A REPORT TO
THE CHAIR OF THE HOUSE COMMITTEE ON AGRICULTURE, CHESAPEAKE AND NATURAL RESOURCES

REVIEW OF SUPPLY AND DEMAND FOR STREAM AND WETLAND MITIGATION CREDITS AND INCENTIVIZING DAM REMOVAL PROJECTS IN VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
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Executive Summary

During the 2022 General Assembly Session, HB 276 and HB 479 were left in the House Committee on Agriculture, Chesapeake and Natural Resources. In a letter after the conclusion of the General Assembly session, Chairman R. Lee Ware asked the Department of Environmental Quality (DEQ) to examine the issues raised by HB 276 and HB 479, specifically amendments in the nature of a substitute that had been offered for consideration in the House Committee on Agriculture, Chesapeake and Natural Resources Subcommittee Chesapeake.

The amendment in the nature of a substitute for HB 276 would have directed DEQ to:

> "Convene a stakeholder advisory group to (i) determine, to the extent practicable, the current and projected demand for wetland and stream mitigation credits by public and private entities and (ii) recommend legislative and regulatory changes to increase the supply of wetland and stream mitigation credits and reduce volatility in the price of mitigation credits. The stakeholder advisory group shall be comprised of representatives of the residential and commercial land development industry, the mitigation banking industry, the Virginia Department of Transportation, economic development agencies, environmental organizations, federal agencies involved in the review and approval of wetland and stream mitigation banks, and other public and private entities deemed appropriate by the Department. The stakeholder advisory group shall report its findings and recommendations to the Chairmen of the House Committee on Agriculture, Chesapeake and Natural Resources and the Senate Committee on Agriculture, Conservation and Natural Resources no later than November 1, 2022."[1]

The amendment in the nature of a substitute for HB 479 would have directed DEQ, in consultation with the Department of Wildlife Resources (DWR), to:

> "Establish a work group to determine ways to promote the removal by the private sector of obsolete dams and significant river obstructions that inhibit fish passage in the Commonwealth. The work group shall include representatives of the mitigation banking industry, the Department of Conservation and Recreation, the Department of Wildlife Resources, the Department of Environmental Quality, regional and national academies who have expertise in the environmental benefits resulting from the removal of obsolete dams and significant river obstructions, environmental nongovernmental organizations, and other stakeholder groups deemed necessary by the Director of the Department of Environmental Quality. The work group shall (i) devise methods for promoting the removal by the private sector of obsolete dams and significant river obstructions by the private sector that maximize the input of private capital and minimize the need for public funding to facilitate the removal; (ii) examine and make recommendations regarding the extent to which there is a scientific basis from a water quality and fish benefit perspective to expand existing service area limitations for mitigation credits generated by the removal of obsolete dams and significant river obstruction; (iii) examine and make recommendations regarding the potential impacts for local and Chesapeake Bay water quality, ecological services, and

[1] HB 276 - Wetland and Stream Mitigation Banks; Use of Credits from Secondary Service Area. Amendment in the Nature of a Substitute, January 2022.

fisheries as a result of the removal of such obsolete dams and significant river obstructions; (iv) investigate innovative dam removal partnerships and incentives used in other states; and (v) report its findings to the Chairmen of the House Committee on Agriculture, Chesapeake and Natural Resources and the Senate Committee on Agriculture, Conservation and Natural Resources no later than November 1, 2022."[2]

Chairman Ware also asked DEQ to convene a workgroup to examine the issues that were raised in another bill related to the nutrient trading program that was left in the House Committee on Agriculture, Chesapeake and Natural Resources (HB 1283). Because of the overlap in workgroup membership, DEQ convened one workgroup to review all three bills. This report only addresses the issues related to the review of the supply and demand for wetland and stream mitigation credits and incentivizing dam removal projects in Virginia; the workgroup's examination of the issues raised in HB 1283 will be reported under a separate cover.

DEQ convened the workgroup during the summer of 2022. The workgroup directives, as stated in the workgroup invitation letter, were as follows:

<u>Supply and Demand for Mitigation Credits</u>

1. What is the current and projected demand for wetland and stream mitigation credits by public and private entities?
2. What are your recommendations for legislative and regulatory changes to increase the supply of wetland and stream mitigation credits and reduce volatility in the price of mitigation credits?

<u>Incentivizing Dam Removal Projects in Virginia</u>

3. What methods are in place or could be developed for promoting the removal of obsolete dams and significant river obstructions by the private sector that maximize the input of private capital and minimize the need for public funding to facilitate the removal?
4. What are your recommendations regarding the extent to which there is a scientific basis from a water quality and fish benefit perspective to expand existing service area limitations for mitigation credits generated by the removal of obsolete dams and significant river obstructions?
5. What are the potential impacts for local and Chesapeake Bay water quality, ecological services, and fisheries as a result of the removal of such obsolete dams and significant river obstructions?
6. What innovative dam removal partnerships and incentives are used in other states?

Details of those discussion are included in the report below.

[2] HB 479 - Wetland and Stream Mitigation Banks; Dam Removal Credits. Amendment in the Nature of a Substitute, January 2022.

Prologue

The fundamental problem of periodic mitigation credit shortages and resulting price jumps in various geographic areas within the Commonwealth of Virginia is a combination of:

1. Mitigation bank approval, construction, and credit release times that are slower than market demand time frames.
2. A lack of accurate and timely data on credit supply, demand and pricing- the hallmarks of a true "free market."[3]

Mitigation banks need federal approval by the U.S. Army Corps of Engineers (USACE). DEQ is working with the USACE to reduce the bank approval and credit release time frames by:

a. Agreeing to develop a Memorandum of Agreement[4] that establishes the tasks, time frames, and responsible Agency for completing each task (so that DEQ and the USACE can "divide and conquer" versus duplicate each other's efforts, thus doubling their effective manpower); and,
b. Developing a module in DEQ's new Permitting Enhancement and Evaluation Platform (PEEP) system to track and publicly provide information about the progress of each bank approval, and allow Agency (USACE and DEQ) management to deploy resources where needed to meet schedule commitments.

DEQ is also proposing to develop a mitigation trading platform to bring free market principles found in commodity, stock and bond markets to the mitigation credit market. Based on funding and staff resources, this will not likely begin in earnest until Fiscal Year (FY) 2025 (July 2024). By collecting real-time data on existing supply and expected future supply, real demand data from creating linkages to issued permits, future commitments, and transparent pricing the mitigation credit market can move closer to having free market characteristics. Coupled with a predictable regulatory approval process, DEQ expects private companies to be more willing to expand or enter these markets in the Commonwealth.

DEQ does expect push back from some entities that do not want transparency in supply, demand, and pricing because the current lack of transparent data allows for larger arbitrage profits. However, DEQ anticipates that others will embrace the benefits of a free marketplace.

One further note: not everyone involved in the mitigation market and programs concurs that the approval times are "slow," nor that there are shortages periodically (and resulting project delays or price-gouging) across the Commonwealth. Staff and users have consistently found this to be

[3] It is important to acknowledge that the market for mitigation credits is created by regulation, and that regulatory processes also control the timing of supply approvals.
[4] DEQ is awaiting a first draft from the USACE at the time of this publication.

true, even when the USACE's Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) shows plenty of supply because existing RIBITS data is not timely.

A presentation[5] given at the Ecological Restoration Business Association (ERBA) conference illustrates the approval time for mitigation banks. This presentation included the following data:

Mandatory Federal Processing Time in Districts with 10 or More Bank Approvals between FY14-21

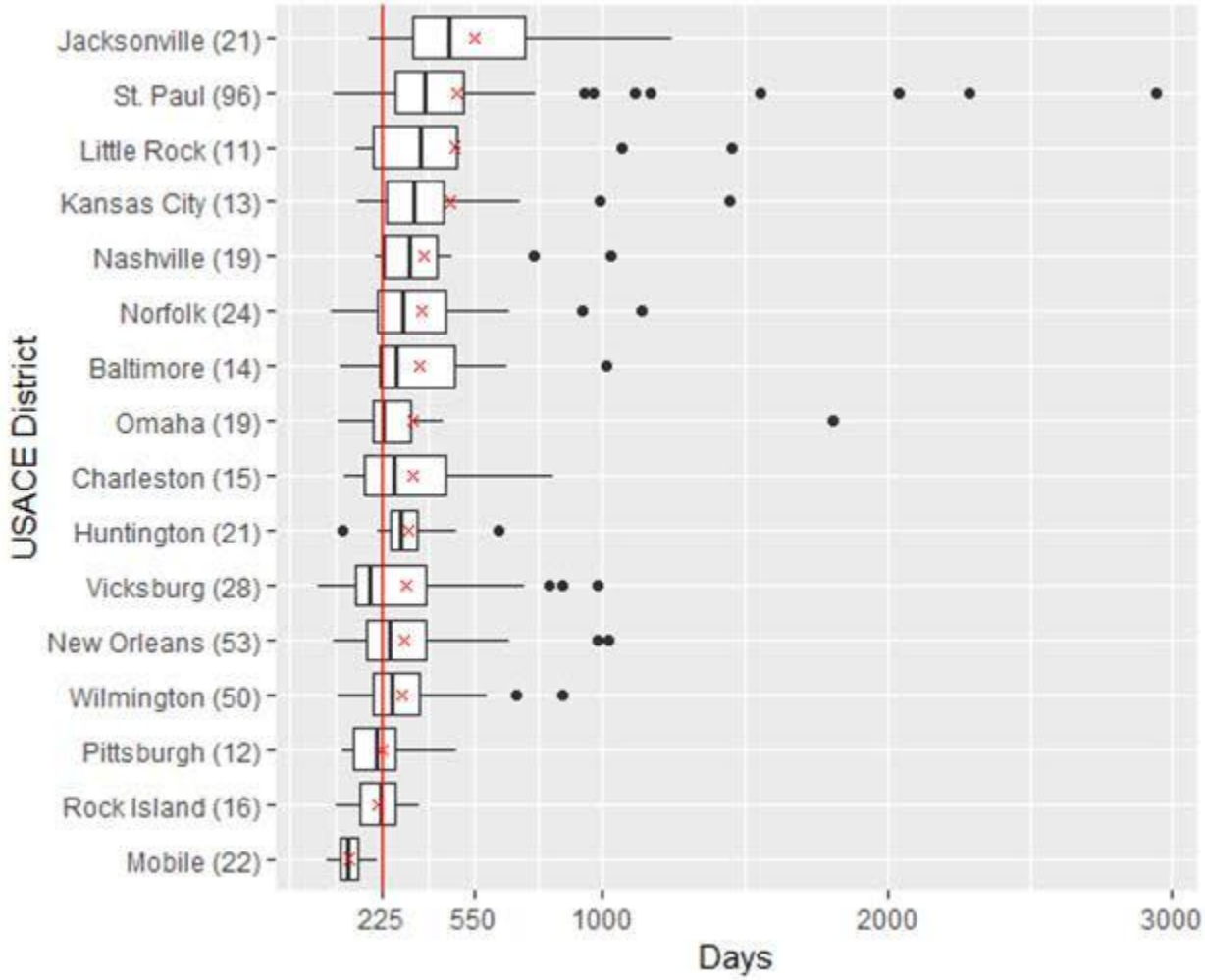


Figure 1: The numbers in parentheses are the number of bank approvals – between FY 2014 - 2021. The red line is the 225 days that federal processing is supposed to take. The boxes indicate the timeframe of 50% of banks in the District. The line in the box is median, X is mean.

