



Great Lakes region cohort

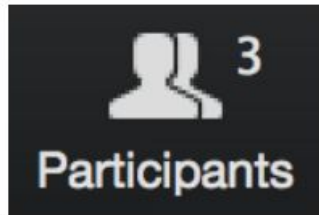
Campus exterior: Smart salt

November 1, 2021

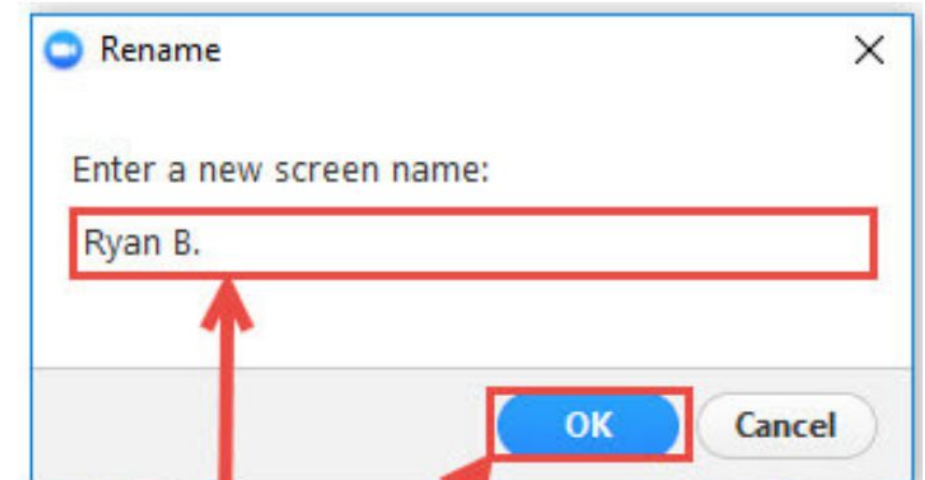


Housekeeping | How to rename yourself in Zoom

Rename yourself to include your first name and organization name.
Sample: Sarah, St. Johns Hospital



2 In the "Participants" list on the right side of the Zoom window, hover over your name and click on the "Rename" button.

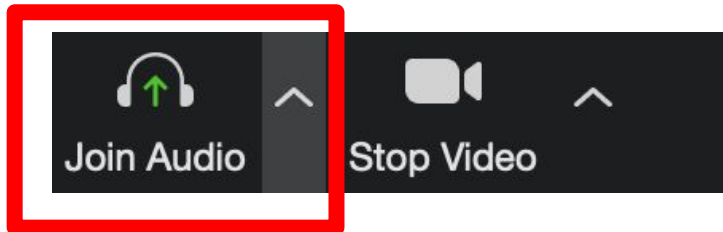


3 Type in the display name you'd like to appear in the meeting and click on "OK".

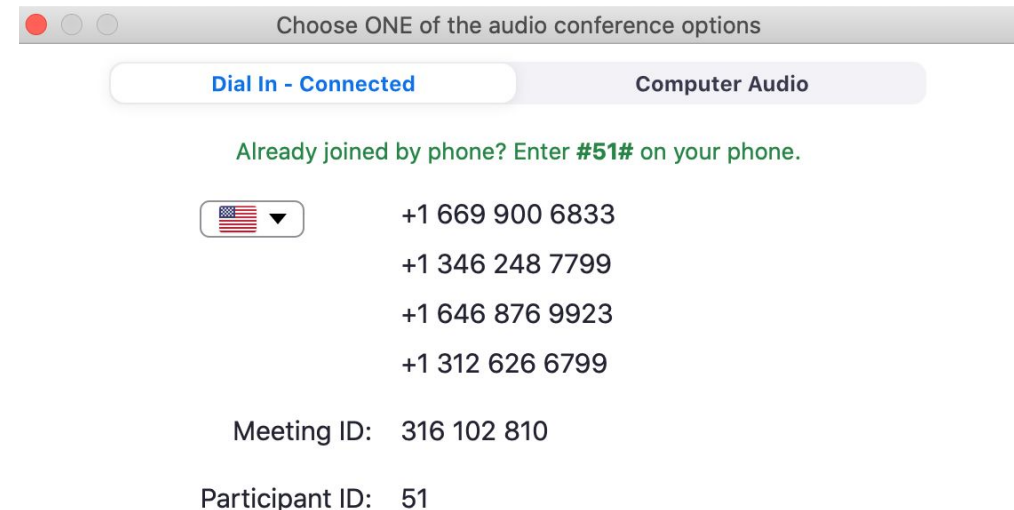
Housekeeping | How to pair your phone and computer

