

SIDE-STREAM & MAINSTREAM NUTRIENT WORKSHOP

Cost Effective Strategies for Nutrient Removal



In 2015, WEF released The Nutrient Roadmap with an aspirational goal: The next generation of wastewater treatment has zero net impact with regard to energy use, greenhouse gas emissions and nutrient discharge by 2040. Achieving this goal requires a dedication to overcoming technical barriers, financial constraints, and regulatory disincentives limiting nutrient removal, greenhouse gas emission reduction, and energy neutrality in wastewater treatment. [View the Nutrient Primer from WEF.](#)

Solids handling recycle flows contribute substantial nutrient loads to the main plants. Therefore, better managing solids handling side streams, reducing the nutrient loads is one of the overarching goals of the POTWs for NPDES permit compliance. The focus of this workshop is on nutrient removal technologies currently in use and the next generation technologies in development. This interactive workshop will cover fundamental principles of short-cut nitrogen removal and how we can apply this knowledge to reliably and cost effectively treating ammonia thorough application of side stream and mainstream processes.

Thursday, February 8th

Los Angeles County Sanitation Districts

1955 Workman Mill Road
Whittier, CA 90601

Thursday, February 15th

HS Lordships

199 Seawall Drive
Berkeley, CA 94710

What you'll learn:

1. The latest research in side stream nutrient removal
2. Lessons learned from agencies using nutrient removal
3. New technology options entering the market

Who should attend:

- Project managers
- Engineers
- Energy leaders
- Operations staff
- O&M leaders
- Technology providers
- Academics
- Regulators

Earn up to 5.2 CWEA contact hours towards Collection System Maintenance, Environmental Compliance Inspector, Laboratory Analyst, Mechanical Technologist and Electrical & Instrumentation recertification.

Hosted by



Note: Local Sections are handling registration. Please follow the registration link carefully, it is different for each location.

REGISTER SOON ~ WORKSHOPS DO SELL OUT



Engineering & Research Committee

SIDE-STREAM & MAINSTREAM NUTRIENT WORKSHOP

Cost Effective Strategies for Nutrient Removal

Workshop Speakers - Feb 8th - Whittier

8:30 a.m.	Registration, Coffee and Continental Breakfast
8:50 a.m.	Welcome - Ufuk Erdal , PhD, PE, AECOM, CWEA Engineering & Research Committee Vice Chair
9:00 a.m.	Introduction, Technologies and Theory on Side Stream and Main Stream Nitrogen Removal Beverley Stinson, PhD, AECOM
9:40 a.m.	Design Considerations for the Side Stream and Main Stream Nitrogen Removal Systems Sandeep Sathyamoorthy, PhD, PE, Black and Veatch
10:20 a.m.	<i>Break</i>
10:40 a.m.	Ammonia-based Intermittent Aeration Control Optimized for Efficient Nitrogen Removal Pusker Regmi, PhD, PE, Brown and Caldwell
11:20 a.m.	Pilot-Scale Testing of the ANITAMox Process for Centrate Deammonification Michael Liu, PE, Los Angeles County Sanitation Districts
12:00 p.m.	Lunch
1:30 p.m.	Panel Discussion: Perspectives by Technology Suppliers Facilitators: Pusker Regmi and Ufuk Erdal Panel Speakers: James Horton , Aqua Aerobic Daniel Dair , World Water Works Yaniv Scherson , Anaergia Nathan Antonneau , Evoqua
3:00 p.m.	Wrap-up



SoCal registration is handled by our Los Angeles Basin Section

Register your team early. Include continental breakfast and lunch.

Member \$100

Non-member \$125

Student \$20

Registration by Eventbrite. Note: credit card fee is added to reg price at check-out

<https://www.eventbrite.com/e/side-stream-nutrient-workshop-tickets-39556385213>

Payment method is by credit card only. No refunds, changing the attendee is welcome.

Wednesday, February 8th

**Los Angeles County
Sanitation Districts**

1955 Workman Mill Road
Whittier, CA 90601

For info about this location, please contact:

John Robinson

LABS President

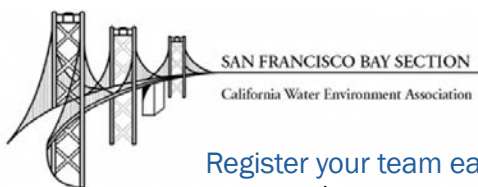
jrobinson@johnrobinsonconsulting.com

SIDE-STREAM & MAINSTREAM NUTRIENT WORKSHOP

Cost Effective Strategies for Nutrient Removal

Workshop Speakers - Feb 15th - Berkeley

8:30 a.m.	Registration, Coffee and Continental Breakfast
8:50 a.m.	Welcome - Ufuk Erdal , PhD, PE, AECOM, CWEA Engineering & Research Committee Vice Chair
9:00 a.m.	Introduction, Technologies and Theory on Side Stream and Main Stream Nitrogen Removal Beverley Stinson, PhD, AECOM
9:40 a.m.	Design Considerations for the Side Stream and Main Stream Nitrogen Removal Systems Sandeep Sathyamoorthy, PhD, PE, Black and Veatch
10:20 a.m.	<i>Break</i>
10:40 a.m.	Ammonia-based Intermittent Aeration Control Optimized for Efficient Nitrogen Removal Pusker Regmi, PhD, PE, Brown and Caldwell
11:20 a.m.	EPA Grant-funded Regional Sidestream Nutrient Removal Study Phoebe Grow, PE and David Graham, PE, East Bay Municipal Utility District
12:00 p.m.	Lunch
1:30 p.m.	Panel Discussion: Perspectives by Technology Suppliers Facilitators: Pusker Regmi and Ufuk Erdal Panel Speakers: James Horton , Aqua Aerobic Chandler Johnson , World Water Works Yaniv Scherson , Anaergia Mike Doyle , Evoqua
3:00 p.m.	Wrap-up



NorCal registration is handled by
the San Francisco Bay Section

Register your team early. Include continental breakfast and lunch.

Member \$100

Non-member \$125

Student \$20

Registration by Eventbrite. Note: credit card fee is added to reg price at check-out

<https://www.eventbrite.com/e/nutrients-sidestream-treatment-seminar-tickets-39404259200>

Payment method is by credit card only. No refunds, changing the attendee is welcome.

Thursday, February 15th

HS Lordships

199 Seawall Drive
Berkeley, CA 94710

For info about this location, please contact:

Gary Warren

SFBS Vice President

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