

**PUTNAM VALLEY
CENTRAL SCHOOL
DISTRICT
PUTNAM VALLEY, NY**

**MS4PY4 STORMWATER
PROGRAM**

**FACT SHEET # 3
JANUARY 2014**

**REDUCING STORMWATER
POLLUTION BY UTILIZING
PHOSPHATE FREE DETERGENTS**

**FOR MORE INFORMATION CONTACT
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**1. Phosphates in Detergents and Household
Cleansing Agents**

Phosphates are added to soaps, detergents, and other household cleaning agents, to soften the water and allow for the formation of soap suds. Dishwashing detergents contain up to 9% and can account for 9% to 34% of the phosphorus found in wastewater. Keeping phosphorous out of wastewater and our streams reduces wastewater and water treatment costs to municipalities and taxpayers (\$1 to \$20/pound). In addition, NYSDEC SPDES Permit requires the removal of pollutant discharges at their source, which is a cost-effective way to reduce pollutants in stormwater. Because of its serious impacts on our water resources, health and costs to our communities, in 1970, the detergent industry agreed to voluntarily limit phosphates in detergents to 8.7% by weight as phosphorus. Also, as a result of ongoing research by manufactures of dishwasher detergents, phosphate-free detergents are now readily available and are priced competitively to their phosphorus-bearing counterparts.

2. The Negative Impacts of Phosphates

Phosphates from dishwashing detergents and floor cleansing products, if discharged into our streams, ponds and lakes, not only seriously impact our water resources, but may have health as well as economic impacts on our local communities. High concentrations of phosphates in our freshwater streams and lakes promote excessive algae growth, resulting in:

- **The Creation of Harmful Algae Bloom (HAB):** High concentrations of phosphates in our waters promote the growth of harmful blue-green algae

- **Toxins from HAB:** Blue-green algae, if in contact with the body, or if ingested, may result in health problems such as ear aches, stomach cramps, diarrhea, vomiting and difficulty in breathing
- **Swimming and Boating Activities:** Excessive HAB, may lead to restricted swimming and boating activities
- **The Blocking of Sunlight and the Depletion of Oxygen:** Algae blooms, especially during the peak summer months, block sunlight and can significantly deplete oxygen, beneficial to fish and other aquatic organisms
- **The Speeding of Lake Eutrophication:** Algae blooms, if not controlled, can lead to the speeding of lake eutrophication from the constant filling up of the lakes with dead algae, silt and other organic matter. With the build-up of bottom sediments, the lake water capacity is reduced, and ultimately, the lake can turn to dry land
- **Loss in Tourism Revenues:** Excessive algae growth can cause potential loss in tourism revenues from beach closings, restricted boating activities and shellfish bed closures

3. Detergents and Cleansing Products Law

In 2010, New York State enacted a law that requires all household and commercial soaps and detergents, as well as floor cleansing agents to be phosphorous-free. Under the New York State Environmental Conservation Law, Article 35, distribution and sale, possession and use must meet the following requirements:

- **Household Use:** Effective August 14, 2010, dishwasher detergents for household use that contain phosphorus may not be

distributed, sold, offered or exposed for sale in New York State

- **Commercial Use:** Effective July 1, 2013, commercial establishments in New York State may not possess or use or authorize the possession or use of dishwasher detergents that contain phosphorus
- **Trace Amounts of Phosphorus:** Trace amounts of phosphorus (0.5% or less elemental phosphorus by weight) are allowed in dish detergents, after the above effective dates
- **Domestic or Commercial Use of Cleansing Products:** ECL 35 also restricts the distribution and sale, possession or use by domestic and commercial facilities, of cleansing products containing phosphorus
- **Cleansing Products:** means any product, including but not limited to soaps and detergents, containing surfactants as a wetting or dirt emulsifying agent and used primarily for domestic or commercial cleaning purposes, including but not limited to, the cleaning of fabrics, dishes, food utensils in household and commercial premises
- **Food, Beverage Processing and Dairy Equipment:** ECL 35 also restricts the use of cleansing products in food, beverage and dairy processing equipment, which contains phosphorus in excess of 8.7% by weight

The number of states with detergent phosphate bans has steadily increased and currently 27 states and the District of Columbia have complete or partial bans. Most states are located around the Great Lakes and along the eastern coast of the United States. The laws banning phosphorus vary state by state.

4. Alternative Cleaners And Detergents

Several manufacturers are offering green alternative cleaners and detergents. Look for phosphate free detergents containing the words:

- Zeolites (chemicals that soften water)
- Phosphorus or phosphate free detergents
- No Phosphorus detergents
- No STPP (sodium tri-polyphosphates)

In order to comply with new state laws, many name brand detergents and household cleaners are now offered with low-phosphate formulas. In addition, many homes are now equipped with water softeners which work more efficiently with phosphate-free detergents.

5. Washing Cars In Our Driveways

Few people still do not realize that washing our cars in our driveways is bad for our environment:

- Phosphate detergents from the wash water enter the storm drain and our waterways
- Even when using green-friendly phosphate free cleaners, it is better to avoid the driveway
- Instead wash your car on your lawn or over dirt so that the wash water can be absorbed and neutralized in soil instead of flowing directly into storm drains or open water bodies
- One way to avoid such problems altogether is to wash your car using any number of waterless formulas available, which are especially handy for spot cleaning and are applied via spray bottle and then wiped off with a cloth

6. Utilizing a Commercial Carwash

Going to a commercial carwash is a much greener option than washing your own car:

- Most carwashes have to comply with strict water contamination rules, so their runoff is often filtered before it enters the public wastewater system, where it then gets treated again
- Commercial car washes use computer controlled systems that minimize water usage
- Many also recycle and re-use the rinse water
- Automatic car washes use less than half the water of even the most careful home car washer

7. Impact of the Phosphate Detergent Ban

The new law will improve water quality in New York State by:

- Minimizing the potential harmful health impacts from blue-green algae
- Reducing phosphorus runoff into the water bodies of the State
- Curtailing costs to municipalities and private entities that must remove excess phosphorus from wastewater, drinking water, and stormwater
- Improving recreational and other uses of the waters of the state
- Reducing the impact of algae blooms and the deposition of organic matter that lead to lake eutrophication
- Reducing the potential loss in tourism revenues from beach closings, restricted boat usage and shellfish bed closures, as a result of algae blooms