Upper & Middle James Riparian Consortium
2020 Buffer Summit Summary

Thursday, October 15th 2020

Executive Summary

The second annual Buffer Summit of the Middle and Upper James Riparian Consortium was held on October 15th, 2020 as an online gathering. The Buffer Summit included several lively panel presentations, keynote speakers on biodiversity and restoration, updates on progress made on buffers within the James River Watershed, and a flash networking session for participants. For more information about the Upper & Middle James Riparian Consortium (the Consortium), visit the website at: www.jamesriverconsortium.org. The presentation slides for the meeting can be found at this link, and the YouTube video of the presentation can be found at this link. The Welcome Packet with speaker bios and the agenda for the Summit can be found at this link.

Welcome and Consortium Overview

At the beginning of the Summit, Christine Gyovai of Dialogue + Design Associates (D+D) welcomed participants to the meeting, gave an overview of Zoom's interactive features, and shared the meeting guidelines. Emily Carlson of D+D introduced herself, and Christine reviewed the agenda, and asked participants to introduce themselves in the chat roll. Participants were reminded that the next Consortium meeting will be November 12th, from 10:45 am-12:00 pm with a presentation from Stroud Water Research Center on whole riparian ecosystem planning and health. The meeting will be followed by an in-person, socially-distanced BMP site tour at the Braford farm from 2:30-4:30 pm in the Upper James watershed.

Amber Ellis of the James River Association (JRA) --the Consortium convener--shared a brief overview presentation about the Consortium, which can be found at this link. Amber shared that JRA serves as the hub of the Consortium, with the goal of protecting the James River and connecting people to the river through awareness, appreciation, action, and advocacy. The Riparian Consortium is focused specifically on the Upper and Middle James River watershed, and was launched at the beginning of 2019 with funding from the National Fish and Wildlife Foundation (NFWF). A parallel program focusing on implementation, the James River Buffer program, is funded by the Virginia Environmental Endowment (VEE). The Consortium is now in its second year, with last year's activities focused on developing an organizational structure and identifying existing partner groups working in the watershed for outreach and networking. 2020 has focused on developing team strategies and

increasing the capacity of the Action Teams to begin implementing targeted projects, testing and refining its strategies, and readjusting its structure to better meet its partners' collaboration needs.

Amber also gave an overview of the interactive tools that the Consortium has recently launched. The Coordination Tool was created for the Consortium by the Chesapeake Conservancy's Conservation Innovation Center to facilitate coordination and collaboration among implementation partners across the James River Watershed. The layers within the Tool provide spatial information and landscape context to support collaborative decision-making for members of the Consortium. The Streamside Program Report Tool, for example, was created by the Chesapeake Conservancy, where landowners can enter a few basic questions about their land and objectives. The tool will then narrow down eligible programs in their respective area and provide a report about their property and relevant program information. Users can also choose to simply browse the list of programs and get in touch with relevant program providers directly to find out if a particular program suits their situation and interests.

Shereen Hughes of Wetlands Watch shared that they will start a series of training webinars and workshops beginning in mid-December of 2020. If anyone is interested in attending these Buffer trainings, please feel free to contact her at: shereen.hughes@wetlandswatch.org. Wetlands Watch is looking for experts (i.e. buffer planners, installers, and maintenance/management professionals) who are compelling speakers to help lead the trainings. They are also looking for potential sites for field workshops for site evaluation and planning, buffer installation, and buffer maintenance.

State of Our Buffers in the James Watershed - An Update on WIP III Progress

Presenter: James Martin, Virginia Dept. of Environmental Quality, Chesapeake Bay Coordinator

After the Consortium overview, James Martin of the Department of Environmental Quality (DEQ) gave an update on the state of the James watershed health, WIP III goals update, and a vision for the work that needs to be accomplished. Please see the slides and YouTube video (23:19) for more details.

