



Upper & Middle James Riparian Consortium Source Water Protection, Monitoring, & Workforce Virtual Meeting Summary

Wednesday, September 29th, 2021

Executive Summary

The sixth general meeting of the Upper & Middle James Riparian Consortium (Consortium) of 2021 was held on Wednesday, September 29th, 2021 as a virtual meeting with an optional, in-person tour of the State Farm buffer project after the meeting. The purpose of the online meeting was to introduce and raise participants' awareness about the benefits of buffers for source water protection, and how this opens up new opportunities for funding, messaging, and ways to prioritize projects. Meeting attendees also had the opportunity to learn more about current efforts to increase workforce by engaging new partners in training and implementation. An optional site tour at the State Farm was held to showcase how partners are working together at the working farm at a Virginia Department of Corrections facility in Powhatan and Goochland.

During the meeting, Anne Marie Roberts with the James River Association offered a tribute to Dan French who passed away in August 2021 and was an incredible trailblazer for riparian buffers and source water protection at the Amherst Service Water Authority. Action Team leads also provided detailed updates on the efforts that the Knowledge Network, Targeting and Outreach, and Implementation Teams have been working on the past months. The meeting also featured a panel discussion on Source Water Protection, Monitoring, & Engagement with presentations by Erin Ling of Virginia Tech, Michelle Wolfgang with the U.S. Environmental Protection Agency, and Jen Rogers with the Virginia Department of Environmental Quality. Beth Ginter with the Chesapeake Conservation Landscaping Council also gave a rich overview of the upcoming Buffer Certificate trainings and charrettes offered through the Chesapeake Bay Landscape Professionals and new partnerships with the Pennsylvania and Virginia Department of Corrections. Presentation slides from the meeting are available [at this link](#). Finally, [meeting participants](#) with affiliations are listed at the end of this summary.

Ways to Engage

- [RSVP](#) for the virtual **Buffer Summit** on Wednesday, October 27th from 10:00 AM- 2:30 PM! A flyer with more details on the exciting line-up of presenters and panelists is available for download and distribution [at this link](#)- please share widely!
- To stay up-to-date on events, please see the Consortium's event calendar at <https://jamesriverconsortium.org/events> and sign up for our monthly newsletter at www.jamesriverconsortium.org.
- Reach out to Amber Ellis at aellis@thejamesriver.org or another member of the Planning Team if you are interested in potentially serving in a greater capacity with the Consortium or would

like to connect with an Action Team.

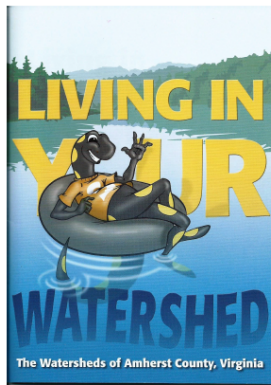
Welcome and Introductions

At the beginning of the meeting, Christine Gyovai with Dialogue + Design Associates welcomed participants to the meeting and invited them to share their name and affiliation in the chat. A list of [meeting attendees](#) and affiliations is included at the end of this summary. Sierra Gladfelter with Dialogue + Design Associates previewed the agenda and panel presentations during the meeting.

Overview of the Consortium and State Farm Project

Next, Amber Ellis with the James River Association gave a brief overview of the Riparian Consortium, including the vision, focus, mission, values, where the Consortium has been, and where it is headed. Amber emphasized that the Consortium's vision is "growing partnerships" with a growing membership of over 300 partners. Both new folks and seasoned Consortium members alike are welcomed to today's meeting! To learn more about the Consortium visit www.jamesriverconsortium.org, where you can also register for the monthly Consortium newsletter.

