

Meeting Minutes

2023 Virginia Stormwater Management Handbook Stakeholder Advisory Group (SAG) Mtg #7

Friday January 20, 2023

Location: Department of Environmental Quality
Bank of America 3rd Floor Conference Room
1111 East Main Street
Richmond, VA 23219

Attendees:

See attached sign-in sheets

DEQ Staff

- o Evan Branosky
- o Rebecca Rochet
- o Nelson Daniel

Arcadis / Contractor for Handbook Development

- o Fernando Pasquel
- o Mike DeVuono
- o Shandor Szalay
- o Chris Solden

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1. Welcome & 6th Meeting Recap - Evan Branosky (DEQ Chief Stormwater Policy Advisor)
 - a. Mike Rolband, DEQ Director, welcomed SAG members, thanked them for their continued effort, and provided an update on legislation that would affect the stormwater program.
 - i. SAG members asked about details of the legislation that would establish July 1, 2024, as the effective date for the consolidated regulations and consolidation bill.
 - ii. SAG members asked about having more flexibility with the BMPs specified in Parts IIB and IIC of the of the Stormwater Regs.
 - b. Evan Branosky thanked SAG members for their efforts and involvement to date. Members have been very responsive with respect to feedback on draft material for the Handbook. The presentation Evan and Arcadis used for the meeting follows the minutes.
 - i. DEQ has received feedback on its request for information on Annual Standards & Specifications.
 - ii. DEQ has also received feedback and information from its letter to university engineering programs. One university has offered to provide assistance drafting and reviewing content for the Handbook.

- iii. Evan said that we are continuing to work with SharePoint issues, but most appear to have been resolved.
 - iv. In discussing the timeline, Evan asked that feedback be provided consistent with specified deadlines. Comments that come in outside the specified deadlines will be accepted but may not receive full consideration due to the need to follow the timeline. Members expressed difficulty in meeting the one-week turnaround that Arcadis is seeking. Arcadis suggested on focusing on specifications that members are most familiar with, or those that they have the most issues with. Evan noted that Arcadis is reaching out to individual SAG members about some specific comments. DEQ and Arcadis understand that the timeframe is short, and that members' time is limited – the process is a balance.
 - v. SAG members asked if they could see responses to comments. Arcadis is tracking all comments and offered to address / follow up at a later meeting, possibly sharing the tracking spreadsheet in the future or including a summary or background document / information (as an appendix) with the documentation when it goes out for public comment. Arcadis said that they are focusing on content now as opposed to formatting and graphics, particularly exhibits that will accompany the content.
2. Evan reviewed requirements for public bodies under Virginia's Freedom of Information Act (slide 4).
 - a. 6th Meeting Content and Outcomes
 - b. General Update
 3. Handbook Development Tasks - Arcadis staff presented an update on ongoing Handbook development tasks.
 - a. Outline (Last Draft) and Detailed Chapter Outlines
 - i. Arcadis plans to follow V.4 of the outline
 - ii. 10 chapters, revisions from V.3 are on slide 7
 - b. Planned Work and Production Schedule
 - i. Review Process/Comment Feedback – Arcadis is sending BMP specs for review and comment; they are also starting to send detailed chapter outlines for review, detailed content for chapters will follow... looking to May-June to go through all detailed chapter outlines and chapters... have draft Handbook ready. Content development & review process (slide).
 - ii. To help coordination, DEQ suggested sending a spreadsheet showing where content is supposed to go, or listing where content can be viewed – allowing individuals to look in folders with relevant content on the SharePoint site.
 - iii. Review Process Deadlines – slide 9 has handbook chapters rollout
 1. Chapter 3 content is delayed until end of the General Assembly session since legislation may impact development of some content. Arcadis is basically on schedule at this point, would like more review and feedback on the chapter outlines.
 2. Appendices – Hydrologic and hydraulic methods and computations will be coming out today; VRRM – Arcadis is meeting with VT, rollout of appendix may be delayed or (content may be shifted to another site) (slide 10).
 3. SAG members asked about specific details re regional considerations and karst – this will be in the next block of content with Chapter 6.