Key Points

- As a whole, the James River watershed requires a lot more work in order to meet 2025 goals.
- The majority of reductions are happening in the agricultural sector.
- The Upper and Middle James represent about half of Virginia Baywide Buffer BMP Goals from WIP III.
- BMP verification is having an impact on progress since buffers only have a 10 year credit duration in the model. 11,064 acres of Forest Buffer are lost due to expiring credit duration (Virginia Baywide).
- It is important to highlight the co-benefits from forest buffers for marketing to landowners.
- The presenter and Summit participants shared a list of co-benefits:
    - Wildlife habitat
    - Biodiversity
    - Fish habitat
    - Stream health

    - Brook trout
    - Healthy watersheds
    - Carbon sequestration
    - Heat island
    - Flood mitigation
    - For both humans and wildlife such as planting edible species in the buffer zone
    - Spaces for people to enjoy
    - Human health - forested areas with water and birds are one of the best for our mental health
    - Buffers are filters increase groundwater recharge

Discussion

- The new Coordination Tool shows WIP III buffer progress and pulls directly from CAST (Chesapeake Assessment Scenario Tool), which should be used to reflect the work that has been done with forest buffers.
- One participant asked James if the 11,000 acres lost due to verification are due to automatic expiration versus actual verification of the buffer being no longer present?
    - The old model of verification assumed that every BMP lasted forever which received criticism. They created a more stringent approach which swung too far in the other direction. Now the verification process needs to find a balance. If the site is older than 10 years and has not been inspected, the Chesapeake Bay gets zero credit.

Flash Networking Session -- streamside ecosystem threats and solutions

After the presentation, participants broke out into small group discussions into Zoom breakout rooms to focus on the questions: *what is one threat to streamside ecosystems in your area, and what solutions or programs have been helpful to address it?* After small group discussions, participants brought their top themes back to the main group for discussion and sharing in the chat roll. Highlights included:

- Threat: Streambank restoration is not always the best solution. There is a need to build greater awareness so that people are less dedicated to mowing down to the edge of the creek in urban areas.
    - Helpful: Property tax breaks for those that put in buffers in urban/suburban areas work as a positive incentive, instead of a negative incentive such as fines.
    - It is possible to use resource protection areas which are part of the regulatory compliance?
        - In James City County, buffers are preserved through the development process. In York County, they are preserving buffers as a BMP in the development process and are encouraging this use rather than other BMPs. Virginia Conservation Assistance Program (VCAP)'s resources (technical assistance, cost share programs) and residential stewardship programs such as those with the James River Association and the Alliance for the Chesapeake Bay are also helpful. Having both a "carrot and stick" approach has been important.
    - Stream restoration is not showing to necessarily improve stream health, but landowners losing land is a concern that they need to understand more.
    - For development and landscape behavior of urban and suburban property owners programs to address property owner's landscape and buffer behavior - residential

stewardship programs like VCAP, Regulation for the Chesapeake Bay Protection Areas, RiverWise, River Heroes, River Star Homes, etc.

- Threats: Development, Invasive Plant Species, Highly Fragmented Landscapes, Stream Bank Erosion
    - Helpful: For invasive species, improved policy and native plant list for developers. Working from the nursery level is also important. For highly fragmented landscapes, outreach to landowners is important. For stream bank erosion, funding needs must be addressed. Maintenance support and buffer protection easements are also essential.
- Threats: Deer browse and invasive species, pesticide/herbicide use, mowing, tree removal, etc.
    - Helpful: University of Maryland Extension is looking at opportunities to engage realtor companies so that they can help educate folks when they are purchasing waterfront properties.
- Threats: Landowner adoption
    - Helpful: Programs are putting more money towards maintenance which is helpful. Work and time are necessary for building and sustaining relationships and projects! There has also been better communication with landowners, which is essential for project success.
    - Reporting older buffers for credit could encourage other landowners to initiate buffers.
- Threats: Lack of funding for long term maintenance or permanent protection of buffers, lack of options for small parcels/landowners.
    - Helpful: A shift to different resources and funding from other sources, has allowed new approaches to buffers (thanks to VEE, NFWF, etc.). A change of perspective from local governments would be helpful- i.e. a property tax break if landowners put in buffers.
- Other Threats:
    - In the City of Richmond, there is usually a one-hour wait at the dump. People choose to dump in stream valleys instead (like Cannon Creek).
    - Rural subdivision/development leads to an increase in impervious surfaces and stormwater.
    - Cattle in the buffer and in streams is a challenge.
    - Farming/agriculture, storm water run off, littering continue to be threats.
    - COVID is impacting their ability to engage volunteers, and corporate restrictions on site visits are also difficult.

