Salt Management Strategy (SaMS)
3rd Stakeholder Advisory Committee Meeting

May 29, 2019

The third meeting of the Stakeholder Advisory Committee (SAC) for the Salt Management Strategy (SaMS) was held from 10:00 am – 3:00 pm on May 29, 2019 at Fairfax Water's Griffith Water Treatment Plant (9600 Ox Road, Lorton, Virginia).

Attendance

Fifty-five (55) individuals, including ten Virginia Department of Environmental Quality (DEQ) staff members and one staff member from the Interstate Commission on the Potomac River Basin (ICPRB; DEQ's contractual support), participated in the meeting. Five of the participants joined the meeting via teleconference. 24 of the 45 organizations who are members of the SAC participated.

Meeting Highlights

Development of the SaMS is about halfway through the development process. This meeting provided the SAC an opportunity to provide a mid-course assessment and come together as one group to discuss preliminary recommendations.

Volunteers presented an overview of the status of each workgroup's process. After each presentation, a poll was conducted to identify where there is support and where there are concerns on the overall direction the workgroups are heading with their developing recommendations so those concerns can be addressed during the next round of workgroup meetings. The majority of organizations present indicated their support for the developing recommendations with a few organizations indicating they have concerns (indicated by a yellow card). No organizations present indicated a strong degree of concern (indicated by showing a red card) during the polling.

After all the workgroups concluded their presentations, a discussion was held to address concerns and comments from the SAC on the information and draft recommendations that were presented. Concerns identified (either through discussion or on submitted notecards) will be discussed further within the workgroups during their next meeting. SAC members also discussed ideas for the framework for the SaMS post-development. This discussion focused on adaptive, non-regulatory implementation to identify ideas to support the SaMS as a "living" document and be revisited to add and revise as more is learned.

During the meeting, the results of a GIS study conducted by a VCU graduate student were shared with the SAC members. The presentation summarized the proportions of impervious surfaces within different land use categories throughout the Northern Virginia study area.

Meeting Summary

Introduction

The meeting opened with brief introductory remarks from DEQ. DEQ stated that the SaMS is about halfway through the development process and that this meeting represented the mid-course assessment of workgroup progress. After the workgroup and steering committee meetings, a draft document will be ready for Stakeholder

Advisory Committee (SAC) review in Summer 2020. While this meeting was the last opportunity for the full SAC to have the conversation together before the SaMS report is drafted, there will be continued opportunity for discussions by email and during workgroup and steering committee meetings. DEQ emphasized that the SaMS effort is a stakeholder-driven process and asked SAC members share all feedback they may have.

Participants then briefly introduced themselves, providing their name and the organization they represent. This was followed by DEQ outlining the main objectives for the meeting, which were to bring all the members together, collect feedback on the status of the workgroups' developing recommendations, develop a shared understanding of the path to completing the SaMS, and get final nominations for the steering committee membership.

Project Status Overview

DEQ provided a brief overview of the status of the SaMS and provided an update on the adjusted timeline. The revised timeline can be found here.

DEQ then gave an update on the Government Coordination Workgroup. This workgroup has only met one time, unlike the other 5 workgroups that have met twice, because their work is more dependent on the work from the other workgroups. Their next meeting is scheduled for late July after this SAC meeting. The scope of the workgroup was presented along with meeting highlights; the summary of the Government Coordination workgroup meeting can be found here.

DEQ's summary was complemented by brief additional remarks by Norm Goulet of the Northern Virginia Regional Commission (NVRC). He emphasized the importance of the SaMS effort to public works agencies, and that funding and other forms of administrative support need to be made available to continue work on this effort after the SaMS is complete. He stated that NVRC expects to play a coordinating role, which will be fleshed out in future discussions.

