

Point Source Working Sub-Group

IAWA Perspective

Wednesday, November 13, 2013

9:30 AM

Flexibility & Alternate Solutions

- **Integrated Planning, Watershed Planning, Adaptive Management, Effluent Trading, Early Adopter Assistance, Green Solutions, Common Sense Initiative**
 - Can't be an afterthought
 - Must retain options for alternative solutions
 - Must incorporate local needs
 - Must provide incentives to innovation
 - Must recognize budgetary limitations

Integrated Planning

Alternative compliance plan that accomplishes:

- Nutrient benefit, OR
- Habitat repair, OR
- Other substantial permit compliance goal (i.e. TMDL, CSO, SSO, or others)

Then:

- IEPA will evaluate the totality of those plans.
- Each such permit evaluation will be case-by-case.

Watershed Planning

- Where local plans are established, they should take precedence.
 - Honors the concept of developing local solution.
- Fix problems, don't just build grey solutions.
- Local benefits is what sells most programs.

Biological Nutrient Removal Preferred WHY?

- **Better long-term average discharge**
 - Biology needs to over-perform by a wide margin
- **Associated denitrification is a free bonus**
- **Lower energy usage**
 - Less aeration required
 - Less biosolids is produced, processed, & trucked
- **Less wasted digester capacity**
 - So lower carbon footprint

Biological Nutrient Removal Preferred

HOW?

- **Annual-average P limits only**
 - Require systems to be run according to best professional judgment of licensed operators – this should balance BOD, TSS, ammonia, and nutrients.
 - Delete all shorter-term P limits (especially UCSD’s daily P limit, pretty please 😊).
- **Longer construction planning window to allow incorporation into larger construction plans**
 - Already proven to be true.
 - Most plants designed after 2000 include bio-P as a natural part of the plant design (i.e. FRWRD West Plant). Whereas, separate or rushed “Nutrient Projects” are likely chemical-based.
- **Permit revisions**
 - Start up problems and risk of failure concern operators – work to reduce this.
 - Permits should encourage excellent results, not just 100% compliance with numerical limits.
- **Chemical systems should not be required**
 - Remove requirement for back-up chemical systems at bio-P plants.
 - Don’t go too low – requires chemical addition & filtration = huge carbon footprint, few pounds

Stoner Memo – Paragraph #3

“Ensure Effectiveness of Point Source Permits in Targeted/Priority Sub-Watersheds...”

Does recommend local solutions.

Does recommend regular evaluations.

Does not recommend statewide numeric limits.

Does not recommend Gulf-Hypoxia-driven limits.

Priority Watersheds Need Preservation

- **Waterbodies with no sources of anthropogenic nutrients merit protection**
 - Alternates to discharging plants to be investigated
 - If discharging, strict limits to be expected

Subwatersheds with Local Impacts

- **Local nutrient impairments →
(targeted/priority) local effluent P limits
or an alternate solution**
- Large DO swings and sags below DO WQ
standard
 - = Local nutrient impairment
 - **P effluent limits or
alternate solutions to impairment**

Gulf Hypoxia

is a

Continental Problem

Gulf Hypoxia

is a

Continental Problem

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Targeted Subwatershed

Gulf Hypoxia Planning

- No local nutrient imperative exists.
- Removals from anywhere are equally effective.
- Reductions from anywhere are equally effective.

- Question is reduced to:

What is the fastest way to reduce even more?

- Significant point source reductions are in place or coming soon.
 - Need to document change in pounds.
 - Need to advertise best solutions.
 - Need to investigate options or impediments.

NPDES Permits

- **Continue to document effluent data.**
- **Require Draft Facilities Plan Reports regarding nutrients**
 - **Itemize cost-effective nutrient reductions**
 - Advertise methods to optimize operations
 - **Evaluate different levels of reduction possible**
 - Note potential local impacts of reductions
 - **IEPA to evaluate \$/lb P and tons of CO₂/lb P**
- **Require specific vote by governing authority regarding level of voluntary reductions**

Why Not One Size Fits All?

- **Should get to well over 45% reductions in P.**
- **Current progress has been (semi-)voluntary – should continue.**
- **Illinois' internal needs addressed with current actions plus enhanced narrative.**
- **Need a next step with everybody contributing what they can.**
- **45% to 70% P reduction from POTWs expected in 10 years.**
 - MWRDGC = 5.25 million people, 10 million PE
 - Fox River watershed = 450,000 people
 - DuPage River/Salt Creek watershed = 200,000 people
 - Springfield = 150,000 people
- **Facilities not actively installing equipment often have serious impediments and “solutions” with massive carbon footprints and financial considerations.**

Why Not One Size Fits All?

- **IEPA needs to process permits.**
 - Need to write permits in current set of priority/targeted subwatersheds that have local nutrient impairments that must be addressed.
- **Adaptive management requires evaluation.**
 - Need accurate data for evaluation.
 - Industry-wide estimates adequate for initial discussions.
 - Site specific evaluations needed for next level of assessment.
- **Next logical step.**
 - Evaluation of remaining sources is needed.
 - Need to determine impediments to progress.
 - Even if (one-size-fits-all numerical) limits were imposed blindly, studying alternatives would still be necessary.
 - IEPA can target help for those that require it.
 - Option to re-open permits, as needed.

IEPA Nutrient Initiative

- Consensus of Business, Agriculture, Wastewater Utilities, Stormwater Utilities, Environmental Groups, and Regulators is we have a state-wide problem

Illinois Environmental Utility

- Statewide solution
- Focus on solving problems
- Tasked with making progress
- Sources of pounds will be motivated to step up and work towards a solution