As well as this conclusive slide:

[5] Martin and Madsen, 2022. ERBA Policy Conference, Washington DC, October 21, 2022.

Figure 2: Martin and Madsen data regarding average time to permit a wetland restoration bank in the US between FY 2014 and FY 2022.

After a bank is approved (± 3.1 year average[6]), it must be constructed (6-12 months) and monitored during the "grow-in period" (often 2-3 years) before 100% of the credits are released, making the entire process last 6 to 7 years.

Introduction

The primary driver of wetland and stream mitigation credit demand is from entities engaged in land development that require compensatory mitigation for permitted wetland and/or stream losses associated with state and/or federal permits. The Virginia State Water Control Law specifies that when Virginia Water Protection (VWP) permits are issued, such "permits should contain requirements for compensating impacts on wetlands."[7] Permitted impacts may occur as a result of grading, dredging, filling, excavating, dumping, impounding, or otherwise altering the physical, chemical, or biological properties of state waters.[8] VWP permit regulations further specify that "compensatory mitigation for project impacts shall be sufficient to achieve no net loss of existing wetland acreage and no net loss of functions in all surface waters."[9]

In 2008, the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE), through a joint rulemaking, expanded the Clean Water Act guidelines[10] to include more comprehensive standards for compensatory mitigation for USACE permits. This joint federal

[6] *Id*.
[7] Va. Code § 62.1-44.15:21 B
[8] *See* 9VAC25-210-50 (A).
[9] *See* 9 VAC 25-210-116.
[10] *See* Clean Water Act Section 404(b)(1).

rulemaking is called the "Compensatory Mitigation for Losses of Aquatic Resources; Final Rule" (Final Mitigation Rule).[11] In 2008, the Commonwealth also revised VWP permit regulations in order to align with the Final Mitigation Rule to promote no net loss of wetland acreage and function, and no net loss of stream functions and water quality benefits. These revisions included a preference for third-party mitigation bank and in-lieu fee mitigation credits (large, consolidated offsite mitigation projects that serve many permits) over permittee responsible mitigation (an onsite or offsite mitigation project completed by the permittee for one permit). A broad provision was also included in state regulation that in order to use mitigation site credits for a state permit, "the banking instrument, if approved after July 1, 1996, [must be] approved by a process that involved public review and comment in accordance with federal guidelines." [12] This effectively requires a mitigation site to go through the federal review process, regardless of its intended use for state or federal permits. The alignment of compensatory mitigation requirements between state and federal permit programs in Virginia has proven to be highly efficient, effective, and predictable for permit applicants, mitigation site sponsors, and state and federal regulators. These programs continue to grow together to ensure efficient review of permits and ecological restoration outcomes that meet state and federal law and regulations.

The Final Mitigation Rule recommends that each USACE District form an Interagency Review Team (IRT), which is a "group of federal, tribal, state, and/or local regulatory and resource agency representatives that reviews documentation for, and advises the [USACE] on, the establishment and management of a mitigation bank or an in-lieu fee program." [13] In the USACE Norfolk District, the permanent IRT members are the USACE, EPA, DEQ, DWR, Virginia Marine Resource Commission (MRC), Virginia Department of Conservation and Recreation (DCR), Virginia Department of Historic Resources (DHR), Virginia Department of Forestry (DOF), National Oceanic and Atmospheric Administration (NOAA), U.S. Fish and Wildlife Service (USFWS), and U.S. Department of Agriculture – Natural Resource Conservation Service (USDA-NRCS). Other IRT members may be invited, based on site-specific conditions.

Compensatory mitigation may take the form of the following options, which are in the VWP permit regulations[14] and the Final Mitigation Rule. DEQ and the USACE consider all available mitigation options in the order they are written below, which is commonly referred to as the "mitigation hierarchy:"

- Purchase of wetland or stream mitigation credits from an approved mitigation bank;
- Purchase of wetland or stream mitigation credits from an approved in-lieu fee mitigation program or site;
- Permittee-responsible mitigation (PRM) under a watershed approach;
- PRM through onsite and in-kind mitigation;
- PRM through off-site or out-of-kind mitigation;
- Restoration, enhancement, or preservation of upland buffers adjacent to wetlands and/or streams, when utilized in conjunction with the options above; and

[11] *See* Department of the Army, Corps of Engineers § 33 CFR Parts 325 and 332. Environmental Protection Agency § 40 CFR Part 230 Compensatory Mitigation for Losses of Aquatic Resources; Final Rule, April 10, 2008.
[12] *See* 9VAC25-210-116 (E)(3).
[13] *See* Department of the Army, Corps of Engineers Part § 33 CFR 332.2.
[14] *See* 9 VAC 25-210-116 (C)(2) – (C)(3)).

- Preservation of wetlands and/or streams, when utilized in conjunction with the options listed above.

For the purposes of this report, third-party mitigation banks and in-lieu fee mitigation program sites will collectively be referred to as "mitigation sites," unless otherwise noted. The sponsor of a mitigation site is defined as "any public or private entity or person responsible for establishing and operating a [mitigation site]. The sponsor assumes legal responsibility for providing compensatory mitigation once a permittee secures [mitigation] credits from the sponsor." The sponsor of a mitigation bank is usually a private entity or locality. The sponsors of the two approved in-lieu fee mitigation programs in the Commonwealth are conservation-oriented non-government organizations.

The concept of mitigation credits is to quantify the replaced wetland acreage and wetland and stream functions as a mitigation "credit," which can be purchased or "debited" by permittees to compensate for unavoidable wetland or stream losses. In the Commonwealth, wetland and stream mitigation credits are currently expressed in DEQ and USACE approved standard mitigation ratios based on the mitigation activity proposed to occur. A sponsor may propose mitigation credits for projects involving wetland restoration/creation, stream restoration, wetland or stream enhancement, wetland or stream preservation, and buffer area mitigation activities such as planting or preservation. For example, one acre of wetland restoration equals one wetland mitigation credit, and 1,000 linear feet of stream restoration equals 1,000 stream mitigation credits. Stream mitigation crediting is guided by DEQ and USACE's jointly-developed, rapid stream mitigation assessment, the Unified Stream Methodology (USM).[15] Additional stream mitigation credits may be derived from activities such as livestock exclusion, whole watershed protection, and Threatened or Endangered species habitat and protection. Due to the nature of compensatory mitigation for wetland and stream losses, mitigation sites are always located in close proximity to existing water resources on a property. Generally, mitigation site proposals do not retire whole agricultural farms or grazing fields, but rather only one to two hundred feet around existing or restored water resources.

According to the USACE Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) website, there are currently 158 approved mitigation sites in Virginia. An additional 65 mitigation sites in Virginia are sold-out of mitigation credits. Approved and sold-out mitigation sites total approximately 38,169 acres across Virginia. Currently, there are approximately 49 new proposals for mitigation sites in Virginia. The USACE RIBITS website is used to track mitigation proposals, act as a repository for official mitigation documents, track mitigation credits (including credit releases), and a number of other functions related to the review, approval, operation, and compliance of mitigation sites.

Current guidance for third-party mitigation sites in Virginia takes the form of a Site Selection Criteria checklist (USACE and DEQ, 2018), and a Mitigation Banking Instrument (MBI) template (USACE and DEQ, 2018), among other guidance. The Site Selection Criteria assist sponsors and regulators in the location, selection, and review of proposed mitigation sites. The MBI template contains the standard requirements necessary to establish and operate a mitigation site in Virginia, and any deviations from the standard are reviewed by the IRT on a site-specific basis. A mitigation

[15] DEQ, USACE – Norfolk District, "Unified Stream Methodology for Use in Virginia," January 2007.

site is assigned a Geographic Service Area (GSA) within which the sponsor may sell mitigation credits. This GSA is always established in accordance with the Code of Virginia,[16] and is subject to the review and approval by the IRT. The mitigation site lands are required to be put under a recorded Conservation Easement[17] or Open Space Easement,[18] which commonly prohibits most land use activities except for passive recreation and hunting. Silviculture is not allowed on the mitigation site lands on a property, which is different from the activities allowed on property in nutrient banks in the nonpoint source nutrient trading program. The sponsor must monitor a mitigation site for a minimum of a 10 year period after construction and planting, and must demonstrate attainment of ecological performance standards. The sponsor must manage invasive species onsite according to an Invasive Species Management Plan approved by the IRT. The sponsor must develop a Long-Term Management Plan, approved by the IRT, and an endowment fund for long-term management tasks, which is held by a third-party endowment holder such as the National Fish and Wildlife Foundation (NFWF). The sponsor names a long-term steward for each mitigation site, who is responsible for carrying out the long-term management tasks in perpetuity. The long-term steward may be the sponsor, the landowner, or another qualified entity, such as a conservation-oriented non-government organization with the capacity for land stewardship.

