

# Salt Management Strategy (SaMS)

## Final Public Meeting

January 21, 2021

The final public meeting for the Salt Management Strategy (SaMS) was held virtually from 6:30 pm – 8:30 pm on January 21, 2021.

### **Attendance**

Seventy-seven individuals, including seven Virginia Department of Environmental Quality (DEQ) staff members and four staff persons from the Interstate Commission on the Potomac River Basin (ICPRB; DEQ’s contractual support), participated in the meeting.

Heather Ambrose  
Glenda Booth  
Renee Bourassa  
Allan Brockenbrough  
Irina Calos  
Bryan Campbell  
Juan Campos  
Marian Carroll  
Alinda Coats  
Scott Crafton  
Michelle Crawford  
Dennis Cumbie  
Curtis Dalpra  
Kat Dyer  
Dave Evans\*  
Thomas Faha  
Connie Fortin  
Suzanne Foster  
Joseph Gorney  
Lee Gould  
Norm Goulet  
Sophia Grossweiler  
Andrew Hammond  
Diana Handy  
Maria Harwood  
Tony Hill

Jeremy Hull  
Will Isenberg\*  
Justin Jackson  
Jessica Jacobson  
Philip Jones  
Douglas Klimbal  
Christopher Kohr  
Tim Krsul  
Krishna Lamichhane  
Philip Latasa  
Neely Law  
Daniel Lazenby  
Kyle Leas  
David Lincoln  
Imani M.  
Mary McCutcheon  
Lauren Mollerup  
Heidi Moltz\*  
Lynne Mowery  
Douglas Nelson  
Cathy Nicely\*  
Dennis O’Neill  
Hunter Pates  
Norbert Pink  
Paul Pisano  
Gregory Prelewicz

Sam Raasch  
Alison Robinson  
Bart Routh  
Kristin Rowles  
Kim Schauer  
Steven Schirtzinger  
Jutta Schneider  
Phil Sexton  
Erfaneh Sharifi\*  
Rebeca Schumaker  
Deanna Sivers  
Larry Sivers  
Sarah Sivers\*  
Roger Stewart  
Ed Stuart  
Anthony Taylor  
Bryant Thomas  
Sara Tomlinson  
David Trimble  
Anna Tuthill  
Andrew Uglow  
David Unger  
Juan Vicenty-Gonzalez  
Alistair Watson  
Harry Zhang

\* Facilitator/Organizer

### **Meeting Highlights**

The final public meeting was held as a culminating participatory step in development of the SaMS, to present the draft product to interested parties and the general public at the end of a comprehensive stakeholder-driven planning process. The meeting kicks off a 30-day stakeholder review period. The main content of the meeting focused on providing an overview of the SaMS Toolkit and the associated

public summary document as well as discussing the implementation of SaMS. The meeting also included opportunity for stakeholder-driven dialogue.

## Meeting Summary

Meeting information was made available electronically to attendees in advance of the meeting. The information contained in this summary is not intended to repeat that previously distributed information, but only to capture the main meeting topics and discussions.

### **Introductions, Objectives, and Logistics**

Sarah Sivers, DEQ, welcomed everyone and presented formal introductory remarks about the rationale for remote meetings. Sarah then introduced the purpose of the meeting – to provide an overview of the [SaMS Toolkit](#) and the [public summary document](#) and discuss the implementation of SaMS. She asked attendees to call a dedicated DEQ staff person if they were to experience any technical difficulty related to the meeting platform. She invited attendees to submit any comments or questions in the platform's questions box. DEQ will address those comments and questions after the presentation and follow up with attendees if there wasn't enough time left to address all the questions. Next, a poll was conducted to understand participant affiliations.

POLL: Which of the following best describes you? Responses: 2% I work in the private winter maintenance business, 2% I work in academia, 56% I work for a local, state or government organization, 29% I am a member of or work for a nongovernment organization, 12% None of the above.

### **SaMS Toolkit & Public Summary Introduction**

Sarah Sivers started the presentation and provided an overview of the topics including:

- Why the winter salt matters;
- Background;
  - Water quality planning process;
  - Accotink Creek TMDL;
  - Chloride and winter storm events;
- SaMS development;
  - Framework;
  - Timeline;
  - SaMS Toolkit overview; and
- SaMS implementation.

Next, a poll was conducted to gauge the level of awareness of the impacts of winter salt applications.

POLL: Winter salts benefit us and are critical for public safety, but there are negative impacts, such as: (select all that apply). Responses: 98% Aquatic life and vegetation, 54% Economic and civic activity, 96% Vehicles and infrastructure (parking lots, bridges, etc.), 98% Drinking water suppliers, 12% Gas mileage.

