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Centers for Water Research on National Priorities Related to a Systems View of Nutrient Management: Kickoff Workshop

Narragansett, Jan. 21, 22, 2015

James H. Johnson, Jr., Ph.D.
Director, National Center for Environmental Research

Office of Research and Development
National Center for Environment Research

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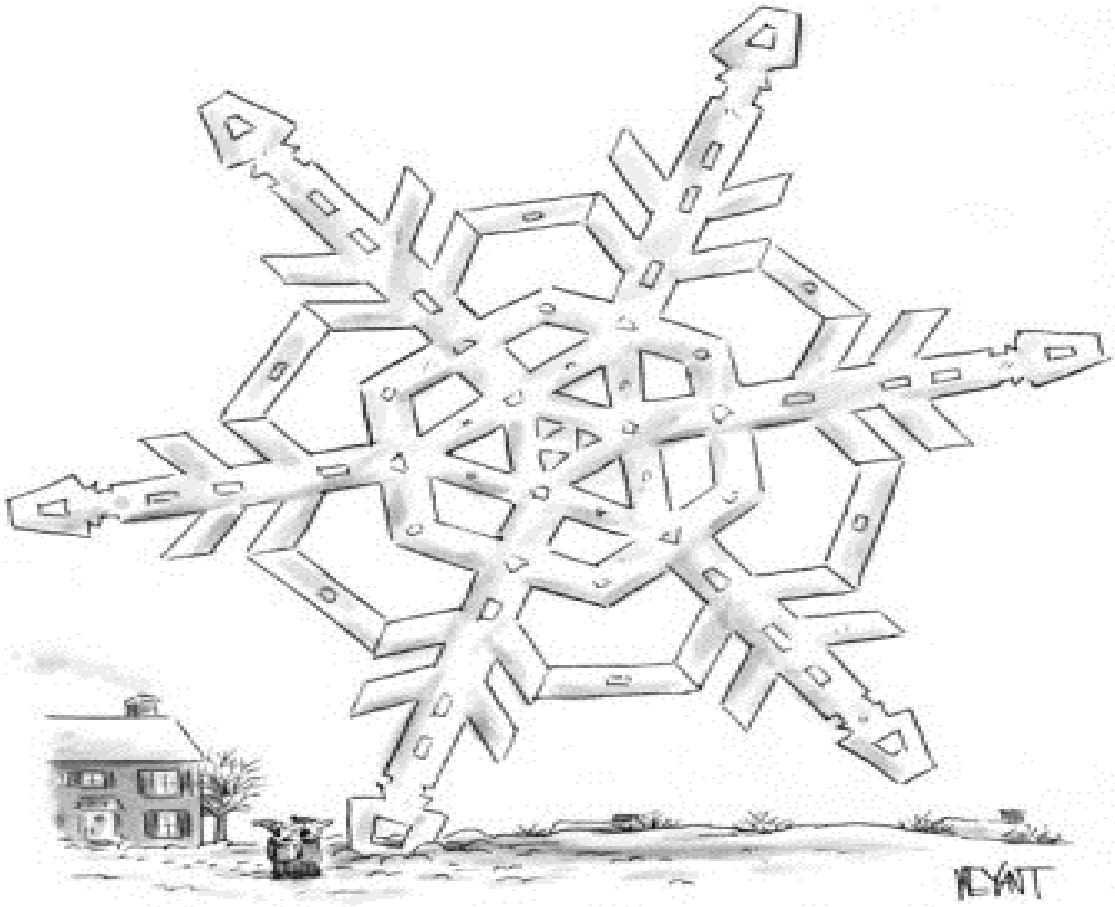

"I don't mean to be alarmist, but these things usually travel in groups."

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Objectives of Workshop

1. Kickoff Centers

2. Present recently funded research so we know who is doing what.

3. Enable Center & EPA researchers to understand common interests, explore prospects for collaboration.

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Centers for H_2O Research on a Systems View of Nutrient Mgmt.

- *Peer Review Criteria*
  - *Research*
  - *Center*
  - *Administrative Unit*
  - *Responsiveness*
  - *Facilities and Equipment*
  - *Budget*

Centers for H_2O Research on a Systems View of Nutrient Mgmt.

Peer Review Research Criteria *:*

- Originality and Creativity of Research
- Systems Approach
- Transdisciplinary
- Shifts Paradigm
- Sustainable
- Includes Partners
- Dissemination of Results
- Engage Communities

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Centers for H_2O Research on a Systems View of Nutrient Management

Research areas:

- ***Science*** to achieve sustainable, cost effective outcomes
- ***Demonstration*** to support efficacy with & beyond current technology & information at appropriate scale
- ***Community involvement*** in the design, acceptance & implementation

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Component 1: Science to support beneficial health & environmental outcomes.