4. Still working on details for annual standards and specifications– content will not be ready for a few more months.
 5. SAG members asked about VRRM. Arcadis said they expect Virginia Tech (VT) will develop content for the Handbook re VRRM; there will be less for the SAG to do since VT is doing development. SAG members would like an update on changes to the VRRM. Evan committed to starting with a briefing from VT. Arcadis needs to meet with VT to get more information about the best ways to integrate VRRM into the Handbook. Discussed having detailed instructions for use of VRRM outside of the Handbook – Handbook will contain more conceptual information.
 6. For annual standards and specifications (AS&S), Arcadis wants to ensure they also cover linear utilities. This content will be in Chapters 4 (process oriented) & 5 (technical requirements – how technical requirements may be different, how linear projects are different) – both will have content relevant to AS&S.
 - a. The letter from DEQ asked for additional consideration AS&S holders would like to include ... DEQ received feedback from some entities that was in addition to what is in their AS&S ... would also like to have a standardized form that would replace need for AS&S entity to submit complete plan on an annual basis, to include waivers they follow / submit for approval. Handbook chapters will clarify the process, not revise or change the process / waiver process. Another goal is to minimize the number of waivers.
 7. BMPs – reviewed process slide again, specific to BMPs (slide 12).
 - a. Slide 14 shows BMPs that members reviewed and those that are drafted are coming out for review (slides for construction and post-construction).
 - b. Moved bioretention to the end because everyone is expected to be involved, but may start earlier.
- c. Content Update – Plans
- i. Karst Considerations:
 1. Slide 18 – karst will be included in chapter 6, incl regional considerations
 2. DCR sent a list of general comments for consideration. Referenced appendix 6B in 2013 Stormwater Management Handbook – suggestion that it should not be incorporated at the back of the document ... determining whether terrain is karst is a primary determination. Arcadis noted karst will be addressed initially in Chapter 6, with more detail in an appendix. DEQ and Arcadis agreed to have a 1-on-1 meeting with DCR re karst issues.
 3. Arcadis noted that Robert Denton has joined the SAG.
 - ii. MTDs – considering linking to manufacturer details/content/approval letters; considered having a follow-up discussion specific to MTDs
- d. Outreach Plans (slide 17)
- i. A member suggested doing a 1-hour seminar for ACEC (engineering firms); also presenting at Environment VA in March; VTCA
4. Subcommittee Brainstorm: Handbook Content

- a. SAG Subcommittees – following the break, SAG members went to breakout sessions (by subcommittee) to provide feedback on draft Handbook content as follows:
 - i. ESC & SWM BMPs (Standards & Specifications) (Members of the E&S and SWM BMPs Subcommittee that specialize on E&S controls are requested to participate in this work group to review the E&S specifications and provide feedback. Identify SAG members that can contribute content.)
 - ii. Calculations (H&H, Water Quality) (Members of the Calculations Subcommittee and the E&S and SWM BMPs Subcommittee that specialize on SWM BMPs are requested to participate in this work group to review the stormwater specifications and provide feedback. Identify SAG members that can contribute content.)
 - iii. Outline, Chapters & Handbook Planning, Production and Outreach (Review outline revisions and draft chapter detailed outlines and content. Provide feedback and identify SAG members that can contribute content.)
5. Public Comment – Evan invited SAG members and members of the public to provide comments. No one offered comments.
6. Wrap-up – Evan thanked SAG members for their continued support and participation. The next SAG meeting is scheduled for Friday, February 17, 2023. SAG members went to break-out sessions following the break at 11 am.



2023 Virginia Stormwater Handbook

Stakeholder Advisory Group

Meeting #7 (January 20, 2023)

Agenda

- **Welcome & 6th Meeting Recap**

- ✓ FOIA Information
- ✓ 6th Meeting Content and Outcomes
- ✓ General Update

- **Handbook Development Tasks**

- ✓ Outline (Last Draft) and Detailed Chapter Outlines
- ✓ Planned Work and Production Schedule
 - Review Process/Comment Feedback
 - Review Process Deadlines
- ✓ Content Update – Plans
 - Karst Considerations
 - MTDs
- ✓ Outreach Plans
- ✓ SAG Subcommittees

Evan Branosky, DEQ

Arcadis Team

Break

Agenda

- **Subcommittee Brainstorm: Handbook Content**

- ✓ Subcommittee Discussions
- ✓ Report Out

- **Outline, Chapters & Handbook Planning, Production, and Outreach**

Subcommittee: Review outline revisions and draft chapter detailed outlines and content. Provide feedback and identify SAG members that can contribute content.

