



Salt Management Strategy (SaMS) Development

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Photo Credit: Jessie Williams

Presentation Overview

- Project Overview
 - Scope
 - Framework
- Current Progress / Status
- Overview of Developing Recommendations



Winter Salt Application, why it matters...

- Benefits:

- Slip and fall reduction
- Crash reduction (88-95% reduction)^{1, 2}
- Maintaining access during winter
 - Businesses and governments remain open
 - Workers can get to work, especially important for hourly workers



- Negative impacts:

- Toxic to fish and bugs
- Corrosive to infrastructure
- Affects public health



¹University of Waterloo: <http://www.saltinstitute.org/wp-content/uploads/2014/01/Final-Report-L-Fu-Taimur.pdf>

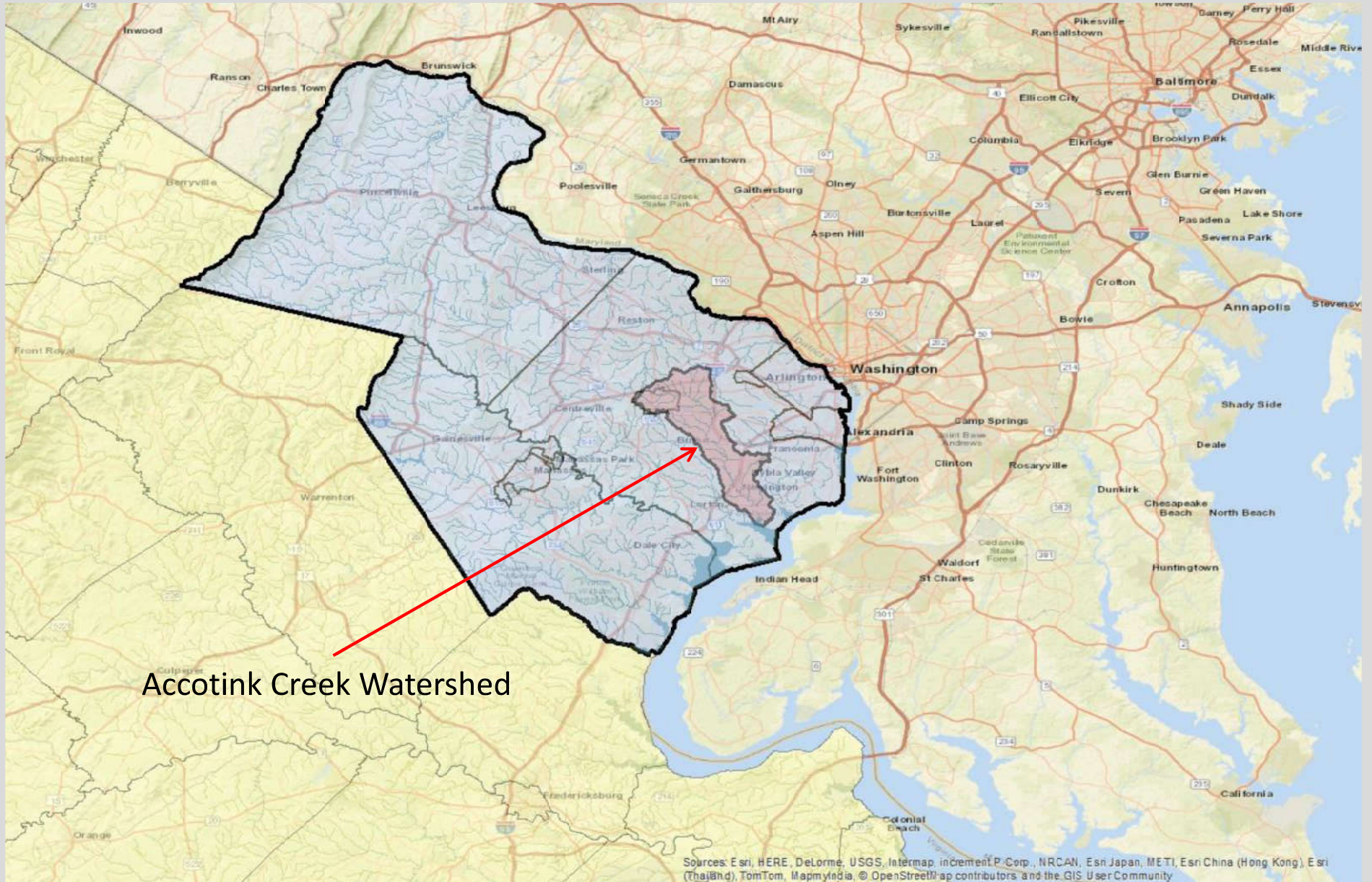
²Marquette University: <http://www.trc.marquette.edu/publications/IceControl/ice-control-1992.pdf>

