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Kansas
Department of Health
and Environment

Kansas Nutrient Reduction Framework

ACWA Nutrients Policy Committee

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Kansas Nutrient Reduction

- Kansas Surface Water Nutrient Reduction Plan
  - Adopted 2005 to address nitrogen and phosphorus pollution
  - Incorporated into the State Water Plan the same year
  - Focused on reduction of nutrient in lieu of criteria
    - Point source (PS) – wastewater treatment plants
    - Nonpoint source (NPS) – runoff
  - Seen good progress
    - Half of large PS have significantly reduced nutrient discharge
    - Some success and continued implementation on NPS through WRAPS – Watershed Restoration and Protection Strategies
      - Will take a number of years to realize restoration

Kansas Nutrient Reduction

- EPA realized nutrient reduction w/o criteria is a OK
  - On March 16, 2011 put out the concept of a “nutrient reduction framework”
    - Promotes nutrient reduction while criteria ultimately developed
    - Very similar to what Kansas has been pursuing
  - Eight parts of the framework
    - Seven focus on reduction plan
    - One on ultimate development of nutrient criteria

EPA's Nutrient Reduction Framework

1. Prioritize watersheds on a statewide basis for N & P loading reductions
2. Set watershed load reduction goals
3. Ensure effectiveness of NPDES in targeted watersheds - WWTP NPDES, CAFO, MS4 (municipal stormwater)
4. Target most effective Ag practices with watershed plans
5. Identify tools to reduce loads from small town stormwater and on-site waste systems
6. Establish accountability and verification tracking
7. Annually report on status, challenges and progress for each targeted sub-watershed

EPA's Framework: the Endgame

8. Develop work plan and schedule for numeric criteria development
   - N & P criteria for classes of waters
   - Interim milestones for data collection, analysis, proposals and adoption
   - Timetable for criteria development
     - N & P criteria for one class of waters within 3 – 5 years
       - Could be longer if state is progressing
     - Completion of criteria development in accord with a state-specific workplan and phased schedule

EPA's Framework: the Endgame

- We have "shoehorned" our nutrient strategy into the framework (see last page)
- In the form of a matrix
  - Identifies actions to be taken to address EPA's first 7 elements by
    - State Agencies
    - Agriculture Stakeholders
    - Local Government Stakeholders
    - Environmental Stakeholders
- Have run by stakeholder groups
  - General buy in
- Sent a copy of the KS framework to EPA 3/15/12
  - Signed by agency heads for KDHE; Water Office; Wildlife Parks & Tourism; and Agriculture

EPA's Framework: the Endgame

- Important points to remember
  - Seeks accountability
    - Mainly by requiring annual reporting on targeted actions
  - Types of reporting
    - Are priority watersheds identified and load reductions established?
    - Are priority Ag practices identified in priority watersheds?
    - Are stormwater practices in place?
    - Is PS performance maintained and improved?
- Bottom line
  - Need to show continued nutrient reduction
    - If not, expect EPA or others to seek criteria immediately
    - Two national lawsuits active that could affect KS
      - Mississippi River nutrient criteria
      - PS minimum mandated nutrient removal