- **E&S Controls Group** – Members of the E&S and SWM BMPs Subcommittee that specialize on E&S controls are requested to participate in this work group to review the E&S specifications and provide feedback. Identify SAG members that can contribute content.

SAG
Arcadis Team

- **SWM BMPs Group and Calculations Subcommittee** – Members of the Calculations Subcommittee and the E&S and SWM BMPs Subcommittee that specialize on SWM BMPs are requested to participate in this work group to review the stormwater specifications and provide feedback. Identify SAG members that can contribute content.

Lunch Break

- **Subcommittee Brainstorm: Handbook Content (continued)**

All

- **Public Comment**

- **Wrap-Up**

Evan Branosky, DEQ

Welcome & 6th Meeting Recap

FOIA Information

1. The SAG is a public body subject to the Freedom of Information Act (FOIA). As such, all business of the group must be conducted in a public forum that has been noticed in accordance with the Act and minutes must be prepared.
2. Emails may be considered as the conduct of business. Thus, individual members of the SAG should not use "reply to all" when receiving emails from DEQ. Also, any member of the SAG that wants to provide information to the group should send it to the DEQ Project Manager for distribution.
3. If more than two members of the SAG serve on a subcommittee, those subcommittees are also public bodies and thus subject to FOIA rules.

NOTE:

- Subcommittee seeking to meet virtually will be subject to § 2.2-3708.2. (Meetings held through electronic communication means), of the *Code of Virginia*.

Handbook Development Tasks



Draft Handbook Outline V4 - Chapters

- Chapter 1 – Introduction
- Chapter 2 – Why Erosion and Sediment Control and Stormwater Management Matter
- Chapter 3 – Laws and Regulations
- Chapter 4 – Regulatory Compliance Process
- Chapter 5 – Erosion and Sediment Control and Stormwater Management Requirements
- Chapter 6 – Site Design and BMP Selection
- **Chapter 7 – Design Specifications for Erosion and Sediment Control**
- **Chapter 8 – Design Specifications for Stormwater Management**
- Chapter 9 – BMP Construction
- Chapter 10 – BMP Inspection and Maintenance
- Appendices

Changes to Overall Outline – V4 and SAG Review

- **Changes from V3**

- Clarified content of Chapter 3 to include guidance on municipal programs and avoid duplications with Chapter 4
- Made minor revisions on chapter titles and clarified content (Chapters 3, 5, 6, 7, 8, 9, 10, and appendices)

- **SAG Review and Content Contributions**

- BMP Specs (ongoing)
- Chapters detailed outline and chapter content (ongoing)
- Draft Stormwater Handbook (review date TBD)

Chapter Content Development & Review Process - Feedback

Prior to each SAG Meeting

Draft Chapter Content to DEQ prior to SAG meeting for fatal flaw review – (1 week prior to SAG Meeting - 24-hour TA needed);

Draft Chapter Content released to OC&HPPO Subcommittee - (Friday prior to SAG meeting);

List of upcoming Chapter Content for review the following month released to OC&HPPO Subcommittee only - (Friday prior to SAG meeting);

OC&HPPO Subcommittee members review Chapter Content and summarize any wish list items for upcoming Chapters - (Friday prior to SAG Meeting – SAG Meeting).

