Metropolitan Washington Council of Governments

Glossary of commonly used terms and acronyms in the Bay restoration effort

Anoxia - A condition where no oxygen is present in the water. Also called a "dead zone."

Atmospheric deposition - When pollutants in the air fall onto the land or water. Pollution that falls with rain or snow is called wet deposition, and pollution that falls without precipitation is called dry deposition.

Baseflow - The portion of river flow that comes from groundwater, rather than runoff.

Best management practices (BMPs) - The most effective and practical ways to control pollutants and meet environmental quality goals. BMPs exist for forestry, agriculture, stormwater and many other sectors.

Biological nutrient removal (BNR) - Technology that removes nitrogen and phosphorus during wastewater treatment.

Cap load - The maximum amount of nutrients and sediments that can be allowed to flow into a waterway and still have it meet water quality criteria.

Cap load allocations - Based on each tributary's nutrient and sediment input to the Bay, the total Chesapeake Bay pollution load is divided accordingly to each tributary and jurisdiction. Cap load allocations show where the nutrient and sediment loads will most effectively be reduced to achieve restoration goals.

Chesapeake Bay Program (CBP) – The federal-state partnership originally established under the 1983 Chesapeake Bay Agreement for restoring the Bay. Its current mandate derives from the 2000 Chesapeake Bay Agreement.

Chesapeake Executive Council (EC) – The governing body for restoration activity under the various Chesapeake Bay agreements, it is comprised of the governors of Maryland, Virginia and Pennsylvania; the Mayor of the District of Columbia; the Environmental Protection Agency administrator; and the chair of the Chesapeake Bay Commission, a tri-state legislative body.

Chlorophyll a - The predominant type of chlorophyll found in algae. Chlorophyll a is used as an indicator of nutrient pollution in the Bay and its tributaries.

Concentrated animal feeding operation (CAFO) – A farming operation encompassing livestock numbers above a certain threshold that are subject to federal and state regulations under the Clean Water Act.

Designated use - The description of an appropriate intended use by humans and/or aquatic life for a water body. Designated uses for a water body may include recreation, shellfishing, water supply and/or aquatic life habitat.

Dissolved oxygen (DO) - The amount of oxygen that is present in the water. It is measured in units of milligrams per liter (mg/L), or the milligrams of oxygen dissolved in a liter of water. Just like humans, all of the Bay's living creatures need oxygen to survive.

Enhanced nutrient removal (ENR) – The most advanced current technology for removing nitrogen and phosphorus during wastewater treatment; exceeds biological nutrient removal.

Eutrophication - The process of excess nutrients accelerating the growth of algae, ultimately depleting the water of dissolved oxygen.

Groundwater - Water that is stored underground in cracks and spaces in rock and soil.

Impaired waters - Waterways that do not meet state water quality standards. Under Section 303(d) of the Clean Water Act, states, territories and authorized tribes are required to develop prioritized lists of impaired waters.

Load - The amount of a type of pollution that the Bay and its tributaries receive.

Low-impact development (LID) - Innovative stormwater management practices that mimic a site's pre-development hydrology. LID uses design techniques that reuse runoff and allow it to soak into the soil, helping to protect local water quality. Also known as environmental site design (ESD).

Maximum Extent Practicable (MEP) -A water quality standard that applies to all MS4 operators under NPDES permits. The standard has no exact definition, as it was intended to allow permit holders to adjust their stormwater programs to their particular site, creating flexibility.

Municipal Separate Storm Sewer System (MS4) – The system of pipes and conveyance structures local governments employ to drain stormwater away from roads, parking lots and buildings. Includes best management practices for the removal of pollutants from stormwater. In larger communities, these systems are subject to federal-state NPDES permits.

- Phase I MS4 permits, first issued in 1990, require medium and large cities or certain counties with populations of 100,000 or more to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for their stormwater discharges.
- Phase II MS4 permits, first issued in 1999, require regulated small MS4s in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their stormwater discharges.