Sarah Sivers talked briefly about the benefits and negative impacts of winter salt application, and introduced two speakers who spoke from a private and public organization's perspective on winter maintenance.

Phil Sexton provided some context about the private sector:

- Through practical efforts and research, it has been identified that salt is more broadly used in private settings than on public roadways.
- In Northern Virginia, the District of Columbia, and Maryland, salt use is more prevalent than plowing.
- From an economic perspective, most winter maintenance contracts in Northern Virginia are based on "time and materials", per event, per push, or per application. When the contractor is paid by the amount of salt used, using less is not incentivized.
- Much of the salt supply, particularly magnesium chloride and calcium chloride comes from overseas and contributes to the problem (by increasing the overall amount of salt in our environment).
- Sustainable solutions to over-salting require making the environmental and economic case. The economic part of it will incentivize people to make a change.
- The SaMS is foundational to scaling salt reduction strategies for Northern Virginia.

Lauren Mollerup provided remarks on VDOT's practices. VDOT's number one priority is ensuring the safety of the public. Salt is a physically sound, proven measure for snow and ice control. Environmentally sound practices are vital pieces of what VDOT does, and VDOT works hard to balance public safety and environmental impacts. VDOT staff work closely with DEQ, and VDOT is committed to using winter salts responsibly. VDOT has developed and implemented BMPs for snow and ice control including guidelines based on the weather forecast. VDOT continues to explore BMPs to support the most efficient, safe, and effective use of materials through research and improved management approaches. In collaboration with the Virginia Transportation Research Council, VDOT considers ways to improve its winter operations. VDOT looks forward to working with its partners in a potential pilot program to identify ways to further refine its approaches. The SaMS brought a lot of things related to the winter salt application to VDOT's attention.

Sarah Sivers continued the presentation on the background and development of the SaMS. She then summarized the project timeline. The project started in 2018 with the first public meeting. The development phase is wrapping up in January 2021 with this public meeting and comment period. Then, the transition to implementation will begin. A poll was conducted to understand the audience's familiarity with the SaMS Toolkit and the public summary document.

POLL: Have you read any of the SaMS Toolkit and/or Summary Document? (select all that apply)  
Responses: 8% Only the summary document, 0% Only the SaMS Toolkit, 40% I have read portions of both documents, 3% I have read all of the SaMS Toolkit, cover to cover, 58% No, I am joining the webinar to learn more.

Sarah Sivers continued the presentation with an emphasis on the SaMS Toolkit. Will Isenberg, DEQ, then gave a brief overview of some of the winter maintenance best practices in the Toolkit. A poll was conducted about salt application during snowy and icy conditions.

POLL: During snowy and icy conditions. How often (if at all) do you (or a family member) apply salt at your residence? Responses: 7% Always or most of the time, 5% Frequently, 10% Sometimes/Occasionally, 24% Rarely, 55% Never.

Sarah Sivers provided an overview of the public summary document and briefly touched on SaMS implementation. She mentioned that all of the SaMS documents discussed are available through the webinar platform and are posted to the DEQ website. Sarah then introduced Norm Goulet of the Northern Virginia Regional Commission (NVRC)

Norm shared remarks on NVRC's current plans to coordinate SaMS implementation. NVRC will concentrate on maintaining a SaMS website, developing the contract(s) and sponsoring winter maintenance training for NoVA local governments, planning a SaMS implementation assessment form, and facilitating SaMS implementation communications.

Sarah Sivers next shared some ways to be "Winter Salt Smart" and asked Dave Evans, DEQ to discuss the 30 day public comment period. Dave underscored the value that public comments can have going forward into implementation, while clarifying that DEQ does not anticipate substantively revising the Toolkit itself, given the extensive stakeholder involvement in its final development. DEQ team members thanked attendees and the many stakeholders that have participated in the multi-year process.

### **Summary of Questions and Comments**

Attendees submitted questions and comments using the Questions tab of the webinar platform. Dave Evans invited participants to speak directly if desired.

Quoted comments and questions below are taken directly from the Questions tab of the webinar platform (with minor editorial corrections). Unquoted questions and comments below are summarized from participant verbal remarks.

Questions and Answers:

Q1 (Paul Pisano): "VDOT is definitely doing great work, so it's great to see that they are part of this process. One thing I didn't see in the Toolkit that I think would be of value to the cities and counties is promoting use and access to the states RWIS assets. It looks like there are 10 weather stations within this study area. Do the counties have direct access to the data? Could the cities and counties have access to the MDSS services that VDOT is using?"

