Glossary

angle of repose
The maximum angle or slope at which a material, such as soil or loose rock, remains stable and does not collapse. (EPA)

annual
A plant that completes its life cycle (grows, flowers, and makes seeds) in one season; then dies.

bluff
Any high bank or bold headland with a broad, precipitous cliff face, overlooking a lake. (Bluff Recession Act)

bluff recession
The ongoing movement of a shoreline in a landward direction, due to the eroding away of bluff materials.

bluff recession hazard area
Any area or zone where the rate of progressive bluff recession creates a substantial threat to the safety or stability of nearby or future structures or utility facilities. (Bluff Recession Act)

BMPs
Best Management Practices. These are the currently recommended practices for managing an area or resource.

breakwater
A structure that is designed to protect the shore, harbor or beach from waves.

buffer zone (riparian buffer)
An area of permanent vegetation that borders a body of water, field, etc. And is intended to protect that area from the erosive effects of wind, rain and runoff.

canopy
The layer formed by the uppermost leafy portion of trees or shrubs.

channeling
A method of intercepting water, as from downspouts and driveways, before it infiltrates the ground, and piping it to a desired location. (Along the bluff, water is usually piped directly to lake level.)

coastal erosion
The wearing away of land along the coast.

crest (of the bluff)
The part of the bluff where the tableland begins to slope downward to the lake.

deciduous
In the northeast, plants that loose their leaves in the winter. Not evergreen.

dewatering
The interception and removal of groundwater.

diamict
A layer of sediment that is often of glacial origin, in which there are grains of various sizes mixed together (said to be "poorly sorted").

dormancy
A state of reduced physiological activity. A dormant seed will not grow, even if given the proper amounts of water, warmth and light.

double dormancy
A type of dormancy that is being maintained by two factors, for example a chemical in the seed and a hard seed coat.

downdrift
Along the shore in the direction of the predominant movement of the sand and sediments.

ecotype
A distinct genetic subgroup within a certain species that is adapted to a specific environment yet is still considered part of that same species.

evapotranspiration
Water lost in vapor form, both from the leaves of plants via transpiration and by evaporation from the surfaces of the vegetation and the ground.

glacial till
The mix of rocks and ground materials deposited when a glacier melts. (See also 'diamict'.)

groin
A structure that is designed to protect the shore by trapping littoral drift. It usually is built perpendicular to the shoreline.

groundwater
Water that has been absorbed into the soil over a large area and moves through the ground below the surface.

hard stabilization
The installation of any physical structure on or along the bluff (or elsewhere) to prevent erosion.

hardwood cutting
A cutting taken from a woody plant during its dormant period (i.e. during the winter months).

herbaceous
Flowering plants that do not produce a woody stem during their life cycle.

hydrology
The study of the distribution, circulation, and properties of water.

impermeable
A characteristic of soil or any other material that prevents water from moving through it. Clays are often impermeable.

impervious
A surface characteristic that prevents water from entering the soil. Concrete driveways are usually impervious.

invasive species
An alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health (EPA).

littoral
Having to do with the shore, especially of a large body of water.

littoral flow
A natural process in which sand and sediment particles are slowly moved along the shore by water currents and waves. Along the Pennsylvania Lake Erie shoreline, littoral flow moves sediments to the north east.

littoral drift
The sediments that are moved along the shore by littoral flow.

microbial diversity
All of the different types of microscopic organisms in a certain environment.

mycorrhizae
The beneficial symbiotic relationship between the roots of most plants and certain species of fungi. The plant gives sugars to the fungi and the fungi gives minerals and water to the plant.

native species
Species that have grown in the local area for a long period of time; not species introduced recently from some other country or location.

nitrogen fixation
The process of converting unusable nitrogen from the atmosphere (N_2 gas) into forms of nitrogen that plants (and then animals) can use (NH_4^+, ammonia). The only living organisms that can do this are certain bacteria.

non-native species
Species that have been recently introduced into an area from some other country or location.

organic matter
The part of the soil that is composed of materials that were once living organisms or produced by living organisms. Organic matter consists of carbon compounds in some state of decomposition.

perennial
A plant that lives for many years. It may die to the ground during the winter, but the root and crown persist and grow back the next year.

pH
A measure of how acidic a solution is on a scale of 0-14 where 7 is neutral. A pH below 7 is acidic and a pH above 7 is basic. pH is actually the hydrogen ion concentration of the solution, equal to the $-\log [H^+]$.

permeable
A characteristic of soil or any other material that allows water to move through it easily. Sandy soils are usually very permeable.

propagation
With respect to plants, propagation is increasing the number of plants through seeds (sexual) or through cuttings, division, or layering (asexual).

ravine
A deep narrow cleft in the earth's surface, usually formed by a stream or runoff.

reclamation plants
Plants used to help restore disturbed land to a previous, environmentally healthier condition.

rooting hormone
A plant hormone that can be used to stimulate the formation of roots on plant cuttings. Rooting hormones can be purchased in powder or liquid forms, and usually contain an auxin such as indole-3-butyric acid and/or 1-napthaleneacetic acid.

seep
A location where groundwater emerges on the face of the bluff or other bank, or any place where groundwater seeps to the surface.

semi-hardwood
A cutting taken from a woody plant after its growth period, when the new season's wood has hardened (i.e. during mid-to-late summer).

setback
The legally required minimum distance that a building must be from a property line or, on bluff-front property, from the crest of the bluff.

softwood
A cutting taken from a woody plant during its growth period, or shortly after growth stops, while the new wood is still very soft (i.e. during the spring and early summer).

stratigraphy
The study of the layers (strata) of the sediments that have been sequentially deposited over time.

subsoil
The layers of sediment that lie beneath the topsoil and above the bedrock. It contains little or no organic matter.

surface runoff
Water from rain or other sources that flows over the surface of the ground and does not soak into the ground.

successional process
The gradual process by which one plant community replaces another over time. Usually, the early plant community changes the soil or environment in a way that favors the next plant community.

suckering root system
A root system that produces buds that form new shoots. In a plant with a suckering root system, new plants will often arise all around the parent plant.

tableland
The flat or rolling land at the top of a bluff.

taproot
A single, vertical, main root, often with many lateral branches, formed by some plants.

tip layering
A method of propagating plants by bending the shoot tip down and burying it in the ground with just the tip emerging. The buried stem will form roots, producing a new plant that can be separated from the parent plant.

toe of the bluff
The part of the bluff at the base where the steep slope meets the beach.

topsoil
The upper layer of the soil, which contains organic matter and is richer in nutrients than layers below. Most of the roots of plants, and their mycorrhizal fungi, are found in this layer.

transpiration
The evaporation of water from plant tissues, usually through the leaves.

watershed
All of the land area that is drained by one waterway and all of its tributaries.