



New Jersey Alliance for Environmental Concerns, INC.

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## Points to Ponder - Phosphorus Facts

- 1) Commonly used granular fertilizers are 90 – 100% water-soluble. The granules dissolve rapidly when in contact with the soil. The phosphorus (P) reacts with water from the soil and forms phosphoric acid, this process is referred to as diffusion. The phosphoric acid (P solution) then reacts with minerals present in the soil (soil-fertilizer reaction products) to form insoluble compounds. The P solution can travel 3 to 5 cm before the reaction is completed and the phosphorus consumed.<sup>1</sup>
- 2) Dr. Wayne Kussow, UW-M, has actually physically measured the amount of phosphorus that runs off from turf. His research project collected data for six years (1993 – 1998). He documented that phosphorus run off from “unfertilized” turf (0.61 lbs P/ac/yr - mulched mowed) exceeded that from “fertilized” turf (0.36 lbs. P/ac/yr – mulched mowed) for 1994 through 1996.<sup>2</sup>
- 3) Dr. Wayne Kussow, UW-M, documented that over a six-year period (1993-1998) approximately 80.6% of the annual lbs. P/ac/yr loss occurred while the soil was frozen.<sup>2</sup>
- 4) The highest P loss Dr. Wayne Kussow measured from fertilized turf during the growing season was 0.11 lbs. P/ac/yr in 1993-1994.<sup>2</sup> A typical lawn is around 8,000 square feet. Therefore, the P loss during the growing season from a typical lawn would be 0.02 lbs. P/yr.
- 5) One adult goose can contribute 0.86 lbs. P/yr to the watershed. This is equivalent to the contribution of 43 lawns.
- 6) One adult dog can contribute 1.14 lbs. P/yr to the watershed. This is equivalent to the contribution of 57 lawns.
- 7) One **acre** of Eurasian water milfoil, an invasive aquatic weed, can contribute 25 lbs. P/yr directly to the water. This is equivalent to the contribution of 1, 250 lawns.
- 8) Depending upon where you live in the United States, the landscaping around your home is responsible for between 5 to 20% of the value of your home.
- 9) This DRAFT NJDEP “Model Ordinance – Low Phosphorus Fertilizer” proposed Ordinance, if enacted, will degrade the quality of lawns in the state - impacting the value of the property.
- 10) Depending upon where you live in the United States, 50 to 75% of the fertilizer annually applied by homeowners is a fertilizer-pesticide combination product.