DEQ then explained the SaMS SAC Polling/Feedback Process, which was shared in a document with the SAC before this meeting. Polling was used to identify the level of support, as shown by a single response from each organization, for the overall draft workgroup recommendations. After each workgroup's status update, all SAC member organizations were asked to indicate their level of support by holding up one of three colored cards Green cards indicated that the organization was "in support" of all of the recommendations, yellow cards indicated that the organization "can live with" all of the recommendations, and red cards indicated that the organization "cannot live with" the recommendations. Where concerns were identified (red cards), discussion time was planned in the afternoon session of the meeting to discuss further and also, concerns that need more time to discuss would be addresses by each workgroup in the next round of meetings.

Workgroup Presentations

Volunteers presented on the status of the SaMS workgroups and their preliminary recommendations. The preliminary workgroup recommendations are available online.

Education and Outreach Workgroup (Kris Unger): *Polling result: 18 green, 4 yellow, 0 red*

Kris Unger reported the Education & Outreach Workgroup Status Update, which included the recommendations and products the workgroup is developing. In the presentation, Mr. Unger talked about the workgroup's conversations on how to reach the public on issues associated with winter salt use. Then the SAC members discussed the presentation and provided feedback:

- The pilot survey is intended to establish a baseline of public awareness of salt use benefits and impacts.

- Who are the "people" responding to the pilot survey? As originally planned, the pilot survey was to be distributed 1) by postcard to the residents of the Long Branch (Central) Watershed, and 2) through outreach channels of workgroup members. In response to concerns raised about the statistical validity of the survey being administered as planned, workgroup members are looking into funding a third party survey company, which may recommend a different distribution method. The audience for the survey is the general public with a focus on homeowners and commuters.
- Collaborative efforts can be streamlined by working with already established partners (e.g. Northern Virginia Clean Water Partners).
- The survey is a tool to collect information needed for education and outreach messaging, and it is distinct from the on-the-ground pilot outreach campaign area in the Long Branch (Central) watershed.
- Funding for a third party survey company will not be an obstacle because the survey is not too costly. It is essential that the survey avoid any perceptions of having an "anti-salt" bias.
- There was a conversation about working with other groups, including K-12 education, in the first Education and Outreach Workgroup meeting.

Water Quality Monitoring and Research Workgroup (Joel Moore): *Polling result: 19 green, 4 yellow, 0 red.*

Joel Moore presented the Water Quality Monitoring and Research Workgroup Status Update, which included the recommendations and products the workgroup is developing. The presentation focused on the workgroup's preference to provide recommendations on measuring the impact of salt use Best Management Practices (BMPs) on water quality, identifying existing water quality data and gaps in existing data, identifying long-term trends in existing water quality data, and better understanding the origin, fate, and transport of deicing salts over the long-term. SAC members discussed the presentation and provided feedback:

- Many factors affect specific conductance. Developing monitoring strategies that facilitate teasing out these relationships requires careful consideration up front.
- The workgroup has considered not restricting the effort to Northern Virginia.
- The level of salt use data recommended by the Water Quality Monitoring & Research workgroup is challenging for some public agencies to compile, and it will be even harder to gain private companies salt use data.
- There was concern expressed that Accotink Creek not be assumed as the default location for a pilot study. Arlington County may be a good location for pilot projects because of the level of salt use data they collect and their minimal use of private contractors.
- There is no paired chloride and specific conductance data available for the coastal plain physiographic province.
- To avoid the implication that the pilot is mandatory or already determined, the pilot study could be phrased as a recommendation for the final SaMS.

Non-Traditional Best Management Practices Workgroup (Heidi Bonnaffon): *Polling result: 20 green, 2 yellow, 0 red*

Heidi Bonnafon presented the Non-Traditional Best Management Practices Workgroup Status Update, which included the recommendations and products the workgroup is developing. The presentation focused on the workgroup's preference to provide recommendations for alternative deicing compounds, homeowner/commuter BMPs, certification and training programs, and winter maintenance contract templates. Another workgroup

member provided brief remarks on their work as part of this workgroup and enhancements their locality is considering to their winter storm operations. SAC members discussed the presentation and provided feedback:

- When discussing certification programs as recommendations from the Non-Traditional BMPs workgroup, it is important to specify that the certification covers operational BMPs (i.e., the recommendations of the Traditional BMPs workgroup).
- Tort reform legislation will be required for the private sector to voluntarily seek certification from one of the recommended certification programs.
- While records kept to maintain certification may result in winning slip and fall cases, it does not defer the costs associated with litigation. Private contractor concerns include attorney costs and insurance rates.
- Documenting a "standard" contract may help avoid lawsuits.
- Non-traditional deicers have been researched less than traditional deicers. Furthermore, their composition has changed over time and varies by manufacturer. Therefore studies on effectiveness and impact of these projects are often not comparable.
- Coordination with universities should be considered for additional research on deicing compounds and products.
- When new compounds (and any other changes in winter maintenance practices) are introduced, the public should be prepared through an outreach campaign to avoid a misinformed pushback. This was highlighted as a potential opportunity for the Education & Outreach workgroup to consider for this and other workgroup recommendations.

Traditional Best Management Practices Workgroup (Greg Waters): *Polling result: 19 green, 2 yellow, 0 red.*

Greg Waters presented the Traditional Best Management Practices Workgroup Status Update, which included the recommendations and products the workgroup is developing. The presentation focused on the workgroup's preference to provide recommendations to plan for BMP use in the winter maintenance planning process. Plans should include a process to evaluate application rate achievement. The workgroup is developing products that include a list of operational BMPs framed by their pros and cons and a summary of an application rate survey administered to public operations. The members discussed the presentation and provided feedback:

- Preventive strategies are more useful than reactive ones. All of the BMPs outlined on the Pros and Cons list are preventative.
- Equipment, technology, storage/handling, and good housekeeping are all included as operational practices on the BMP pros/cons list.
- Cost savings and material reduction estimates should be included in the BMP pros/cons list. The sources of this data should be referenced so that regional applicability can be considered because some conclusions of studies in other geographic regions may not be applicable to NoVA.
- Over the long-term, salt use data collected via the recommendations of the Salt Tracking & Reporting workgroup can be used to update this list with regionally specific information.
- The Traditional BMPs Workgroup toolbox is a resource that different agencies can tailor to their need.
- Homeowners and commercial/smaller property management (through contract templates) are addressed by the Non-traditional BMPs.

Salt Tracking and Reporting Workgroup (Neely Law): *Polling result: 17 green, 2 yellow, 0 red.*

Neely Law presented the Salt Tracking & Reporting Workgroup Status Update, which included the recommendations and products the workgroup is developing. The presentation focused on reporting salt use (quantity and location) and reporting of BMP implementation, and plans to develop example reporting forms at varied levels of detail/precision. Another workgroup member provided brief remarks from its organization's experience tracking salt use and plans for improving this tracking. SAC members discussed the presentation and provided feedback:

- In Fairfax County, salt application is being recorded at a coarse level (tonnage). In some places, the weight of a truck is recorded when it leaves and then again when it returns. Adding beet juice or other components to the brine can be costly, and create cleanup challenges.
- The starting point for reporting salt use currently will require manual calculation. The Salt Tracking and Reporting Workgroup decided to start from a very coarse level of reporting or "baby steps" and develop more refined information over time.
- As technology improves, tracking can move from manual calculations to automated systems. Hopefully, in the future, the process can become more affordable.
- Breaking down salt usage by storm is different from breaking down the usage by parking lots, roads, and communities.
- When considering recommendations for the Water Quality Monitoring & Research workgroup, the percentage of pervious and impervious cover in a watershed, and the amount of roads and commercial/residential areas are important factors to consider. Each watershed has different characteristics to consider.
- The three-tier matrix and example reporting forms will allow organizations to pick and choose an appropriate level of tracking and reporting based on their needs and current abilities.
- Reporting can provide greatest benefits to the organization itself. Caution needs to be taken when combining and reporting data regionally to avoid inappropriate conclusions.

