

# Protecting Water Sources from Fertilizer

**Fertilizers used to promote plant growth and lush green lawns also have the potential to contaminate water sources if applied improperly.** The principle components of fertilizer are Nitrogen, Phosphorus and Potassium (N-P-K). **Nitrogen** is the main nutrient for new, green growth, **Phosphorus** promotes root development and **Potassium** improves the overall health of plants. Excessive amounts of nitrogen and phosphorus are the nutrients most likely to adversely affect water quality.

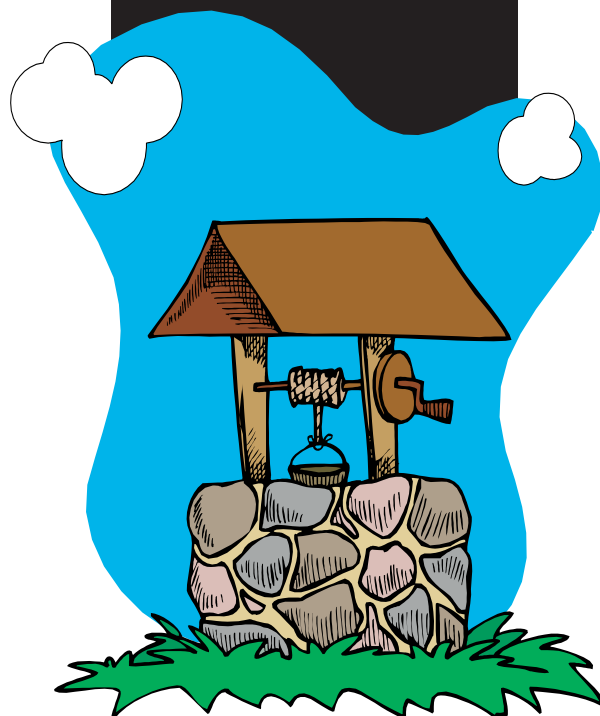


## You can prevent ground and surface water contamination by observing the following practices when buying and applying fertilizers:

- **Test your soil.** Soil testing is the most critical step in any lawn fertility program by providing the information needed to select the fertilizer with the N-P-K value best suited to the nutritional needs of your soil. If you use a lawn care service insist they test your soil before any applications are made.
- **Use a slow-release nitrogen fertilizer.** There are two basic forms of nitrogen contained in fertilizer products: **fast-release** or Water Soluble Nitrogen (WSN), and **slow-release** or Water Insoluble Nitrogen (WIN). Slow-release fertilizers provide a more controlled release of nitrogen thereby limiting the amount of fertilizer leaching into groundwater. Also remember that **weed and feed** fertilizers contain pesticides which pose additional risks to water sources.
- **Use iron as a supplement to nitrogen.** Iron can be used alone or in combination with nitrogen to provide a greening response. Adding iron will decrease the amount of nitrogen needed thereby minimizing the amount of nitrate leaching into water sources.
- **Choose the proper spreader and calibrate it correctly.** By using a drop spreader instead of a rotary spreader near water supply sources and storm drains, you decrease the risk of fertilizer contamination. Proper calibration helps prevent misapplication of the fertilizer.

- **Time your fertilizer applications.** Fast-acting fertilizers should not be applied before a heavy rainfall. Spring fertilization should be minimized—water tables are generally high at that time, thereby increasing the risk of fertilizer leaching into water sources. Do not apply fertilizer on frozen ground—the likelihood of runoff into water supply sources is dramatically increased. Avoid fall nitrogen applications on coarse-textured soils. These soil types have low water holding capacities and a high potential of nitrate leaching.
- **Use buffer strips.** Leave a strip of unfertilized grasses or natural vegetation near any water body. This helps against erosion and produces a trap for unwanted nutrients.
- **Minimize fertilizer rates on slopes.** The potential for runoff is decreased if you limit the amount of fertilizer in these locations.
- **Use a mulching mower.** Mulching the grass and leaving the clippings reduces the need for fertilizer by as much as one-half.
- **Prevent misapplication of fertilizers.** Take care when applying fertilizers around sewers and drains. Shut off spreaders before crossing sidewalks or driveways and sweep up any spills. Rinse your spreader over the lawn area and not on the driveway in order to minimize fertilizer runoff.
- **Properly store your fertilizer.** Unused fertilizer should be removed from the spreader and returned to the original bag or container for future use. Store unused fertilizer in a dry place away from any water source. If stored fertilizer gets wet you not only lose nutrient value, there is potential for nitrates to leach into water sources.

**Fertilizers should not be applied within the Zone I protective radius of a public drinking water supply.**



**Any questions or concerns about fertilizer use should be directed to:**

**The Bureau of Farm Products and Plant Industries at the Massachusetts Department of Food and Agriculture (DFA), 251 Causeway Street, Boston, MA 02114. Telephone: 617- 626-1700. Website: [www.massdfa.org](http://www.massdfa.org)**

**For information on protecting water sources from Pesticides refer to the Pesticide Fact Sheet**