

# “What Makes A Quality Lake?”

## DVD Vocabulary – High School



Introduces the benefits of native aquatic plants; problems caused by some exotic aquatic weeds; and introduces the major methods of aquatic plant management.

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<b>Algae</b>	<b>Lake depth</b>	<b>Sedimentation rates</b>
<b>Lake eutrophication</b>	<b>Limnologist</b>	<b>Secchi disc</b>
<b>Degradation</b>	<b>Macrophytes</b>	<b>Seepage Lakes</b>
<b>Eutrophic lake</b>	<b>Mesotrophic lake</b>	<b>Soil types</b>
<b>Geology</b>	<b>Nitrogen</b>	<b>Trophic State</b>
<b>Groundwater</b>	<b>Nutrients</b>	<b>Water clarity</b>
<b>Flushing rate</b>	<b>Oligotrophic lakes</b>	<b>Water color</b>
<b>Hypereutrophic lake</b>	<b>Phosphorous</b>	
<b>Lake Management</b>	<b>Population Growth</b>	

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**Algae** – microscopic plants (or plant-like organisms) that live both in water and on land.

**Lake eutrophication** – nutrient enrichment of a lake leading to increased algae and plant growth.

**Degradation** – chemical decomposition of an organism or nutrient

**Eutrophic lake** – a lake with a high level of biological productivity. These lakes will either have few plants and “murky” green water or lots of plants and clearer water. Water clarity is typically from 3 to 8 feet.

**Geology** – scientific study of the origin, history and structure of the earth; a geologist is a person who studies geology.

**Groundwater** – water that resides at different depths underground; it can be collected with wells, tunnels, or drainage devices and it also flows naturally to the earth’s surface via small openings or “pores” in the rock (known as seeps) or springs.

**Flushing rate** – the speed at which water (and nutrients) move through an aquatic system

**Hypereutrophic lake** – a lake with extremely high levels of biological productivity. These lakes tend to have very low water clarity, the potential for lots of fish and wildlife, and they may also have an abundance of aquatic plants.

**Lake Management** – the practice of handling, supervising and controlling activities related to lakes including nutrients, plant and animal life.

**Lake depth** – average depth of a lake; lake depth can affect nutrient concentrations in the water.

**Limnologist** – a scientist who studies freshwater aquatic systems including ponds, rivers and lakes.

**Macrophytes** – aquatic plants large enough to be seen to the naked eye (bigger than algae).

**Mesotrophic lake** – a lake with a moderate amount of biological productivity. These lakes have a moderate amount of algae, aquatic plants, or both. Water clarity ranges from 8 to 13 feet.



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**Nitrogen** – an element that stimulates the growth of aquatic plants, algae, as well as all other types of plants.

**Nutrients** – elements that algae and all other types of plants need for growth, including aquatic plants.

**Oligotrophic lakes** – have the lowest level of biological productivity. These lakes typically have clear water (visibility greater than 13 feet), few aquatic plants, few fish, not much wildlife. Bottom sediments are usually sandy.

**Phosphorous** – an element that stimulates the growth of aquatic plants, algae, as well as all other types of plants; this element is naturally abundant in soils, in some parts of Florida.

**Population Growth** – increase in the number of organisms including humans, animals and plants that inhabit a territory or habitat.

**Sedimentation rates** – rate at which the dead plant matter (including algae) falls to the bottom of lake forming sediment

**Secchi disc** – a round, white disk that is lowered into the water at the end of a string and used to determine water clarity. When the disk disappears from view, the length of the string is measured (between the disk and the water surface); this distance is known as the Secchi depth.

**Seepage Lakes** – lakes that get their water from groundwater movement or rainfall; these lakes have a very slow flushing rate.

**Soil types** – sand, silt or clay soils can be acidic or alkaline; the type of soil directly affects the type of sediments found in a lake.

**Trophic State** – the degree of biological productivity found within a waterbody; the amount of algae, aquatic macrophytes, fish and wildlife a waterbody can produce and sustain.

**Water clarity** – refers to the clearness or transparency of water

**Water color** – color of water due to dissolved organic compounds called tannins

Reference web sites:

<http://plants.ifas.ufl.edu/guide/trophstate.html>

<http://plants.ifas.ufl.edu/hoyercon.html>

<http://lakewatch.ifas.ufl.edu/circpdf/folder/Clarityapdx.pdf>

<http://lakewatch.ifas.ufl.edu/LWcirc.html>