Salt Management Strategy (SaMS)

- A strategy to reduce negative impacts of winter salts & maintain public safety
- Recommendations will include:
 - Best practices that promote efficient and effective winter salt use
 - Options to raise awareness of impacts and ways people can make a difference
 - A monitoring & research program to inform adaptive implementation
- Stakeholder-driven process



SaMS Project Area: Northern Virginia



What is the SaMS?

A broad strategy, primarily voluntary*

- Proactive application in the Northern Virginia region
 - Absent a Total Maximum Daily Load (TMDL), no regulatory requirement
 - If voluntarily adopted (in part or whole), potential to defer/avoid additional TMDLs in other watersheds
- Potential cost-savings a key incentive to adopt recommendations
- Broad education and outreach to promote awareness and voluntary adoption

*Exception: regulated sources in the Accotink Creek TMDL Watershed

- Addresses permitted sources
- Resource for permittees in preparing plans to meet permit requirements

SaMS Goals

The aim of this effort is to develop a strategy for Northern VA, that:

1. Uses a **stakeholder-driven** process to **proactively** address salt loads in the **region** and address the Accotink Creek chloride (salt) TMDLs.
2. Generates **increased public awareness** that leads to **positive behavior changes**, and **long-term support** for the continual improvement of deicing/anti-icing practices and actions.
3. Ensures continued protection of **public safety**, improves **water quality** and terrestrial habitat, and **lessens the effects** of deicing/anti-icing salts on drinking water resources, property and road infrastructure through **information sharing** and **implementation of best practices** over time.



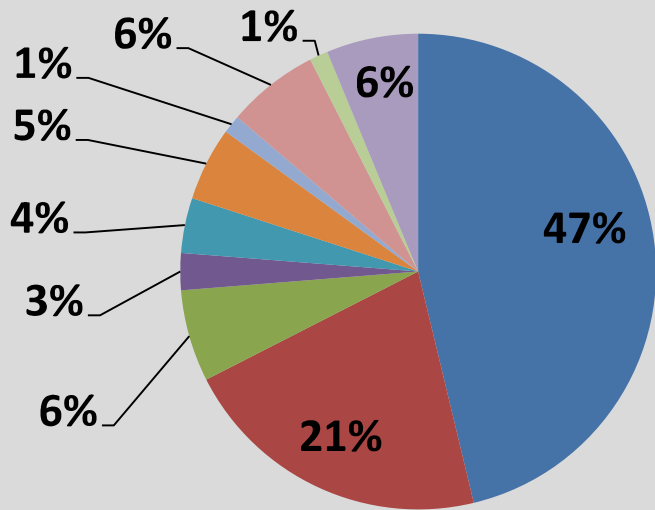
Bridge corrosion
Photo by Jim Palmer.