- Technical approach managers can use to achieve nutrient reduction in water systems
- Systematic & sustainable water management approaches to achieve nutrient reduction
- Transferable & equitable technologies/tools

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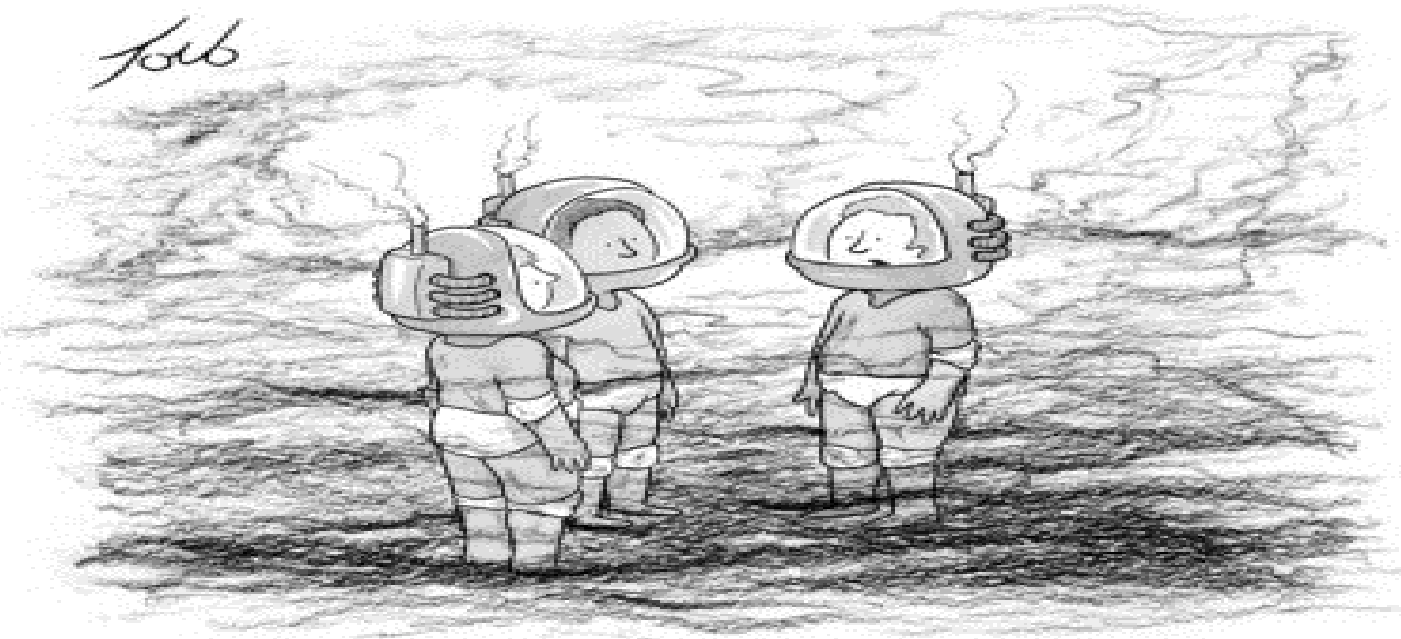

"Looking back, it was probably a mistake to disregard global warming after the winter of 2014."

CN COLLECTION

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Component 2: Demonstrate performance to support implementation of new systems

- Demonstration projects evaluate nutrient management systems
  - Sustainable
  - Replicable
  - Scalable
  - Affordable (including data)
  - Perform

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Component 3: Evaluate social, economic & environmental costs/ benefits; acceptance & implementation.

- Assess social, economic & environmental costs of solutions to nutrient management
- Make it usable, include comprehensive environmental assessment/lca
- Include dissemination & adoption program

4 Integrated Centers Create a Strong National Model to Address Nutrient Priorities…

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N & P Sources

Arabi: broad range of sources
Mihelcic: urban infrastructure, redxn in use, point & diffuse
Shortle: broad range of sources
Pramanik: broad range of sources

Arabi: working group, LCA communication dashboard
Mihelcic: socioeconomic quantification, diverse economic pilots
Shortle: ecosystem valuation, web/GIS tools, partners council
Pramanik: implementation tool, community acceptance, national network

Scales & Regions

Arabi: Western & Eastern H2O Law, watershed-level
Mihelcic: Tampa Bay, coastal, different urban scales
Shortle: Susquehanna-Chesapeake, reach to watershed
Pramanik: household to watershed scales, national network

Science & Demonstration

Arabi: nutrient control performance LC assessment
Mihelcic: source rdxn, reuse and recycling
Shortle: modeling N flows, scenario-building, evaluation
Pramanik : nutrient recovery, source control

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