

Nutrient Management Planning

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The Agriculture Water Quality Act states that landowners with 10 or more acres in agricultural production must develop and implement an ag water quality plan. Ag water quality plans document practices used on the farm to protect water quality from excess nutrients, sediment, and pathogens.

Nutrients naturally cycle through the environment, including farming operations. Sources of nutrients on the farm include manure, commercial fertilizers, feed, and compost. Nutrient management allows farmers to use nutrients (specifically nitrogen, phosphorus, and potassium) wisely for optimum economic benefit with minimal impact to the environment.

Nutrient Management Plans account for the amount of nutrients produced or brought onto the farm, the existing soil fertility, and the nutrient needs of crops grown. These nutrients must balance out without overloading soils with excess nutrients. Excess nutrients can run off and cause water quality problems in streams and rivers.

Nutrient Management Plans are part of an Ag Water Quality Plan and are required if your operation produces manure or applies nutrients. Farmers utilizing manure or fertilizer nutrients on their farm must have a nutrient management plan to comply with the Kentucky Ag Water Quality Act. The type and complexity of the nutrient management plan is dependent on a number of factors. These factors include, but are not limited to, requirements of state or federal operating permits, NRCS requirements regarding technical or financial assistance for a manure handling operation, whether or not manures are produced on the farm, and requirements of FSA loan applications.

Livestock best management practice #11 Nutrient Management, from the KY Ag Water Quality Act, describes the minimum requirements of a nutrient management plan. Farmers have two options for developing nutrient management plans: 1) use the Kentucky Nutrient Management Planning Guidelines (KyNMP; described in UK Extension publication ID-211) to develop their own plan; or 2) use a certified nutrient management planner to develop a plan based on the USDA Natural Resources Conservation Service (NRCS) Practice Code 590 (version 2013). The basic steps for developing a nutrient management plan include:

- 1) Determine the total volume and amount of nutrients generated on the farm.
- 2) Determine soil fertility with annual soil tests.
- 3) Determine nutrient application rates based on existing soil fertility, crop nutrient requirements, nutrient application timing and method, and fertilizer type.
- 4) Create a cropping plan for utilizing generated manure on a field-by-field basis for five years.
- 5) Implement the plan and keep records.

By implementing an Agriculture Water Quality Plan and a Nutrient Management Plan, farmers can efficiently utilize nutrient sources on the farm while protecting water resources. Keeping the water resources of the Commonwealth clean protects human and animal health, reduces the cost of treating drinking water, and protects water quality for our downstream neighbors.

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For more information about developing an Ag Water Quality Plan or nutrient management plan, visit www.ca.uky.edu/awqa or visit your local Conservation District or Cooperative Extension Service office.

This work was funded in part by a grant from the U.S. Environmental Protection Agency under §319(h) of the Clean Water Act.