Stormwater Handbook Chapters Rollout

6 – Dec 2022	7 – Jan 2023	8 – Feb 2023	9 – Mar 2023	10 – Apr 2023
Chapter 5 Section 5.1	Chapter 1 Outline	Chapter 1 Content	Chapter 2 Content	Chapter 9 Content
Chapter 6 Outline	Chapter 3 Outline	Chapter 2 Outline	Chapter 6 Section 6.3	Chapter 10 Content
	Chapter 4 Section 4.1	Chapter 3 Content	Chapter 9 Outline	
	Chapter 4 Section 4.2.1 Section 4.2.2 Section 4.2.3	Chapter 4 Section 4.2.3 Section 4.2.4 Section 4.2.5	Chapter 10 Outline	
	Chapter 5 Section 5.2	Chapter 5 Section 5.3		
	Chapter 6 Section 6.1	Chapter 6 Section 6.2		

SAG Schedule

Stormwater Handbook Appendices Rollout

7 – Jan 2023	8 – Feb 2023	9 – Mar 2023	10 – Apr 2023	11 – May 2023
Hydrologic and Hydraulic Methods and Computations Outline	Hydrologic and Hydraulic Methods and Computations Content	Hydrologic and Hydraulic Methods and Computations Content		
VRRM Guidance/Link Outline	VRRM Guidance/Link Content	VRRM Guidance/Link Content		
	Example Site Plans Outline	Example Site Plans Content	Example Site Plans Content	
	Soil and Geotech Outline	Soil and Geotech Content	"Hot Spot" Procedures Outline	"Hot Spot" Procedures Content
			Planting List Outline	Planting List Content
		BMP Design, Construction & Maintenance Outline	BMP Design, Construction & Maintenance Content	BMP Design, Construction & Maintenance Content
		Standard Worksheets for E&S Controls Outline	Standard Worksheets for E&S Controls Content	Standard Worksheets for E&S Controls Content
		CADD Standard Details (ESC and BMPs) Outline	CADD Standard Details (ESC and BMPs) Content	CADD Standard Details (ESC and BMPs) Content
		Future of Stormwater Outline	Future of Stormwater Content	

SAG Schedule



BMP Spec Development & Review Process - Feedback

Prior to each SAG Meeting

Draft Specs to DEQ prior to SAG meeting for fatal flaw review – (1 week prior to SAG Meeting - 24-hour TA needed);

Draft Specs released to BMP and Calculations Subcommittees - (Friday prior to SAG meeting);

List of upcoming Specs for review the following month released to BMP and Calculations Subcommittees - (Friday prior to SAG meeting);

Subcommittees members review draft specs and summarize any wish list items for upcoming BMPs - (Friday prior to SAG Meeting – SAG Meeting).

Construction BMP Specifications Updates

Construction BMPs Review Comments Addressed

- Storm Drain Inlet Protection
- Surface Roughening
- Topsoiling *
- Sodding
- Safety Fence
- Brush Barrier
- Compost Blankets
- Impermeable Diversion Fence
- Flexible Transition Mat
- Slope Interruption Device
- Compost Filter Sock
- Super Silt Fence

Construction BMPs Drafted

- Level Spreader
- Outlet Protection
- Temporary Sediment Basin
- Temporary Diversion Dike
- Culvert Inlet Protection
- Tree Preservation & Protection
- Bermudagrass & Zoysiagrass Establishment
- Temporary ROW Diversion
- Dust Control
- Filter Log
- Straw Wattles
- Woodchip Filter Berm

Post-Construction BMP Specifications Updates

Post-
Construction
BMPs Review
Comments
Addressed

- Vegetated Roof
- Rooftop Disconnection
- Grass Channels
- Wet Swales

Post-
Construction
BMPs
Drafted

- Soil Compost Amendment
- Filtering Practices
- Extended Detention Pond
- Dry Swales
- Support Component:
Earthen Embankments