Panel 1: Buffers Beyond the Teenage Years: Stewarding your Buffer into Adulthood

Panelists: Amber Ellis, James River Association, Senior Watershed Restoration Manager; Lara Johnson, Dept. of Forestry, Program Manager of Urban & Community Forestry; and Patti Nylander, Virginia Dept. of Forestry, Senior Area Forester in Upper James

Amber Ellis introduced Patti Nylander of the Virginia Department of Forestry. Patti's presentation provided an overview of the maintenance needs of buffers in their teenage years (4 to 15-years-old). Amber Ellis then gave an introduction to the Bellemeade site. Lara Johnson provided a more detailed case study on the Bellemeade site as an example of a suburban buffer. Please see the slides and YouTube video (42:24) for more details.

Key Points from Patti Nylander

- Three elements that will help your "teenage" buffer make it:
    - Managing Invasives - yep, they're still out there!
    - Maintenance - it's "messy" but might actually be OK
    - Staying Engaged - Be patient and check in
- Even after the establishment phase, managing invasives continues to be a part of your management strategy.
- Maintenance needs change as the buffer matures: remove debris, vines, and invasives from around trees.
- A messy area may be a real benefit to wildlife. At some point, we need to stop mowing the area, and be OK with the appearance!
- The best method for getting more buffers in the landscape is to point to ones that are successful and where the landowner can share a positive experience.

Discussion

- One participant noted via the chat roll that leaving tubes on trees can help to reduce the damage from buck rub.
- How do tubes compare to increasing tree planting density to mitigate deer browse?
    - Patti answered that they've tried projects using no tubes as well as projects with deer-resistant species, but the deer will eat them anyway particularly if they are hungry enough. Planting more trees with no tubes might be cheaper in the beginning, but it is also worth protecting the trees. The tubes also provide a physical barrier of protection that has additional benefits beyond just deer browse. Particularly if your maintenance regime includes herbicide application and/or mowing it is going to be difficult to see the trees without tubes.
    - Another person commented that tubes also provide critical protection from rodents. However, it is important to make sure that the tubes are properly installed into the ground as opposed to on top of it.

Key Points from Amber Ellis

- The Bellemeade site provided a lot of variety in streamside conditions to address such as concrete channels and eroding banks.
- The walkable watershed plan outlined the five goals of the project:
    - Connectivity
    - Safe Passage
    - Water + Environment
    - Open Space
    - Awareness
- For more information about Walkable Watersheds in general, find the guide here.
- Workforce development was also included in the project with partners such as the Mayor's Youth Academy and Groundwork RVA.

- With any urban or suburban project, it is important to think about interesting opportunities and partners.

Key Points from Lara Johnson

- Urban buffers have a range of issues and challenges, but the main rule to follow is: "some buffer is better than no buffer!" Work with what you have, and work with the buffers in phases.
- Community members want to see water features so it is important to work with the vegetation in order to create windows.
- Working closely with the community and understanding what they want and need is important in order to make a buffer successful. The aesthetics of a project are important.
- Urban buffers are a great opportunity to educate, but if signage is installed, it needs to be maintained.
- Mower blight and weedeater damage are often an issue, but it is great if the community members get creative with protecting the trees with trunk guards.
- Manage invasives, but pick your battles because it is going to be a lifelong fight!

Comments and Discussion

- One participant shared that there would be a hands-on volunteer day at the park in Bellemeade that following Saturday.
- One attendee noted that Lara's point about thinking about wildlife as a source of wonder instead of a nuisance in the buffer planting area was a very interesting point to keep in mind.
    - Lara added that it is good to keep a pulse check with the buffer and the community. You don't want buffers to fail because they're not addressing wildlife issues, which are also creating habitat for animals such as beavers.