Contact Information

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Role	Framework Goal						
	❶ Prioritize Watersheds for N & P Reduction	❷ Set Watershed Load Reduction Goals w/HUC 8 Priority Watersheds	❸ Ensure Effectiveness of NPDES in Targeted Watersheds	❹ Target Most Effective Ag Practices	❺ Identify Tools for Small Town Stormwater and Septic Tank Reductions	❻ Establish Accountability Tracking	❼ Annual Reporting for Targeted Sub-Watersheds
Ⓐ State Agencies, Including KSU	• Lead prioritizing exercise • Produce prioritized watershed list based on stakeholder input and NPS Management Plan analysis of HUC 8 loads	• Develop initial load reduction goals • Consider sources, local ability to implement, availability of data, geographic scope, weather-related and seasonal variables, and the potential impacts on current stakeholder operations • Finalize load reduction goals after stakeholder input	• Develop stormwater and wastewater NPDES permits incorporating watershed load reduction goal • Enforce NPDES permits • Incorporate w/WRAPS	• Implement WRAPS plans in priority HUC 12s • Direct targeted funds to key Conservation Districts	• Where warranted in a watershed plan, direct WRAPS implementation to small town sources	• Develop annual report format and metrics • Monitor targeted HUC 8s and 12s	• Collate annual data and reports • Develop annual report for stakeholder review that accounts for weather-related and seasonal variables and describes the impact of implemented practices on current stakeholder operations • Distribute report to WRAPS, NPDES, and stakeholders to encourage strategy changes where it is necessary and supported by sufficient evidence
Ⓑ Agriculture Stakeholders	• Include priorities based on likely active participation, considering potential impacts to operations	• Estimate attainable ag reduction levels w/ next 10 yr timeframe considering geographic scope, weather-related and seasonal variables, local leadership, likely participation, potential impacts on current operations, and current loads • Review initial load reduction goals	• Ensure AFOs continue to operate with no significant potential to pollute pursuant to KDHE standard protocol for assessing pollution potential	• Promote nutrient reduction information and education through KSU and WRAPS cooperators • Promote use of state and USDA funds for nutrient reduction practices • Work with USDA and other federal agencies to target and prioritize available funding • Encourage ag producer participation in targeted HUC 12s • Seek Legislative support for funding and implementation		• Use WRAPS to report on BMP installation	• Comment on draft annual report • Distribute final report to constituencies • Encourage incorporation of results in plans for next year, taking into account weather-related and seasonal variables, and potential impacts on current operations
Ⓒ Local Government Stakeholders	• Indicate priorities based on likely Major NPDES implications	• Indicate attainable municipal reduction levels in next 5-10 yrs • Review initial load reduction goals	• Facilitate investment in nutrient reduction treatment design, operation, and maintenance • Monitor nutrient level of wastewater and stormwater • Incorporate green infrastructure to reduce stormwater runoff	• Where applicable, encourage ag implementation in PWS watersheds through cost share arrangements (e.g. Wichita and Cheney Res)	• Assist in identifying towns • Provide elected official education through LKM, KAC, & NEMO • Provide technical staff education though LKM & KAC • Deliver tools through KMU and other utility groups • Seek Legislative support for implementation • Maintain proper lagoon O&M	• Provide DMRs, study reports, and reports on stormwater and wastewater treatment investments	• Comment on draft annual report • Distribute final report to constituencies • Adjust plans based on results

	Framework Goal						
	❶	❷	❸	❹	❺	❻	❼
Role	**Prioritize Watersheds for N & P Reduction**	**Set Watershed Load Reduction Goals w/HUC 8 Priority Watersheds**	**Ensure Effectiveness of NPDES in Targeted Watersheds**	**Target Most Effective Ag Practices**	**Identify Tools for Small Town Stormwater and Septic Tank Reductions**	**Establish Accountability Tracking**	**Annual Reporting for Targeted Sub-Watersheds**
Ⓓ Environmental Stakeholders	• Indicate priorities based on top environmental and recreation resources	• Review initial load reduction goals • Identify environmental benefits of derived reduction goals	• Promote participation of utilities in the WRAPS process	• Promote producer participation in WRAPS process	• Promote small town/rural community participation in WRAPS process	• Report on local perception of water quality	• Comment on draft annual report • Distribute final report to constituencies

Framework Goal 8 – Develop Workplan and Schedule for Numeric Criteria Development

- Framework goal 8 is exclusively a state government task. To be successful, that task will require significant stakeholder outreach, which is inherent in each subtask. The proposed tasks to achieve Goal 8 are:
  - Establish N & P criteria for streams and lakes currently achieving all designated uses
  - Establish chlorophyll-a criteria for public water supply lakes
  - Establish causal and response variable criteria for impaired waters when they have been restored to full support of designated uses.