

Salt Management Strategy (SaMS)

3rd Salt Tracking and Reporting Workgroup Meeting

September 12, 2019

The third meeting for the Salt Tracking and Reporting Workgroup for the Salt Management Strategy (SaMS) was held from 9:30 am – 12:00 pm on September 12, 2019, at Fairfax Water's Griffith Water Treatment Plant (9600 Ox Road, Lorton, Virginia).

Attendance

Thirteen individuals, including two Virginia Department of Environmental Quality (DEQ) staff and one staff from the Interstate Commission on the Potomac River Basin (ICPRB; DEQ's contractual support), participated in the meeting.

Christina Alexander, Fairfax County
Nicki Bellezza, Fairfax Waterⁱ
John Burke, Fairfax County
Satoshi Eto, Fairfax City
Dave Evans, DEQ*
Marty Hurd, Fairfax County
Neely Law, Center for Watershed Protection

Dave Lincoln, Friends of Accotink Creek
Heidi Moltz, ICPRB*
Merrily Pierce, McLean Citizens Association
Robert Prezioso, VDOT
Sarah Sivers, DEQ*
Greg Waters, Snow and Ice Mgmt Co.ⁱⁱ

* Facilitator

ⁱ Workgroup follower (non-member)

ⁱⁱ Participated via conference call

Meeting Highlights

- At this meeting, workgroup members reviewed and discussed the draft example salt use and BMP tracking forms including: (1) identifying practical improvements to the forms and, (2) discussing presentation of this workgroup's content in the SaMS report.
- The SaMS report should state clearly that example forms are intended primarily to support improved internal management. A longer-term objective of regional reporting and analysis will need further deliberations and decisions during SaMS implementation.
- Forms would be clearer and easier to use if each tier of reporting stood on its own. Data entry should be streamlined to avoid any redundant reporting, and totals should be auto-populated when detailed (tier 2 or 3) tracking is used.

Notes for Other Workgroups / Potential Areas of Overlap:

- The Non-Traditional BMP Workgroup is looking into certification programs. Certified applicators are typically required to do some level of reporting, depending on the program.
- The Water Quality Monitoring and Research Workgroup has interest in the detailed (Tier 3) forms that include geographically specific locations and usage amounts that can be used to, for example, assess the impact of BMPs.
- The BMPs listed in the draft tracking forms are identical to those under consideration in the Traditional BMP Workgroup.

- Collecting information on the use of abrasives was considered. This workgroup would like to know whether the Traditional BMP Workgroup thinks the use of abrasives, particularly mixed abrasives, is an acceptable best practice.
 - Traditional BMP workgroup feedback: *Abrasives are considered in the BMP Pros and Cons list, but 50/50 mixtures are not considered acceptable/best practice:*
 - *"Use abrasives or deicers, but not both combined. Do not mix deicers and abrasives (except to keep the abrasives from freezing/clumping) because one of the products will only be half as effective. Abrasives work best on top of snow/ice to provide traction. However, if deicer is mixed in significant proportions (e.g., 50/50) to the abrasive, the deicer will melt the snow/ice and the abrasive will no longer work as well. Use abrasives to provide traction during 1) freezing rain events, 2) in slow-moving traffic areas, and 3) when deicers are ineffective because it is too cold. "*
 - *They are also addressed as a potential cold temperature product when other deicers don't work.*

Follow-up Action Items:

- 1) Restructuring modifications to the tracking forms will be made per the workgroup's recommendations. Dave Lincoln volunteered to share his suggested changes with DEQ.
- 2) A data dictionary will be developed to clarify terms and units and foster improved data consistency and comparability. Dave Lincoln offered to help frame this also.
- 3) Workgroup members should submit any comments on the Traditional BMP workgroup's "Voluntary Process for Evaluating Deicer Application Rate Achievement" by Friday, Sept. 20, 2019.
- 4) DEQ will follow up with COG and VDOT about any existing ways they document variation in winter storm conditions across the NoVA region.
- 5) DEQ will share revised tracking forms and draft data dictionary with workgroup members and provide an opportunity to discuss and share feedback in advance of the fourth workgroup meeting.

Meeting Summary

Introductions

The meeting opened with brief introductory remarks from DEQ. Participants then briefly introduced themselves, providing their name and the organization they represent.

