

#### **P2 Within Tribal Nations**

December 10, 2024 3:45 – 4:45PM ET

#### Moderated by Charles Kovatch, EPA

#### **Speakers:**

- Lisa Lone Fight, Montana State University
- Tanner Johnson, Alaska Forum
- Les Benedict, Saint Regis Mohawk Tribe

Indigenous Science and Source Reduction: Ancient Wisdom for Modern Environmental Challenges







# Beyond Traditional Ecological Knowledge (TEK)

Living, Dynamic System

Indigenous Science is not static
but evolves and adapts to
changing environments and needs.

Maa udats awee: "Our Ancient Ways of Life"

Indigenous cultures have long practiced sustainable living, emphasizing respect for the natural world.

Prevention-Based
Approaches

Indigenous Science emphasizes minimizing environmental impact through thoughtful practices and resource management.



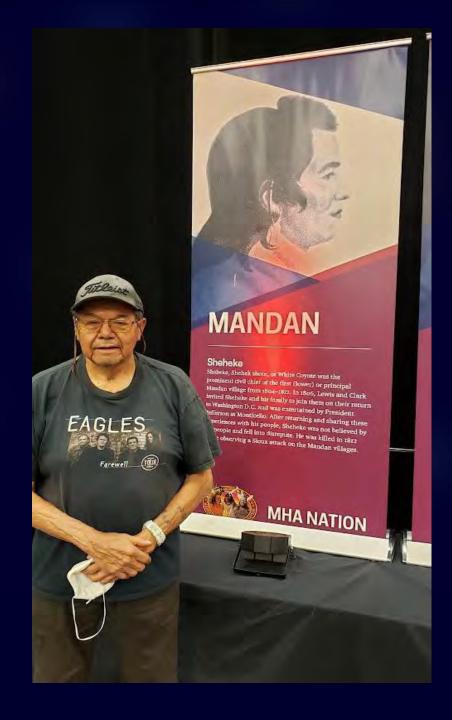
# A Science of Relationships

#### **Systems Thinking**

Indigenous Science recognizes the interconnectedness of all living things and the environment, promoting a holistic approach to sustainability.

#### **Connected Impacts Across Generations**

Traditional practices aim to ensure the health and wellbeing of future generations by fostering a deep understanding of ecological balance.



## Language as Science



**Encoded Understanding** 

Indigenous languages often encode ecological knowledge, reflecting a deep understanding of the natural world.



Relationships and Actions

Indigenous languages often prioritize verbs and relationships, emphasizing the interconnectedness of actions and their consequences.



## Multiple Ways of Knowing

#### Diverse Perspectives

Indigenous Science values
multiple ways of knowing,
acknowledging the
importance of diverse
perspectives and experiences.

