



### 3. ALGAL BLOOMS

Algal blooms most frequently occur in nutrient-rich waters, particularly during the hot summer months. Most algae are harmless and are an important part of the food chain. Algae are naturally present in slow moving streams, lakes, coastal waters and ponds. Some, algae blooms, such as Blue-Green algae, can cause serious impacts to the environment and public health. Algae blooms can cause the following:

- **Oxygen Depletion:** Heavy mats of algae deplete the water of oxygen that fish need to survive
- **Recreational Use Impacts:** Algae overgrowth makes recreational water use unpleasant and potentially harmful
- **Depletion of Sunlight:** Heavy mats of algae deplete sunlight that underwater plants and microorganisms need to survive
- **Drinking Water Impacts:** Algae growth may cause carcinogens to form in drinking water during chlorination

Because it is hard to tell harmful algae blooms, the NYSDEC recommends you avoid contact with any waters covered by floating scums and discolored waters. It is not easy to tell if a bloom will produce toxins harmful to human health or animals.

Laboratory analysis of the water sample is required to confirm the presence of toxins from harmful algae blooms.

Some algae can produce toxins that can be harmful to people and animals. These are collectively called harmful algal blooms (HAB). Blue-green algae are HABs because they contain cyanobacteria that may produce toxins harmful to human health or animals. Large populations of blue-green algae may produce toxins high enough to prevent those using the water for drinking or recreational use. Blue-green algae blooms have the appearance of spilled green paint or pea soup. Typically, the blooms are blue-green in color, but they also can be yellow, red, or brown.

People and pets should avoid contact with the water that is discolored or has algae scums on the surface.

Drinking, accidentally swallowing or swimming in water affected by a harmful algal bloom can cause serious health problems including:

- **Allergic Reactions:** Symptoms include nausea, vomiting, diarrhea, skin or throat irritation as well as breathing difficulties
- **Liver and Nervous System Disorders:** Toxins can affect the liver and nervous systems when water is consumed in sufficient quantities

## 8. NITROGEN

Nitrogen is essential for plant growth and is a natural component of animal waste and can be produced by bacteria. While

## 7. PHOSPHORUS

Phosphorus is carried to ponds, rivers lakes and streams by stormwater runoff. Phosphorus-impaired waters can negatively impair recreation and tourism activity. Treating drinking water from phosphorus effects can be costly.

In order to reduce Phosphorus use the NYS Dishwasher Detergent and Nutrient Runoff Law went into effect on August 14, 2010.

- **Phosphorus Restrictions:** Under this law phosphorus-containing dishwasher detergents for household and commercial use is prohibited. NYS had previously banned phosphorus in laundry detergents.

Beginning on January 1, 2012, New York State Law went into effect, restricting the use of lawn fertilizers:

- **Phosphorus Restrictions:** Under the law, use of fertilizer that contains up to 0.67% phosphorus is not restricted. Fertilizer containing more than 0.67% phosphorus can only be used if a new lawn is being established or a soil test indicates it is necessary
- **Look for the Zero:** Before buying fertilizer, check the fertilizer bag for a set of three numbers showing the percentage of nitrogen (N) phosphorus (P) and potassium (K). Buy a bag with “0” in the middle