Panel 2: Why Conservation Makes Sense: Stories from the Field

Panelists: Bill Braford, Blue Chip Forestry Consultant, Farmer in the Upper James and Matt Ehrhart, Stroud Water Research Center, Director of Watershed Restoration

Amber Ellis introduced Bill Braford and Matt Ehrhart. Please see the slides and YouTube video (1:26:20) for more details. Bill shared his personal history and perspective on riparian buffers as a farmer and former forester. Matt Ehrhart shared Stroud's research and ideas on multifunctional buffers.

Key Points from Bill Braford

- Bill shared the history of his farm and his family's heritage with agriculture. The Mullins Tract of his farm in Pittsylvania County, Virginia was planted with loblolly pine in 1986, harvested, and then replanted in 2015. Many of the pines didn't thrive due to the deep sod.
- Bill manages his land with stream exclusion fencing, rotational grazing, and plantings.
- He used SWCD cost share (also NRCS) at nearly 100% for waterers, well, pipeline and fencing in 2015.

- Bill shared his list of advantages and disadvantages of installing stream buffers on his farm on slide #68.

Comments and Discussion

- One participant asked what stocking rates Bill uses for his rotational grazing. How many cows approximately in a given area before you move them?
    - Bill stocks 50 brood cows and 20 feeder calves on separate pastures. Each paddock is about 20 acres and is routinely rotated for grazing. Total number of acres is 200.
- Have your buffer installments attracted attention from nearby neighbors, potentially encouraging such practices on their properties?
    - Bill has had some comments about the tree shelters, but overall he has not received a lot of comments.
- Do you plan to harvest the pines that are mixed in with the hardwoods later on or leave them?
    - They were planted with the idea of harvesting in approximately 30 years.

Key Points from Matt Ehrhart

- Although buffers obviously provide multiple co-benefits and functions, "multifunctional" refers to the potential income that can be derived from buffers, either from edibles, floral production, or energy (biomass) production.
- The ecosystem services alone make buffers valuable.
- One reason that a lot of these value-added enterprises haven't taken off is that farmers are already busy. Lack of market development and difficult terrain are also issues.
- Distributed production on numerous farms, managed by one producer who leases space may be a solution to scaling up production to a profitable level.
- Market development is also an area for growth that could help producers sell and market their riparian products in a streamlined, collective manner.
- "Multifunctional" should always be defined by money. Other benefits such as creating pollinator, wildlife, and bird habitat for viewing pleasure as well as hunting and fishing are important to landowners. Having space to recreate as a family is also valuable.

Comments and Discussion

- One participant shared in the chat roll, "Deer are edibles too!"
- Another participant noted via the chat that Belmead out in Powhatan used to lease their land to folks to hunt (bow and arrow only) on with a fee. There's also Outdoor Access where people rent land for various recreational uses such as hunting or fishing. "Habitat is a selling point!"
    - So much variability on farms gives landowners and practitioners a lot to think about.
- A participant clarified that buffers remove 2-9 times more nitrate pollution than pastures do.
- A participant noted that they had learned about *Panicum virgatum*, a ubiquitous grass tolerant of harsh soil conditions (i.e degraded agricultural lands), having biofuel potential.
    - Matt responded that energy production is complicated and that the demand for biofuels has fluctuated quite a bit; biofuels are not competing with natural gas prices.