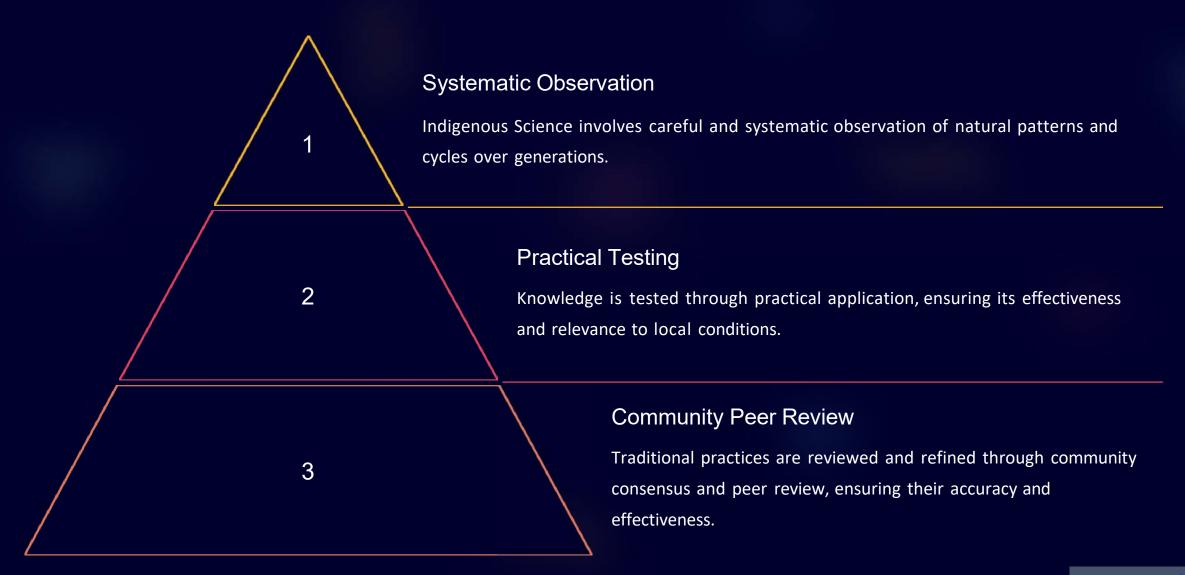
#### Community Consensus

Knowledge is validated through community consensus and shared understanding, ensuring accuracy and relevance to local contexts.

#### Generational Knowledge Transfer

Indigenous Science is passed down through generations, ensuring the continuity of valuable ecological knowledge and practices.

#### Rigorous Methodology



### Application to Modern Challenges



#### Traditional Practices

Indigenous knowledge provides valuable insights into source reduction practices, offering sustainable alternatives to modern methods.



#### Alternatives to Toxic Substances

Traditional methods often employ natural resources and non-toxic substances, providing eco-friendly solutions to modern challenges.



#### **Zero-Waste Traditions**

Indigenous cultures have long practiced zero-waste living, incorporating sustainable practices into daily life.



# Working Together

1

#### Collaboration

Integrating Indigenous Science with Western scientific approaches can create more comprehensive and effective solutions.

2

#### **Prevention-Based Solutions**

Indigenous wisdom emphasizes preventing environmental damage through thoughtful resource management and sustainable practices.



#### **Knik** Tribe

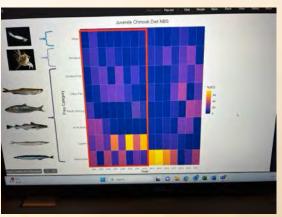
 Federally recognized tribe that provides services to tribal members in the Matanuska Susitna Borough.











#### **Alaska Forum**

- Our mission is to promote a healthy environment through communication and education.
- The Alaska Forum supports rural Alaskan communities through environmental worker training, Green Star Community certification, and more.







# **Project Overview**

Reducing Toxics in Alaska Rural Communities through EPA's Safer Choice Program



Focus on rural Alaska & Environmental Justice (EJ) impacted Alaska Native communities.



Promote use of Safer Choice products in business operations for rural Alaska businesses.



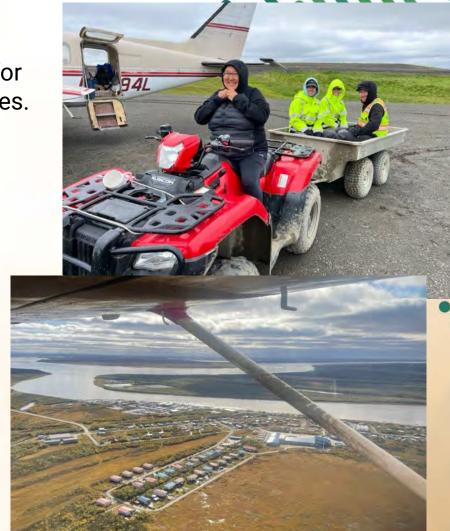
Encourage local stores to increase availability of Safer Choice products.



Assist in-store consumer education opportunities.



Expand the awareness of Safer Choice products for residents & community organizations to reduce their exposure and use of toxic chemicals.



# **Environmental Justice (EJ)** impacted Alaska Native communities.



271 rural communities in Alaska, 229 Federally Recognized Tribes



Most have a population of less than 2,500 and are not connected to any road system.