Workgroup Membership

Consistent with the request in Chairman Ware's letter to DEQ and the amendments in the nature of a substitute for HB 276 and HB 479 that DEQ was asked to examine, the following individuals were invited to participate on the workgroup to Review the Supply and Demand for Mitigation Credits and Incentivizing Dam Removal Projects in Virginia. Due to anticipated overlap in workgroup membership, one workgroup was formed by DEQ to examine the issues raised by HBs 276, 479, and 1283. The review of the issues raised in HB 1283 is described in a separate report. The following workgroup members were invited to attend:

Jennifer Perkins, Virginia Department of Agriculture and Consumer Services
Terry Lasher, Virginia Department of Forestry
Kyle Shreve, Virginia Agribusiness Council
Martha Moore, Virginia Farm Bureau
Adrienne Kotula, Chesapeake Bay Commission
Lonnie Johnson, Virginia Cooperative Extension
Chris Swanson, Virginia Department of Transportation
Andrew Clark, Home Builders Association of Virginia
Phil Abraham, Virginia Association for Commercial Real Estate
Chris Boies, Clarke County
Justin Mackay-Smith
Shannon Varner, Troutman Pepper representing the Virginia Environmental Restoration Association
Brian Wagner, Resource Environmental Solutions
Casey Jensen, EcoCap

[16] Va. Code § 62.1-44.15:23 (A)
[17] Va. Code §§ 10.1-1009 through 10.1-1016.1
[18] Va. Code §§ 10.1-1700 through 10.1-1705.1

Samuel Markwith, Tidewater Soil and Water Conservation District
T.J. Mascia, Davey Resource Group
Serena McClain, American Rivers
Justin Curtis, AquaLaw
Peggy Sanner, Chesapeake Bay Foundation
Bobby Proutt, Clearwater Ventures
Dave Jordan, Commonwealth Mitigation
Jennifer Van Houten, Davey Resource Group
Brent Fultz, Earth Source Solutions
Evan Ocheltree, Falling Springs LLC
Bill Street, James River Association
George Bryant, Koontz Bryant
Kelby Morgan, Liesfeld Construction
Chris Miller, Piedmont Environmental Council
Sara Aman, Potomac Conservancy
Fritz Schneider, Potomac Riverkeeper Network
Jeff Waldon, Rapidan Institute & Center for Natural Capital
Kathy Hoverman, Resource Environmental Solutions
Jeff Corbin, Restoration Systems
Nikki Rovner, The Nature Conservancy
Jeanne Richardson, US Army Corps of Engineers
Jennifer Stanhope, US Fish and Wildlife Service
Howard Epstein, University of Virginia
James Hutzler, Virginia Association of Counties
Greg Garman, Virginia Commonwealth University
Rene Hypes, Virginia Department of Conservation and Recreation
Mark Killgore, Virginia Department of Conservation and Recreation
Charles Wilson, Virginia Department of Conservation and Recreation
Robert Condrey, Virginia Department of Transportation
Amy Martin, Virginia Department of Wildlife Resources
Alan Weaver, Virginia Department of Wildlife Resources
Timothy Owen, Virginia Department of Wildlife Resources
Kirk Havens, Virginia Institute of Marine Science
Randy Owen, Virginia Marine Resource Commission
John Foote, Walsh Colucci Lobeley & Walsh
Mike Kelly, Mitigation Banker
Steven Barrs, Mitigation Banker

Workgroup Discussion: Supply and Demand for Mitigation Credits

The workgroup met twice at DEQ's Central Office in Richmond on July 7, 2022 and August 8, 2022, and also at DEQ's Piedmont Regional Office in Glen Allen, Virginia on August 30, 2022. Following introductions, DEQ gave presentations (Appendix A) to introduce the workgroup's directives and in later meetings to present information requested by the workgroup. After presentations and questions, the workgroup engaged in discussion of each directive. For a full recounting of the workgroup discussion at each meeting, please refer to the Meeting Minutes in

Appendix B. A summary of the discussion and recommendations is provided below, which reflects the various positions of the workgroup members. DEQ notes that unless expressly stated in this report, general consensus was not tested for or achieved for the discussion points or suggested recommendations described below.

1. What is the current and projected demand for wetland and stream mitigation credits by public and private entities?

DEQ presented historic demand estimates[19] for wetland and stream mitigation credits. The demand appears to be variable by river watershed and year; however, a few trends do emerge. Over the last ten years, high demand river watersheds (Potomac and James Rivers) have needed an average of 40 to 100 wetland mitigation credits (respectively), and approximately 25,000 stream mitigation credits per watershed per year. In comparison, most other river watersheds may be deemed to have low average demand, and have demand at under 10 wetland mitigation credits and under 10,000 stream mitigation credits per watershed per year. DEQ notes that the above demand estimates are likely higher. DEQ was not able to synthesize data from all permits prior to the workgroup meetings, and the presence of additional permittee responsible mitigation (PRM) projects is likely.

DEQ's analysis also covered potential supply estimates,[20] based on mitigation site information available on the USACE RIBITS website and in Virginia Aquatic Resources Trust Fund (VARTF) in-lieu fee mitigation program annual reports. In high demand watersheds (Potomac and James Rivers) for non-tidal wetland mitigation credits, short-term supply (currently available mitigation credits) will cover less than one year of average demand; adding in mid-term supply (future phases of construction or future credit releases) may cover 2-5 years of average demand, if constructed and successful; and adding in long-term supply (current mitigation proposals under review) may cover 4-11 years of average demand, if approved, constructed, and successful. In high demand watersheds (Potomac and James Rivers) for stream mitigation credits, short-term supply will cover less than one year of average demand; adding in mid-term supply may cover 1-6 years of average demand, if constructed and successful; and adding in long-term supply may cover 5-20 years of average demand, if approved, constructed, and successful. In low demand watersheds, short-term supply appeared to be adequate, except in the Atlantic Ocean, Chesapeake Bay, and Rappahannock, Roanoke, and Tennessee Rivers. In low demand watersheds, mid-term and long-term supply appeared to be adequate, except for the Atlantic Ocean, Chesapeake Bay, and Roanoke River.

One workgroup member noted that there is currently high demand for wetland and stream mitigation credits relative to supply in many river watersheds of the Commonwealth. Several workgroup members agreed that demand from the public and private sector will continue to be strong for the foreseeable future, with residential/commercial developments, public infrastructure, state roads, and non-residential/commercial development projects that will, more likely than not, require compensatory mitigation. One workgroup member noted that mitigation credits are released on an approved schedule, therefore the mid-term and long-term supply of

[19] See Appendix A – Attachment 1 and 2 for graphs of mitigation credit use by river watershed.
[20] See Appendix A – DEQ Presentations.

mitigation credits will not be available all at once. The workgroup members also listed many difficulties in determining future trends in demand and supply of mitigation credits. These difficulties are listed here, as well as any potential solutions that were discussed:

A. Large transportation, public works, and infrastructure projects skew mitigation credit demand. These projects may also significantly affect the available supply of mitigation credits, by purchasing or removing from the market available mitigation credits in bulk for future projects, therefore limiting available supply for other projects that need to break ground earlier.

B. Reserved mitigation credits (those that are reserved between a permit applicant and a third-party mitigation sponsor, but not yet sold) are currently not publicly tracked and are confidential.

   Several workgroup members believe that DEQ should consider the creation of a public system or platform for tracking real-time available mitigation credits and/or posting available mitigation credits for sale, with reserved mitigation credits subtracted. The creation of a platform may be the subject of a future workgroup so that its content and functions may be appropriately designed. Regardless of its form, several workgroup members expressed a need to continue to keep client information confidential.

C. Mitigation credit sales at some older mitigation sites were not required to be tracked publicly (those with a pre-2010 MBI template).

   Mitigation credit sales for most new mitigation sites (those with 2010 or 2018 MBI templates) are required to be uploaded to RIBITS and are public information.

D. The post-construction as-built plans for a mitigation site may generate a different total of mitigation credit than the pre-construction final mitigation plan.

   It was noted that DEQ and the USACE should update the total potential mitigation credits in RIBITS after an as-built report is submitted and approved.

E. Future phases of a mitigation site that a sponsor decides not to build may generate a different total of mitigation credit.

   A sponsor may submit this information to DEQ and the USACE at any time. DEQ and USACE currently require this to be reconciled when the sponsor requests mitigation site closure.

F. PRM projects are only tracked in permit records. Additionally, past state permit records have often tracked mitigation in acres and linear feet, rather than in mitigation credits.

2. What are your recommendations for legislative and regulatory changes to increase the supply of wetland and stream mitigation credits and reduce volatility in the price of mitigation credits?

Initially, workgroup members reflected on the causes of the current low supply of mitigation credits. Workgroup members mentioned myriad reasons that included, but were not limited to, difficulties in forecasting future demand, fast-changing and increasing demand, lengthy timelines for mitigation review, lengthy timelines for mitigation credit releases, narrow agency guidance and preference for specific types of mitigation sites, lack of available suitable property, high cost of financial assurances, inability of permittees to sell unused mitigation credits, high upfront costs of private mitigation banking, total high cost of mitigation banking, uncertain return on investment, in-lieu fee advance mitigation credits are sold-out in many watersheds, and hesitancy on the part of sponsors to submit new mitigation proposals given all the above.

The workgroup had extensive discussions about how to increase the supply of mitigation credits. Several workgroup members acknowledged that further legislative and regulatory changes alone may not be effective in solving the current issues in supply. One workgroup member mentioned that changes in state laws and regulation may not result in a net change in the mitigation program, without an accompanying change in federal law. Another workgroup member noted that proposals for legislative or regulatory changes may divert DEQ staff time away from other recommendations on this list that may prove more effective at increasing credit supply. Additionally, one workgroup member stated that revised state law or regulation that is too detailed or prescriptive may result in two separate state and federal compensatory mitigation options being required for each development project. Lastly, several workgroup members suggested that a combination of the following recommendations may prove the most effective to solve the issue at hand.

The following non-consensus recommendations were put forth by the workgroup, for federal and state regulators involved in mitigation site review and regulation, and includes recommendations and solutions from the workgroup and DEQ:

A. DEQ and USACE should decrease the timeline for mitigation site review and mitigation credit releases.

   Several state and federal solutions that are currently in development or being implemented to decrease the time required for mitigation site review and credit releases. Historically, the USACE Norfolk District has assigned mitigation site review to ten to twelve USACE regulatory staff, who were also assigned other duties, including issuing permits. In 2022, the USACE Norfolk District moved mitigation site review to two USACE regulatory staff, who will work solely on mitigation sites. One workgroup member recommended in a written comment that this decision be memorialized in some way to prevent a reversal to prior workload allocation. Several workgroup members have also stated that a concerted effort is underway by a broad array of public and private stakeholders to increase funding and staffing for the USACE regulatory program on a nationwide scale.