Construction BMP Rollout

6 – Dec 14, 2022

7 – Jan 20, 2023

8 – Feb 17, 2023

9 – March 17, 2023

10 – Apr 12, 2023

<p>“New” BMPs Compost Sock Super Silt Fence</p>	3.21 – Level Spreader	3.05 – Silt Fence	3.27 – Turbidity Curtain	3.36 – Soil Stabilization & Matting
	3.34 – Bermudagrass and Zoysiagrass Est.	3.17 – Storm Conveyance Channel	3.25 – Utility Stream Crossing	3.37 – Trees, Shrubs, Vines, Groundcover
	3.14 – Temporary Sediment Basin	3.23 – Struct. Streambank Stabilization	3.28 – Subsurface Drain	3.04 – Straw Bale Barrier
	3.18 – Outlet Protection	3.22 – Veg. Streambank Stabilization	3.24 – Temporary Vehicular Stream Crossing	3.31 – Temporary Seeding
	3.07 – Storm Drain Inlet Protection	3.13 – Temporary Sediment Trap	3.26 – Dewatering Structure	3.32 – Permanent Seeding
	3.01 – Safety Fence	3.12 – Diversion	3.20 – Rock Check Dams	3.16 – Paved Flume
	3.06 – Brush Barrier	3.03 – Construction Road Stabilizations	3.19 – Riprap	3.15 – Temp. Slope Drain
	3.33 – Sodding	3.10 – Temporary Fill Diversion	3.02 – Temp Stone Construction Entrance	3.35 – Mulching
	3.30 – Topsoiling			
	3.29 – Surface Roughening			
AS&S Release 1/4	AS&S Release 2/4	AS&S Release 3/4	AS&S Release 4/4	Graphics / Details

SAG Schedule

Post-Construction Stormwater BMP Rollout

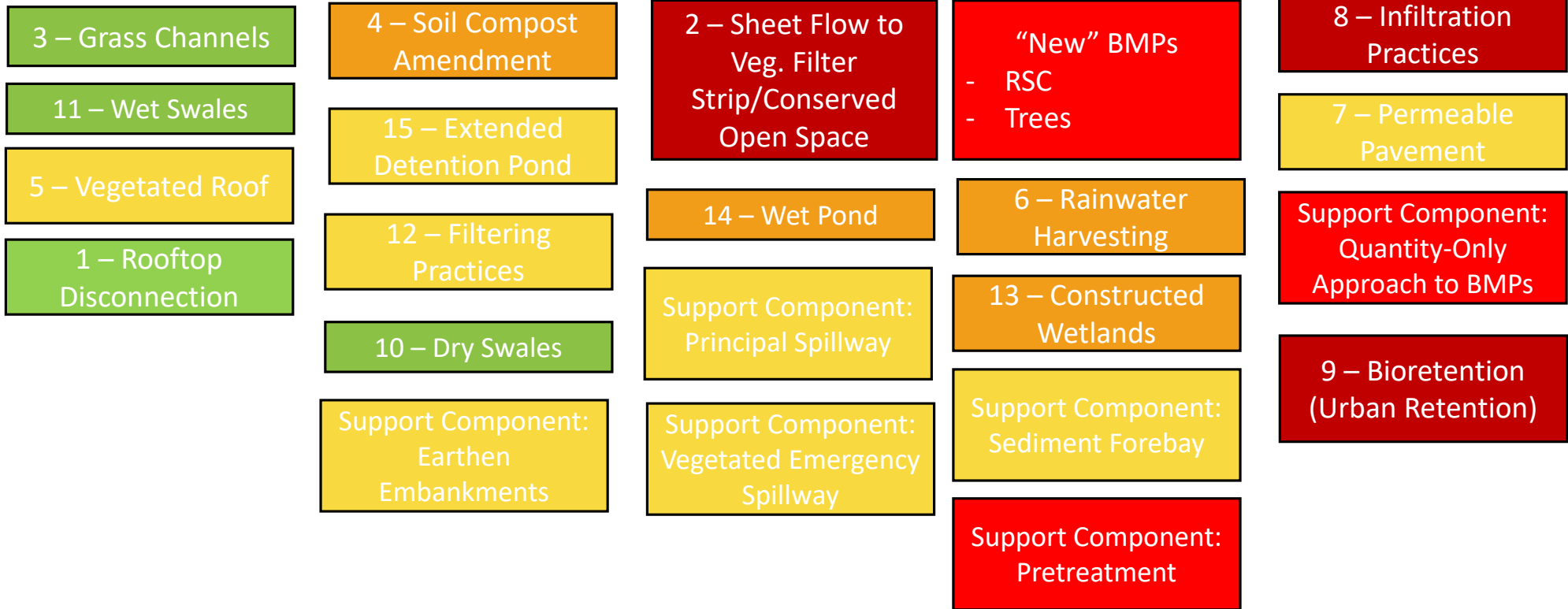
6 – Dec 14, 2022

7 – Jan 20, 2023

8 – Feb 17, 2023

9 – Mar 17, 2023

10 – Apr 12, 2023



SAG Schedule

Content Update - Plans

- **Karst Considerations**

- ✓ General karst topography considerations to be included in Chapter 6
- ✓ Each BMP will include karst considerations, as needed
- ✓ SAG members include Karst experts (Robert Denton, DCR staff, others?) – coordinating with Arcadis Karst staff