SaMS Project Area GIS Analysis (Angela Hanretty)

Angela Hanretty presented the Project Area Spatial Analysis Project Results, which summarized the proportions of impervious surfaces within different land use categories throughout the Northern Virginia study area. SAC members discussed the presentation and provided feedback:

- Any area that is not in a classified land use polygon is assigned to the unclassified land use category in this study.
- The impervious surface data came from the Virginia Geographic Information Network dataset. All impervious surface estimates in this study had building footprints removed to target the impervious surface proportions that can be treated with salts.
- The roads are classified using a linear road shapefile provided by VDOT. The ArcGIS software "buffer" tool was used to create the roads.
- The proportion of transportation land use that was impervious was higher (95% vs. 75%) than estimates VDOT has calculated in the past as part of their effort under their MS4 permit. This may have been a result of "unclassified" transportation areas that did not fit within the roadway buffers.
- The Dulles Airport was shown as unclassified in the land use study, but SAC members recommend it be classified as "Special Development Area" to match the other local and federal government properties placed in that land use classification.
- The results of this presentation have not been compared with literature values for impervious surface proportions by land use type. SAC members are interested to see such comparisons.

- Military facilities and schools are classified as the special development area.
- Some questions that SAC members raised that are out of scope for this analysis include: 1) how did the land use categories in this study compare to those used in the Accotink Creek TMDLs, and 2) are areas like swimming pools and astro-turf considered "impervious."

Group Discussion

SAC members discussed their concerns and support for the draft recommendations:

- The Education and Outreach Workgroup discussed the importance of messaging consistency and speaking with one voice to best generate public support. There is an opportunity in Government Coordination Workgroup to discuss this in more detail.
- One SAC member suggested the members be open to the option of legislation if needed. Members discussed this option and commented:
    - New licensing/certification laws are tough to pass. Business community and environmental group support for tort reform is critical based on experiences in other states.
    - Passing legislation requires a strategy for gaining support. Adequately framing legislation proposals is critical to success, and communicating drinking water impacts will be important.
    - It may be premature to consider legislation around certification programs and tort reform because much of the framework isn't established yet. Legislative options versus recommendations may be most appropriate to discuss/include in the SaMS report.
    - SaMS could have a "for future consideration" section for the legislative concept and other recommendations that cannot be adequately addressed at this point in time.
- SAC members discussed the rising trend of chloride level and agreed that "the sooner we start changing the curve, the better".
- Identifying funding to support implementation is important. The Education and Outreach Workgroup has discussed funding and all workgroups plan to discuss funding in upcoming meetings.
- There is an opportunity for collaborative work by MS4 permit holders. While SaMS should not dictate the how MS4s comply with their separate permit requirements, suggested collaboration among the MS4s in their efforts is beneficial. Shared responsibilities may be a good opportunity for collaboration.
- Government Coordination Workgroup needs to give attention to shared resources, and collaborative funding options.
- Communication across the SaMS workgroups is necessary to address the discussed topics in more depth and is critical to inform the final SaMS recommendations.
- "What if there will be no improvement in 2025?", one member asked. SAC members shared their ideas about the meaning of "improvement", "measure of success", and "what happens next":
    - Based on DEQ's conversation with colleagues in New Hampshire, measures of success can be categorized (in level of increasing difficulty to measure) by 1) tracking BMP implementation, 2) measured reduction in salt use, and 3) water quality improvement identified through monitoring.
    - Public awareness of salt impacts will lay the groundwork for support for future actions to reduce salt impacts. Successful education and outreach is also a measure of success.
- A SAC member mentioned that levels of service seem to drive this effort more than liability concerns or other factors in terms of how much salt is used. The impact of the recommendations on stakeholders is important to consider. DEQ mentioned that the Education and Outreach Workgroup and the Government Coordination Workgroup considered communication of levels of service in their draft recommendations.