   In 2022, USACE is also drafting a Memorandum of Agreement (MOA) between USACE and DEQ.[21] In the MOA, the USACE intends to assign DEQ to be the lead coordinating agency for monitoring reports and associated mitigation credit releases. This has the potential to significantly increase the speed at which mitigation credits are released. Within DEQ, the Permitting Enhancement and Evaluation Platform (PEEP), intended to improve efficiency and

[21] This MOA draft was expected to be provided by the USACE by October 30, 2022. As of the date of this draft, DEQ has not yet received this draft MOA.

transparency in permitting review, will also have a module for mitigation sites. This module will track major milestones in mitigation site review, approval, and credit releases, and will show both agency and sponsor timeframes. Lastly, DEQ and USACE will introduce a mitigation monitoring report template in 2022,[22] which is intended to decrease agency review time for reports, decrease agency requests for additional information, and, therefore, decrease the timeline for credit releases.

Several members of the workgroup stated that the changes in the mitigation program outlined above may significantly incentivize them to submit future mitigation bank proposals.

B. DEQ, the USACE, and the IRT should broaden their approach to mitigation site selection, increase flexibility, and consider alternative types of mitigation proposals. The alternatives mentioned by workgroup members generally fall into the following two categories: (i) Adjustments to existing mitigation practice and guidance. This may include, but is not limited to, flexible buffer widths, smaller mitigation sites, dam removal projects, alternative solutions to existing impoundments on mitigation sites, and alternative types of mitigation credit proposals, and (ii) Consider alternative types of mitigation sites that may not have been proposed or considered in the past. This may include, but is not limited to, mitigation site proposals on properties previously under the EPA Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or Superfund law), and other similar properties or programs.

C. DEQ and USACE should use existing guidance for accelerated mitigation credit release schedules according to USACE Regulatory Guidance Letter (RGL) 19-01[23] in order to allow any mitigation site an accelerated credit release in any river watershed of the Commonwealth.

   The USACE publishes RGLs to provide guidance to USACE Districts on issues relating to their authority for USACE permits. In RGL 19-01, USACE gives guidance on accelerating credit release schedules for mitigation sites.

   USACE Norfolk District already considers accelerated mitigation credit release schedules within the mitigation review process in the Commonwealth. DEQ will continue to collaborate with the USACE and support accelerated mitigation credit release schedules.

D. One workgroup member mentioned that the required cost of financial assurances necessary to obtain an accelerated mitigation credit release in the Commonwealth is too high, and that DEQ and the USACE should consider alternative proposals for financial assurances for accelerated mitigation credit releases.

E. Increase the amount of advance mitigation credits for the Virginia Aquatic Resources Trust Fund (VARTF) in river watersheds with high mitigation credit demand relative to supply.

   VARTF, established and operated by The Nature Conservancy, is an in-lieu fee mitigation program approved to operate within the Commonwealth. As an in-lieu fee mitigation program, VARTF is allowed to request and receive a specific amount of advance mitigation credits, to sell prior to finding and implementing a mitigation site. This is different from released

[22] This template was public noticed by the USACE on November 17, 2022 for a 30 day public comment period.
[23] US Army Corps of Engineers, "Mitigation Bank Credit Release Schedules and Equivalency in Mitigation Bank and In-Lieu Fee Program Service Areas," RGL 19-01, February 22, 2019.

mitigation credits, which are released and available for sale only after a mitigation site has been constructed and ecological performance standards are met.

VARTF may propose an increase to its advance mitigation credits at any time, which DEQ and the USACE will evaluate, in consultation with the IRT.

F. DEQ and the USACE should allow the use or re-sale of unused mitigation credits.

Currently, permittees purchase or propose an anticipated amount of mitigation credits for each project, based on permitted impacts. When the project is finished, occasionally, there is less actual impact and therefore less mitigation required. This results in unused mitigation credits.

There are currently several options for unused mitigation credits. A permittee may currently return unused mitigation credits to a willing sponsor, who in turn may offer the returned mitigation credits for sale to another applicant. A permittee may also currently be able to utilize unused mitigation credits for their own additional permits, if deemed appropriate compensation. In addition, several workgroup members reiterated the potential creation of a mitigation credit platform, as discussed in 1.B. above.

The following non-consensus recommendations were put forth by the workgroup, for consideration by legislators in the Virginia General Assembly:

G. The Commonwealth should increase staffing and the allocation of general funds to cover the responsibilities assumed by all state advisory agencies participating on the IRT for mitigation site review (DEQ, MRC, DHR, DWR, DCR, and DOF).

H. There is a provision in state law for a Wetland and Stream Replacement Fund,[24] which was intended to authorize the Commonwealth to establish and operate an in-lieu fee mitigation program to provide additional advance mitigation credits for state and federal permits in Virginia. It was suggested by some workgroup members that the Commonwealth should evaluate and consider the additional resources and requirements for staffing and allocation of general funds needed in order to operate the Wetland and Stream Replacement Fund by an agency of the Commonwealth or by stakeholders. Further, if after this evaluation is complete, members of the Virginia General Assembly believe that the Wetland and Stream Replacement Fund should move forward, it was noted that the Code of Virginia should be amended to align with the USACE and EPA Final Mitigation Rule requirements for in-lieu fee mitigation programs.

I. At least one workgroup member, representing the Home Builders Association of Virginia, provided written comment supporting additional discussion on amending the Code of Virginia[25] to reduce existing restrictions on the ability to purchase mitigation credits within the secondary service area. In 2021, legislation was enacted after extensive discussions between various representatives from the residential and commercial development industry, mitigation sponsors, and environmental/conservation stakeholders to allow for the purchase of mitigation credits from a secondary service area further away from permitted impacts, provided that certain mitigation credit price and supply thresholds were met, and the applicant agreed to certain onsite measures. The workgroup member felt that additional amendments (similar to

[24] Code of Va. § 62.1-44.15:23.1.
[25] Code of Va. § 62.1-44.15:23.

those in the introduced version of HB 276) could be made to expand its effectiveness in increasing the supply of mitigation credits and addressing credit price volatility.

DEQ agrees with the workgroup member that further discussion would be necessary on this topic, because the 2022 workgroup meetings were focused on the workgroup directives based on the amendments in the nature of a substitute and not on HB 276 as originally introduced. Since the 2021 legislation was enacted, DEQ and the USACE have received many requests to modify MBIs to include a secondary service area. DEQ believes the existing law has already proven effective where there are approved mitigation sites and available released mitigation credits for sale. However, DEQ recalls that at meetings of the previous stakeholders workgroup on this topic there was also strong support from conservation organizations for the current restriction in the current statutory language to seek mitigation closer to impacts (i.e. in the primary service area) prior to considering mitigation further away from impacts (i.e. in the secondary service area). Lastly, it should also be noted that the USACE restricts the sale of mitigation credits in a secondary service area as it sees appropriate, and may continue to do so, regardless of further changes to state law. Currently, secondary service areas may be used for federal general permits only, not for federal individual permits.

Workgroup Discussion: Incentivizing Dam Removal Projects in Virginia

The workgroup met twice at DEQ's Central Office in Richmond on July 7, 2022 and August 8, 2022, and also at DEQ's Piedmont Regional Office in Glen Allen, Virginia on August 30, 2022. Following introductions, DEQ staff gave presentations (Appendix A) to introduce the workgroup's directives and in later meetings to present information requested by the workgroup. After presentations and questions, the workgroup engaged in discussion of each directive. For a full recounting of the workgroup's discussions at each meeting, please refer to the Meeting Minutes in Appendix B. A summary of the discussion and recommendations is provided below, which reflects the various positions of the workgroup members. DEQ notes that unless expressly stated in this report, consensus was not tested for or achieved for the discussion points or recommendations described below.

3. What methods are in place or could be developed for promoting the removal of obsolete dams and significant river obstructions by the private sector that maximize the input of private capital and minimize the need for public funding to facilitate the removal?

The workgroup's discussion about the compensatory wetland and stream mitigation program was the lengthiest discussion by the workgroup. DEQ and the USACE described that with the first proposed dam removal project for mitigation credit, DEQ and the USACE are using and expanding upon the existing USM stream mitigation credit methodology. USM already includes mitigation crediting for stream restoration, and additional mitigation credits from stream adjustment factors such as that for Rare, Threatened, or Endangered species habitat protection. Where appropriate, DEQ and the USACE may develop other USM stream adjustment factors related to dam removal projects. DEQ and the USACE are also open to alternative proposals for site protection and riparian buffers. Mitigation banking is generally a private sector venture, with occasional projects that involve a public-private partnership. One workgroup member mentioned that it can be difficult for public-private partnerships to allow for mitigation credits to be sold for profit by the private sector, because the mitigation credit is split proportionally based on the amount of funds contributed by

each public and private entity involved. There is more discussion on this point in number 6 below.

The workgroup discussed additional crediting programs that may be entered into by the private sector. One workgroup member brought up the potential to create a species conservation bank for anadromous fish from a dam removal project. According to the USFWS, species or conservation banks are "permanently protected lands that contain natural resource values. These lands are conserved and permanently managed for species that are endangered, threatened, candidates for listing, or are otherwise species-at-risk. Conservation banks function to offset adverse impacts to these species that occurred elsewhere." [26] This program would function like a credit program, except for species impacts and species credits. However, a workgroup member representing DWR stated that state law and regulation[27] enables DWR to protect wildlife, including fish species. DWR requires adherence to a Time of Year Restriction on construction to avoid impacts to anadromous fish, so the actual impact, and therefore potential demand, for anadromous fish species credits may be low.

The potential for nonpoint source nutrient trading credits generated from a dam removal project was discussed briefly. However, DEQ staff stated there was very little potential for dam removal projects in that program due to the nature of the project in relation to nutrient crediting methods. DEQ noted that it would be an innovative practice, at best.

A workgroup member representing DCR mentioned that landowners may remove or be required to remove obsolete dams through state regulation[28] within the DCR Dam Safety Program, if the dam is required to be regulated. Another workgroup member mentioned that the Dam Safety Program could be improved via the development of more landowner education and incentives. IT was noted that landowner education may include information on legal liability for dams, actions landowners can take to mitigate their liability, and performing functional dam assessments (and potential public funds available to do so). Several workgroup members mentioned that the Commonwealth could also provide incentives (financial or otherwise) for landowners to remove obsolete dams.

A workgroup member representing DWR mentioned that the state law regarding fish passage[29] may provide another means of incentivizing dam removal in Virginia.

