

Congratulations and Welcome!!

EEl would like to recognize the following employee for his milestone anniversary with the company:

20 Years: David R. Burroughs, P.E.
Senior Vice President

EEl welcomes **Christopher J. Ott, E.I.**, *Project Engineer*, **Jeffrey A. Humm**, *Senior Project Technician I*, **Christopher R. Walton, E.I.**, *Project Engineer*, **David C. Johanson, P.E., PTOE**, *Project Manager* and **Collette M. Frohlich, E.I.**, *Project Engineer* to our staff!

EEl would like to thank the following interns for spending their summer with us:
Nadia Simek, Todd Clapp and Kevin Lill



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Did You Know?

Engineering Enterprises, Inc. has been selected as one of the Top 5 for the Illinois Society of Professional Engineers (ISPE) Best Engineering Firms to Work For.

Watch for more information coming soon!



Enterprises Trivia Challenge

Q: How many miles is the Fox River in Illinois?

Send your answer to eei@eeiweb.com or fax to (630) 466-6701 by January 15th to be entered in a drawing for a \$50 American Express gift card!



Engineering Enterprises, Inc. (EEl), founded in 1974, provides consulting engineering services throughout northern Illinois. Our expertise includes water, wastewater, transportation, stormwater, construction management, land surveying and GIS.

www.eeiweb.com

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Nutrient Standard Ship Has Set Sail

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Congratulations
and Welcome

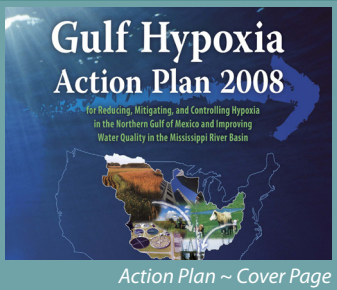
Did You Know?

Enterprises Trivia
Challenge



Fall / Winter
2013

Federal and statewide nutrient regulations have been discussed for many years, even decades. In the last decade they have generally only been applied to Wastewater Treatment Facility (WWTF) discharge permits undergoing a plant expansion in Illinois. However, in recent years there has been heightened focus on developing nutrient standards from the national and state level. The statewide efforts, along with recent results from Total Maximum Daily Load (TMDL) and watershed studies, have provided the momentum for the Illinois Environmental Protection Agency (IEPA) to add nutrient standards to WWTF National Pollutant Discharge Elimination System (NPDES) renewals. In fact, draft NPDES permit renewals for Fox River Watershed WWTF's issued in the spring of this year have included a total phosphorus (total-P) effluent standard along with other nutrient related special conditions. The IEPA has continued to add nutrient standards to draft permit renewals throughout the summer, as well. If your WWTF discharges within the Fox River Watershed and you currently do not have a total-P effluent standard within your NPDES permit, it is quite likely that your community will receive nutrient



Enterprises

Nutrient Standard Ship Has Set Sail, Cont'd.

standards at your next NPDES permit renewal. The purpose of this briefing is to provide general background on nutrient regulations on the federal, state and Fox River watershed level, so you can start to plan to meet these regulations.

Federal Nutrients Rulemaking

Under the direction of the Clean Water Act, the United States Environmental Protection Agency (USEPA) has been charged with evaluating the deleterious effects of nutrients, amongst other constituents, on waters of the United States. USEPA efforts to develop nutrient regulations to reduce impairments caused by nutrients within inland and coastal waters have been ongoing for decades. Within the Midwest, USEPA's primary motivation for nutrient reduction is to reduce and control hypoxia in the Gulf of Mexico. Gulf Hypoxia is an area within the Gulf of Mexico, currently estimated to be the size of the state of Massachusetts, where dissolved oxygen levels are so low that the waterbody cannot sustain most marine life. It is believed that nutrient loads within the Mississippi Watershed contribute to the Gulf Hypoxia problem. The Gulf Hypoxia Task Force Action Plan has established a goal of 45% reduction in nutrient loads from the Mississippi Watershed.