A1 (Lauren Mollerup): MDSS (Maintenance Decision Support System) is based on the RWIS (Road Weather Information) data. The information is available through [Virginia 511 Web](#) which is VDOT's public website for traffic.

Comment (Paul Pisano): "But going to VA511 only gives you current readings. It doesn't allow for the assessment of changes in temperatures over time. It would be better if the cities and counties could have better access than just the current condition. In order to effectively anti-ice you need to see trends over time, and really need a pavement temperature forecast."

Comment (Paul Pisano): Maybe there is an opportunity for Falls Church, Arlington, and Alexandria to develop one brine making facility that they all can use.

Comment (Paul Pisano): Abrasives do not have a cost-benefit ratio. I am glad that you did not promote the use of abrasives.

Q2 (Paul Pisano): “Is there any data that identifies the source of the salt - i.e., public sector from snow and ice control, private sector (commercial and residential), individual residents, etc.? That seems like it would be an important input.”

A2 (Dave Evans): “The best information we put together in the SaMS development was from Land Cover analysis, as a proxy of salt users. That is one of the SaMS Toolkit appendices.”

Q3 (Christopher Kohr): “Brine application is also limited if there is rain prior to or at the start of the storm as it just runs off with the precipitation. With conditions, events and number of events varying so drastically between years do you have any recommendations for how to track and measure your salt/brine usage against "baseline" to confirm you're being as efficient as possible?”

A3 (Lauren Mollerup): VDOT makes the decision to use brine based on the weather condition. Brine is not as effective as salt when it starts to rain.

Q4 (Krishna Lamichhane): “Is there any reason for measuring Sodium concentration to represent salt concentration increase if Magnesium and Calcium chlorides are used for deicing?”

A4 (Will Isenberg): The best ion to measure in this case is chloride. It passes to the soil and waterways without binding to the soil and sediment like magnesium, calcium, or sodium. The reason to see sodium being measured in one of the sites is that there is a drinking water intake located there. Sodium at certain levels can be of concern for people who are on a salt-restricted diet. In terms of the recommendations for monitoring data we mostly focus on chloride and specific conductance.

Q5 (Neely Law): “To what degree will DEQ use the Toolkit strategies that are voluntary in regulating Chloride TMDLs?”

A5 (Allan Brockenbrough, DEQ): The SaMS Toolkit is being used to a degree to address the Chloride issues. In terms of the MS4 permits, the SaMS Toolkit is not going to be used in a prescriptive fashion.

Q6 (David Trimble): “Air temperatures are one gauge, but what about use of roadway temperature gauges. Is VDOT or others using such measuring devices?”

A6 (Lauren Mollerup): VDOT has access to the data and uses the stations as a guide. There are only have a handful of them across the district and major roadways. Road salt treatment by VDOT is based on experience.

Lauren Mollerup also provided some more general feedback on VDOT's operations. VDOT calibrates the spreaders. There are standards and recommended BMPs that VDOT employs as much as possible.

Q7 (Krishna Lamichhane): “Yes (*see Q4 and DEQ response above*), Chloride measurement can be a better candidate to measure the increase in salt concentration due to application of salt during deicing. My point was that is there any correlation to track back the amount of salt applied for deicing/anti-icing

and sodium ion concentration in water. Sodium can be from various sources and if there is any correlation with measured (increased) sodium concentration and MgCl and/or CaCl<sub>2</sub> applied.”

A7 (Will Isenberg): Tracking the BMPs implementation is easy to do but we do not know how BMPs impact water. Tracking the salt use is an easier way to see the impact of BMPs. We put together a pilot study. The goal is to work between two different watersheds. One with usual practices and one with BMPs. The pilot study will try to identify the effect of the BMPs implementation. Based on available funding the goal is to consider all different ions.

### **Wrap-up and Next Steps**

The public comment period on the SaMS Toolkit is from January 22 to February 22, 2021. Submit feedback on the SaMS Toolkit and implementation via email to Dave Evans at david.evans@deq.virginia.gov.

DEQ will send an email to the attendees on January 22nd with the meeting recording.

The virtual meeting public comment form was available through the webinar platform. The form should be submitted to the FOIA Council.

Will Isenberg, Dave Evans, and Sarah Sivers thanked the Stakeholder Advisory Committee, the Interstate Commission on the Potomac River Basin (ICPRB), and the workgroup members for their participation in the SaMS development.

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Meeting notes were prepared and submitted by the Interstate Commission on the Potomac River Basin.

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