Ensure your audio is paired with your participant ID

1. Click on
Join audio





2. On dial pad enter:
participant ID





Housekeeping | Zoom tools


Let’s review where you can find the tools you will need for today’s meeting.


Mute


Start Video


Invite

Participants²

Share Screen

Chat

Record

Reactions

Leave Meeting

1

2

3

4

5


6


7


8


9


Raising you hand can be done by clicking “Participants” (button #4 above) in the in-meeting control bar and clicking the “Raise Hand” icon highlighted


Raise Hand

yes

no

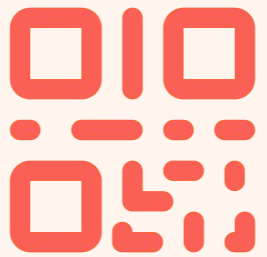
go slower

go faster

more

Unmute Me

slido



**Join at slido.com
#663932**

① Start presenting to display the joining instructions on this slide.

In Good Company | Cohort participants



Practice Greenhealth Partners

Abbott Northwestern Hospital
Abraham Lincoln Memorial Hospital
Advocate Aurora Health
Aspirus, Inc.
CentraCare Health System
Children's Hospital Wisconsin
Cincinnati Children's Hospital Medical Center
Cleveland Clinic Health System
Froedtert Hospital
Gundersen Health
HealthPartners
Indiana University Health
Mayo Clinic Health System

Northwestern Memorial Healthcare
OhioHealth
Ohio State University Wexner Medical Center
OSF Saint Anthony Medical Center
Rush University Medical Center
Spectrum Health Butterworth Hospital
SSM Health
Trinity Health - St. Joseph Mercy Ann Arbor
UH Cleveland Medical Center
UW Health
University of Illinois Hospital & Health Sciences System
University of Michigan Medical Center

Agenda

- Introductions
- Smart salt: a primer
- Mayo Clinic case study

slido



Which of the following Great Lakes states have vast rock salt mines? (select all that apply)

[Source: Columbia Climate School](#)

① Start presenting to display the poll results on this slide.

slido



What are some of the negative health implications of inappropriately using salt?

Source: Poison Control

① Start presenting to display the poll results on this slide.



Alex Kim

City of Brooklyn Park

Alex Kim, MPH received his Master of Public Health degree in Environmental Health from the University of Minnesota in 2016. He has been active in the pursuit of a more sustainable present and future by working with Abbott Northwestern Hospital to develop more environmentally friendly practices. He is currently an Environmental Health Specialist for the City of Brooklyn Park and has enjoyed being able to actively engage with the community and promote various sustainable practices within the city. He also helps his fellow staff members live and work in a more sustainable manner by spearheading the Green Team.

The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic visual effect.

Smart Salting

An Overview

What's the Issue?