One workgroup member noted in a written comment that existing programs mentioned above have not made progress in the removal of dams, particularly on large waterways. The workgroup member stated that the only option discussed above that may be able to maximize private capital and minimize the need for public funding, as the directive indicates, is the option presented in the previously proposed legislation, HB 479.

Lastly, one workgroup member suggested that no matter which of the above programs are utilized, the Commonwealth should be prepared to accommodate the alternative nature of dam removal projects, and that they may differ from the practice and guidance for site protection and riparian

[26] USFWS, "Conservation Banking: Incentives for Stewardship," September 2019.
[27] *See* Code of Va. § 29.1-521 and 4VAC15-30-10.
[28] *See* 9VAC50-20-80.
[29] Code of Va. § 29.1-532.

buffer protected.

4. What are your recommendations regarding the extent to which there is a scientific basis from a water quality and fish benefit perspective to expand existing service area limitations for mitigation credits generated by the removal of obsolete dams and significant river obstructions?

One workgroup member, the sponsor of the proposed South Anna River at Ashland Mill Dam Mitigation Bank, introduced the project as a real-life example for the workgroup to consider. The workgroup member said that the dam is a high priority for removal within the Chesapeake Bay watershed, according to Freshwater Network and other ranking systems. The workgroup memer stated that going from a lentic (lake) to a lotic (river) ecosystem would be a significant ecological uplift. A comment letter from Dr. Charles McGowan (Randolph-Macon College) stated that the removal of the dam would open up approximately 860 river miles of near-ideal spawning and rearing habitat for six migratory fish species known to the area. However, the sponsor mentioned that the dam is located in the York River watershed, which historically has low mitigation credit demand. The workgroup member stated that expanding the service area to the fall line of the adjacent river watersheds (James and Rappahannock Rivers) may be the only way to make the project work as a private mitigation bank. The workgroup member also submitted a letter from Dr. Martin Doyle (Duke University), which generally offered support for alternative regulatory and crediting guidance where necessary to incentivize dam removal projects, and asserted that "dam removal has the potential for far greater ecological benefits than the track record demonstrated by traditional stream restoration."

Several workgroup members stated that allowing expanded service areas for only dam removal projects would be unfair to other wetland and stream mitigation sponsors. One workgroup member stated that dam removal projects should follow the rules that all mitigation sites follow. Another workgroup member expressed concern that all credit trading programs need to protect local water quality and river watersheds, as well as the Chesapeake Bay. If the service area is expanded in one program, it may lead to proposals for expansion in other programs, such as nonpoint source nutrient trading.

A workgroup member representing DWR stated that they generally supported dam removal for the known biological benefits to anadromous and catadromous fish, and ecological benefits within the river watershed of the dam removal and within the Chesapeake Bay (if it is a Chesapeake Bay tributary). This was echoed by several workgroup members and comment letters received from entities working closely on dam removal projects.

From a fish benefit perspective, one workgroup member stated that migratory fish generally return to their river of origin; however, there is scientific evidence that a certain percentage of each fish species strays into river watersheds adjacent to their river of origin. A comment letter from Dr. Charles McGowan (Randolph-Macon College) stated that "straying rates [into] adjacent watersheds in the region are between 4 and 6% for American shad, and rates appear higher for other Alosids such as hickory shad." A workgroup member representing DWR stated in a written comment that American Eel is a species that returns "home" to a region (such as the mid-Atlantic), and not specifically to a single river of origin. The workgroup member further stated that since

American Eels are known freshwater mussel hosts and healthy mussel populations contribute to improved water quality (filtering capacity) there may be a potential water quality connection between the tributaries of the Chesapeake Bay via American Eels and mussels.

DEQ asked the workgroup whether a dam removal project in a river watershed would achieve no net loss of all stream functions within adjacent river watersheds, which is a requirement of both federal and state permit programs that would use the mitigation credits as compensation.

Several workgroup members questioned whether there is a scientific basis from a water quality perspective to expand the service area into adjacent river watersheds. One workgroup member stated that it is challenging to prove there are no local water quality impacts if compensatory mitigation for a permit is obtained from an adjacent river watershed. One workgroup member acknowledged that the stream functions improved in an adjacent watershed may largely be ecological and biological, and potentially not physical or chemical. Several other workgroup members agreed with this statement.

Two workgroup members, representing the James River Association (JRA) and Chesapeake Bay Foundation (CBF), stated in a written comment that they "would like to make clear that we have strong concerns and are in opposition to expanding existing service area limitations into the James River watershed for mitigation credits generated by the removal of obsolete dams and significant river obstructions in different river basins. We do not believe that there is a scientific basis for achieving a net benefit from dam removal in other river basins for water quality in the James River that would offset permitted stream or wetland impacts. Additionally, JRA and CBF do not believe that the potential addition of wayward migratory fish coming into the James River to spawn would provide sufficient benefits to offset the habitat losses and increased pollution resulting from the permitted stream or wetland impacts. The Commonwealth of Virginia terminated the James River stocking program for American shad due to a lack of survival and natural recruitment. This experience and decision by the Commonwealth demonstrate that simply adding additional fish into the James River is not effective at restoring the population. Conversely, one of the factors that continues to be a major impact to the overall health of the James River and its habitat for migratory fish is sediment pollution, for which stream mitigation projects are often the most effective. While JRA and CBF support the removal of dams and river obstructions to improve fish passage and habitat within a river basin, we do not support expanding the service areas of mitigation banks across watershed boundaries for such projects."

The following statements were tested for consensus in the workgroup during the August 30, 2022 meeting, and resulted in the following results:

> *Statement 1: "There is a scientific basis from a water quality and fish benefit perspective to justify expanding existing service area limitations for mitigation credits generated by the removal of obsolete dams and significant river obstructions into adjacent river watershed boundaries."*
>
> *Strongly Agree - 8*
> *Do not Strongly Agree, but Do Not Oppose - 11*
> *Strongly Oppose – 7*

Result: No general consensus achieved.

Statement 2: "Provided appropriate conditions are established, there is a scientific basis from a water quality and fish benefit perspective to justify expanding existing service area limitations for mitigation credits generated by the removal of obsolete dams and significant river obstructions into adjacent river watershed boundaries."

Strongly Agree - 9
Do not Strongly Agree, but Do Not Oppose - 13
Strongly Oppose – 4
Result: No general consensus achieved.

The workgroup did not vote to define "significant obstruction;" however, the following definition was reviewed by the workgroup prior to voting on the statements. "Significant obstruction" was proposed to mean "i) an obsolete manmade structure, such as a dam or other impediment, in a fourth order as defined by the U.S. Geological Survey National Hydrography GIS dataset, or larger stream inhibiting the migration or distribution of anadromous species and (ii) upon request of a mitigation bank sponsor, such other obsolete structures on lower order streams determined by DEQ, in consultation with DWR and MRC, to be a significant impediment to the migration or distribution of anadromous species." [30]

5. What are the potential impacts for local and Chesapeake Bay water quality, ecological services, and fisheries as a result of the removal of such obsolete dams and significant river obstructions?

Workgroup members generally discussed that dam removal provides many permanent benefits within the river watershed where the dam is located, and only potential and/or temporary impacts.

The permanent ecological benefits that were mentioned by the workgroup were numerous, and included, but were not limited to: removal of restrictions on migration, anadromous and other fish habitat improvements, benthic macroinvertebrate and other aquatic life habitat improvements, aquatic population maintenance and recovery, and downstream ecological health benefits (mainly discussed in reference to the Chesapeake Bay as a downstream receiving water). One workgroup member also reiterated the lentic (lake) to lotic (river) ecosystem shift, which the workgroup member has observed to yield a significant ecological habitat uplift. Thermal changes were also mentioned as a benefit, particularly water temperature decreases resulting from dam removal, which may provide better cold water refuge and habitat for fish species in the context of climate change.

One workgroup member stated in a written comment that there are also physical benefits to dam removal. These physical benefits may be localized around the former dam and impoundment, but may extend downstream over time. In the area of the tail water and dam foot print, the workgroup member said geomorphic changes may occur to stabilize the stream after dam removal. The workgroup member also mentioned that downstream physical benefits may include an increased

[30] HB 479 (2022) – Wetland and Stream Mitigation Credits; Dam Removal Credits.

sediment supply to a formerly sediment starved river system, and a corresponding reduction in erosive channel incision over time.

One potential impact discussed by workgroup members was excessive sedimentation downstream of the dam location immediately after removal. Another workgroup member mentioned the potential for temporary destabilization of river banks and riparian buffer around the former impoundment, due to a change in water level after dam removal. Many members of the workgroup generally deemed these impacts as potential and temporary, relative to the overall permanent and definite ecological benefits of dam removal.

The following statement was tested for consensus in the workgroup during the August 8, 2022 meeting, and resulted in the following result:

> *Statement 3: "Dam removal provides ecological benefits within the river watershed where the dam is located and those benefits outweigh the potential ecological impacts."*
>
> *Strongly Agree - 19*
> *Do Not Strongly Agree, but Do Not Oppose - 2*
> *Strongly Oppose – 0*
> *Result: General consensus achieved.*

6. What innovative dam removal partnerships and incentives are used in other states?

One workgroup member stated that in order to attract private sector involvement and funds for dam removal projects, the Commonwealth or other entities could consider public-private partnerships. This type of partnership is currently utilized in the ecological restoration community, and was not deemed innovative by this workgroup. Public-private partnerships involve federal or state government grants or non-governmental organization funds partnered with matching private funds to accomplish a specific project. A workgroup member noted that there are federal infrastructure funds currently available from NOAA for barrier removal projects. Other federal partnering agencies listed by the workgroup included the Federal Emergency Management Agency (FEMA) and Federal Energy Regulatory Commission (FERC). One workgroup member also mentioned processes used by federal agencies for enforcement that may result in mitigation outcomes, such as the Natural Resource Damage Assessment (NRDA) process.

One workgroup member mentioned the Patapsco River Restoration - Bloede Dam Removal project, which was completed by the Patapsco River Restoration Partnership between Maryland Department of Transportation, NOAA, American Rivers, Maryland Department of Natural Resources, and others. Another workgroup member mentioned an additional type of public-private partnership, which occurs between the hydropower industry, agencies, and non-government organizations to ensure fish passage on operational hydropower dams. In this partnership example, the dam is not removed, but fish passage is designed into the hydropower dam project to create a mutual win for all partnered entities.