SAC members discussed ideas for the framework for the SaMS post-development. It was clarified this discussion was intended to focus on adaptive, non-regulatory implementation to identify ideas to support the SaMS as a "living" document and be revisited to add and revise as more is learned :

- DEQ acknowledged that from the beginning of the project it was understood that the initial development effort of the SaMS cannot recommend every possible strategy and would therefore need to be adaptively implemented. Therefore, some sort of framework for adaptive implementation needs to be developed.
- Additionally, DEQ stated that after the SaMS is developed, DEQ's role will change from being a facilitative leader of the initiative to a seat at the table. Therefore to support adaptive implementation, an organization willing to take on the facilitative leader role will need to be identified. NVRC indicated their organization may be willing to assume that role. There was support from fellow SAC members that this organization seems like a logical fit for such a role.
- Tracking and evaluating BMP implementation, as part of SaMS implementation, should inform each organization's continuous improvement processes.
- Successful SaMS implementation should mitigate the need to identify additional impairments and develop TMDLs. In contrast, inadequate SaMS implementation could result in pressure for additional TMDLs.
- Considering a framework to facilitate adaptive implementation, the SAC discussed options for a group like the SAC that would continue to meet in the future to revisit the SaMS.
- Existing forums, such as Northern Virginia Clean Water Partners and the NVRC-led MS4 Workgroup, etc., could be leveraged. In upcoming meetings of these groups and the SaMS workgroups (e.g., Government Coordination Workgroup, Steering Committee, etc.), SAC members could engage the other participants in a discussion of whether a role in adaptive implementation of the SaMS is a good fit for that group. Many of the groups discussed are governmental in nature and therefore may not have adequate representation of non-government SAC members; this warrants further consideration.
- Workgroups should explore how to address different aspects of implementation in the SaMS report (e.g. frequency of meetings to revisit the SaMS, timing of the first meeting, and involving partners).
- SAC members were encouraged to explore possibilities for this framework and to share ideas with DEQ and other partners. The proposed framework will be available for review by the Steering Committee and SAC when reviewing the draft SaMS document.

Meeting Wrap-up and Next Steps

DEQ shared three items the day after the meeting:

- A survey to capture any additional thoughts that workgroup members had following the meeting.
- A survey to receive feedback and preferences for the two draft SaMS logos that were developed to represent work related to the SaMS and the SAC, including the final SaMS document.
- The spatial analysis project presentation and methods document.

DEQ announced that the next SAC meeting will be in August or September 2020 and will be focused on reviewing the draft SaMS document.

Handouts from the meeting are available on the SaMS Meeting Materials website.

All information, questions, additional resources, etc. should be emailed to Dave Evans (david.evans@deq.virginia.gov), Sarah Sivers (sarah.sivers@deq.virginia.gov) and Will Isenberg (william.isenberg@deq.virginia.gov) to reduce email traffic among SAC members.

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

Additional Feedback Contributed to the Follow Up Survey:

A survey was shared with SAC members following the meeting to capture any additional thoughts members may have had following the meeting. Feedback is arranged below based on the sections of the agenda. Only sections where additional thoughts were provided are included:

Education & Outreach Workgroup Status Update

"All was confusing until the font color was changed because those of us from the 2nd row back couldn't see what was on the screen. Obviously we knew what we had discussed in committee but . . ."

Non-Traditional Best Management Practices Workgroup Status Update

"I think the work of this group is really important and ideally will be tightly coordinated with Education & Outreach."

Traditional Best Management Practices Workgroup Status Update

"I think it would be very helpful if both BMPs provided a matrix of the products that includes the recommended application rate relative to conditions such as temperature and ground temperature. And it would be helpful to know what results to reasonable expect, i.e., how long the product takes to work and how long it will remain effective."

"I agree with the sentiment that informally renaming this group "Operations" is probably a good idea."

Salt Tracking & Reporting Workgroup Status Update

"While I recognize that VDOT, and other operators, have a substantial task in determining how much is applied, without salt application numbers, it is hard to envision how success will be determined from the strategy without these numbers. I say that because stream chemistry may take years to respond."

SaMS Project Area GIS Analysis

"This was an excellent presentation and the methodology will lend itself to numerous applications."

"Seems like a great start."

Any additional thoughts?

"Nope. Minus the powerpoint glitch, the meeting as usual was well organized, information presented clearly, and discussion useful. Thanks to all of you."