Objectives of SaMS Effort

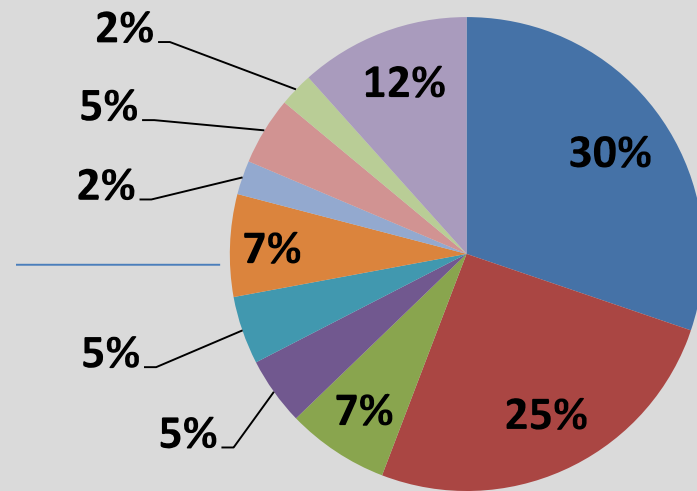
1. Comprehensively **describe the effects** of deicing/anti-icing salt use and identify and **summarize the costs and benefits** of winter storm operations.
2. Collaboratively develop a **suite of best practices** to minimize the negative effects of deicing/anti-icing salts.
3. Develop a comprehensive **education and outreach plan** to **increase awareness** of the benefits and impacts of winter salt use for both the public and political leaders to **promote positive behavioral changes**.
4. Explore **funding opportunities**, operational **cost savings**, and broader **incentives**, such as certification requirements/tort reform, to **support implementation**.
5. Develop recommendations for a **monitoring and research program** to better understand water quality patterns and impacts related to salt application throughout Northern Virginia.
6. Develop options to **assess effectiveness** and **methods to track and report** salt usage.

Stakeholder Advisory Committee (SAC)

SAC Members (80)



SAC Entity Representation (43)



- MS4
- Environmental Groups
- Commissions/Other Government
- Universities
- Business/Property Managers
- HOAs
- Miscellaneous
- Water Purveyors
- Public Safety
- Winter Maintenance Service Providers