Travel to/between is accomplished largely using small planes and boats.







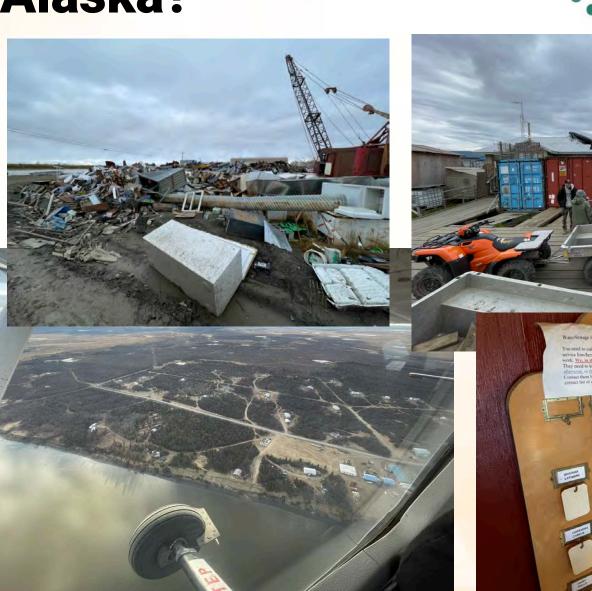
# **Environmental Justice (EJ)**impacted Alaska Native communities





# What does Pollution Prevention mean in rural Alaska?







#### **Methods - Retail**

Develop assets for physical and digital education

- In-store Aisle Call-Outs
- Posters & public-facing one-sheet
- Social media and email newsletter

Collect data on currently available Safer Choice products in community stores

- Brand, item name, size
- Unit Price
- Competitive non-Safer Choice options comparison





#### **Methods - Communities**

Largely through Green Star® Community enrollees and awardees, we're:

Identifying opportunities for Tribal Councils, city admins, and other stakeholders to migrate their own cleaning supplies to Safer Choice certified products.

- Surface cleaners, floor cleaners, soaps, other janitorial products
- Social media and email newsletter
- Posters & public-facing one-sheet

Collaborating with community stakeholders to share out public education assets.

- Tribal Council, IGAP, community Facebook pages/groups
- Post hard assets in community laundromats
- Work with other community entities to adopt the use of Safer Choice products in their own practices.





#### **Communities**

Public education signage has been delivered to 18 stores and 26 Tribal/community entities across the state to to reduce their exposure and use of toxic chemicals by promoting the use and local availability of Safer Choice products.



65 communities have received Technical Assistance (TA).



43 businesses contacted about participation.



190 Tribal, government and community organizations have received Technical Assistance.



# **Implementation**









# **Impact**

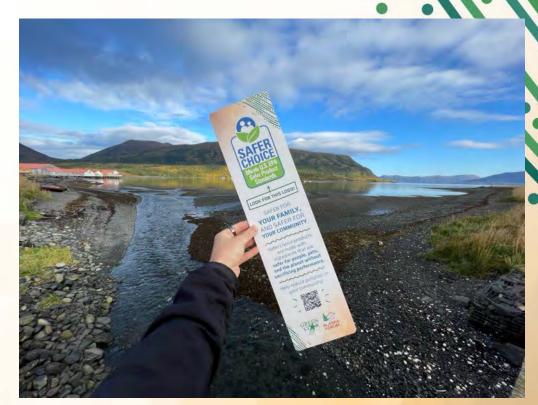
"...it is good to see the community be more informed of safer cleaning supplies and healthier cleaning practices. I had a few customers ask me about the signs, and I believe it did influence their decision on what cleaning products to buy." – Yakutat store manager



With delivery of signage, stores are asked to provide feedback on changes in turn rate.



Community leaders are provided templates and assistance in crafting digital communications for public outreach.



# **Safer Choice Survey Results**



Certified products have been found in every community surveyed so far, with varying levels of inventory.



Safer Choice certified products are priced comparatively to conventional products.