National pollutant discharge elimination system (NPDES) – Under the Clean Water Act, the regulatory program that requires permits for the discharge of pollutants from so-called point sources, such as wastewater plants or municipal stormwater systems

Nitrogen - A type of nutrient contributing to the Bay's poor water quality. While nitrogen is needed for plant growth, human activities—from driving cars to applying fertilizers—contribute more nitrogen than the Bay's waters can handle. Elevated nitrogen levels cause more algae to grow, blocking out sunlight and reducing oxygen for fish, crabs and other Bay life.

Non-point source - A source of pollution that cannot be attributed to a clearly identifiable, specific physical location or a defined discharge channel. Non-point source pollution includes nutrients that run off croplands, feedlots, lawns, parking lots, streets and other land uses. It also includes nutrients that enter waterways via air pollution, groundwater or septic systems.

Nutrients - Chemicals that plants and animals need to grow and survive. However, excess amounts of nutrients can be harmful to aquatic environments. Elevated levels of nitrogen and phosphorus, two types of nutrients, are the main cause of the Bay's poor water quality and loss of aquatic habitats.

Nutrient management – Systems for minimizing the runoff or leaching of nutrients applied as fertilizer through best practices and other means. Although most often employed in agriculture, there are also urban nutrient management systems to address turf grass fertilization.

Phosphorus - A type of nutrient contributing to the Bay's poor water quality. While phosphorus is vital to plant life, human activities—from applying fertilizers to using household cleaners—contribute more phosphorus than the Bay's waters can handle. Elevated phosphorus levels cause more algae to grow, blocking out sunlight and reducing oxygen for fish, crabs and other Bay life.

Point source - A source of pollution that can be attributed to a specific physical location—an identifiable, end-of-pipe "point." The vast majority of point source discharges of nutrients are from wastewater treatment plants, although some come from industries.

State implementation plan (SIP) – River basin-specific cleanup plans that detail the actions needed to achieve nutrient and sediment cap load allocations that must accompany issuance of a TMDL and provide "reasonable assurance" that cap load allocations will be met and water quality standards achieved. (See also "watershed implementation plans.")

Stormwater - Any precipitation in an urban or suburban area that does not evaporate or soak into the ground, but instead pools and travels downhill. Stormwater is also referred to as urban stormwater, runoff and polluted runoff.

Submerged aquatic vegetation (SAV) - Technical term for underwater bay grasses. SAV help improve water quality and provide important food and habitat for fish, shellfish, invertebrates and waterfowl.

Suspended sediments - Tiny particles of clay and silt that become suspended in the water, reducing water clarity and the amount of sunlight that can reach underwater bay grasses. Excess suspended sediment is one of the largest contributors to the Bay's impaired water quality. Synonymous with total suspended solids, or TSS.

Total maximum daily load (TMDL) - Defines the pollutant load that a water body can acquire without violating water quality standards, and allocates the pollutant loading between contributing point sources and non-point sources. EPA established a TMDL for the entire Chesapeake Bay watershed in December 2010.

Use attainability analysis (UAA) - A structured scientific assessment of the factors affecting attainment of the designated use component of water quality standards, based on physical, chemical, biological and/or economic factors.

Wasteload allocation (WLA) – Under a TMDL, the portions of the total pollutant load derived from regulated point sources and therefore subject to federal control. The other portions of the load, derived from sources that are not federally regulated, are known as load allocations (LA).

Water quality criteria - Water quality conditions necessary to protect aquatic plants and animals.

Water quality standards - Standards that define the goals for a water body by designating its uses, setting criteria to protect those uses, and establishing provisions to protect water bodies from pollutants.

Watershed implementation plans (WIPs) – The specific form of state implementation plans developed as part of the Bay TMDL . Phase I WIPs were finalized by each of the Bay states and the District of Columbia in December 2010; two further phases are currently envisioned.

COG staff contacts:
Karl Berger
Heidi Bonnaffon
Tanya Spano