One workgroup member mentioned that it can be difficult for the private sector to be involved in public-private partnerships. If the project is generating any type of credit as compensation for a

permit program, the credit is most often prorated or reduced based on the proportion of funds contributed by the public and private entities involved. According to the workgroup member, this practice may dis-incentivize or prevent the private sector from participating in public-private partnerships, due to uncertain or no return on investment.

DEQ discussed that DEQ and the USACE currently allow public-private partnerships on mitigation sites in the Commonwealth, and may prorate mitigation credits depending on the involvement of public and private entities. A workgroup member also mentioned that there is also state law[31] enabling localities to partner with the private sector to develop mitigation banks as compensation for the locality's own permits, which increases overall mitigation credit supply.

Workgroup members rounded out the discussion by listing other workgroups currently discussing dam or barrier removal projects in the Commonwealth, with the thought that these additional workgroups might provide insight into potential innovative partnerships or incentives now or in the future. These workgroups included the Virginia Community Flood Preparedness Fund, the Virginia Stream Barrier Removal Task Force, and the Chesapeake Bay Fish Passage Workgroup.

[31] Code of Va. § 62.1-44.15:23 (F).

Appendix A: Presentations to Workgroup

Supply & Demand for Mitigation Credits

Workgroup Directive #1

Sarah Woodford
Mitigation Specialist
Virginia Department of Environmental Quality
July 7, 2022

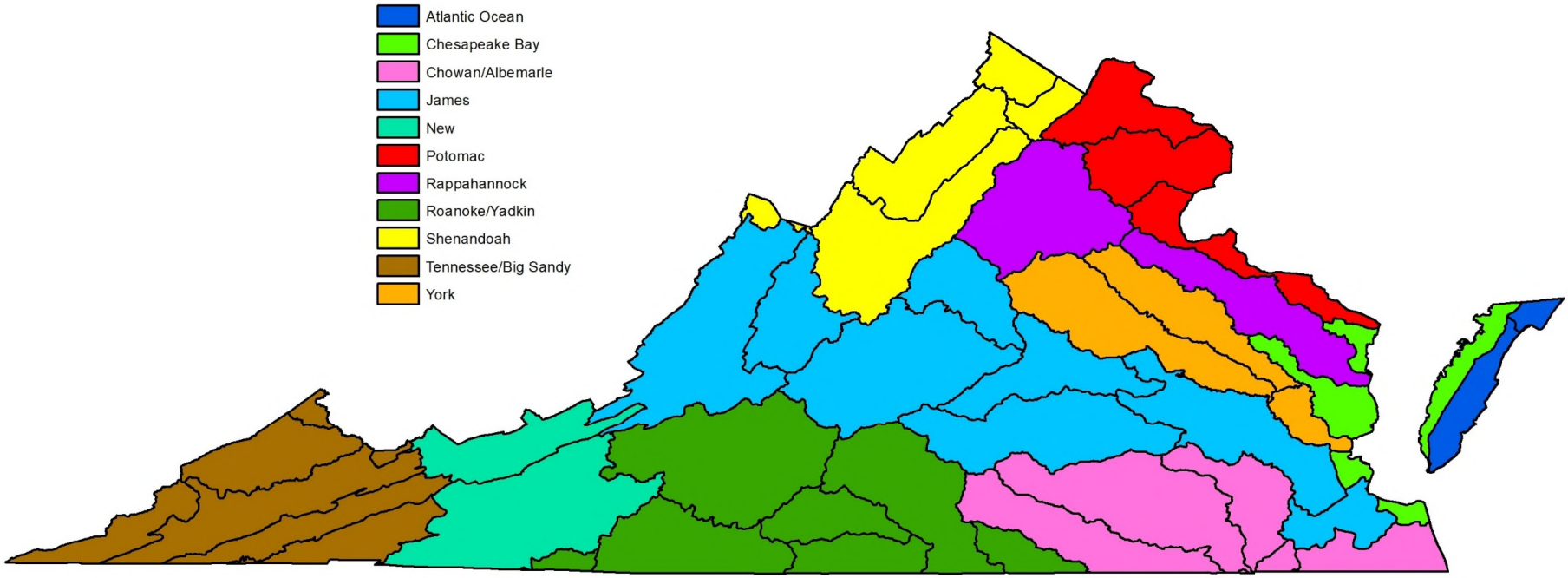
Workgroup Directives

- *What is the current and projected **demand** for wetland and stream mitigation credits by public and private entities?*

- *What are your recommendations for legislative and regulatory changes to increase the **supply** of wetland and stream mitigation credits and reduce volatility in the price of mitigation credits?*

DEQ

“River Watersheds” for Mitigation

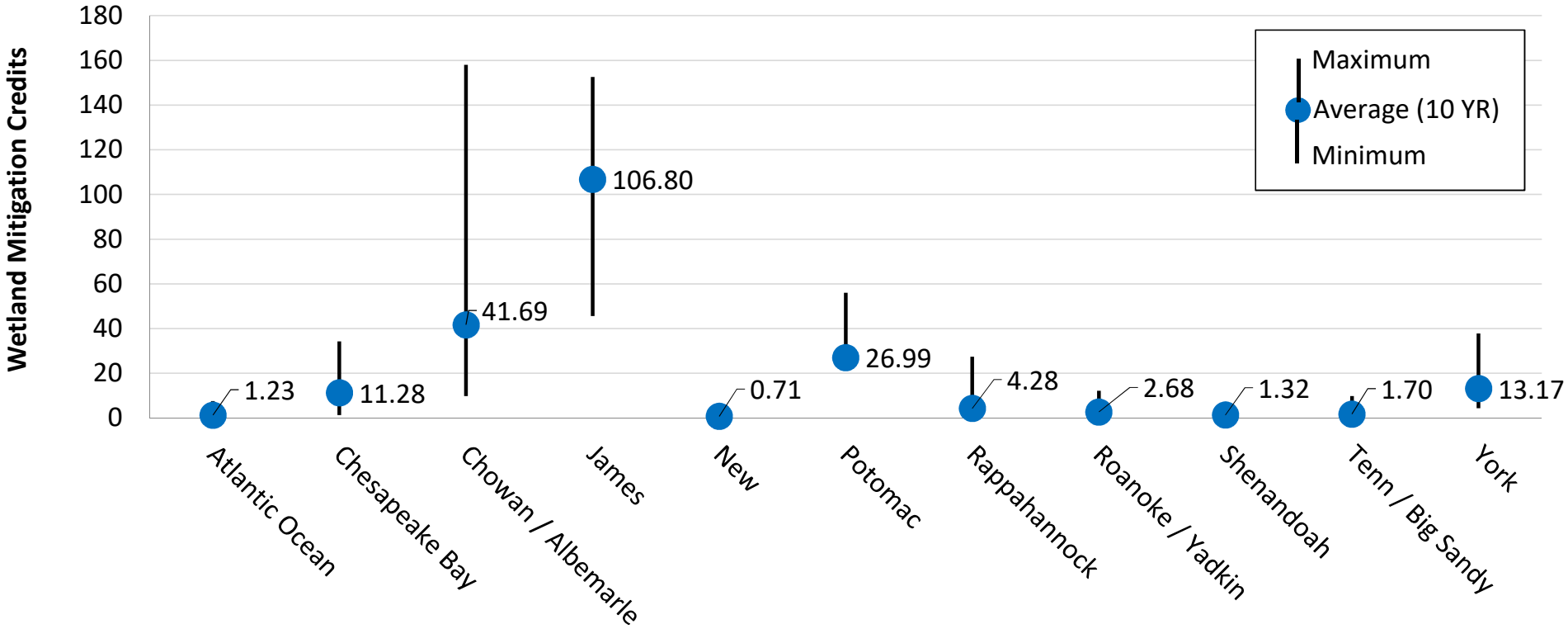


DEQ

Non-Tidal Wetlands

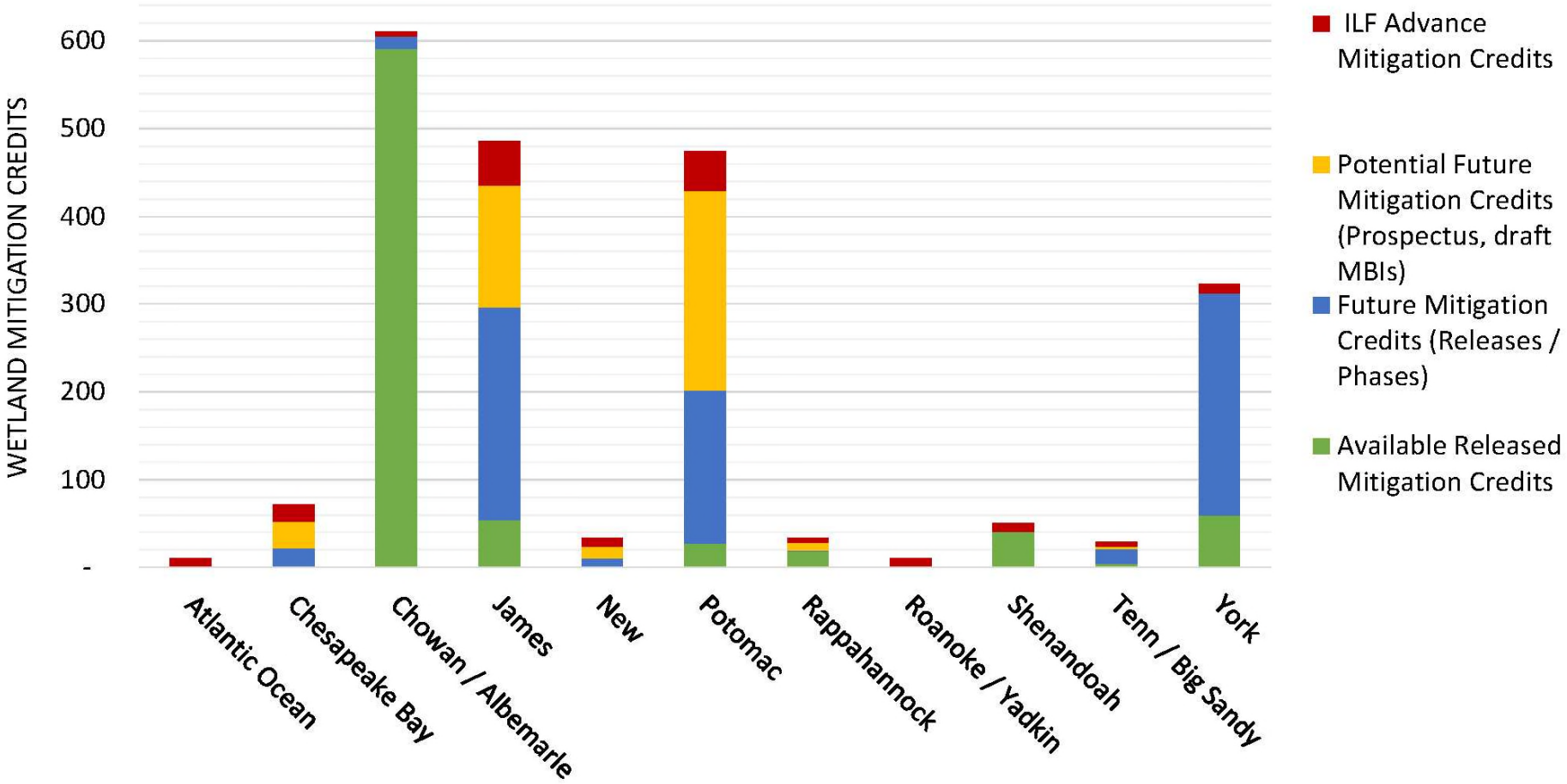
DEQ

Annual Demand - Non-Tidal Wetland Mitigation Credits (Average from 2012 – 2021)



