

2019 Intern Symposium & 35th Anniversary Celebration

August 21, 2019 McNamara Alumni Center University of Minnesota









About MnTAP...

MnTAP is an outreach program at the University of Minnesota that helps Minnesota businesses develop and implement industry-tailored solutions that prevent pollution at the source, maximize efficient use of resources, reduce energy use, and bring down costs to improve public health and the environment.

MnTAP provides technical assistance tailored for each specific business. By reducing waste and increasing efficiency businesses in Minnesota can save on disposal and raw material costs, and decrease regulatory compliance burdens while creating healthier and safer working conditions for employees.

MnTAP is funded primarily by a pass-through grant from the Minnesota Pollution Control Agency's Prevention and Assistance Division to the University of Minnesota School of Public Health, Division of Environmental Health Sciences. MnTAP has no regulatory responsibilities or obligations.

Symposium Program

| Time | Johnson Great Room | Ski-U-Mah Room |
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| 12:00 | Registration and Refreshments | |
| 12:30 | Welcome: Laura Babcock, MnTAP Director Peter Tester, MPCA Deputy Commissioner William Toscano, Ph.D., EnHS, SPH Keynote: Zach Zurbey, Plant Manager, Atlas Corporation, Past MnTAP Intern | |
| 1:30 Session 1 and Panel Discussions | Health Systems Cooperative Laundries, St. Paul Josiah Budiman, U of MN, Chemical Engineering Investigate water, gas, and electricity balances to determinemore efficient ways of resource use. City of Plymouth, Plymouth Sam Mader, U of MN, Chemical Engineering & Chemistry / Perform acity-wide water audit reduce water to find ways to decrease consumption in city irrigation systems and multifamily buildings. Minnesota Zoo, Apple Valley Erin Maxson, U of MN, Duluth, Chemical Engineering / Study water usage zoo wide and ways to reduce the amount of water consumed. Boston Scientific, Maple Grove Heather Levy, U of MN, Chemistry Study the life cycle of water at the facility, | Minnesota Rural Water Assc., Statewide Amit Itkin, U of MN, Environmental Engineering Develop strategies to improve nutrient removal in several wastewater treatment ponds. Hutchinson WWTP, Hutchinson Joshua Kirk, U of MN, Environmental Engineering Assess opportunities for nutrient reduction through computer modeling and preliminary testing. Hope Communities, Minneapolis Elizabeth Joncas, U of MN, Sustainable Systems Management / Increase the air quality of the Phillips neighborhood by working locally to transition from harmful cleaningproducts. White Bear Lake, White Bear Lake Area Melody Markert, U of MN, Bioproducts & Biosystems Engineering / Recommend less |
| 2:30 Poster | conduct a detailed water balance, and complete recommendations for water conservation. Posters and Networking with Interns | hazardous cleaning and degreasing products for automotive shops. |
| Session | Speaker: Christine Anderson, EPA, Region 5 | |
| 3:15 Session 2 and Panel Discussions | Ball Corporation, St. Paul Sayandeep Biswas, U of MN, Chemical Engineering Improvesystems for tracking water usage to reduce the water consumption of the plant TreeHouse Foods, Fridley | Aveda Corp., Blaine Bailey Erickson, U of MN, Chemical Engineering Focus on improving energy efficiency of the compressed air and chiller systems and reducing off-grade product. |
| 4:15 | Nick Tulshibagwale, U of MN, Mechanical Engineering / Study the life cycle of water at the facility, conduct a detailed water balance, and complete recommendations for water conservation. Seneca Foods, Glencoe Larry Lau, U of Illinois at Urbana-Champaign, Chemical Engineering / Study production water usage throughout the plant and identify areas of opport unity for reduction. Wenger Corp., Owatonna Patrick Gibbons-Peterson, U of MN, Chemical Engineering / Find solutions to mitigate wood waste generation and increase facility-wide energy efficiency. | North Memorial Health Hospital, Robbinsdale Joshua Goetz, U of MN, Chemical Engineering Focus on increasing the efficiency of the boiler plant and HVACsystems. Kerry Ingredients, Rochester Noah Siem, U of MN, Bioproducts & Biosystems Engineering / Examine potential for water flow reduction, BOD sequestration, and wastewater pretreatment optimization. Verta Inc., Delano Christopher Yun, U of MN, Chemical Engineering Evaluate options to improve paint transfer efficiency and reuse cleaning solvents. |
| Poster Session | Posters and Networking with Interns | |

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2019 Interns



Front, L-R: Heather Levy, Melody Markert, Larry Lau, Sayandeep Biswas, Elizabeth Joncas, Joshua Goetz, Erin Maxson, Bailey Erickson

Back: Josiah Budiman, Amit Itkin, Sam Mader, Nick Tulshibagwale, Josh Kirk, Noah Siem, Patrick Gibbons-Peterson, Chris Yun

Thank You!

MnTAP would like to thank the companies that participated in the 2019 intern program. Without their support and the dedication of their employees, the students would not be nearly as successful.

- Aveda Corporation
- Ball Corporation
- Boston Scientific
- City of Plymouth
- Health Systems Cooperative Laundries
- Hutchinson WWTP
- Kerry Ingredients
- Minnesota Rural Water Association
- Minnesota Zoo
- North Memorial Health Hospital
- Seneca Foods
- TreeHouse Foods
- Verta Inc.
- Hope Communities
- Wenger Corp.
- White Bear Lake Chamber of Commerce

Additionally, we would like to thank the following for their contributions to the program:

- Minnesota Pollution Control Agency
- Metropolitan Council Environmental Services (MCES) with funding from the Clean Water Land & Legacy Amendment
- CenterPoint Energy
- Minnesota Environmental and Natural Resources Trust Fund
- U.S. Environmental Protection Agency
- Xcel Energy

Each of these agencies, organizations, or utilities either partially or fully-funded at least one intern project for 2019. This support helps MnTAP increase the number of intern positions available each year and fund our continuing water conservation and energy efficiency work.



University of Minnesota

2020 Intern Program

Now's the time to starting talking with us about developing a project and applying for a Summer 2020 intern. Applications are due on January 31, 2020.

For more information about the intern program or how to participate, please contact Nathan Landwehr, MnTAP intern administrator, at 612-624-4697 or landwehr@umn.edu.

MnTAP is a non-regulatory program in the School of Public Health at the University of Minnesota and is funded by the Minnesota Pollution Control Agency. © 2019 Regents of the University of Minnesota. All rights reserved. The University of Minnesota is an equal opportunity educator and employer. MnTAP • 200 Oak Street SE, Suite 350-1 • Minneapolis, MN 55455-2008 www.mntap.umn.edu • 612-624-1300 • 800-247-0015 (Minnesota only)