    - Ernst Seed had a large biofuel operation and were shipping pelletized switch grass and shrub fuel to Europe because the carbon markets made sense to do so. However, this market has not been stable and now that material is being put in silt socks because it is the only market option they have and they are making a lot less money.
- A lot of folks grow shiitake and oyster mushrooms on logs in the shade in their stream buffers.
    - Matt noted that mushrooms are best grown in mature buffers that have deadwood and soil to make that work.
- How do we manage these small area buffers for producing consumer products?
    - Matt responded that one idea is to have one entity handling the management of crops through leases on multiple farm operations, thereby consolidating the resource. Propagate Ventures is an example of an agroforestry group that has been working on how to develop these opportunities and increase market development. More information is available here: https://www.propagateventures.com.
- A participant noted that the average livestock stream exclusion project costs an average of $1,300/acre of pasture including stream buffer area. These projects did not include buffer planting. Maybe there is an income stream that would help with that?
    - Matt noted that one of the drivers in trying to make buffer areas economically viable is to try to create a funding stream so that people are willing to make the investment without having to look for grant or other program funding. This would accelerate implementation but is still a challenge that they are working on.
- One participant noted that on her land the buffer is the most productive piece of the property, since it is not a monoculture. She asked if anyone has written about or quantified the economic value that stream corridors provide in benefits to farms and surrounding areas (i.e. aquatic organisms and function with creatures being raised for production).
    - Matt answered that there is anecdotal evidence but it has been hard to put concrete numbers on this. There had been a robust conversation in the veterinary community about the economic value of getting cows out of stream for hoof health. There was also potential evidence that when cows were not in the stream, they were having less gastrointestinal problems but this was harder to establish a causal link and quantify. Some farmers also saw increases in milk production from cleaner water.
    - Matt noted that we see large blackfly populations where cows have access to streams.
    - Matt clarified that one of the challenges is that there are so many variables from farm to farm that it is difficult to get good compiled numbers. However, this is an issue that is on a lot of farmers' minds, especially dairy farmers, who are concerned about herd health, calving success, and overall milk production.
- Dave Wise with Stroud added that a survey of CREP project owners in multiple states found a clear pattern that people's buffer motives included an interest in birds, nuts, fruits, etc. The interest was in wildlife not commercial use. Thus, there is capacity for a much broader interest in the multifunctional ecological benefits of buffers, which may include niche communities.
- Amber noted that leading with WIP III goals has been the approach to outreach and the method to get these practices on the ground but we still have a long way to go. As we heard in

both of these presentations, maybe it's time we lead the message with all of the co-benefits. This is where the real motivation for folks lives.

Alluvial/Riparian Natural Plant Communities of Our Region: Biodiversity Assessment, Restoration, and Stewardship

Presenter: Devin Floyd, Center for Urban Habitats, Founder & Director

Amber Ellis introduced Devin Floyd with the Center for Urban Habitats. Please see the slides and YouTube video (2:11:44) for more details. Devin offered a perspective on riparian natural communities of the Piedmont.

Key Points from Devin Floyd

- Devin began his portrayal of riparian natural communities of the Piedmont with defining natural plant communities and ecosystem classes such as palustrine and riverine. There are 300 types of natural plant communities in Virginia.
- Grasslands have been ignored, yet critical, for biodiversity in Virginia and serve as a counterpoint to the myth that all of Virginia was once covered in virgin forest.
- 2,900 square miles of grasslands may have existed in Virginia with natural fire ecology.
- It is estimated that a 95% loss of high quality grasslands in Virginia translates to declines in grassland insects, birds, and other animals.
- Natural Plant Community Modeling includes restoration, site assessment, a reference community study, design and restoration, and long term management.
- Concluding Points
    - By including natural grassland communities in buffers, we can maximize biodiversity renewal by providing plants and animals the context that shaped their behaviors and life cycles.
    - Environmental restoration and social justice are inseparable.
    - Restorations present opportunities for inclusion, diversity, and healing of the land and of cultures.
    - The maturity of your restoration project has nothing to do with the size of the organisms, but maximum natural community development and soil stability.
    - We must acknowledge and understand the ecosystem variety of the pre-Colonial Piedmont before we can put that knowledge to work in conserving biodiversity for the future.

Comments and Discussion

- One participant commented: “Visits to these various riparian ecosystems would be great. How do you find reference communities? Are there examples of them that are accessible?”
    - Devin responded that reference communities take a trained eye to identify but once trained it is possible to identify them even driving by. In general, one should look for dense assemblages of native plants without invasive species.