DATA: DEQ CEDS 6/23/2022, USACE RIBITS 6/24/2022, VARTF Annual Reports 2012-2021

Total Supply – Non-Tidal Wetland Mitigation Credits



Data: USACE RIBITS 6/22/2022

Non-Tidal Wetland Mitigation Credits

River Watershed	Average Annual Demand	Short Term Supply*	Mid Term Supply^	Total Supply"
Atlantic Ocean	1.23	-	-	10.00
Chesapeake Bay	11.28	-	21.91	71.91
Chowan / Albemarle	41.69	591.02	605.30	610.30
James	106.80	53.45	295.73	485.72
New	0.71	0.67	10.22	33.48
Potomac	26.99	27.11	201.65	474.80
Rappahannock	4.28	18.07	19.19	33.49
Roanoke / Yadkin	2.68	0.56	0.56	10.56
Shenandoah	1.32	40.13	40.13	50.13
Tenn / Big Sandy	1.70	3.76	20.50	28.65
York	13.17	59.58	312.29	322.29

*Short Term Supply - Available released mitigation credits.

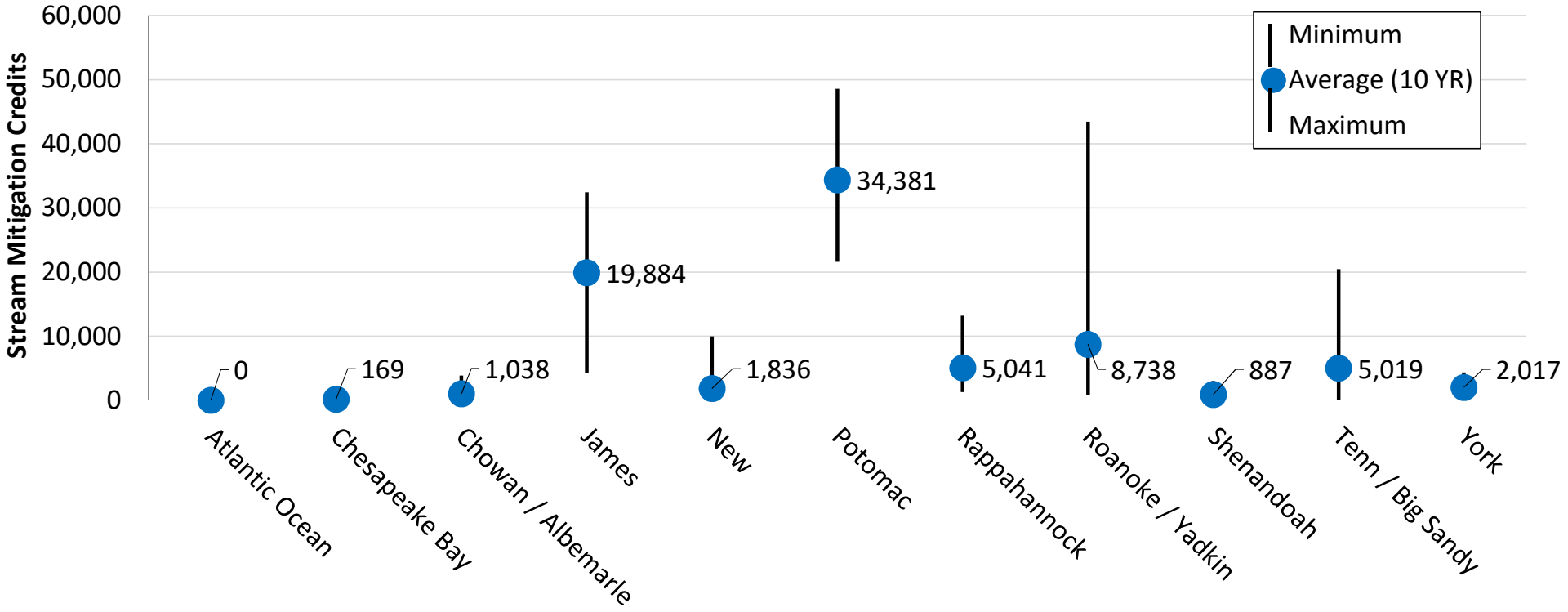
^Mid Term Supply - Future credit releases or construction of phase(s) from approved mitigation banks.

"Total Supply - Subject to site approval or ILF advance mitigation credit availability.

DEQ

Streams

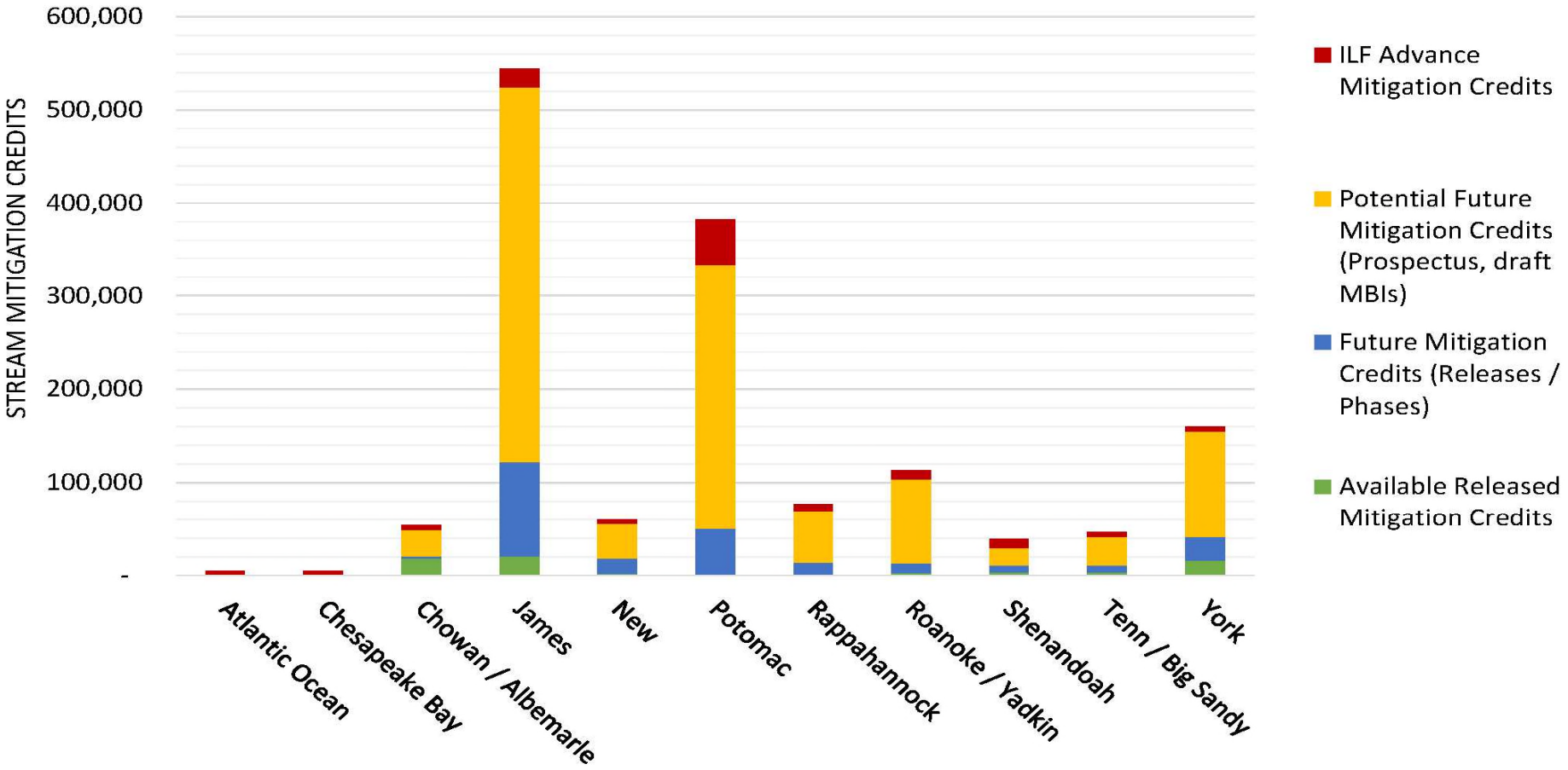
Annual Demand - Stream Mitigation Credits (Average from 2012 – 2021)



MITIGATION CREDITS IN UNIFIED STREAM METHODOLOGY (USM). DATA: DEQ CEDS 6/23/2022, USACE RIBITS 6/24/2022, VARTF Annual Reports 2012-2021

DEQ

Total Supply - Stream Mitigation Credits



Mitigation credits in Unified Stream Methodology (USM). Data: USACE RIBITS 6/22/2022

DEQ

Stream Mitigation Credits

River Watershed	Average Annual Demand	Short Term Supply*	Mid Term Supply^	Total Supply"
Atlantic Ocean	0	-	-	5,000
Chesapeake Bay	169	-	-	5,000
Chowan / Albemarle	1,038	18,629	20,997	54,235
James	19,884	21,138	122,231	544,281
New	1,836	2,491	18,559	60,095
Potomac	34,381	1,388	50,181	382,789
Rappahannock	5,041	-	14,244	77,348
Roanoke / Yadkin	8,738	2,799	13,258	113,712
Shenandoah	887	3,484	11,169	39,453
Tenn / Big Sandy	5,019	3,733	11,101	46,729
York	2,017	16,074	41,345	160,411

*Short Term Supply - Available released mitigation credits.

