

## The Problem

Brickyard Pond is classified as an **impaired water body** by the Rhode Island Department of Environmental Management (DEM) because of **high phosphorus (P)** and **low dissolved oxygen (DO)** levels.

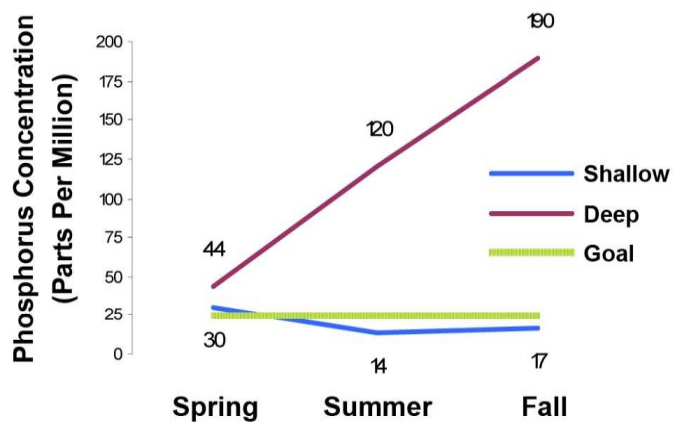
P is a naturally-occurring nutrient essential for plant growth, but high P levels can cause excessive aquatic plant growth and algal bloom. When these plants die and decompose, oxygen in the water is used up. DO levels can drop too low for fish to breathe, leading to the death of fish and other aquatic organisms. Low DO levels can also free up P already present in the sediments, further increasing the available P.

In Brickyard Pond, DO levels in deeper waters fall below 3 parts per million (ppm) from late spring through autumn, **below levels required to support most forms of aquatic life.**

DEM has established a total maximum daily load (TMDL) of P for Brickyard Pond, and the Town of Barrington is working to meet the TMDL.

P is found in many substances, such as lawn and garden fertilizers and animal and human waste. The major sources of P to Brickyard Pond are stormwater runoff (which carries P from land sources), waterfowl and animal waste, shoreline erosion (which adds P from soil), and internal cycling of P in sediments.

**Average Phosphorus Concentrations in Brickyard Pond Water (1994 - 2004)**



## The Solution...

### Reduce Your Phosphorus Levels

To meet the TMDL goal for P and improve the water quality in Brickyard Pond, homeowners in the watershed need to help.

#### Here's how:

**Reduce use of lawn fertilizers** that contain P and avoid fertilizing immediately before anticipated storm events.

**Minimize roof runoff** by installing dry wells, roof drains, buffer strips, or swales that can capture roof runoff and help filter it through soil.

**Limit impervious surfaces** on your property. Use porous material, such as crushed shells, stone, unmortared pavers, or pervious concrete, for driveways, walkways, and patios.

**Wash cars on grass** instead of on pavement so the water can percolate through soil.

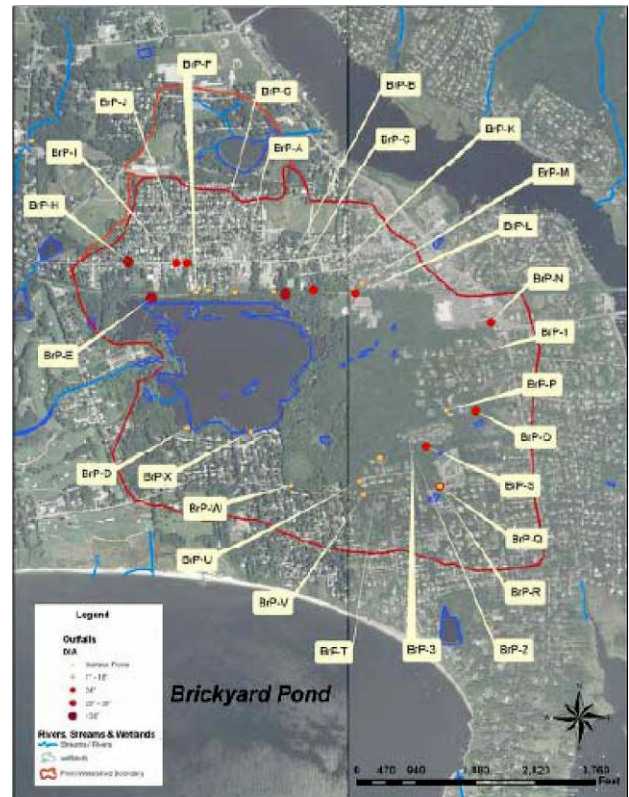
**Keep pets from doing their "business" near streams**, drainage ditches, catch basins, on the sidewalk, or along the edge of the street.

**Pick up your pet's solid waste** and dispose of it properly:

- Flush it down the toilet, or
- Bury it in a dedicated, deep (at least 6 inch) trench in your yard, away from gardens, fruit trees, play areas, water bodies, or wells, or
- Put waste in the trash, well-wrapped to prevent spillage during trash collection (always for cat litter).

**Do not feed waterfowl.** In addition to encouraging high concentrations of birds whose waste can impact water quality, feeding waterfowl is banned in Rhode Island and can disrupt natural feeding and migration habits.

**Limit large tracts of open land near water bodies** where waterfowl land and congregate. Grass should be allowed to grow to its full height (10-14 inches) around water bodies.



Brickyard Pond Stormwater Outfalls (RIDEM 2007)

#### References

Murphy (2007). *General Information on Phosphorus*. City of Boulder/USGS Water Quality Monitoring

Rhode Island Department of Environmental Management (2007), *Total Maximum Daily Loads for Phosphorus To Address 9 Eutrophic Ponds in Rhode Island*.