

Iowa Environmental Council Factsheet:

Why we need phosphorus limits for manure management plans

Problem:

- Phosphorus is a significant water quality problem in the state of Iowa. According to DNR, one-third of the 157 waters on Iowa's impaired waters list are impaired by phosphorus,
- Iowa manure management plans require application rates to be based only on the nitrogen content of the manure and the nitrogen needs of the crops being grown. This generally results in 2 to 3 times as much phosphorus as is removed by crops grown in Iowa and phosphorus builds up in the soil.
- Overapplication of phosphorus fertilizer and manure on cropland has led to phosphorus buildup in our soil. According to a survey by Iowa State University, 70% of Iowa cropland soils test high or very high for phosphorus.
- Increases in the concentration of livestock has led to manure production that exceeds the fertilizer needs of crops being grown in some areas of the state, leading to increasing soil phosphorus levels in the surrounding areas and an increased risk of water pollution.

Why do we care?

- Excess phosphorus in water causes the proliferation of algae and aquatic plants and turns water a turbid green. This degrades water quality and can affect the use of the water for fisheries, recreation, agriculture, industry, and drinking.
- Too much phosphorus leads to the death of fish and other aquatic life. When overabundant algae and nuisance aquatic plants die, they use up oxygen in the water leading to oxygen depletion and the death of aquatic life.
- Phosphorus pollution can lead to blooms of cyanobacteria (also called blue-green algae) which can contribute to a wide range of water quality problems including summer fish kills, foul odors, and unpalatable tastes in drinking water.
- Water-soluble compounds toxic to the nervous system and liver are released when cyanobacteria blooms die or are ingested. These can kill livestock and may pose a serious health risk to humans.

What the legislature should do:

- Require that manure management plans include phosphorus limits for manure application rates, in addition to the current nitrogen limits.
- Phosphorus limits should apply immediately for all new livestock facilities requiring manure management plans. Existing livestock facilities should be given a transition period to incorporate phosphorus limits in their plans.
- To prevent phosphorus buildup on cropland, application limits should be based on agronomic rates. Details of the implementation of phosphorus limits should be worked out in rule making.