The second Salt Tracking and Reporting Workgroup meeting highlights, workgroup action items, and notes from other workgroups are available [online](#).

Discussion topics at the meeting focused on the salt use reporting forms, including the overall structure and rationale and how the final SaMS report should present the intended use of the forms.

Salt Use Reporting Forms Discussion

Dave Evans, DEQ, asked about the matrix of recommended voluntary tracking for winter operations (see [slide 7](#)). The matrix was accepted at the 3rd Stakeholder Advisory Committee meeting. He asked if the draft tracking forms match the intent of the matrix and opened the floor to any other general comments about the forms.

Discussion points:

- While the example forms can support internal tracking in the near-term, numerous assumptions will need to be validated before regional analyses would be appropriate using data collected from these forms.
 - It is not as simple as saying how much salt was used each year. There are many variables at play including tracking methods, storm characteristics, and individuals/employees. These differences create challenges in conducting a regional analysis.
 - Double reporting could be an issue if both a locality and a contractor submits forms for the same area. Other examples of potential double counting occurring within the same organization were offered on several occasions during the meeting.
 - Precipitation amounts can differ drastically across a reporting area. For example, part of a county may get a lot of snow and the remainder of the area gets very little snow.
 - COG and VDOT may have mechanisms for dealing with these localized storm variabilities. If so, their approaches could be used as a model.
 - Moving towards a standardization of content is the initial goal, along with getting organizations to collect and track data so that it becomes a standard of practice. Regional data analysis is a longer-term goal for multiple reasons including Tier 2 and 3 data are likely needed for such analyses.
- The forms would make more sense and appear more complete (regardless of what tier of tracking is conducted) if the different reporting tiers appear on separate sheets of the workbook; recommendation was to restructure the example forms.
- The forms are effective at letting folks know what needs to be tracked, but these might not be the exact forms that people want to use. It should be easy to modify the forms to add or revise elements, as desired by individual organizations. It was commented that some organizations may prefer to build upon existing tracking forms or programs they have. Therefore, it might be more appropriate to identify what data collection elements are important so that those elements can be incorporated in other tracking systems.
 - DEQ noted that the forms are meant to offer a starting place for people/organizations that do not already have one in place.
 - A data dictionary should be developed for each tier of reporting. The dictionary will better ensure that all use terms in the same way and track the same measures. This can also be used as the list of data elements that anyone can put in their own tools. It does not require development of databases, spreadsheets, or tools, but simply identifies key metrics to track.
- The online tool from Minnesota should be reviewed to see if there are any useful resources that can serve as examples.
- The accompanying write-up says these forms are "tools", but they are not operationalized. The language should be careful to call the forms "examples".
- The final version of the reporting forms should be in a SaMS appendix with a high-level conceptual discussion in the main report. The general matrix of recommended voluntary tracking for winter operations should also appear in the main report to make the report as useful and user-friendly as possible.
- To make the three levels of tracking terms readily understood, Tier 1 should consistently be referred to as "Seasonal", Tier 2 should consistently be referred to as "Storm-specific", and Tier 3 should consistently be referred to as "Operational Units". Using these terms will clearly describe what is meant by the groupings.
- It is helpful for jurisdictions within the Accotink Creek TMDL area to have example forms as a starting point, rather than design future MS4 reporting from a blank slate.

- In the conceptual matrix write-up, the language around regional analyses should be softened. "Potentially" have regional analysis; "Future regional analysis is a long-term aspiration"; etc.
 - Goal 1 is getting everyone on board with tracking and moving towards standardization of information tracked. Goal 2 (longer term) is regional analysis that the SAC members would need to come together to figure out the specifics at a later time.
- The organization that is the recipient of voluntary salt use tracking forms is still to be determined, with the Northern Virginia Regional Commission as the leading option due to previous conversation regarding their possible role in SaMS implementation. Decisions on submitting data will await decisions on SaMS implementation coordination, and should follow additional discussions with the SAC.
- It may not be worthwhile to reconcile past data collection with data collected using this tracking format due to potential differences in the data and assumptions needed for comparisons. The purpose, initially at least, is to focus on current reporting and move forward.
- The forms are expected to also be used by private applicators (HOAs, private companies, etc.) through incentives, certification programs, and contractual requirements as discussed in the Non-Traditional BMP Workgroup. One local jurisdiction plans to write reporting requirements into its future winter service contracts.
- The link between tracking and the associated level of service should be considered in the context of evaluating BMP effectiveness. This will likely be in the form of open-ended, narrative information.

