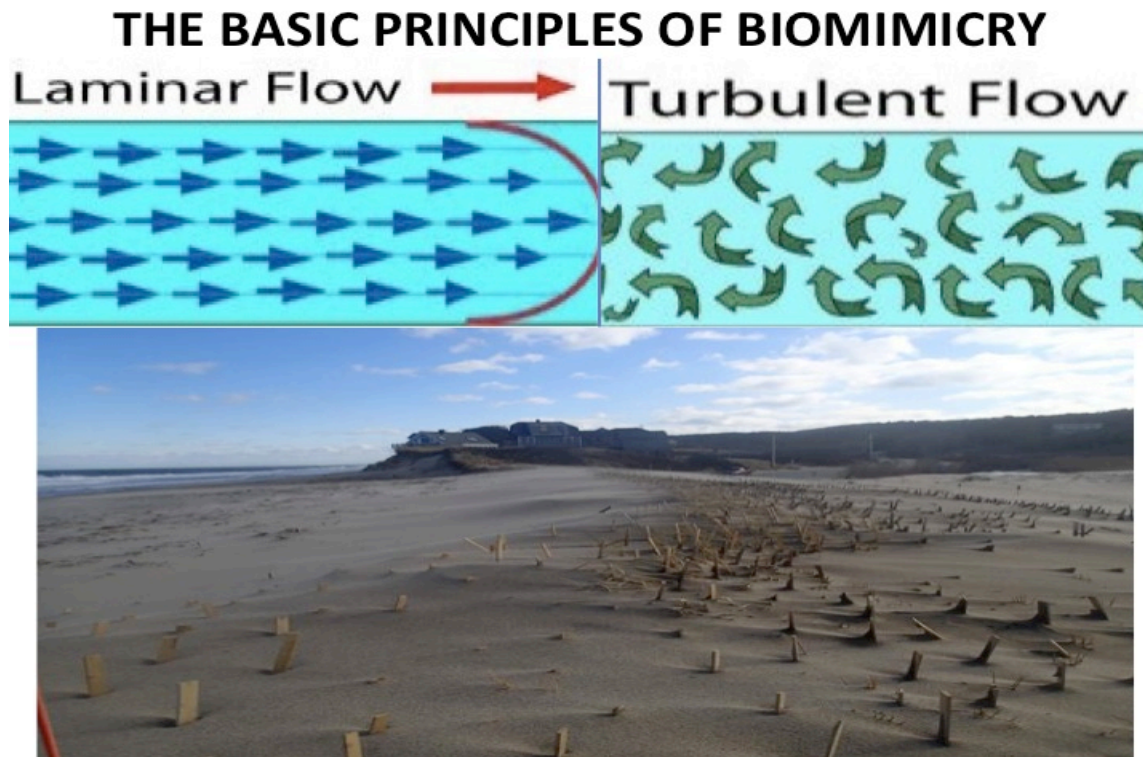


# UNDERSTANDING ECOLOGICAL VOCABULARY

A reference publication, not intended to be fully inclusive or exclusive. Gordon Peabody, Safe Harbor, 2015, Edited by Samantha Thywissen [gordonpeabody@gmail.com](mailto:gordonpeabody@gmail.com)  
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**Abiotic elements** are the non-living components of an area, such as exposure, landform, elevation and soil chemistry.

**Abundance** refers to the population size of one type of plant (or animal) found in one particular area. Abundance may mean an area is productive but populations with no diversity are stress sensitive.

**Accretion** refers to the gradual accumulation by deposition of new land, eroded elsewhere and transported by wind and water.

**Adaptive management** focuses on lateral alternatives to achieve project goal.

**Aesthetics**–non scientific term with discretionary, not established standards.

**Alert distance**, the human approach distance which catches an animal's attention. They stop feeding or whatever they have been doing.

**Allopathic**, referring to usually invasive plants. which produce chemicals that control which other plants can grow near them.

**Anadromous**, refers to fish which live in the Ocean but migrate through fresh water rivers to breed, in rivers, like Salmon or Herring in ponds.

