

### Nutrients in compost can be washed into fresh water systems causing Algae Blooms in fresh water ponds and lakes

Did you know that Phosphorus causes Algae Blooms in bodies of Fresh Water?

- The sources of Phosphorus in freshwater pollution are : chemical fertilizers and natural composts made with animal manures (cow, horse, chicken).
- You apply phosphorus to your lawn and gardens, then rain and irrigation systems wash it through the soil, or along paved driveways and roads, right into the ground water. Here, it joins streams, rivers, and lakes providing excess food for pond algae. The resulting algae bloom follows the same cycle as a saltwater algae bloom. These tiny aquatic plants a vital link in the aquatic life cycle flourish with extra phosphorus in fresh water (or extra nitrogen in salt water.) This is called a "bloom".
- When the algae die, bacteria consume it, and in the process use up the oxygen in the water. Aquatic life *cannot* LIVE without oxygen. Fish and amphibians that can swim away will leave. Stationary life perishes. Murky water prevents sunlight penetration, the water is murky, loaded with bacteria. It is not safe to drink, fish or swim in. Your green lawn or organic vegetable garden has contributed to the fetid water that was once a serene duck pond.

## What is in Your Compost?

### Compost of leaves and plants has the lowest levels of phosphorus

Isn't all compost good? Natural?

- Yes, yes, yes! **Recycle the nutrients** on your property, absolutely!
- Use your compost as a basic building block of a healthy eco-system.
- Choose compost over chemicals. Phosphate mining destroys once green and lush landscapes. World reservoirs will be depleted before this century ends.
- What you make your Compost out of can affect your personal contribution to algae blooms in your local lakes!
- You can safely make compost with leaves and plants, in terms of phosphorus levels, and "safely" apply it to a depth of 2 inches on your gardens.



- If your compost contains cow or horse manure, applying *over one half inch* can overload your ground water with phosphorus.
- **Composts with chicken manure overload phosphorus** if it is spread over the depth of just *one eighth of an inch* on your lawns or garden beds. If you make compost or buy it, please be aware of the affect this will have on the fresh water eco-systems in your area, on the duck pond down the road.
- **Phosphorus in compost is 80 to 100% available** for plants to use. It does not need to be broken down by micro-organisms first. In fact, high levels of phosphorus are not detrimental to plant life, but are a catalyst to the destruction of a functioning fresh water ecosystem: for example, that duck pond down the road.

### Now Keep Your Compost Nutrients & Water On-Site!

Minimize phosphorus loss with more plants, less pavement

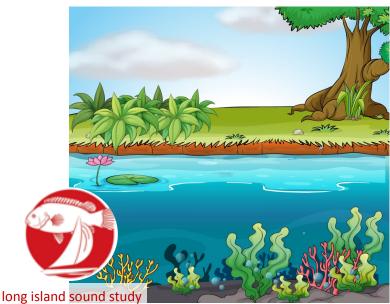
Your yard is part of a huge watershed that feeds streams and rivers running south into the Sound

- By minimizing your run-off, your compost's nutrients remain with your plants, where you want it.
- Use crushed stone instead of pavement or concrete. Try individual paving stones, mow a path of grass.
- For lawns and paths, use low growing plants that don't mind foot traffic, like thymes, mosses, dichondra, sedums, portulaca, lysmachia, dwarf mondo grass.
- Build swales in your yard and driveway slopes to slow the movement of water off-site.
- Install a Rain Garden a water collection basin with plant roots ready to drink up nutrient-rich water you would otherwise lose down the driveway, into the storm sewer, into that duck pond down the road.
- If you have moving water on site, a river or stream for example, let a buffer of plants grow along the banks. The plants will take up the phosphorus in the ground water before it enters the stream.
- Manage your irrigation system: don't water the road, overwater the ground, run it in the rain.

# Tips for healthy plants, healthy fresh water eco-systems!

#### To create a vibrant Life Cycle of plants, mammals, birds, fish and amphibians

- A Soil Test \*\*determines Phosphorus levels *then* you can CHOOSE your COMPOST WISELY!
- Green and Brown: Use compost made primarily of vegetative matter green and brown.
- Avoid chicken(especially), cow, horse and other animal manures in your compost. If you do have composted manures, then spread the compost *very* thinly.
- Keep your compost nutrients and water in your garden, on your property, feeding your plants.
- Excess phosphorus in our fresh water system (ground water that moves into streams, rivers, ponds and lakes) creates algae blooms that lead to the loss of Oxygen in bodies of fresh water and to the die-off of aquatic life, plant, fish, amphibian and animal.



#### **Everything in balance**

Water recirculates - or flushes through the ecosystem naturally without added and unnecessary nutrients

*Results in Lush plant growth in the landscape,* 

Healthy aquatic plants,

Water rich in oxygen, microbes and insects,

Healthy fish, frogs, salamanders, birds, water fowl, mammals

A Vibrant Ecosystem Community You Can Create, Support and Maintain with simple Wise Choices.



PLANT SCIENCE AND LANDSCAPE ARCHITECTURE

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\*\*SOIL TESTS : UCONN Soil Nutrient Analysis Lab <u>https://soiltesting.cahnr.uconn.edu/</u> or CT AG Experiment Station <u>www.ct.gov/caes/soiltesting</u> Prepared by Carole Barber, Master Gardener, UConn Program; Coastal Certificate 2017, Judy Preston, CT SeaGrant Collage Program Basic statistics thanks to Tom Morris, Professor Emeritus, UConn

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