Main areas of agreement:

- Revise the presentation of the forms so that each tier of reporting is clear and complete. Integrate information so that the user only needs to input any duplicate information once and eliminate any redundancies in the tracking forms.
- A data dictionary is needed that clarifies terms and units and fosters improved data consistency and comparability.
- The ideal tool might ultimately be in a database format. While this is not within the scope of this current effort, it can be included in the SaMS report as a recommended next step.
- The SaMS report narrative should focus on the conceptual level, and include and describe the matrix presented at the 3rd SAC meeting. The report should have a link to the data dictionary, and text that highlights that the focus of initial tracking is to support improved internal operations. The report should clearly state that future regional analysis is a next step requiring further SAC deliberations and decisions. The example tracking forms should be included as appendices of the SaMS final report.

Dave Evans, DEQ, then presented each tracking form in turn and asked for questions and discussion on how to improve the forms. The discussion and recommended changes are captured by form below.

Form A: Operational Areas Reporting

- Combine reporting of highways, primary roads, and local roads (report only total lane miles) as all are treated in similar manner. Do not combine non-roadway categories (parking lots, sidewalks, etc.) because different products can be used on each.
- A definition is needed for lane miles. Is this simply the length in the service area (a constant) or is this the length times the number of passes (a variable)? The forms should allow for recording when more than one pass ("treatment") occurs for a given treatment area during a storm.

- Recommended not providing a choice for unit type. If choice provided, restrict type to a dropdown list.
- Add a comment field to indicate whether anti-icing treatment was used. There was not sufficient discussion of whether any more detailed tracking of anti-icing is desired.

Form B: Product Use Reporting

- Add checkbox for use of abrasives if the Traditional BMP Workgroup agrees that this is an acceptable best practice.
- When information is the same at multiple levels of reporting, minimize/eliminate the need to enter any information more than once.
- Work on improving coloring/formatting to clearly define the sections for each tier.
- Note that the sum of product used in the sub-areas (Tier 3 reporting) might not equal the total amount of product used (Tier 1 reporting) if detailed reporting is incomplete (only covers part of the operation). Form A could include a dropdown box to indicate the type of data being used - organization-wide or finer resolution data.
- A challenge in tracking product use was noted; for entities that make their own brine, the amount of salt used to make brine (versus applied directly as a solid) is unknown. The workgroup proposed identifying when brines are used with a Yes/No box for brine use.

Form C: BMP Implementation Reporting

- Type-o at Form C, Row 1a: "equipment" should be "equipment".
- Remove column "Was BMP effective".
 - A narrative form would be more appropriate to deal with effectiveness due to this evaluation being relative to each entity completing the form. Definitions would also be helpful here.
- A wide spreadsheet format could be used where each row (or column, depending on format selected) is a storm that includes all of the needed information for each storm in the columns.
- Add a treatment area field like Forms A and B.
- The text in the Tier 1, Tier 2, and Tier 3 boxes on the top right refer to Columns C, D, E, and F. When looking at a printout of the forms, the user has to guess which columns those are.
- Provide the ability to link available geospatial data when possible (some operators have apps in the trucks that can link data geospatially).
- The forms should be developed in a way that is easy for operators to fill in. The data can be reformatted to be easy to use/analyze later.

Form D: Winter Season/Storms Reporting

- Change this form to use the metrics on page 4 of the [voluntary process for evaluating deicer application rate achievement document](#) to be consistent with the Traditional BMP Storm Severity Factors.

Meeting Wrap-up:

It was determined that a fourth meeting of the Salt Tracking and Reporting Workgroup will be needed. The next meeting is expected to take place in January or February 2020.

Any feedback on the [voluntary process for evaluating deicer application rate achievement](#) should be given to Dave Evans and/or Will Isenberg by Sept. 20, 2019. DEQ will follow up with VDOT Northern District

about potentially using their recommended application rates in place of the Iowa DOT rates shown on the last page of the guide.

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) and Sarah Sivers (sarah.sivers@deq.virginia.gov) to reduce email traffic among EOWG members.

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 workgroup 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:

No additional written comments were submitted.