Amber also shared the history and evolution of the Consortium's work and partnerships to implement the State Farm project with the Department of Corrections. This project was highlighted during the afternoon site tour. Amber noted that one of the greatest challenges with the State Farm project is cobbling together funding from so many diverse sources in order to make implementation at the current scale possible. Yet, this also created one of the Consortium's most collaborative projects with partners representing the Virginia Department of Corrections, the Virginia Department of Forestry, Virginia Cooperative Extension, The Nature Conservancy, the James River Association, and the Monacan Soil and Water Conservation District.



Dan E. French Highlight

Developed the Amherst Watershed Protection Program



Chesapeake Monitoring Cooperative's Restoration Monitoring Survey

Liz Chudoba with the Alliance for the Chesapeake Bay then shared a link to the Chesapeake Monitoring Cooperative's [Restoration Monitoring Survey](#). This was developed through a partnership between the Chesapeake Monitoring Cooperative and NFWF to create a community based monitoring program that can target restoration practices and identify pre- and post-water quality responses over time. So far the survey, which will help identify best practices and barriers for monitoring, was sent out via NFWF and the Chesapeake Monitoring Cooperative's networks. Meeting participants are encouraged to share the survey widely and also complete it themselves if relevant.

Additional Partner Updates

Meeting participants shared several additional updates and events announcements in the chat:

- Beth Ginter shared: "October is Riparian Buffer Month! We invite you to join us in celebrating buffers and use the #riparianbuffermonth hashtag on your social media in October. <https://www.chesapeakelandscap.org/riparian-buffer-month>."
- Kristen Saacke Blunk shared: "Just a note about an OPEN RFP NFWF has posted: <https://www.nfwf.org/programs/chesapeake-bay-stewardship-fund/innovative-nutrient-and-sediment-reduction-grants-2022-request-proposals>. The 2022 Innovative Nutrient & Sediment Reduction program has a proposal deadline of November 29, 2021. Feel free to reach out to me if you'd like to discuss ideas/approaches you may be considering. This is the same program that JRA has successfully applied to for the Riparian Buffer Consortium."
- Anne Marie Roberts shared: "The Blue Ridge Land Conservancy is hiring both an assistant director in Roanoke and a program manager (work from home in either Nelson/Amherst/Lynchburg/Appomattox or Campbell). I thought you all may know someone!"

Action Team Updates

After partner updates, Christine invited each of the Action Team leads to share top highlights from the activities they have been working on recently or have on the horizon for the remainder of 2021.

Knowledge Network Team

Beth Ginter shared an update on the Knowledge Network Team's work with the Chesapeake Bay Landscape Professionals (CBLP) to develop workshops, trainings, and certificates on buffer design, installation, and maintenance. More details will be covered in Beth's presentation around workforce development opportunities later in the meeting. Beth noted that the Knowledge Network Team and CBLP approach the term "landscape professionals" broadly and consider local and state government, educators and others as critical to train and connect to landscape and green infrastructure practices. Beth also noted that October is Riparian Buffer Month and participants are invited to join CBLP in celebrating buffers and use the #riparianbuffermonth hashtag on your social media in October. Additional details on this are at: <https://www.chesapeakelandscap.org/riparian-buffer-month>.

Targeting and Outreach Team

Casey Johnson with the James River Association shared that the Targeting and Outreach Team focuses on landowner engagement, strategic messaging, and holding outreach events in the watershed. A list of current Consortium and partner events is available at: <https://jamesriverconsortium.org/events>. Please reach out to Casey to get your events added to the calendar if you don't see them here. Next, Dave Jasinski with Green Fin Studio shared an update on the activities they have been working on for the Consortium, including developing an Annual Report tracking and celebrating success stories and progress that will come out this fall and an Education Module on buffers for local government officials.