# **Training**

- Alaska Forum on the Environment
- Alaska Native Tribal Health Consortium's (ANTHC) 7 Generations Training
- ANTHC's Statewide Monthly Webinar
- Association of Alaska School Boards' (AASB) School Maintenance Employee Conference





# **Next Steps**

 Continued coordination with local stakeholders' source reduction in:









**Tribal Offices** 

School Janitorial Staff

Community Government

Fishing/Hunting Lodges

 Continued TA for public education outreach through signage and through Social Media/Digital Toolkit









# Challenges

 Follow through feedback on changes in consumer purchasing habits.



- Collaboration/participation with larger corporate retail entities.
- Limited retail options within communities.
- Remote communities travel access, visit logistics, weather, and more.



# **Travel**





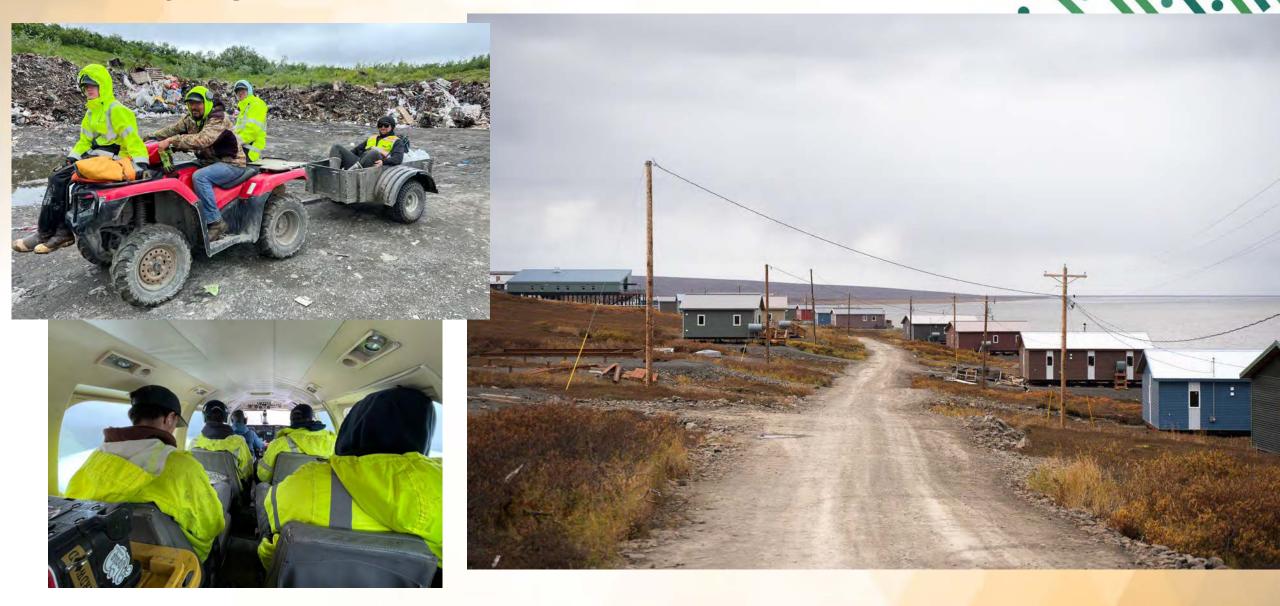


# **Travel**





# **Travel**



#### Contact

**Tanner Johnson** 

Environmental Programs Coordinator, Alaska Forum

tjohnson@akforum.org / 907-310-6604









# Salt Cycle Disruption and Climate Change

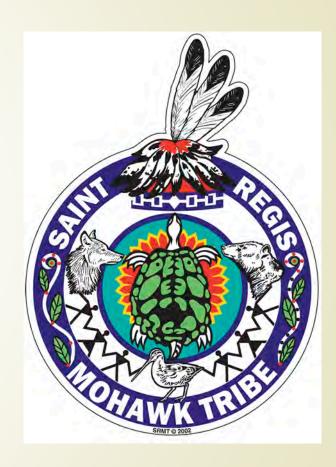
Presentation by Les Benedict, Saint Regis Mohawk Tribe

