



# Nutrient Pollution

What's fueling the cyanobacteria, fish kills, and beach closures in the Tatnuck Brook Watershed? How you can help protect Patch Reservoir, Coes Pond, and Cooks Pond.



Together for Waterways

Co-Brand In This Space!

## The Problem

- Nitrogen (N) and Phosphorus (P) are normal: they **naturally occur** in our water, soil, and air, and they're essential for life.
- Certain products like fertilizers and pet waste can introduce **excessive amounts** of these limiting nutrients into our water.
- The nutrients fuel an **overgrowth** of aquatic life, creating toxins and scum, killing fish, and contaminating drinking water.

## The Impact

- Nutrient pollution affects **2.5 million acres** of lakes, reservoirs, and ponds across the United States.
- **35%** of Massachusetts lakes and reservoirs are impaired for recreation because of algal blooms.
- The effects of nutrient pollution have caused Coes Reservoir and Binienda (Coes Pond) Beach to close down in 2022.
- Nutrient pollution couples with **invasive species**, like in Patch Reservoir, to create an even larger overgrowth.

## The Process

1

### Our Products



Items from our daily lives—chemical lawn fertilizers, pet waste, yard waste, and some soaps and detergents—contain the nutrients **Nitrogen (N)** and **Phosphorus (P)**.

2

### Runoff



We often leave these items vulnerable in our roads and lawns. During a rainstorm, the flow of water (**runoff**) picks them up—nutrients included. The **stormwater runoff** passes through storm drains and into our waterways, unfiltered and nutrient rich.

4

### Consequences



These organisms release toxins (like **Cyanotoxins**) while alive and deplete oxygen when decomposed. The results: **fish kills** and **beach closures**.

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### Nutrient Enrichment



The flood of nutrients fuels the excessive growth of plants, bacteria, and algae (like **cyanobacteria**): they visually add scum and block sunlight for aquatic life.

## You Can Help

### Pick Up After Your Pet



Carefully clean up pet waste. Make sure to throw the bag away in a trash can, **safely away from a storm drain**. You can flush pet waste down the toilet too, just don't flush the bag.

### Buy Fertilizer-Conscious



Slow-release or organic fertilizers **gradually introduce nutrients**, reducing leaching and runoff. And unless you're starting a new lawn, you don't need phosphorus in fertilizer.

### Clean Responsibly



Use phosphate-free or low-phosphate (< 1%) detergents. Wash your car over **pervious surfaces** like lawns instead of driveways. Clean up yard waste so it can't get into storm drains.

### Support Town Initiatives



Worcester is helping prevent and manage nutrient pollution with a **Cyanobacteria Monitoring Collaborative** and an **Alum Dosing Station**. Reach out and volunteer to support their projects.