Implementation Team

Amber Ellis with the James River Association shared that the Implementation Team recently awarded two mini-grants totaling \$19,000 in response to a RFP that was distributed over the summer. The two awardees are the Capital Region Land Conservancy and NDPonics, a Native-owned business based in Rockbridge County. The Implementation Team is also celebrating the success of the James River Buffer Program. Since its launch, 345 acres of buffers have been installed- mostly in the Middle James- through partnerships between the James River Association, the Virginia Depart of Forestry, and the Chesapeake Bay Foundation (CBF). CBF is now launching a program in the Upper James to increase the acreage being installed in this region of the watershed. Amber noted that the Implementation Team is also planning some field visits to buffer projects in various stages and ages and welcomes suggestions for sites to visit from meeting participants.

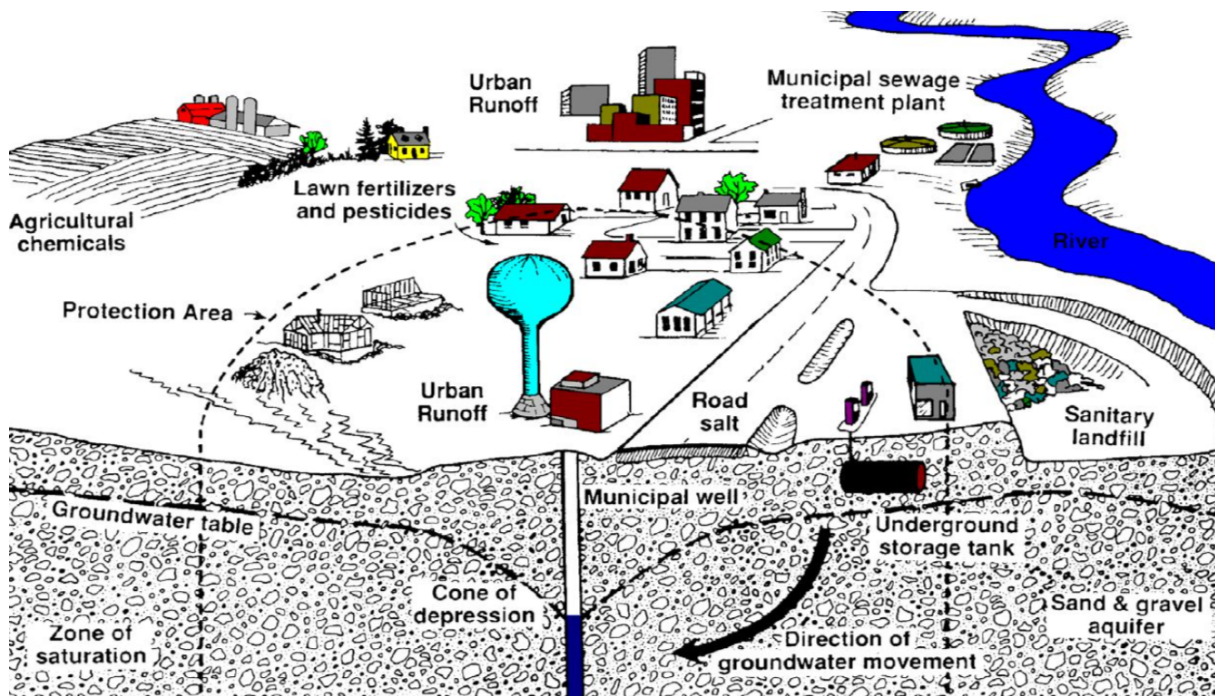
Source Water Protection, Monitoring, & Engagement Panel

Amber Ellis introduced panelists for the Consortium's panel on Source Water Protection, Monitoring, & Engagement, including Erin Ling of Virginia Tech, Michelle Wolfgang with the U.S. Environmental Protection Agency, and Jen Rogers with the Virginia Department of Environmental Quality. This panel was assembled to provide an overview for participants about why buffers are important for source water protection, how we measure water quality in our streams, and how drinking water can be a tool for engagement.