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SaMS Development Framework

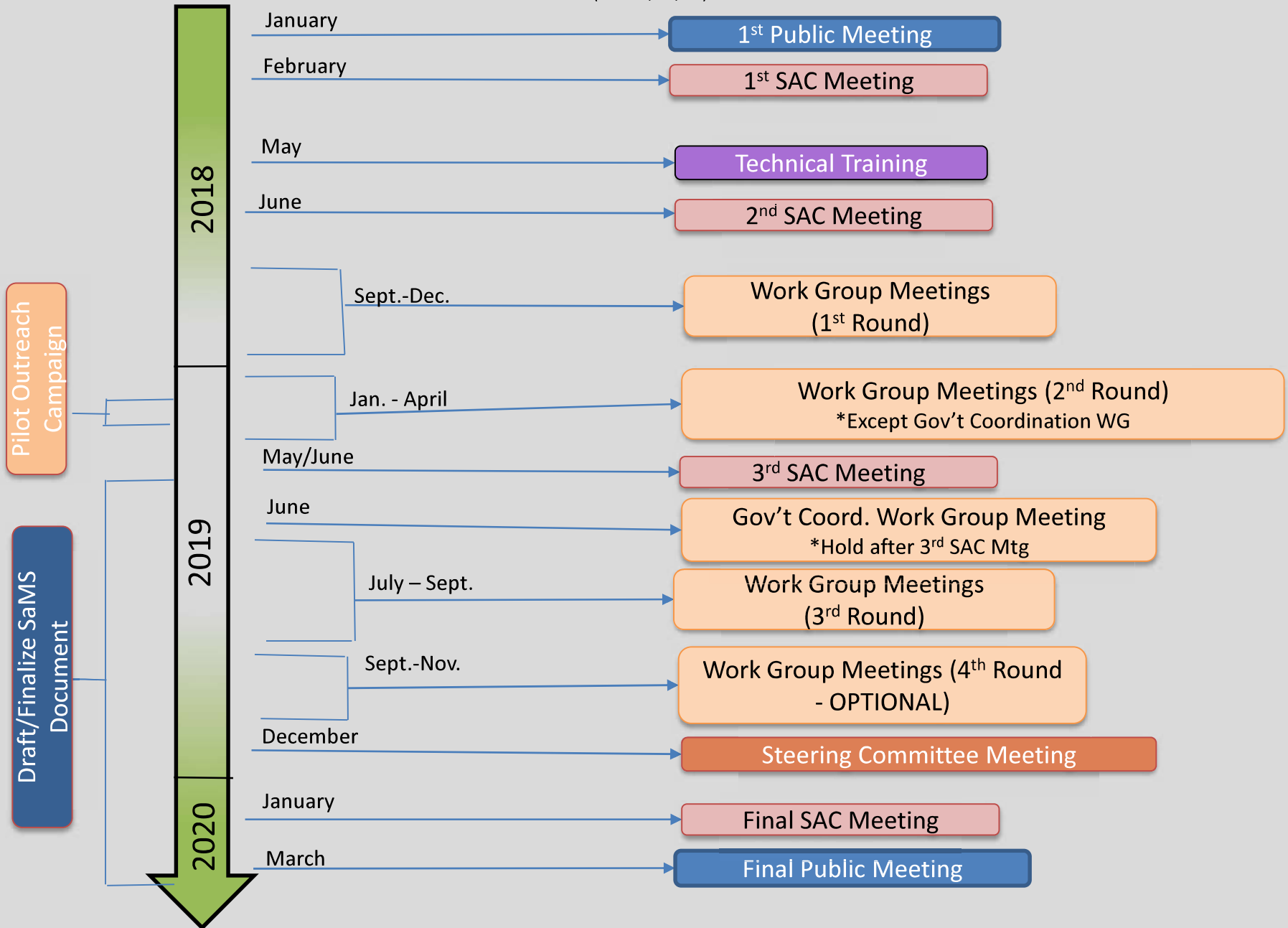
- Stakeholder Advisory Committee (SAC)
 - Large stakeholder body
 - 4 meetings
- Workgroups
 - 6 groups, comprised of SAC members
 - 3-4 meetings each
- Steering Committee
 - 1-2 representatives from each workgroup
 - 1-2 meetings
 - Provide, at a minimum, assistance reviewing final recommendations (in form of a report)

SaMS Workgroups:

1. Traditional Best Management Practices
2. Non-Traditional Best Practices
3. Education & Outreach
4. Water Quality Monitoring & Research
5. Salt Tracking & Reporting
6. Government Coordination

SaMS Project Timeline

(as of 2/20/19)



Progress to Date

Stakeholder Advisory Group



- Developed:
 - Goals and Objectives
 - Participation Guidelines
- Formed 6 workgroups

Workgroups

- Scope established
- Identified potential recommendations
- Working on action items
- Prep for 3rd SAC meeting



Potential Recommendations

- Education & Outreach
 - Outreach campaign and materials/social media toolkit
 - Pilot outreach campaign (March-April 2019)
- Traditional Best Management Practices (BMP)
 - Target application rates
 - List of BMPs and their pros & cons
- Non-Traditional BMPs
 - Evaluation of non-traditional deicing compounds
 - Contracting best practices
 - Certification programs
 - Societal best practices (e.g., teleworking, pre-storm messages)

Potential Recommendations (continued)

- Salt Tracking & Reporting
 - Metrics/forms to report salt use and BMP implementation
- Water Quality Monitoring & Research
 - Survey to inventory existing ion monitoring (completed)
 - Plan to monitor impact of improved practices on water quality
 - Strategy to improve understanding of salt origin, fate and transport
 - Reporting standards for data comparability
- Government Coordination
 - Opportunities to support SaMS and provide more consistency in the region



Questions?

Project Team

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