Statewide Nutrients Rulemaking

While several research studies have struggled to define the cause/effect relationship between phosphorus levels and impairment

in Illinois streams, federal nutrient reduction initiatives have forced the state to proceed with the development of nutrient standards. In May of 2011, the IEPA moderated a nutrient summit where stakeholders were informed of the results of research to date, existing statewide nutrient management initiatives and federal programs for nutrient management. Workgroups were established to help craft potential nutrient statewide regulations. On March 11, 2013, the IEPA and Illinois Department of Agriculture initiated the mission to develop an Illinois Nutrient Reduction Strategy. The statewide strategy will be Illinois' plan to meet the goals established in the Gulf Hypoxia Task Force Action Plan. This two tiered approach, scientific assessment and then policy development, likely will result in statewide phosphorus and nitrogen standards.



Tertiary Filters at Wastewater Treatment Facility

In mid-2014 we will see if Illinois' nutrient reduction strategy will be placed predominately on the backs of WWTF dischargers with little focus on nonpoint source (i.e. agriculture) reduction – as is the strategy in at least one similarly agricultural neighboring state.

Fox River Watershed Nutrients Standards

Approximately 50 miles of the 115 miles of the Fox River in Illinois are listed as impaired due to aquatic algae. In the summer of 2001, the Fox River Study Group (FRSG), who is a coalition of stakeholders throughout the Fox River Watershed, assembled and started to chart a course toward eliminating nutrient related impairment for the stretch of the Fox River between Stratton Dam and its confluence with the Illinois River. The FRSG has worked with the Illinois State Water Survey (ISWS) to develop computer models that replicate nutrient loading, phytoplankton production and dissolved oxygen levels within the Fox River. In April 2013, the ISWS started to present the results of alternative nutrient management strategies throughout the watershed, including WWTF total-P effluent standards as low as 0.1 mg/l and some alternatives that include several dam removals along the stretch of river under study. The FRSG has set a goal of completing the



Aquatic Algae in River

modeling report and developing a watershed nutrient management implementation plan in the summer of 2013 and summer of 2015, respectively.



Conclusions

The nutrient standard ship has already set sail and it has many communities throughout Illinois on its route. Several Illinois communities obtained total-P limits as part of WWTF expansions that have occurred over the last decade. Federal, statewide and watershed focused nutrient management efforts are providing the motivation to issue NPDES permit renewals with nutrient effluent standards. Communities with nutrient standards in place should stay tuned because nutrient removal trading likely will be part of the watershed and statewide strategy. The sooner communities plan for nutrient management, the better off they will be when the ship arrives at their port. If you have any questions on how nutrient regulations may affect your community, please contact **Jeff Freeman at jfreeman@eeiweb.com or (630) 466-6700.**

President's Message



Next year EEI will turn **40**. Having been around for most of those years, I can tell you that it has been quite a ride.

As I reflect back on the various projects and people we have worked for, I can confirm that the more things change the more things stay the same.

When I started, hand held calculators were a big deal. Now, with a smart phone you have access to a wealth of information with a push of a button. Regardless, we still face many of the same challenges. While there have been significant technological advancements what remains constant is the need for sound engineering judgment. Technology is great, smart phones and computers have allowed us to do more with less, but in the end, it all comes back to people making sound decisions.

What makes EEI special is our **people**; well over half of my colleagues at EEI have been with us for **over 10 years**. The men and women at EEI are dedicated to making our clients succeed. I feel privileged to work with so many dedicated individuals.

It will be fun to see what changes are in store for us in the next 40 years. Based on what happened the last 40 years, it is sometimes hard to imagine what can happen. I am particularly looking forward to having a car that can drive me to my destination, which will really take the sting out of commuting.

Thanks to the most important people, all our clients that have made it possible for us to get to our 40th anniversary and who have given us purpose.

Be sure to check our website (www.eeiweb.com) and our Facebook page (www.facebook.com/EngineeringEnterprisesInc) regularly for upcoming announcements and events as we celebrate next year!

Engineering Enterprises, Inc. turns **40**

Here is a by-the-numbers look at EEI's first 40 years of technical excellence and innovation.

specializing in **8** areas of practice:

- Municipal Engineering
- Water Works
- Wastewater
- Transportation
- Construction Engineering
- Land Surveying
- Stormwater Management
- GIS and Mapping

established **1974**

100% Illinois Employed

active in **34** professional organizations

over **1,700** clients and counting...

CORE VALUES

founded on **7** values:

- Client Satisfaction
- Technical Innovations
- Leadership
- Results
- Quality
- Teamwork
- Ethics

over **8,500** projects and counting.....