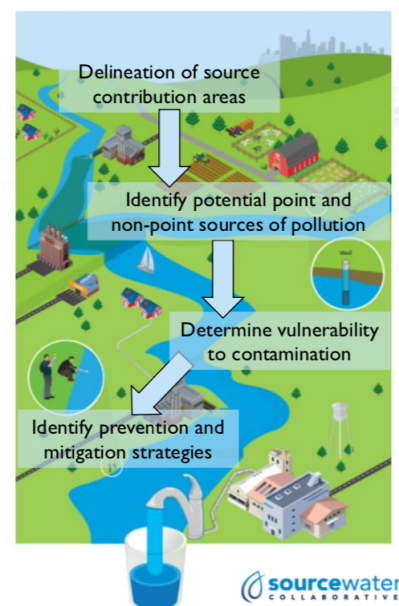
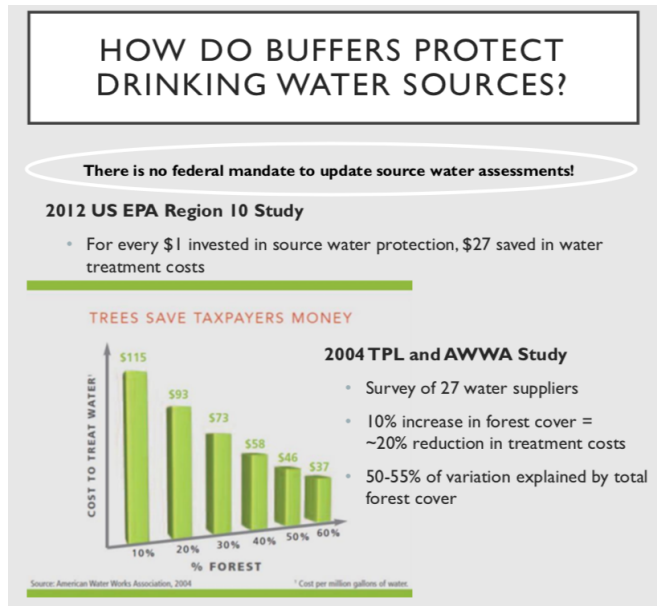
First, Erin Ling, Senior Extension Associate and Program Coordinator with Virginia Tech, offered a broad framework for understanding what source water is and what it means for community members in the Upper and Middle James Watershed. At the beginning of Erin's presentation, she reviewed the basics of the water cycle, how a watershed functions, and asked meeting attendees to turn on their video and raise their hands if their water comes from groundwater or surface water. Then participants were invited to share the source of their drinking water in the chat. Responses included the Maury River, the James River, the Shenandoah River, the Rivanna River, the Potomac River, the Schuylkill River, Carvins Cove, Spring, Deep Spring, Mechums, and Peddler Creeks, and wells. One participant added "faucet" as a joke since this is such a common response. At the end of Erin's presentation she also shared an interactive platform where you can "be a water droplet" and explore how you move through the water cycle. This tool is available at: <https://river-runner.samlearner.com>. Erin also shared the following resources for participants to learn more about source water and their relationship to it:

- <https://www.epa.gov/sourcewaterprotection/how-can-you-help-protect-source-water>
- <https://www.vdh.virginia.gov/DRINKING-WATER/SOURCE-WATER-PROGRAMS/SOURCE-WATER-PROTECTION-PROGRAM>
- <https://thejamesriver.org/ABOUT-THE-JAMES-RIVER>
- More information on VT's well testing program: <https://www.wellwater.bse.vt.edu/index.php>

Erin's presentation slides are available [at this link](#) and she is available to answer any additional questions at ejling@vt.edu.



Next, Michelle Wolfgang with the U.S. Environmental Protection Agency (EPA) gave an overview of how riparian forest buffers relate to water protection by examining the nexus of forests and rivers. In Michelle's presentation, she highlighted a number of studies across the United States demonstrating the value of forests to watershed health broadly and water quality in particular. Of note, Michelle referenced a study that was conducted in the Pacific Northwest that found that for every dollar invested into source water protection, \$27 were saved in water treatment costs downstream.