    - Preddy Creek Park Preserve in northern Albemarle County is a good example of a reference community and a great place to learn what to look for. The park includes a meadow that is a high quality, middle-aged grassland between 500- 1,000-years-old.
    - Devin noted that there are many reference communities: several 1,000 per county.
- How do you deal with resistance to prescribed burns in buffers?
    - Education. Prescribed burns are mostly rooted in fear and it is important to educate people about the amount of planning and care that is put into executing them. There are many good resources available online, especially from the Department of Forestry.
- A participant asked, can you make the assumption that if fescue is removed and trees are not naturally regenerating in that area that it will want to grow into a grassland and not forest?
    - Devin shared that Virginia's landscapes are trying to go back to their natural state. In this area, diversity is key and this is well documented. We had both grasslands and forest. The landscape would go back to closed canopy forest if natural disturbance was removed. We would have savannah trees like post oak and shortleaf pine growing unnaturally as upper canopy trees.
- In the Piedmont where there is granitic-based geology with acidic soils and currently representing oak-hickory forest, if fire was introduced at the appropriate intervals, would those forest communities transition to oak-hickory woodlands or savannas?
    - Devin answered that if fire is introduced every three to seven years, then you will get savannah or woodlands on acidic substrates. If the landscape is less than a 3% slope, you will get large canopy openings close to prairie. Greater than 15% slopes will be woodlands.
- What cost/acre do projects run? Are there ways to integrate herbaceous elements usefully into buffer plantings?
    - Matt noted that the cost depends largely on whether seeds, plugs, or a combination of methods are used. The industry standard is $5-7 per square foot for projects under a couple thousand square feet. Extremely large scale restoration projects across three years can be established with just seed and fire and cost in the $8,000-12,000 range. Thinning the canopy is an effective technique to release the seedbank.
    - Public guide for DCR preserves is a helpful resource.
- Matt with Stroud commented that he thinks it's important to recognize that the realities of the pre-Columbian, "original" landscape is far from settled science. The forensics are very complicated and difficult. We've also removed key dynamic elements of the system (fire and beaver for example) so the ephemeral and transitional nature of the landscape has changed. Different species assemblages make arguments for different scenarios, further complicating our assumptions. This is an interesting conversation that will continue for the foreseeable future.

DCR Perspective

Presenter: Jim Echols, Dept. of Conservation and Recreation, Western Area Manager

Amber Ellis introduced Jim Echols with the Department of Conservation and Recreation. Please see the slides and YouTube video (2:43:51) for more details. Jim offered several updates on riparian restoration opportunities through the Soil and Water Conservation Districts' (SWCD) Virginia Agricultural Cost Share (VACS) program.

Key Points from Jim Echols

- The current cost share program offers the following features:
    - There are over 70 cost share practices available through the VACS program.
    - The practices are delivered by local SWCDs.
    - All practices focus on water quality.
- Current cost share practices include the following:
    - SL-6N/SL-6W: Stream Exclusion with Grazing Land Management
        - As of 2020, 5,376,968 linear feet have been preserved in the James Watershed.
    - FR-3: Woodland Buffer Filter Area
        - As of 2020, 150 acres have been restored in the James Watershed.
    - Conservation Reserve Enhancement Program (CREP)
        - CP-21 – CREP Grass Buffer: 228 acres in the James Watershed (9/3/20).
        - CP-22 – Riparian Forest Buffer: 5,295 acres in the James Watershed (9/3/20).
    - SB 704 (Bay Bill) provides that if the Chesapeake Bay clean up goals are not met that the state will consider:
        - Requiring stream exclusions of cattle (more than 20) from perennial streams (within Bay Watershed portion of state).
        - Requiring the development of an official method for identifying perennial streams without field verification.
        - Directs DCR to establish by July 1, 2021, a portable stream fencing practice for inclusion in the VACS Program.
    - Small Herd Initiative, portable fencing, and methods for identifying perennial streams are three practice concepts under review to address the continuing needs for more buffers.

Comments and Discussion

- A participant in the private industry asked how they can best share the information on cost share (etc.) programs offered.
    - Amber offered that one way to share the information is sending them to the new program tool they recently launched which will narrow down the programs and give the contact info for her to contact for more help. Here's a link to the tool: https://jamesriverconsortium.org/programs/.

    - Jim noted that on the DCR's website, under agricultural incentives, the cost share manual lays out a number of different programs that are offered. For VACS, which is updated every year, the local Soil and Water Conservation District staff are a great resource because each district sets its own local prices and knows what is working and isn't from contractors.
    - Jim is also happy to meet with any participants interested in DCR's programs.
- Can anyone answer if the Bay Bill would apply to all counties in the Chesapeake Bay Watershed or just the regulated Tidewater counties?
    - Jim responded that the Bay would apply to the entire Chesapeake Bay.
- What is the timeline for launching the portable fencing option?
    - Jim responded that they hope to have the portable fencing ready for next summer. It will go to the State Soil and Water Conservation Board this spring.

