Setting the Stage – ACWA Perspective

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When water quality was worse:

There were times when the flow [in the Missouri River] along the west shore was literally red with blood. Great mats of congealed grease floated downstream for miles and entrails collected in scummy islands.

Omaha’s primary treatment plant went into operation only four years ago [~1965]. Before that, it too dumped all its wastes untreated into the [Missouri] river.
Nutrients and Water Quality

- Nutrient over-enrichment is creating problems for recreation, drinking water and aquatic life.
  - Big Creek Lake (Polk Co.)
    Recreation
  - Lake Rathbun (Appanoose Co.)
    Drinking Water Supply
  - Middle Fork of South Beaver Creek (Grundy Co.)
    Aquatic Life
  - Gulf of Mexico Hypoxia

Swan Lake, June 2011
Why has it been so difficult to move forward?

– Competing water quality priorities (2006)

– Excessive nutrients can cause a variety of water quality problems

– Scale issues (e.g., land size vs. population)

– Numeric nutrient criteria development presents challenging problems (1998)(17,000 impairments, 8,000 TMDLs)
  • Difficult to pin down cause & effect relationship
  • Difficult to comply with permit limits and costly to try
  • Possibly every water body impaired by an order of magnitude
  • Polarizing approach, litigation common

– **Different options needed**
Stoner Memo – March 16, 2011

• Ensure effectiveness of point source permits in targeted/priority sub-watersheds for:

  – **Municipal and Industrial Wastewater Treatment Facilities** that contribute to significant measurable N & P loadings;

  – **All Concentrated Animal Feeding Operations (CAFOs)** that discharge or propose to discharge; and/or

  – **Urban Storm Water** sources that discharge into N & P-impaired waters or are otherwise identified as a significant source.
• Renewed call to action to reduce nutrient pollution and support for incremental actions to protect water quality and public health

  – Call for **monitoring requirements** for TP & TN in NPDES permits for major municipal WWTPs

  – EPA to conduct nationwide survey of municipal WWTPs to determine **how nutrient removal can be improved with enhancements to O & M**

  – Highlights NNC as an important tool that can be used
PS and NPS Common Threads Made Possible

– Acknowledgement of the problem

– Recognition that traditional approaches are not workable (e.g. cost, technically)

– Willingness to want to do something now to make progress

– Needs to be practical in its implementation
New flexibilities = New possibilities
ACWA Nutrient Policy Committee

- Worked with EPA to account and recognize different permitting approaches

- Created survey of ACWA membership as EPA offered to begin work on a variety of tools and focused efforts to assist states with their nutrient permitting efforts.

- Permit compendium was #1

- Early returns show 32 of 52 states and territories are permitting for nutrients in some fashion
Each state has story to tell...

We’ll learn about permitting systems from the states that utilize:

- NNC (Montana)
- numeric translators of narrative criteria (Michigan & New Mexico)
- nutrient reduction frameworks (Iowa)
- performance-based approaches (Colorado)
- state variances (Wisconsin & Montana)
- watershed approaches (Virginia, North Carolina, & Connecticut)
- integrated planning (New York)
- adaptive management (Wisconsin)
- antidegradation (Kansas)
Partnerships are critical to make progress...

We’ll learn valuable insights from key partners and states regarding:

- Nutrient Removal Technologies (HDR)
- Optimization Efforts (The Water Planet Co.)
- Struvite Harvesting (City of Boise)
- Biosolids Farming (City of Boise)
- Water Quality Trading (Willamette Partnership, Minnesota, North Carolina)
- Interrelation of Permitting (NEIWPCC & Kansas)
- Nutrient Mitigation in Boise: Dixie Drain (City of Boise)
You’re not alone...

We’ll work together to identify and troubleshoot permitting and technology barriers and create a stronger network of permit practitioners

So, yes – ANYTHING IS POSSIBLLLLE!!!