BUFFERS SUPPORT HABITAT, FOOD WEBS, STREAM STRUCTURE AND MORPHOLOGY



Increased habitat provisions ecosystem services and supports food webs³⁶⁻³⁹

Photo: James River



Stable food webs ensure balance of the nutrient cycle and water chemistry⁴⁰⁻⁴²

Photo: USDA



Enhanced stream structure traps sediment, mitigates thermal impairments, provides habitat⁴³⁻⁴⁹

Photo: King County WA

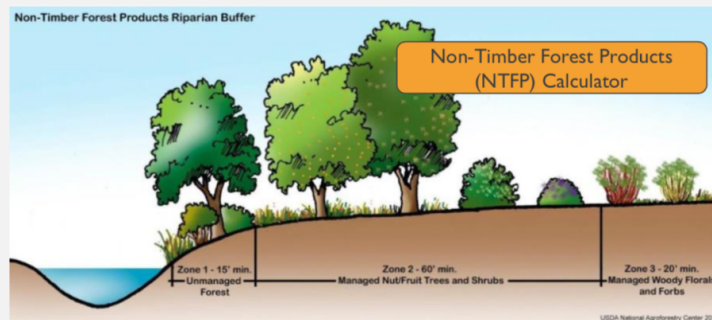


Restored stream morphology reduces turbidity and increases infiltration rates⁵⁰⁻⁵⁵

Photo: USDA

Michelle also acknowledged the significance of agricultural lands and landowners in source water protection, noting that it is often difficult for farmers or ranchers to practice “no touch” on their buffer properties. For this reason, agroforestry practices that allow for “working buffers” to supplement farmers’ primary revenue make source water protection more practical and financially feasible.

AGROFORESTRY BUFFERS WORK FOR FARMS AND CLEAN WATER



- Direct and indirect economic benefits:
 - Typical net return: 5-500\$/acre/year - depends on buffer dimensions and selected crops
 - Cleaner air and water²⁷⁻²⁹
 - Protect aquatic habitat and enhance wildlife habitat²⁹⁻³⁴
 - Flood and streambank erosion protection³⁵⁻³⁹

Gordon, Hal. (2015). *Basic economics of agroforestry: The economics of forest-crop production*. USDA-NRCS.

Michelle’s presentation slides, which include more details on a number of the scientific studies cited, are available [at this link](#).

Finally, Jen Rogers, who works for the Virginia Department of Environmental Quality (DEQ) Piedmont Office as a Total Maximum Daily Load (TMDL) Coordinator gave a presentation on how we measure success in water quality particularly in the state of Virginia informed by the 1972 Clean Water Act. Jen

- DEQ

(CWSRF) and Section 319 grants available for land conservation depending on the watershed. Michelle also shared the following resources mentioned above in the chat:

- “About the Partnership between NFWF and EPA:
<https://www.nfwf.org/partnerships/federal-state-partners/us-environmental-protection-agency>
 - About the Partnership between US Endowment for Forestry and Communities and EPA:
<https://www.epa.gov/hwp/2019-healthy-watersheds-consortium-grant-awards-O>
 - Use of CWSRF and 319 for protection and conservation- I can put you in touch with those folks in your state or in our office- contact wolfgang.michelle@epa.gov.”
- How do you isolate the impacts of the buffers on these water quality parameters?
 - Jen noted that it isn't entirely possible to isolate the water quality improvement coming from a particular site from the surrounding area. However, having pre- and post-data can be an effective way to capture a project's impact even if it is not perfect.
 - Jen Rogers added via chat: “Another thought on isolating impacts on buffers that I've worked with at a different agency is beyond having good pre- and post-implementation data is to also use control stations to compare results- a similar station as far as habitat and water quality goes but that is not getting a buffer project.”
 - Michelle is not involved in EPA's monitoring program, but offered to ask for more information from the relevant individuals to share.
 - Amber shared the following Consortium developed resources in the chat: “We recently added water quality assessment stations to the Consortium Coordination Tool. You can overlay with impaired waters and other layers. Could be an opportunity to lay them over each other. <https://jrapt.cicapps.org/#priorities>.”
 - What is agroforestry and how is it incorporated into a “working buffer”?
 - Michelle responded that “agroforestry” in this context is basically a fancier term for “working buffers.” This may involve a more orchard-like approach in the selection of trees or encouraging specific non-timber crops. Michelle noted that the USDA also provides a tool to calculate the return on investment on agroforestry working buffers. This resource is available at: <https://www.fs.usda.gov/nac>.
 - Amber shared via chat: “VT's Catawba Sustainability Center is doing some stuff in the agroforestry buffer arena ... they covered some in this webinar if you want to check it out https://www.youtube.com/watch?v=UUJp_ISpkpE&feature=youtu.be.”
 - David Wise shared via chat: “Propagate Ventures is a private firm doing for-profit buffers in 10+ states. Stroud is working with PV on a demo project that is pending. Happy to discuss further.”

Participants' Favorite Source Water Buffer Projects

Following a short break, Christine invited participants to share their favorite buffer project or source water protection effort. Responses offered by participants included: Meadow Creek in Charlottesville, the State Farm project, Graham Creek Watershed above the Amherst Co. Service Authority Reservoir, Tom's Creek buffer in the New River watershed, and "any buffer upstream from my water intake."

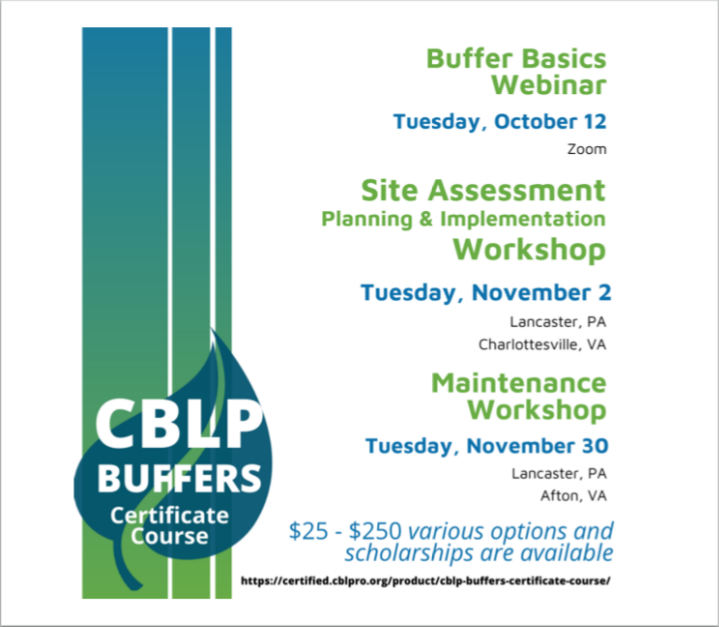
Presentation on Riparian Workforce Development

Next, Beth Ginter with the Chesapeake Conservation Landscaping Council (CCLC) offered an overview of riparian workforce development opportunities that can help to implement and actualize projects to protect source water in the watershed. In her presentation, Beth gave an exciting update on the upcoming Buffer Certificate trainings and charrettes offered through CCLC's primary program: the Chesapeake Bay Landscape Professionals (CBLP) and their new partnerships with the Pennsylvania and Virginia Department of Corrections to train currently and recently incarcerated individuals in buffer installation.