**Angled Cuts**–refers to stepped cuts between restricted height areas to prevent tunneling.

**Anomalous** events without linkage to scale or patterned history.

**Appeal Proof**–careful crafting–specifying which protected public interest is protected in which jurisdictional areas, by which mitigations.

**Biodiversity** refers to a healthy variety of different plants (or animals) found within a habitat.

**Biomass**, refers to the total volume and weight of living organisms. We use carbohydrate biomass referring to plants and protein biomass for animals.

**Biotic elements** are the living components of an area, including bacteria, microbes and all plants and animals.

**Bioturbators**, marine animals, such as crabs, which stir up bottom sediments as part of their feeding process. This often de–stabilizes bottom vegetation.

**Brumation**, referring to turtles, hibernating beneath water in soft mud.

**Canopy**–lower, mid and upper levels refer to trees.

**Catadromous**, fish which live in fresh water but migrate to salt water, to breed, such as Eels, or seasonally, such as Salter (Brown) Trout.

**Coat Racking**—trim term used to describe lack of vertical articulation.

**Conservation of Biomass**— principle maintaining overall vegetative mass within a habitat while transitioning from vertical to horizontal growth OR intentional invasive removal synchronized with native revegetation plan.

**Cut Nodes**—Healed cuts from previous work. Can be used as a reference for management.

**DBH**—term used to identify tree diameter at breast height.

**Delineations** are specific boundaries defining protected resource areas. Usually determined by interactive elements: 1. specific (obligate) vegetation; 2. distinct elevation change; 3. current or historic (core sample) presence of black hydric soil or water; landform.

**Diversity** refers to the variety of different plants (or animals) found in one particular area.

**Diurnal** usually refers to tidal patterns or any other daily 24 hr cycles.

**Ectotherm**, referring to animals, usually amphibians or reptiles, which must depend on external sources of heat. In cold weather they slow down.

**Endangered species** are species close to tipping points, requiring protection.

**Endangered habitat**—linked to endangered species needing habitat to survive.

**Erosion** is the result of the weight of a point source discharge, accelerating down any slope and displacing silt and sediment. This principle can also be applied to wind displacement of soil or sand.

**Erosion control** requires site specific, zero discharge systems.

**Eutrophication**, or nutrient enrichment stimulates the growth of aquatic plant biomass in excess of healthy habitat limits.

The decaying vegetation generates excess CO<sub>2</sub>, which

suffocates aquatic organisms. Most commonly occurring in contained ponds with adjacent residential development (septic systems and lawns).

**Exotic** refers to intentionally planted decorative value vegetation, needing fertilizers. These can become invasive, displacing habitat.

**fecundity** refers to the reproductive success of a species, not just effort.

**Floodplain** areas border rivers. These low areas accommodate excess floodwater and contain sediment deposited by floods.

**Flush distance**, referring to as the human approach distance which triggers an animal's instinct to flee (usually used with birds).

**Groin** is a perpendicular structure, usually of stone, built out 90 degrees from an eroding coastal beach to trap long shore sediment. One side of a groin does trap sediment but the other side shows a lower sediment from scouring.

**Ground Cover**—lowest level vegetation area with no vertical articulation.

**Ground Water Recharge** infiltrates impervious sheet flow, perhaps collected at point sources, into the ground water table.

**Growth Regulators**—hormonal products which slow plant growth.

**Habitat** applies to a land area where specific types of exposure and stress conditions determining specific vegetation, which in turn creates shelter and food sources for specific animals.

**Habitat transition** is a major, well thought out strategy to generate a completely new ecological paradigm. Such as replacing invasive habitat with native plantings or replacing vista conflict vegetation with vegetation that never needs trimming.

**Heathland**—low profile vegetation common to open habitat.

**Horizontal migration** is the movement of ground water beneath the surface, always down slope, towards a wetland.

**Hydrology** studies surface and subsurface movement of water.

**Indigenous**, plants and animals which have coevolved during the past 1,000 years and achieved a sustainable balance of abundance and diversity.

