

<p>PUTNAM VALLEY CENTRAL SCHOOL DISTRICT 146 PEEKSKILL HOLLOW ROAD PUTNAM VALLEY, NY 10579</p>	
<p>MS4PY7 STORMWATER PROGRAM</p>	
<p>FACT SHEET #5 APRIL 2017</p>	
<p>THE EXCESSIVE NUTRIENT PROBLEM AND SOLUTIONS</p>	
<p>FOR MORE INFORMATION, CONTACT YOUR STORMWATER COORDINATOR:</p> <p>PATRICK BELLINO AT: 845-528-8143 OR AT pbellino@pvcasd.org</p>	<p>1. EXCESSIVE NUTRIENT PROBLEM</p> <p>New York, like many other states, is working with the USEPA, to better define the levels of nutrients that result in the impairment of water uses. Nutrients (phosphorus and nitrogen) are a natural part of healthy lakes, rivers, streams and estuary ecosystems. However excessive nutrients can cause water quality problems that negatively affect water supplies, recreational uses and aquatic life. High levels of phosphorus and nitrogen in waters can produce nuisance algal blooms and increase aquatic weed growth, which in turn result in the following water problems:</p> <ul style="list-style-type: none"> • Water Quality Impairment: Nutrients stimulate algae growth. As the algae die and sink to the bottom of a water body, they become a food source for bacteria. As the bacteria multiply, they deplete oxygen in the water and create anaerobic (oxygen free) conditions. The algal blooms which rise to the surface of a water body, not only block the sunlight, needed by aquatic plants and organisms, but also produce odors as well as decreasing the clarity of the water. This results in fish kills and other water quality impacts • Recreational Value Impact: In addition to algal blooms, excessive nutrient levels, over time, can produce excessive weed growth. Weeds, cause problems around docks and deny boaters and swimmers access to the waterway. Weeds can be cut back by herbicide spraying or with mechanical cutters. Mechanical cutters only kill weeds down to the roots, but most weeds will grow back a short time. Spraying with herbicides will kill

weeds, but herbicides also use up oxygen and are harmful to fish and the water quality, impacting boating and swimming and the recreational value of a water body

2. KEY SOURCES OF NUTRIENTS

Phosphorus and nitrogen enter the environment in many ways. The key sources of these nutrients are:

- **Emergency Wastewater Treatment Plants (WWTPs) By-Passes:** Phosphorus and nitrogen are present in human waste. During emergency conditions (breakdown of equipment and/or excessive flows), WWTPs are forced to by-pass their normal treatment processes. This results in nutrients being discharged into our waterways.
- **Defective Septic Systems:** Improperly maintained septic systems contribute nutrients from washout of overflowing septic fields
- **Pet Waste:** Pet and animal droppings are rapidly absorbed by rainfall and are carried into our storm drains
- **Building Floor Cleaners and Detergents:** Floor washing detergents should be properly disposed as directed by the manufacturer's instructions and not discharged into storm drains, as many of the floor cleaners may contain phosphorus
- **Car Washing:** Wash your vehicles on the lawn and not on your driveway, to prevent the direct discharge of

phosphorus containing wash water into nearby storm drains

- **Decomposing Grass and Leaves:** Decomposing grass and leaves should not be piled near any waterway, as decomposing vegetation contains phosphorus and nitrogen
- **Lawn Fertilizers:** Fertilizers contain phosphorus and nitrogen and account for up to 50% of soluble phosphorus in stormwater runoff. These nutrients are released to the soils, and if not utilized by the grasses, are leached into the stormwater runoff. In many areas, sufficient phosphorus and nitrogen is present due to the many years of over fertilization applied to the lawns
- **Phosphorus in Laundry and Dishwashing Detergents and Hand Soaps:** Many of the laundry and dishwashing detergents and hand dish soaps contain phosphorus. But in recent years, manufacturers have almost totally replaced these detergents with phosphorus-free detergents.

3. NYS NUTRIENT RUNOFF LAW

Before buying fertilizer, check the bag for a set of three numbers showing the percentage of nitrogen (N), phosphorus (P) and potassium (K). Buy the bag with "0" in the middle. Why pay for a chemical that your lawn does not need? Only newly established lawns or those with poor soil need phosphorus. Follow the requirements of the NYS law:

- **Soil Test:** Conduct a soil test and apply lawn fertilizer containing phosphorus, only if your soil does not have enough phosphorus
- **Restricted Application Season:** Do not apply any lawn fertilizer during the winter months of December 1 to April 1

- **Impervious Areas:** Do not apply fertilizer on sidewalks, driveways or other impervious surfaces. If fertilizer spills onto these surfaces, you must sweep it up to prevent the fertilizer from washing into drains or waterways. Do not hose it off
- **Restricted Application Near a Waterway:** Do not apply any lawn fertilizer within 20 feet of any water body unless:
 - **10-foot Buffer:** There is at least a 10-foot buffer of shrubs, trees or other plants between the area you are fertilizing and the water or
 - **Fertilizer Deflector Shield:** Fertilizer can be applied no closer than 3 feet from the water using a device with a spreader guard, deflector shield or drop spreader
- Retailers who sell fertilizers must display phosphorus-containing fertilizer separately from phosphorus-free fertilizers and must post a sign near the display.

4. APPLICATION OF NYS NUTRIENT RUNOFF LAW

The NYS Nutrient Runoff Law applies to:

- **Homeowners** applying fertilizer themselves
- **Landscapers** and Lawn Care Professionals
- Pesticides Applicators
- **Retailers, Distributors and Manufacturers** of Lawn fertilizers

- **Fertilization/pesticide combination** products (sometimes called “weed and feeds”) when these products contain over 0.67% phosphorus
- **Organic phosphorus** fertilizer (such as bone meal)

5. THE LAW DOES NOT APPLY TO:

- Use of products with 0.67% phosphorus or lower
- Agricultural fertilizer or fertilizer for trees, shrubs or gardens
- Compost

6. PENALTIES

For an owner, owner’s agent, or occupant of a household, the penalties are:

- **First Violation:** Issuance of a written warning with educational materials for the first violation
- **Second Violation:** Issuance of a fine up to \$100
- **Subsequent Violation:** Issuance of a fines up to \$250 for subsequent violations
- **Penalties for all Others:** A fine up to \$500 for first violation: and fines up to \$1000 for subsequent offenses

7. DISHWASHER DETERGENTS

As retailers are no longer allowed to sell phosphorus-containing dish detergent, consumers do not need to take any steps to comply with this portion of the law.

The information contained in this fact sheet was extracted primarily from articles provided by the USEPA and the New York State Department of Environmental Conservation.