Last year, CBLP started working with the Consortium and Knowledge Network Team to develop a Buffer Certificate program for landscape professionals, nonprofit staff, and contractors in the watershed. After piloting the project successfully last year despite the challenges that COVID posed, a refined version of the course is being offered this October. The program includes a Buffer Basics Webinar on Tuesday, October 12th, which is also available as a standalone primer if it is of interest. There will also be several in-person site assessments where participants can choose their location and then work collaboratively on a site design. You can also register for the CBLP Buffer Basics Webinar and Certificate program at: <https://certified.cblpro.org/product/cblp-buffers-certificate-course>. Finally, CBLP is also offering a standalone or add-on Urban Buffer Design Charette [at this link](#).

CBLP-Buffers

- Certificate course comprised of three sessions online & field learning
- Buffer Basics standalone option
- Who? Landscape professionals interested in installing & maintaining buffers, forestry pros/arborists, municipal and state govt staff
- Expert instructors
- Scholarships available
- Registration is online: <https://certified.cblpro.org/product/cblp-buffers-certificate-course/>
- Please share with your networks!



The flyer for the CBLP Buffers Certificate Course features a vertical bar on the left with a blue-to-green gradient and a large blue water drop graphic containing the text 'CBLP BUFFERS Certificate Course'. To the right, three sessions are listed: 'Buffer Basics Webinar' on Tuesday, October 12 via Zoom; 'Site Assessment Planning & Implementation Workshop' on Tuesday, November 2 in Lancaster, PA and Charlottesville, VA; and 'Maintenance Workshop' on Tuesday, November 30 in Lancaster, PA and Afton, VA. A note at the bottom states '\$25 - \$250 various options and scholarships are available' with the same registration URL as the list item above.

Buffer Basics Webinar
Tuesday, October 12
Zoom

Site Assessment Planning & Implementation Workshop
Tuesday, November 2
Lancaster, PA
Charlottesville, VA

Maintenance Workshop
Tuesday, November 30
Lancaster, PA
Afton, VA

CBLP BUFFERS
Certificate Course

\$25 - \$250 various options and scholarships are available
<https://certified.cblpro.org/product/cblp-buffers-certificate-course/>

Beth also shared that CBLP partnered with the Pennsylvania Department of Corrections, Pennsylvania DCNR, and the Alliance for the Chesapeake through a grant from the Correctional Conservation Collaborative to pilot the buffer training program with currently incarcerated individuals. Through a pilot with the James River Association, Virginia Cooperative Extension, and Virginia Department of Correction, this program was offered to individuals at the State Farm facility in Virginia. Eight women participated in the program, including three of whom completed the whole certificate program. CBLP and its partners look forward to continuing to refine these programs and models and build deeper relationships with communities to support incarcerated individuals returning to work with possible employment opportunities in buffer installation. Beth's slides, which include additional information about upcoming trainings and scholarship opportunities, are available to view and download [here](#).

Questions and Discussion

Following Beth's presentations, participants were invited to ask questions. The following were shared:

- Christine asked about CBLP's plans to consider expanding its trainings and programs into Spanish to reach the Latinx community, which often works as subcontractors on buffer installation.
 - Beth shared that CBLP is currently developing a program for Latino contractors in Washington DC, which may be able to serve as a model for other programs.
 - Beth also noted that Friends of the Rappahannock is interested in similar programming.

- Ultimately, Beth noted, CBLP would like to partner with organizations that provide job training, employment support, and other wrap-around services outside of CBLP's area of expertise.
- One participant shared that they were curious how CBLP can both train - and also increase opportunities for recently returned citizens to find work in this space- post incarceration?
 - Beth noted that CBLP has done more work in this area in Pennsylvania, but knows that Conservation Services, which does many of the buffer contracts for planting, is poised to potentially hire several of the formerly incarcerated women who graduated from the certificate program at State Farm.
 - Amber added via chat: "Hearing that there's some delay in fencing contractors, though just through the grapevine!"
 - Beth responded that there is incredible demand for qualified contractors, especially during COVID and with supply chains in flux.
 - Amber shared the [recording](#) from last year's Buffer Summit, which included a presentation (time marker 3:00:06) with Christopher Rashad Green entitled "Reimagining the Conservation WorkForce: Restoring Communities and Water Quality." Chris was previously incarcerated and now has an organization [Free*Dome Unlimited, LLC](#) working on connecting individuals returning to their communities with support services.