2024 Pollution Prevention Training and Conference – Dec. 10-11, 2024

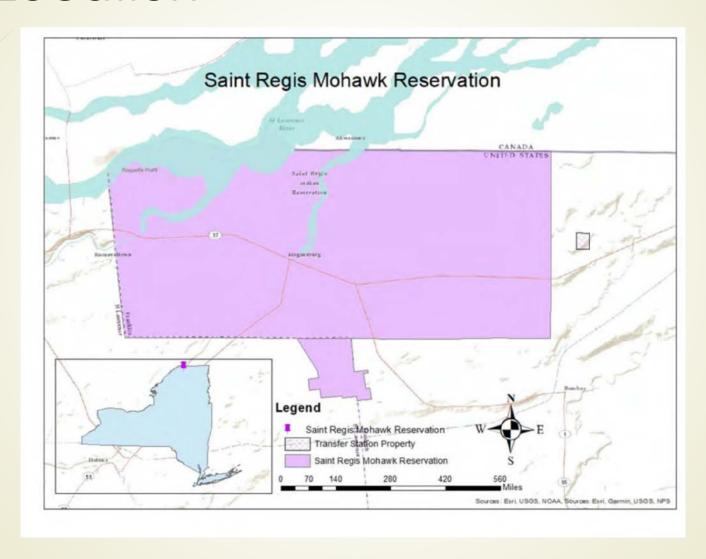
P2 Within Tribal Nations

#### Introduction

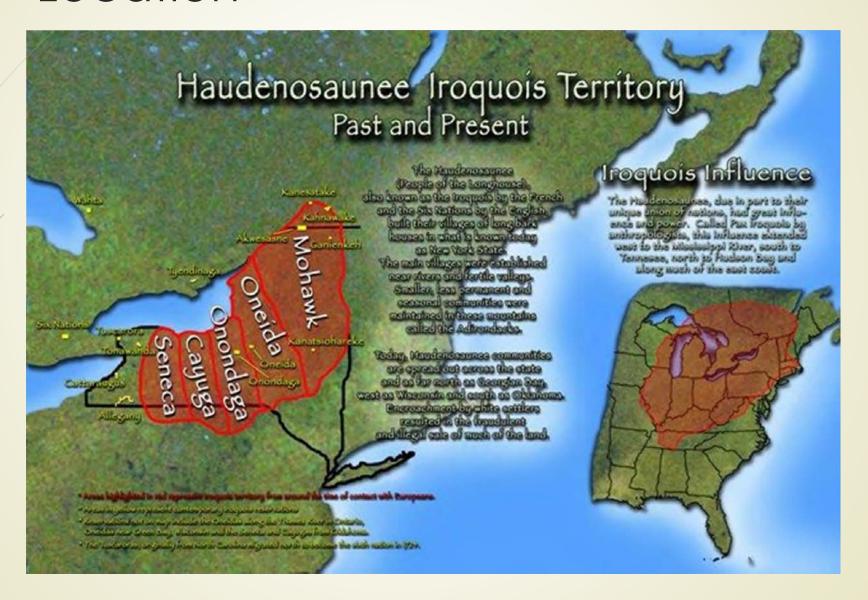
- Saint Regis Mohawk Tribe, Environment Division, Assistant Director
- 35 Year career
- Mohawk Kanienkehaka



#### Location



#### Location



#### The Project

- Review Road Salt Impacts to Tribal environmental resources
- Understand the Science
- Frame as opportunities for Pollution Prevention



**New England News** 

#### Study Finds Salinity Of Lakes In Region Increasing

Pat Bradley, April 26, 2017

A report issued this month assesses the changing salinity of freshwater lakes. It finds increased sodium chloride in the North American lakes studied....