Panel 3: Reimagining the Conservation WorkForce: Restoring Communities and Water Quality

*Panelists: Christopher Rashad Green, Free*Dome Unlimited, Founder and Shea Zwerver, PA Dept. of Conservation and Natural Resources, Policy Specialist*

Amber Ellis opened the discussion with an introduction to the Department of Corrections State Farm project and several of the challenges that they face while looking to engage and train inmates in the installation process. The project is slated to install at least 19 miles of cattles fencing, at least 100 acres of riparian forest buffers, and at least 10 acres of wetlands. Amber then introduced Christopher Rashad Green and Shea Zwerver. Please see the slides and YouTube video (3:00:06) for more details.

Christopher shared his story and journey from incarceration, through various workforce development programs, to his release finding his passion in food justice, community agriculture, and helping others.

Shea Zwerver shared about her work with Pennsylvania's Corrections & Conservation Collaborative, particularly the Workforce Development Program in Arboriculture, Conservation and Riparian Forest Buffers for Inmates Nearing Release.

Key Points from Shea Zwerver

- Educational programs within prison reduced the recidivism rates of inmates by 43%.
- During the call, Shea posed a question to participants that was launched in zoom:
    - Do you have a need/demand for more contractors who can install and maintain riparian forest buffers? (Single Choice)
        - 58% Answer 1: Yes, I notice a major need for contractors to do riparian forest buffer work.
        - 29% Answer 2: I do not know.

        - 13% Answer 3: No, I have not noticed or experienced a need/demand for more contractors.
        - Answer 4: As the demand to install and manage more riparian forest buffers grow, it is met adequately by the industry.
- The tree care industry and the sector that deals with riparian buffers identified a need for more trained workers. The solution was to create a pipeline of skilled workers for the conservation and natural resource industries.
- Developing training opportunities and a workforce pipeline is important to both the inmates' personal development and well-being as well as the industry.
- Shea works with a network of partners to offer a riparian forest buffer course to inmates in Pennsylvania.

Key Points from Christopher Rashad Green

Christopher then led a discussion in what makes a successful re-entry program:

- Making sure that inmates aren't exploited is important in these ventures.
- Creating incentives for the inmates will help retention.
- Living wage needs to replace the minimum wage since a passion can't sustain you if you need to chase money.
- The end goal is to empower folks so that everyone benefits.
- Learning about environmental issues and all the different classes or certificates were important for his success in re-entry.
- Providing housing for re-entry workforce programs is incredibly important.
- All partners need to be at the table.

He launched a Jamboard for participants to share their vision of a successful re-entry program.

The following ideas were shared on the jamboard:

- **Programmatic and Partnership Ideas**
    - Could we involve the State Farm inmates in a comprehensive project to develop a paddlecraft launch site within a buffer area along State Farm property? They could learn about construction (and maintenance) of a canoe launch along with buffer development and maintenance.
    - Offer incentives to business owners to hire and/or provide trainings to the formerly incarcerated.
    - Have a central organization to connect conservation businesses and department of corrections educational program coordinators.
    - Provide more training to agencies/organizations that may hire incarcerated individuals to do work to reduce the risk of exploitation; recognizing them as people and being more mindful of their experience, what they are going through.

    - We're opening up a whole new way at looking towards building our workforce in conservation efforts!
    - Working on this already, but I think having the training is great, but we would need the states to recognize the buffer installation/maintenance work as a viable occupation, so when people re-entry there are potential job opportunities waiting for them!
    - Housing individuals after incarceration!
- **Avoiding Exploitation**
    - I understand why folks would abhor using inmate labor, as for many, abolishing prisons is a priority. What we're doing is eliminating prison beds by building sustainable systems.
    - Pay the incarcerated regardless of whether they are doing physical labor or not- we pay staff to participate in trainings, and we should do the same for the incarcerated.
- **Big Picture Ideas**
    - Connecting people to nature to understand our vital linkages to ecosystems and the mutually beneficial outcomes for all organisms through restoration and conservation efforts.
    - One that supports individuals while they're in and out of our correctional facilities.
    - Holistically looking at this entire process!
    - Folks are probably already working on this already. Skill training is great, but work with states to recognize buffer occupation as viable, so at re-entry people have buffer jobs awaiting!