- **MTDs**

- ✓ MTDs design links to be include in Chapter 8
- ✓ DEQ will send letter to manufacturers requesting design specs in similar format as other Handbook BMPs

Outreach and Engagement Plan

- **Stakeholder groups to brief/engage**
 - Groups to keep informed
 - VAMSA – ongoing briefings at regular quarterly meetings
 - ASCE – coordinating Richmond meeting
 - APWA Mid Atlantic Chapter – abstract submitted
 - Possible workshops/presentations
 - VWEA – Stormwater Committee; Spring Seminar – focus on O&M
 - WaterJAM 2023 – abstract submitted
 - VA Lakes and Watershed Association Annual Conference – abstract submitted
 - Other Groups to consider - VA Cave Board (Karst); Chesapeake Stormwater Network; Planning Districts; Environmental Groups
- **Suggestions and Feedback**

SAG Subcommittees

Review and Contribute Content

- **SAG Subcommittees**

- ✓ ESC & SWM BMPs (Standards & Specifications)
- ✓ Calculations (H&H, Water Quality)
- ✓ Outline, Chapters & Handbook Planning, Production, Outreach

Public Comment





2023 Virginia Stormwater Handbook

Stakeholder Advisory Group

Meeting #7 (January 20, 2023)

The meeting is adjourned.

Contact: Evan Branosky
evan.branosky@deq.virginia.gov
(804)-584-6265

Organization	First (Primary)	Last (Primary)
VACRE	Phil	Abraham
Kimley-Horn	Laurence	Benson
Prince William County	Raj	Bidari
VCAP	Blair	Blanchette
City of Virginia Beach	Charles	Bodnar
City of Waynesboro	Logan	Borror
Colonial Materials	Tommy	Branin
JMT	Melissa	Burgh
Montgomery County	John	Burke
RES	Joseph	Caterino
JMU	Dale	Chestnut
HBAV	Andrew	Clark
Town of Christiansburg	Patricia	Colatosti
Shah Development LLC	Kevin	Conner
AquaLaw	Justin	Curtis
Clark Nexsen	Christos	Damalas
City of Charlottesville	Jack	Dawson
Gentry Locke	Chip	Dicks
SW Manufacturers Assn	Jacob	Dorman
James River Association	Justin	Doyle
City of Danville	Brian	Dunivant
HRPDC	KC	Filippino
VDOT	Alex	Foraste
Hydro International	Chris	French
NOVARC	Norm	Goulet
WSSI	Frank	Graziano
Stantec	Ashley	Hall
Dewberry	Shawn	Harden
JWB	Preston	Hendricks
Hirschman Environmental	David	Hirschman
ACEC Virginia	Mike	Hogan
City of Harrisonburg	Matthew	Huston
DCR	Rene'	Hypes
Henrico County	Scott	Jackson
Culpeper SWCD	Richard	Jacobs
Christopher Consultants	Mike	Kitchen
VTCA	Rob	Lanham
VAC	Joe	Lerch
Roanoake County	Cindy	Linkenhoker
VDACS	Darrell	Marshall
City of Alexandria	Melanie	Mason
GKY	Doug	Moseley
Strata Clean Energy	Brent	Niemann
Caroline County	David	Nunnally
Arlington County	Jason	Papacoma
CBF	Peggy	Sanner
Timmons Group	Liz	Schessele
Luck Ecosystems	Kateri	Simon
Hazen and Sawyer	Benjamin	Slaughter
City of Hampton	Scott	Smith
Fairfax County	Jerry	Stonefield
Street Development	Richard	Street
Balzer & Associates	James	Taylor
American Electric Power	Jared	Webb
Frederick County	Joe	Wilder
Dominion	Hannah	Zegler
TRC Companies	Jason	Franti
DEQ	John	McCutcheon
DEQ	Robert	Cooper