**Indigenous** refers to naturally occurring, site specific, animals and vegetation, creating habitats in which they survive and reproduce.

**Infiltration** refers to the natural path of rainfall, from sky to earth to ground water table. Impervious surfaces interrupt this natural path and require mitigation for storm water.

**Intertidal** refers to area exposed at low tide, between high and low tide.

**Invasive**, new plants and animals exhibit aggressive behavior, replacing indigenous species but not contributing to habitat or diversity.

**Invasive** refers to often fast growing, non-indigenous plants, which displace habitat. Limiting nutrients will discourage them.

**invasive management** long term strategy to displace invasive species.

**Invasive–non indigenous** vegetation which shoulders out native vegetation and usurps native habitat.

**invasive species** of plants or animals do not contribute to ecosystems.

**Learning, single loop** classical response to problem's effects .

**Learning, double loop** innovative response to problem's cause.

**Linkage, internal** refers to diverse energy pathways for sustainability.

**Linkage, lateral** refers to parallel energy pathways.

**Linkage, vertical** refers to trophic levels within system.

**Linkage to scale** refers to the integrity of connection with adjacent habitat.

**Lolly popping** is a pruning term used when mid story limbs are removed.

**Micro Habitats** are sub sets with slightly different stress factors.

**Mitigations:** specific measures designed and implemented to prevent negative impacts to specific resource area public interests.

**Percolation** is the vertical rate of gravity driven water movement through site-specific soil and subsurface soil profiles.

**Performance** refers to the specific manner in which a particular resource area actually performs a particular function in the public interest. This qualifies a resource area for protection under the Act.

**Point source** refers to collected sheet flow discharged from a single point, by design or chance.

**Post Leaf Drop**– temperature related timing of annual vegetation cycle.

**Preferential Cutting**–selective cutting targeting invasives, and not native plants.

**Protected resource** areas are specific landforms or water bodies qualifying for protection under the Wetlands Protection Act.

**Public interests** are any one of a group of specific functions that a resource area may provide to qualify for protection under the Act:

**Flood Control**; Habitat; Storm Damage Prevention; Prevention of Pollution; **Water Quality**; Shell and Fin Fisheries; & local bylaws.

**Rare habitat** is linked to rare species requiring specific habitat to survive

**Rare species** populations are stressed by loss of habitat.

**Seed Heads** are reproductive structures in grasses. In plant “ready to seed”.

**Sentinel species**, A critical Ecological term, referring to particular species in each habitat which are especially sensitive to change.

**Sheet flow** is created by a mass of rain moving across an impervious, paved or roofed surface.

**Storm water**: when more rain falls than can be absorbed by the soil. 1 inch per hour or 3 inches over three days (100-year storm).

**Stress** is a normal but variable cofactor for sustainable species.

**Surge** is a layer of sea water added to tidal levels, generated by onshore wave loading or slow moving, low barometric pressure storm.

**Surprise factor** a poorly defined term regarding exponential negative or positive feedbacks.

**Survival rate** refers to planting success rates. 90% or better is expected from conservation mix seeding. 75% or better is expected from (appropriate) commercial plantings and 50% is expected from indigenous transplants (using our indigenous transplant protocol), at end of growing season.

**Sustainability** refers to any system which has built in cofactors allowing continued performance under changing conditions.

**Stump Sprout**– basal cut stump, allowed to proliferate by re-sprouting.

**Synoptic** refers to a limited observation which does not take into account linkage to scale or longer term patterns over time.

**Tidal prism** is the cumulative effect of basin cross section and tidal access.

**Tipping point** refers to the imbalance within any single species, between cumulative mortality rates and the reproductive rates. A "vanishing point".

**Translocation**, usually refers to chemical, mineral or nutrient transport, internally, through biological systems, usually plants.

**Trend** is a longer term pattern incorporating consistent events.

**Trophic levels** are habitat layers of transition from basic nutrients and sunlight to carbohydrates and from carbohydrates to protein.

**Uncertainty** refers to synergistic variables which may or may not contribute to any event in time.