Comments and Discussion

- Chrisopher added in the chat roll following Shea's presentation: "What would be the challenges for contractors to develop a viable workforce. Salaries? Training? Cross-sector collaborations with local and state and DOC partnering."
- One private sector participant noted that they hire between seven and 60 contractors per season. Their greatest challenge is finding people who are 1) interested in the line of work 2) get along with the other strong personalities in close working environments.
    - Chris responded that individuals are traumatized by incarceration. Housing is a priority, but trauma and addressing it is important for re-entering the workforce. William Weber is an organization that works with employers on how to support their workers.
    - Christine noted the importance of being aware of trauma and workers' vulnerabilities.
    - The participant replied that they think this is an incredible idea and they want to see it be a success in PA and VA. This program certainly has their attention and support.
- Another participant asked Shea to clarify if her programs are only for folks actively incarcerated, or are they also for those recently released?
    - Shea noted that they need to be careful to not exploit the inmates; invasive species management is not the primary intention, the purpose is skill building. While installing forest buffers the focus was building capacity more than production. They also set up a

scholarship program for individuals interested in trainings through Penn State Extension. This resource, unfortunately, has not been tapped into significantly.
    - Shea shared that they recently applied for a NFWF grant to set up an apprenticeship program with Alliance for the Chesapeake Bay to create career pathways. The apprenticeship pays more than $15-18/hr and would be in addition to a full-time job.
- Jennifer Wampler with VA DCR shared that if anyone has thoughts on how to incorporate some of the ideas discussed today in these draft plans, send your comments to: Jennifer.wampler@dcr.virginia.gov
    - The draft Middle James Segment Plan is available at this link: https://drive.google.com/file/d/1ZNsG-h_t24QXpoCmQCEJGOYVMKAqvefL/view?usp=sharing
    - The draft James River Heritage Corridor Strategic Plan Vision, Goals and Objectives are available at this link: https://drive.google.com/file/d/1boxZCiERup_ItHBhD8MubadVeTcYNsN4/view?usp=sharing
- One participant highlighted the importance of a sustainable wage. Local county programs such as the litter pick up program hires out incarcerated inmates at a highly discounted rate that helps with paying off their court fees, but is this the right and fair thing to do?
    - Christopher responded that prison culture is 35 cents/hour, so for inmates even making just minimum wage feels like they are "rich." However, this can lead to exploitation.
    - He noted that within the Virginia enterprise system, inmates are not well compensated, but their pay (i.e. a few hundred dollars a month) is better than inmates' pay (i.e. $40/month).
    - In Christopher's opinion paying minimum wage while people are still incarcerated isn't a major problem. It's more of a concern when people are out of prison.
    - Christopher noted that it would also be good to create ways for them to save and invest money. Most people who work while incarcerated, try to save money for when they're out. If it is possible to support skill building and saving, it could be helpful long term.
- Another individual suggested that as part of the pre-training questionnaires, it could be a good idea to assess whether they will want to live and work in a rural area versus an urban area and discuss the job opportunities in both. The urban areas might offer more green infrastructure jobs versus rural areas which require large buffer installations and management.
- To address the housing need for workforce reentry programs one participant mentioned the WWOOF model as a possible housing and work exchange model.

Summit Closing

After the final panel presentation, Christine encouraged participants to complete the evaluation form for the Buffer Summit. She also invited everyone to share one "Offer" they have for their watershed work or for the Consortium; and one "Ask" they have for the Consortium or from watershed partners.

- Elizabeth Mizell offered Invasives ID and Control Training Blue Ridge PRISM

- Christopher Rashad Green offered to spread this message to all our Community Members, to amplify this concern!

Additional information about the Consortium may be found at: www.jamesriverconsortium.org