Next Steps and Upcoming Events

Meeting participants were invited to share feedback on the meeting content and structure by completing this [evaluation](#). Participants were encouraged to [RSVP here](#) for the upcoming Consortium-hosted Buffer Summit on Wednesday, October 27th from 10:00 am- 2:30 pm. A flyer with more details on the exciting line-up of presenters and panelists is available for download and distribution [at this link](#). There are future opportunities to engage with the Consortium this fall and next year; upcoming events are listed below and can be found at <https://jamesriverconsortium.org/events>.

Individuals attending the BMP tour of the State Farm project at the Department of Corrections were previously sent directions and an agenda for the site tour. Tour participants were also invited to join Consortium members for an optional Happy Hour after the site visit at Hardywood at West Creek.

Meeting Participants

- | | |
|--|---|
| 1. Rick Atkinson, Resource Environmental Solutions LLC | 4. Amber Ellis, James River Association |
| 2. Kim Biasioli, Albemarle County | 5. Liz Chudoba, Alliance for the Chesapeake Bay |
| 3. Keith Burgess, Monacan Soil and Water Conservation District | 6. Jenn Clarke, City of Richmond |
| | 7. Sarah Coffey, Chesapeake Bay Foundation |

8. Jeremy Falkenau, Virginia Department of Forestry
9. Beth Ginter, Chesapeake Conservation Landscaping Council
10. Kelly Hitchcock, Central Virginia Planning District Commission
11. Alston Horn, Chesapeake Bay Foundation
12. Gabriel Irigaray, Roanoke Valley-Alleghany Regional Commission
13. Dave Jasinski, Green Fin Studio
14. Paula Jasinski, Green Fin Studio
15. Casey Johnson, James River Association
16. Matt Kowalski, Chesapeake Bay Foundation
17. Hunter Landis, Virginia Department of Corrections
18. Erin Ling, Virginia Household Water Quality Program with Virginia Tech and Virginia Cooperative Extension
19. Rex Linville, Piedmont Environmental Council
20. James Martin, Virginia Department of Environmental Quality (VA DEQ)
21. Jenny McGarvey, Alliance for the Chesapeake Bay
22. Emily Mills, Chesapeake Conservancy
23. Jane Myers, Capital Region Land Conservancy
24. Jennifer Palmore, VA DEQ
25. Shawn Ralston, James River Association
26. Deya Ramsden, James River Buffer Program, Virginia Department of Forestry
27. Erin Reilly, James River Association
28. Anne Marie Roberts, James River Association
29. Jen Rogers, VA DEQ
30. Kristen Saacke Blunk, Headwaters LLC
31. Nicole Schuman, Virginia Cooperative Extension
32. Joey Shelton, James River Association
33. Kelly Snoddy, Peter Francisco SWCD
34. Sophie Stern, Alliance for the Chesapeake Bay
35. Barbara Teeple, Peter Francisco SWCD
36. Kristen Tillman, Commonwealth Regional Council
37. Kate Tuttle, Eastern Tree Arboricultural Consulting
38. Sammy Vest, Trout Unlimited
39. Laurel Williamson, Albemarle County
40. David Wise, Stroud Water Research Center's Watershed Restoration Group
41. Lisa Wittenborn, Rivanna Conservation Alliance
42. Michelle Wolfgang, EPA Mid Atlantic Source Water Protection Program
43. Chuck Wright, Virginia Department of Forestry
44. Participant joining by phone (*joined late*)
45. Participant joining by phone (*joined late*)
46. Emily Carlson, Dialogue + Design
47. Sierra Gladfelter, Dialogue + Design
48. Christine Gyovai, Dialogue + Design
49. Lea Taylor, Dialogue + Design