▶ Chloride pollution

- ▶ Federal standard (chronic): 230 mg/L = 1 tsp salt/5 gal water. 50 lbs salt can pollute 10k gal of water. 10 yd load can contaminate 8 million gallons of water.
- ▶ TC metro area: ~350k tons/season
- ▶ Breakdown: 42% salt, 22% wastewater, 23% fertilizer (potassium chloride) - 65% of chloride in wastewater from water softeners

▶ Negative Effects

- ▶ Elevated chloride/sodium toxic to plants, animals, humans
 - ▶ [Monarch study](#)
- ▶ Salt infiltrates freshwater bodies and groundwater - contaminates drinking water and harms aquatic species
- ▶ Equipment/buildings: rust on vehicles; damage to floors, carpeting, doorways

Background

- ▶ Alex
 - ▶ Environmental Health Specialist for City of Brooklyn Park, MN
 - ▶ Interest in salt/chloride pollution driven by observations of city facility salting
 - ▶ Specifically: Too much!
 - ▶ Observations led to transportation of water sample from City Hall to Science Museum for testing. Result: chloride level elevated but not dangerous
 - ▶ Smart Salting trainings - 2019 (property managers) and 2021 (roads)



Smart Salting - Trainings

- ▶ MN: [Trainings administered by MPCA](#) and [Fortin Consulting](#) - currently virtual
 - ▶ Level 1 - Individuals
 - ▶ Property mgmt. - 3 years
 - ▶ Roads; Parking lots/sidewalks - 5 years
 - ▶ Level 2 - Organizations
 - ▶ Valid for 2 years. Reports based on usage of smart salting assessment tool (SSAt) submitted every 2 years to maintain certification
- ▶ WI: WI Salt Wise
 - ▶ [Upcoming training](#): Nov. 9th - Smart Salting for Roads (virtual)
 - ▶ [Wednesday Webinars](#): 1 hour each, recorded
- ▶ Other states: MN and WI trainings are open to anyone

Brooklyn Park Policies/Initiatives

- ▶ Salt reduction: based on need
 - ▶ Not all streets salted
 - ▶ Intersections and curves where traction is most necessary
 - ▶ Reduced salt usage near Shingle Creek and Mississippi River
 - ▶ Note: Shingle Creek first creek in MN listed for chlorides. 71% reduction necessary to meet EPA guidelines.
- ▶ Smart Salting
 - ▶ Many staff members have attended trainings
 - ▶ New staff sent to trainings
- ▶ Snow Control
 - ▶ No salt/sand usage in certain areas - mechanical snow removal only
- ▶ City Hall Remodel
 - ▶ Installed heated sidewalk

What Should We Do?

- ▶ Proven ways to reduce salt usage
 - ▶ Focus on mechanical processes for snow/ice removal upfront
 - ▶ Only use salt when necessary
 - ▶ High traffic areas
 - ▶ Use brine - 23% salt, 77% water is ideal ratio
- ▶ Other techniques
 - ▶ Avoid mixing salt and sand - work better alone than together
- ▶ Benefits
 - ▶ Financial
 - ▶ Patient/human/animal health



Other Methods/Alternatives

- ▶ Be aware of temperature
 - ▶ Pavement/surface, not air
 - ▶ Lower than 15 degrees?
 - ▶ NaCl won't work effectively - will blow away before melting anything
 - ▶ CaCl₂ and MgCl₂ will work at lower temps
- ▶ Non-chemical options
 - ▶ Geothermal/heated pavement
 - ▶ Public transit
 - ▶ Telework during snowfall conditions

Thank You!

- ▶ Alex Kim - alex.kim@brooklynpark.org

slido



What does your health system do to reduce salt usage?

slido



What have been the benefits of your health system's health reduction initiatives?



SMART SALT PROGRAM

MAYO CLINIC

- 65,000+ employees
- Destination sites in Minnesota, Arizona, Florida
- Mayo Clinic Health System in Minnesota, Wisconsin, Iowa
- Total building space
 - 25+ million sq. ft.
- Rochester, MN campus
 - 14 million sq. ft. building space
 - 8 million sq. ft. parking (ramp + lot)