#### Most Adirondack lakes will likely become unsuitable for trout

By Krishna Ramanujan, Cornell Chronicle

January 2, 2024

#### Discovery



Understand the composition of supply chain and its impacts

#### **Clean Water Safe Roads**



Road salt pollution is threatening Adirondack waters and causing premature rust and depreciation of vehicles and infrastructure. Studies indicate that Adirondack drinking water is becoming contaminated at an alarming rate. We are working with a broad group of stakeholders to address this complex issue.

#### Salt Watch







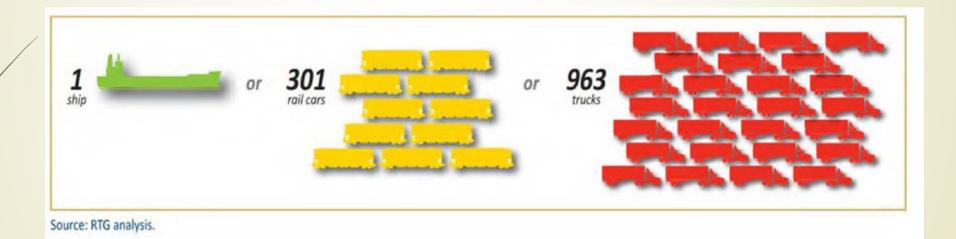
#### Let's Talk About Salt

Navigating the Road Salt Challenge: Balancing Safety, Infrastructure, and Environmental Impact

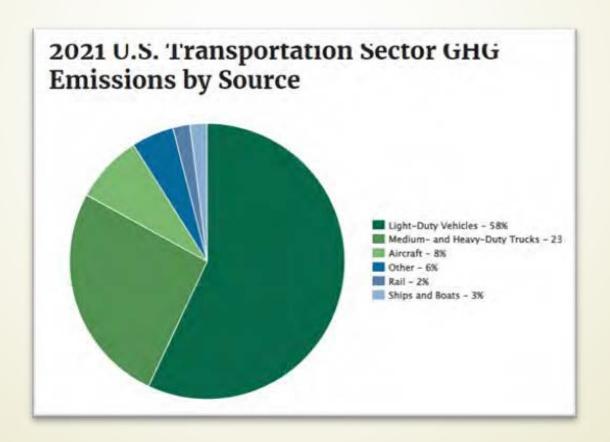
Winter in New Hampshire brings picturesque snowfall but also demands careful management of snow and ice on roads for the safety of residents. The primary tool in this battle is road salt, specifically sodium chloride (NaCl), though its widespread use poses environmental challenges. This blog post explores the impact of road salt, its alternatives, and best practices for managing winter conditions while minimizing environmental harm.

# Discovery

Understand the composition of supply chain and its impacts



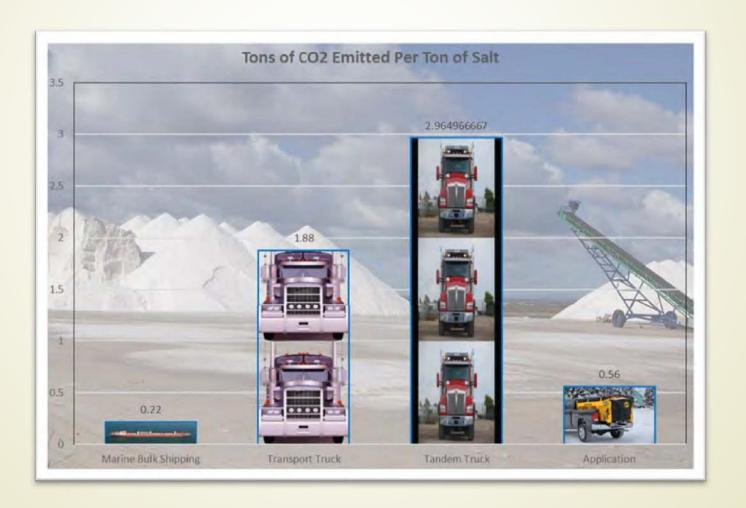
Understand the composition of supply chain and its impacts

