Phosphorus:
Lessons from 10+ Years of Numeric Standards for Wisconsin's Waters

2023 Phosphorus Conference Report:
Policy Recommendations

UW System Water Policy Network

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A. Introduction

Wisconsin passed some of the nation's earliest and most comprehensive phosphorus regulations in 2010. Phosphorus pollution poses a significant threat to the health and stability of Wisconsin's waters. Excess phosphorus runoff to surface waters produces an ecological imbalance that leads to nuisance or harmful algal blooms, fish kills, and human illness. Waterbodies impaired by phosphorus pollution threaten public health, reduce recreational use, and decrease property values.

Phosphorus: Lessons from 10+ Years of Numeric Standards for Wisconsin's Waters was a statewide conference held in February 2023 to evaluate the past decade of Wisconsin's phosphorus regulatory implementation and assess the rules' impact on water quality. One of the primary conference goals was to help shape phosphorus policy change in Wisconsin. The policy recommendations are a product from the statewide phosphorus conference and are a part of a more comprehensive report.

B. Policy Recommendations

This section contains policy recommendations for reducing phosphorus pollution and improving water quality in Wisconsin. The goals of these policy recommendations are to promote profitable farming, clean water, healthy soils, stable climate, biodiversity, and vital communities. Achieving these goals will require a long-term commitment to correct nutrient imbalances at field, farm, and watershed levels caused by excess fertilizer and manure applications and animal densities in confinement systems coupled with inherently leaky cropping systems. One especially promising policy direction is promoting grasslands and agroforestry-based food production systems that provide quantifiable pollutant load reductions and correct nutrient imbalances. Short-term and long-term policy recommendations are outlined below.

1. **Fix regulatory gaps and limitations**
    - Initiate via Wisconsin DNR an administrative rulemaking process to revise Wisconsin Administrative Code section NR 151.04 with new, lower Wisconsin Phosphorus Index target values for croplands, pastures, and winter grazing areas (currently set at 6 lbs/acres/year).

- The new Phosphorus Index target values should be watershed-specific and match the agricultural phosphorus pounds/acres/year necessary to meet water quality goals.
- See corresponding Research Agenda for a question asking what the new Wisconsin Phosphorus Index target value(s) should be.

- Initiate via Wisconsin DNR an administrative rulemaking process to set targeted performance standards to reflect agricultural load allocations in TMDLs pursuant to Wisconsin Administrative Code sections NR 151.005 and NR 151.004. Targeted performance standards should be prioritized where they would have the broadest impact for the most impaired waterbodies.

2. **Support effective phosphorus management strategies**
   - To meet water quality goals, Wisconsin's agricultural system needs to transition away from high input annual cropping systems that leak high levels of phosphorus from fertilizer and liquid manure to more ecologically sustainable systems like well-managed, grazed perennial grasslands.
     - Provide agricultural cost sharing to farmers for:
       (a) Continuous cover programs to convert row cropped fields to continuous vegetative cover including grazing and forage mixes, warm and cool season grasses, agroforestry, native prairie, and harvestable buffers and prairie strips.
       (b) Grazing transition programs such as dairy heifer grazing initiatives to help agricultural producers identify and transition low-productivity and environmentally sensitive areas to perennial grasslands.
     - Reinvest in the Grazing Lands Conservation Initiative at the state level.
     - Incentivize and reward farmers for the pounds of nutrients reduced and for agroecosystems that produce milk and meat while protecting surface and ground water quality, holding onto soils and nutrients, and supporting biodiversity.

- Increase funding for cost-sharing programs to ensure more non-CAFO fields operate under a nutrient management plan pursuant to Subchapter II of NR 151.
- Ensure Producer-Led Watershed Groups have the support and resources needed to establish short-, mid-, and long-term environmental goals for their watershed programs.
    - Develop goal planning tools and templates for groups to use to facilitate this process.
    - Prioritize funding for groups, goals, projects, or activities that incorporate an outcomes-based application and implementation process where water quality, soil health, and profitability goals are articulated and modeled (where feasible) and outcomes are measured to encourage a 'race to the top' among producers to meet watershed goals.
    - Provide significant staffing to run models, install edge-of-field monitoring, conduct watershed planning, and engage with farmers, agency staff, agricultural industry, and the public.
    - Support funding for regional, dedicated support staff to Producer-Led Watershed Groups to assist/facilitate group goal setting, farmer outreach, and tracking/reporting on progress for conservation practices and local social norms shifts.
    - Encourage Producer-Led Watershed Groups to promote the implementation of cover crops in their communities to increase the state's current cover crop adoption rate of 6%.
    - Encourage Producer-Led Watershed Groups to promote incorporation of perennials and multi-year forages into crop rotations.
- Ensure county conservation offices have the support and resources necessary for developing effective land and water plans, building stronger trust-based relationships with farmers, and facilitating more phosphorus management and land conservation projects, including through water quality trading and adaptive management.
    - Increase allocations within the Governor's budget to Land Conservation Departments so they are fully funded by the state,

thereby empowering local entities to prioritize Wisconsin state goals.
    - Provide more training opportunities where needed for county staff to develop enhanced relationship and conservation communication skills.
- Ensure Wisconsin DNR has the support and resources necessary to continue implementing the water quality trading, adaptive management, and multi-discharger variance compliance options effectively.
- Ensure the incoming agricultural workforce has more training in on-farm evaluation of natural resource concerns and agricultural conservation practices.
    - Strengthen the environmental focus in current agricultural education programs.
    - Establish a post-secondary agriculture technical program with an environmental conservation focus.
    - Provide more training to agricultural educators about grazing and other perennial farming practices (i.e., funding for UW-Extension to build more grazing education into trainings for crop consultants, county Extension agents, financial lenders, and other agricultural educators).
- Develop a phosphorus management planning process that targets phosphorus loading hot spots, areas with the highest phosphorus yields, in order to be most effective in a warmer, wetter climate with more frequent and intense rain events.

3. **Expand public education and outreach**
    - Coordinate with state and local actors to design a public awareness campaign on the implications of phosphorus pollution, including the public health threat, reduced recreational use of Wisconsin's surface waters, and declining waterfront property values.
    - Educate and engage with the public about successful phosphorus management projects with information on how to get involved.

- Educate and engage with the public about the kinds of transformative agricultural change necessary to meet water quality, soil health, and farmer-profitability goals simultaneously.

C. Contributors

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