Matt Donovan

Mayo Clinic

For 20 years Matt has been working on the Mayo Grounds team. He has been the supervisor for the last 3 years. Matt has been instrumental in reducing salt usage throughout the winter season and inspires others to do the same. He is also leading the way for urban prairie development on the Mayo Clinic Campus. Matt is inspired by his wife and two children. In his free time, Matt likes to hike, fish and camp with his family.

donovan.matthew@mayo.edu

Mayo Clinic Salt reduction

Matthew Donovan

Mayo Clinic Grounds Maintenance Supervisor

Background

- * 15 miles of sidewalk
- * 120 acres of parking lot, roadway
- * 8 parking ramps
- * 300 doorways
- * 800 outdoor steps
- * 350 acres of greenspace
- * 25+ different sites

First Step

Smart Salt Training



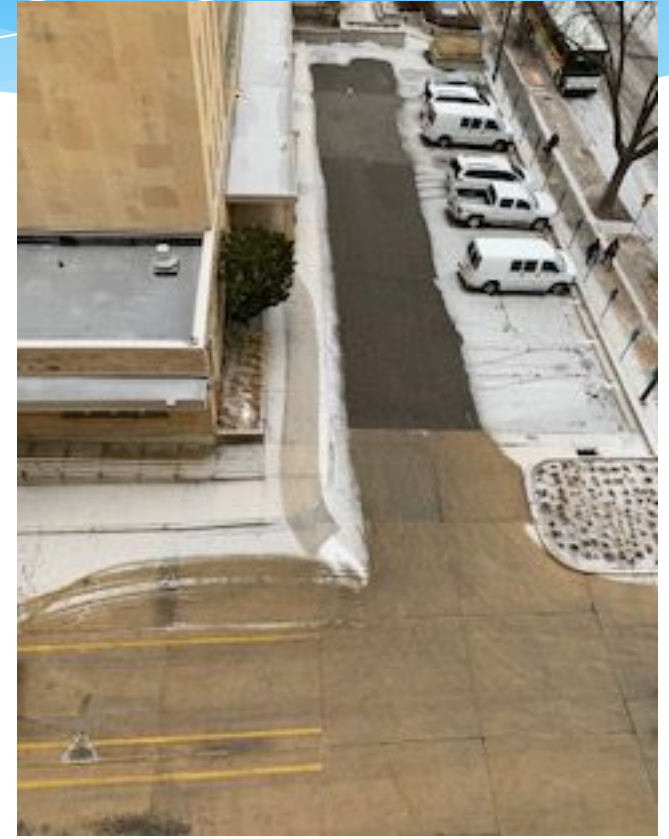
Mayo Contractor Requirements

Contractor provider shall have all employees and subcontractors working on Mayo properties Smart Salt Level 1 certified by the Minnesota Pollution Control Agency.
Contractor will calibrate all de-icing equipment used on Mayo Clinic property at a minimum of once per year and provide calibration records to Mayo Clinic Grounds Maintenance Supervisor by December 1 of each winter season.

Contractor Partnership

- * Plow and salt ???
- * Transition to Plow -> Salt if Needed
- * Spot salting
- * Equipment upgrades

Salt Brine/Potassium Formate



Results

- * Salt Savings
 - * 60% reduction compared to winter 2017-2018
 - * 72% reduction compared to winter 2016-2017
- * Safety
- * Landscape

Thank You!

donovan.matthew@mayo.edu



slido



What are some of the barriers to implementing smart salting practices at your health system?

slido



What have Alex & Matt inspired you to pursue at your health system?

Resources

- Minnesota
 - [Pollution Control Smart Salt trainings](#)
 - [Winter Maintenance Certifications](#)
 - [Mayo Clinic smart salt case study](#)
- Wisconsin
 - [WI Winter Salt Certification Classes](#)
 - [Salt Smart workshops](#)
- Illinois
 - [DuPage River Salt Creek Workgroup](#)



SHANDA DEMOREST
Great Lakes Facilitator
855.239.9998

sdemorest@practicegreenhealth.org

www.practicegreenhealth.org

www.noharm.org

November 2021