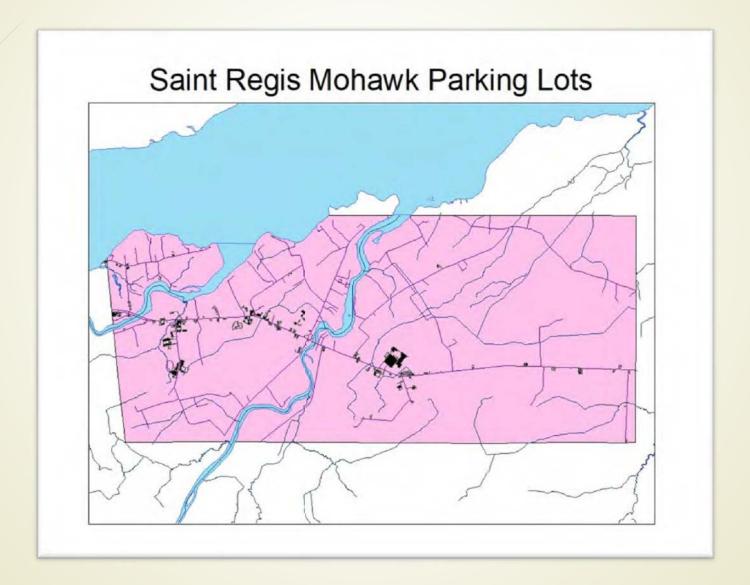


Understand the deicing Industry and its impacts



Understand the deicing Industry and its impacts

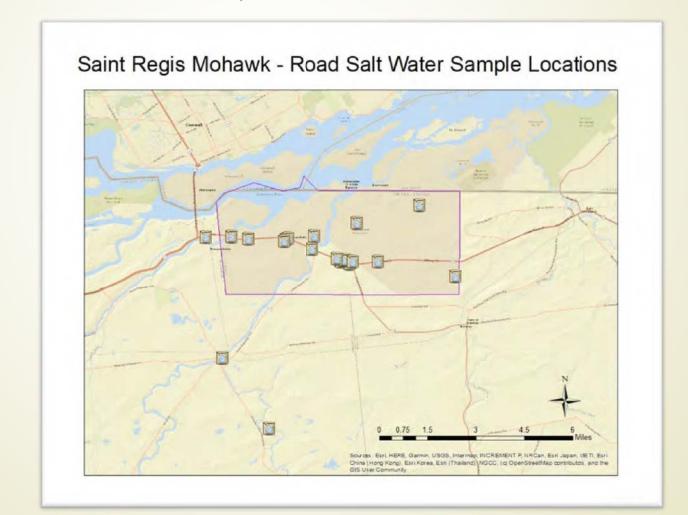




Saint Regis Mohawk Parking Lots Summary	
Mean - Acres	1.05 Acres
Median – Acres	0.60
Range – Acres	7.79
Minimum – Acres	0.079
Maximum – Acres	7.87
Sum – Acres	111.39
Count – Number pf Parking Lots	106



Measure Tribal Water Salinity and Chlorides



- Winter Deicing Monitoring
- Solar Powered With Air Temperature, Pavement Temperature, IR Illumination And Lens De-Icing Capabilities



- Community Engagement through Akwesasne Salt Watch
- Citizen Scientist



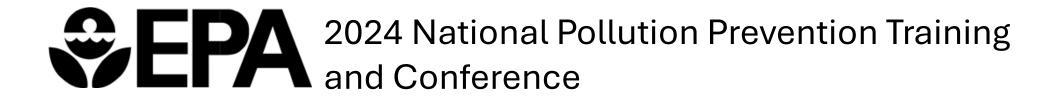
- Case Study
- Exchanges with other Tribal Nations
- Support Local Snow and Ice Managers
- Continue to Learn about industry
- Develop Tribal Salt Reduction Strategies



#### Niawenko:wa – Thank you Greatly

Les Benedict
Assistant Director
Saint Regis Mohawk Tribe
Environment Division
71 Margaret Terrance Memorial Way
Akwesasne, NY 13655
518-358-5937
les.benedict@srmt-nsn.gov





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