed inputs and climatologic conditions, and as influenced by topographic, geologic, and existing human imposed boundary conditions.

Fluvial geomorphology - a science that seeks to explain the physical interrelationships of flowing water and sediment in varying land forms.

Hypolimnetic - the layer of water in a thermally stratified lake that lies below the thermocline, is noncirculating, and remains perpetually cold.***

Impaired water / impairment - a water that has documentation and data to show: a violation of one or more criteria in the Vermont Water Quality Standards, or conditions that cause lack of full support for any given designated use for the water's class or management type.

Impervious – a surface that does not allow water or other liquids to penetrate through

Improved Barnyards - a series of practices to manage and protect the area around the barn, which is frequently and intensively used by people, animals, or vehicles, by controlling runoff to prevent erosion and maintain or improve water quality. Practices may include: heavy use area protection, access roads, animal trails and walkways, roof runoff management, and others.

Index of Biotic Integrity (IBI) – a synthesis of diverse biological information that numerically depicts associations between human influence and biological attributes. It is composed of several biological attributes or “metrics” that are sensitive to changes in biological integrity caused by human activities.*

Indirect Discharge – land-based sewage treatment and disposal, including septic systems, leachfields, treatment facilities and spray disposal systems that use soil as part of the waste treatment process to provide final effluent renovation and polishing before it reaches groundwater and, eventually, surface water.

Isolation Zone - horizontal distances between drinking water sources and potential sources of contamination.

Littoral – the shoreline zone of a lake where sunlight penetrates to the bottom and is sufficient to support rooted plant growth.**

Lotic - pertaining to or living in flowing water.***

Low Impact Development - a set of innovative stormwater management techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source through small, cost-effective landscape features located at the lot level. These include practices such as raingardens, bioretention facilities, dry wells, filter/buffer strips, grassed swales, and rain barrels.

Macroinvertebrate –animals without backbones and large enough to see with the naked eye.*

Macrophyte – a rooted aquatic plant that grows in or on the water.*

Mesotrophic An intermediate level of nutrient availability and biological productivity in an aquatic ecosystem.

Natural condition - the condition representing chemical, physical, and biological characteristics that occur naturally with only minimal effects from human influences.

Natural flow - the flow past a specified point on a natural stream that is unaffected by stream diversion, storage, import, export, return flow, or change in use caused by modifications in land use. ****

Nonpoint source pollution - waste that reaches waters in a diffuse manner from any source other than a point source including, but not limited to, overland runoff from construction sites, or as a result of agricultural or silvicultural activities.

Oligotrophic A low level of nutrient availability and biological productivity in an

pH - a measure of the hydrogen ion concentration in water on an inverse logarithmic scale ranging from 0 to 14. A pH under 7 indicates more hydrogen ions and therefore more acidic solutions. A pH greater than 7 indicates a more alkaline solution. A pH of 7.0 is considered neutral, neither acidic nor alkaline.

Point source - any discernable, confined and discrete conveyance including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which either a pollutant or waste is or may be discharged.

Private Drinking Water Source – include dug, driven, and drilled wells and springs.

Public Water Supply - any water supply system with fifteen or more connections or that serves at least 25 individuals daily at least 60 days per year.

Reference condition - the range of chemical, physical, and biological characteristics of waters minimally affected by human influences. In the context of an evaluation of biological indices, or where necessary to perform other evaluations of water quality, the reference condition establishes attainable chemical, physical, and biological conditions for specific water body types against which the condition of waters of similar water body type is evaluated.

Riparian – located on the banks of a stream or other body of water.

Riparian Buffer Zone - the width of land adjacent to lakes or streams between the top of the bank or top of slope or mean water level and the edge of other land uses. Riparian buffer zones are typically undisturbed areas, consisting of trees, shrubs, groundcover plants, duff layer, and a naturally vegetated uneven ground surface, that protect the waterbody and the adjacent riparian corridor ecosystem from the impact of these land uses.

Runoff - water that flows over the ground and reaches a stream as a result of rainfall or snowmelt. ****

Secondary contact recreation – this water classification is protective when immersion is unlikely. Examples are boating, wading, and rowing. These two broad uses can be logically subdivided into an almost infinite number of subcategories (e.g., wading, fishing, sailing, powerboating, rafting.). Often fishing is considered in the recreational use categories. (EPA Water Quality Standards Handbook, 1994)

Sediment / Sedimentation - soil, sand, silt, algae, and other particles either suspended in the water column or their deposition on the bottom of rivers, streams, lakes, ponds, or wetlands.

Source Protection Area (SPA) - the area delineated around a ground or surface water supply in which contaminants are reasonably likely to move.

Sources – the land uses, human activities, or occurrence of conditions that are the origin of the causes of impairments, impacts or stresses on river and stream in the basin.

Terrigenous - derived from the land, especially by erosive action. Used primarily of sediments.***

Thermal modification - the change in water temperature.

Total maximum daily load (TMDL) - the calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet Vermont Water Quality Standards.

Total phosphorus – the total amount of phosphorus dissolved in solution (reactive) and in particulate form.*

Total suspended solids – the total amount of particulate matter that is suspended in the water column.*

Transparency – a depth measurement taken by lowering a white and black, 8-inch diameter, Secchi disk into the water to the point just before it cannot be seen.

Trophic – a relative level of productivity.*

Turbidity - the capacity of materials suspended in water to scatter light usually measured in Nephelometric Turbidity Units (NTU). Highly turbid waters appear dark and “muddy.”

Type / Typing - a category of water management requirements based on both the existing water quality and reasonably attainable and desired water quality management goals. Through the basin plan all Class B waters must be allocated into one or more Water Management Types pursuant to § 3-06 of the Vermont Water Quality Standards.

Waste Management System -a planned system in which all necessary components are installed for managing liquid and solid waste, including runoff from concentrated waste areas and silage leachate, in a manner that does not degrade air, soil, or water resources. The purpose of the system is to manage

waste in rural areas in a manner that prevents or minimizes degradation of air, soil, and water resources and protects public health and safety. Such systems are planned to preclude discharge of pollutants to surface or ground water and to recycle waste through soil and plants to the fullest extent practicable.

Water quality parameter – the physical, chemical or biological attribute measured to determine water quality.

Water Quality Standards - the minimum or maximum limits specified for certain water quality parameters at specific locations for the purpose of managing waters to support their designated uses. In Vermont, Water Quality Standards include both Water Classification Orders and the Regulations Governing Water Classification and Control of Quality.

Waters - all rivers, streams, creeks, brooks, reservoirs, ponds, lakes, springs, wetlands and all bodies of surface waters, artificial or natural, which are contained within, flow through or border upon the State or any portion of it.

Watershed - all the land within which water drains to a common waterbody (river, stream, lake, pond or wetland).