

DIRECTIONS

From Milwaukee

Follow I-41/US 41 to WI-23E
Take Exit 99 (Johnson St)
Continue East on Johnson St to N Park Ave, Turn Left onto N Park Ave
Continue on N Park Ave to Lakeside Park Pavilion

From Green Bay & Appleton

Follow I-41/US 41 to WI-23E
Take Exit 99 (Johnson St)
Continue East on Johnson St to N Park Ave, Turn Left onto N Park Ave
Continue on N Park Ave to Lakeside Park Pavilion

From Madison

Follow US151N to County Rd D Exit in Fond du Lac,, Continue on D to I-41/US 41N, Continue on I-41N/US 41N to WI-23E (Johnson St) Continue East on Johnson St to N Park Ave, Turn Left onto N Park Ave
Continue on N Park Ave to Lakeside Park Pavilion

Mohammed Haque
Central States Water Environment Association
1021 Alexandra Blvd.
Crystal Lakes IL 60014

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Resource Recovery Seminar

Sponsored by:



Thursday, November 10, 2016
City of Fond du Lac
Lakeside Park - Pavilion
555 N Park Ave
Fond du Lac WI 54935

OPERATIONS SEMINAR INFO

This seminar provides an overview and update of current issues related to meeting low level phosphorus limits and will include low level phosphorus efforts/case studies from facilities around the state. A wide array of phosphorus issues will be presented by recognized experts. WI DNR CEU's will be provided.

DATE: Thursday, November 10, 2016

FEE: \$40 preregistration before 10/31/16 or \$50 on or after 11/1/16. (Fee includes program materials, breaks, lunch.) Student registration \$20. On-site registration is limited to the first 70 participants.

WHERE: City of Fond du Lac—Lakeside Park Pavilion

AGENDA

8:00—9:00 a.m.—**Registration/Breakfast and Welcome/Opening Remarks**

9:00—9:45 a.m.—**Fond du Lac Low Level Phosphorus Efforts and SNRP overview**

Autumn Fisher—Fond du Lac Regional Wastewater Treatment Facility

The Fond du Lac Regional Wastewater Treatment Plant has evaluated numerous phosphorus removal technologies in preparation for their proposed WQBEL of 0.04 mg/L. Additionally, the laboratory has conducted extensive phosphorus speciation analysis with a primary focus on soluble non-reactive phosphorus (SNRP) and the potential impact on the ability to meet proposed effluent limits.

9:45—10:30a.m.— **What's New in Phosphorus Removal and Recovery**

Beverly Stinson—Vice President AECOM Water

In a time of cost constraints and carbon footprint reductions we are seeing a move toward more sustainable and compact treatment concepts. The drive to do more (better removal and recovery of valuable commodities such as reuse water, nutrients and energy) with less (space, time, cost, carbon etc.) is often referred to as "intensification". Dr. Stinson will provide an update on some ongoing research into more compact and cost effective phosphorus removal and recovery approaches emerging within the industry along with some full scale data from real world applications.

10:30—10:45 a.m.—**Break**

Coffee, fresh fruit, and pastries

10:45—11:30 a.m.—**Bull Session 1**

An open forum for the discussion of phosphorus related issues.

11:30—12:00 p.m.— **Sheboygan Case Studies**

Dan Brady—Lead Operator Sheboygan WWTP and Sharon Thieszen—Superintendent

The presentation will focus on efforts to use high strength waste as a carbon source to drive biological phosphorus removal. The facility sends high strength waste to an anaerobic digestion process on a daily basis to produce biogas but has recently added high strength waste to its activated sludge process as a carbon source to drive Bio-P.

12:00—12:45 p.m.—**Lunch**

Cod Fish Fry, butter roasted potatoes, cole slaw, rye bread

12:45—1:00 P.M.— **Oshkosh Phosphorus Source Reduction Efforts**

Jason Ellis—City of Oshkosh Pretreatment Coordinator and Steve Brand— City of Oshkosh Utility Manager

The City of Oshkosh has focused on identifying and reducing/eliminating phosphorus sources via education and outreach to permitted industries. This presentation will highlight source reduction efforts and bring to light other phosphorus reduction considerations.

1:00—1:30—p.m.—**Green Bay Final Clarifier Case Study**

Nathan Cassity—Donohue & Associates

Full scale final clarifier testing was performed at the NEW Water treatment facility which provided projections of TSS removal and ultimately phosphorus removal due to baffle improvements.

1:30—1:45 p.m.— **Energy and Nutrients**

Matt Seib— Process and Research Engineer at Madison Metropolitan Sewerage District

Rusty Schroedel—AECOM Engineering Manager
Information on WEF energy guidance documents and resources will be discussed.

1:45— 2:15 P.M. – **Combining Energy Saving efforts with Nutrient Removal in mind**

Steve Reusser—Ayres Associates Process Engineer

This will be a discussion focusing on energy and nutrients. Energy optimization strategies related to aeration equipment, mixing, and controls will be discussed along with process changes and impacts to Biological Phosphorus removal.

2:15—2:30 p.m.—**Break**

Bars, cookies, coffee, and ice tea

2:30—3:15 p.m.—**Bull Session 2**

An open forum for the discussion of phosphorus and energy related issues.

SPEAKERS

Autumn Fisher— Fond du Lac Regional WWTP

Beverly Stinson—AECOM Water

Dan Brady—Sheboygan WWTP

Sharon Thieszen — Sheboygan WWTP

Jason Ellis—Oshkosh Water and Wastewater Utility

Steve Brand—Oshkosh Water and Wastewater Utility

Nathan Cassity—Donohue & Associates

Matt Seib—Madison Metropolitan Sewerage District

Rusty Schroedel—AECOM

Steve Reusser—Ayres Associates

COMMITTEE MEMBERS

Troy Larson

Bill Marten

Sharon Thieszen

Rusty Schroedel

Steve Brand

Alan Grooms

Matt Seib

Pat Wescott

Sharon Long

Jeremy Cramer

Randy Wirtz

REGISTRATION

Register and pay online at www.cswea.org/wisconsin/ events or mail with payment to:

Jeremy Cramer

Fond du Lac Regional Wastewater Treatment Facility

700 Doty St

Fond du Lac WI 54935-1960

Make checks payable to: CSWEA—WI Section

Please submit 1 registration form per person

Name: _____

Company: _____

Address: _____

City/State/Zip: _____

Phone: _____

Email: _____

Registration deadline: Forms and payment in full by 11/10/16.

\$40 preregistration before 10/31/16, \$50 11/1/16 & day of event/Student registration \$20

No refunds given after 10/31/16. No purchase orders or company billing will be accepted.