^Mid Term Supply - Future credit releases or construction of phase(s) from approved mitigation banks.

"Total Supply - Subject to site approval or ILF advance mitigation credit availability.

DEQ

Incentivizing Dam Removal in Virginia

Workgroup Directive #2

Sarah Woodford
Mitigation Specialist
Virginia Department of Environmental Quality
July 7, 2022

Workgroup Directives

- *What methods are in place or could be developed for promoting the removal of obsolete dams and significant river obstructions by the private sector that maximize the input of private capital and minimize the need for public funding to facilitate the removal?*
- *What are your recommendations regarding the extent to which there is a scientific basis from a water quality and fish benefit perspective to expand* ***existing service area limitations for mitigation credits*** *generated by the removal of obsolete dams and significant river obstruction?*
- *What are the potential impacts for local and Chesapeake Bay water quality, ecological services, and fisheries as a result of the removal of such obsolete dams and significant river obstructions?*
- *What innovative dam removal partnerships and incentives are used in other states?*

DEQ

Existing Mitigation Service Areas

- Code of Virginia § 62.1-44.15:23 (effective July 1, 2021)

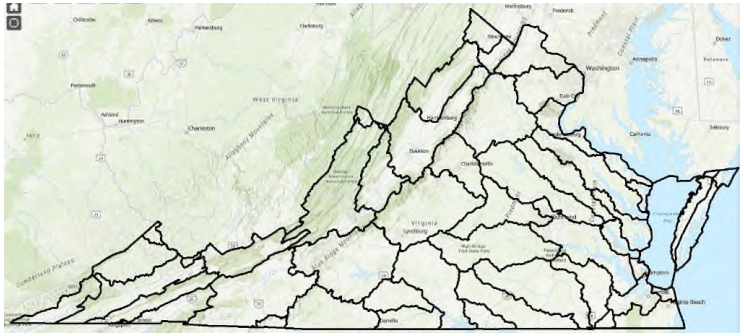
- Permit applicant may purchase credits from a mitigation bank (or ILF mitigation program) to satisfy the permit, if the impacted site is within the _____ of the mitigation site.

  - **Primary Service Area**
  - **Secondary Service Area**

DEQ

Primary Service Area

- “Primary Service Area” defined:
  - Same 8-digit HUC where the bank is located, and adjacent 8-digit HUC(s) in same River Watershed
- Language was in previous Code of Virginia
- Sets the maximum extent for a Primary Service Area



DEQ

Secondary Service Area

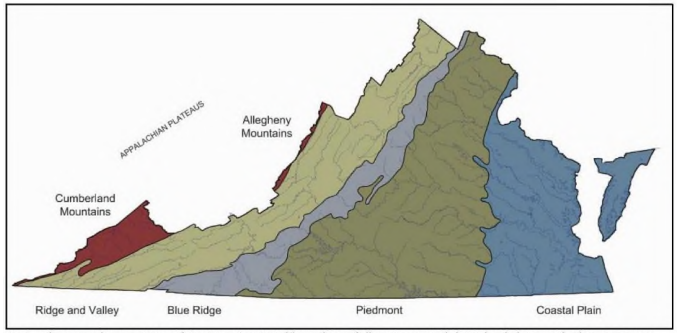


Fig. 2. Physiographic provinces of Virginia. Provincial boundaries follow Keyes et al. (1995). Click image for larger version.

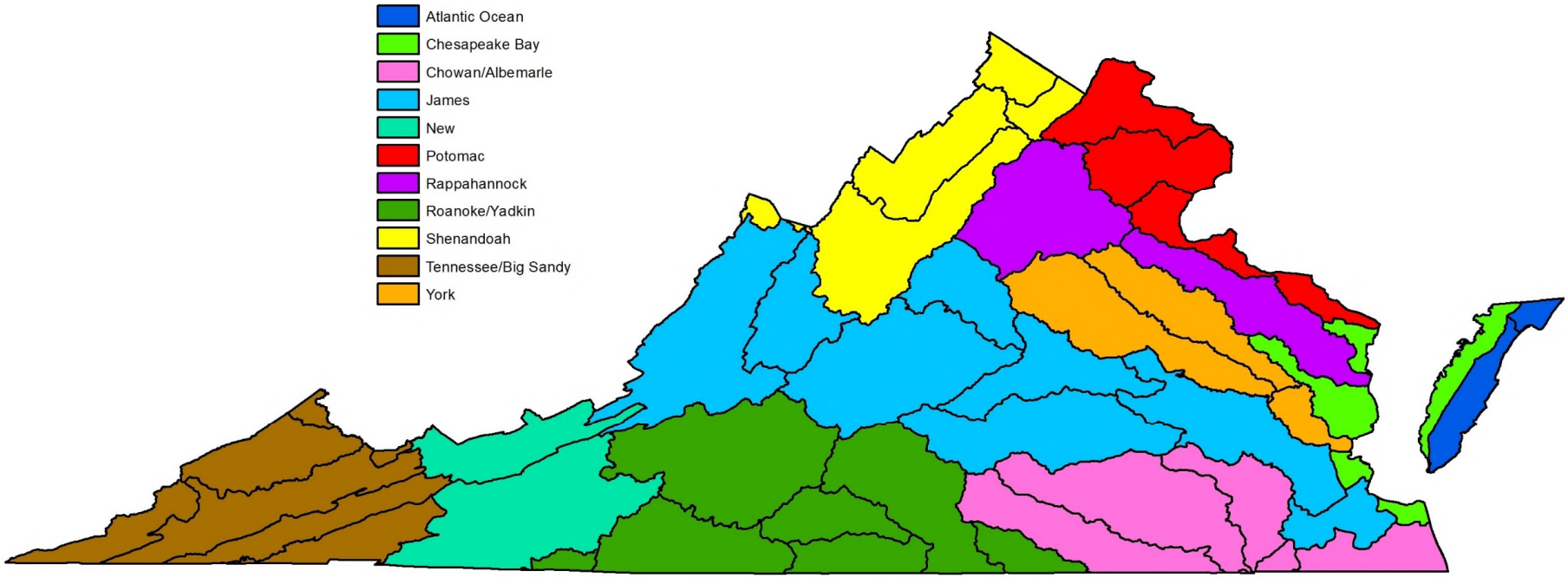
- "Secondary Service Area" defined:
  - Outside the Primary Service Area, but within….
  - Same physiographic province where mitigation bank is located, and adjacent physiographic province(s) within the same River Watershed

- "Physiographic province" defined:
  - Five (5) physiographic provinces of Virginia as defined in "*Overview of the Physiography and Vegetation of Virginia"* prepared by DCR-DNH (February 2016).

- Sets the maximum extent for a Secondary Service Area

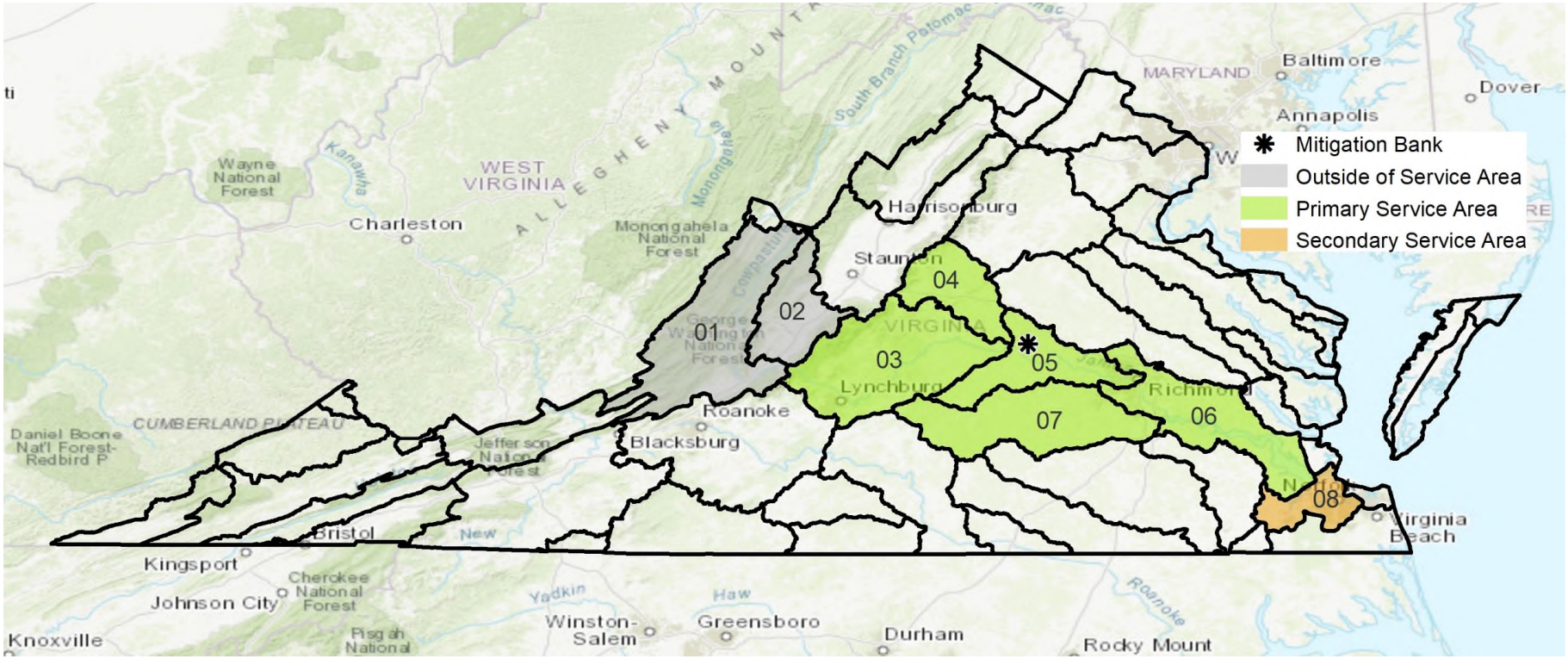
DEQ

“River Watersheds” for Mitigation



DEQ

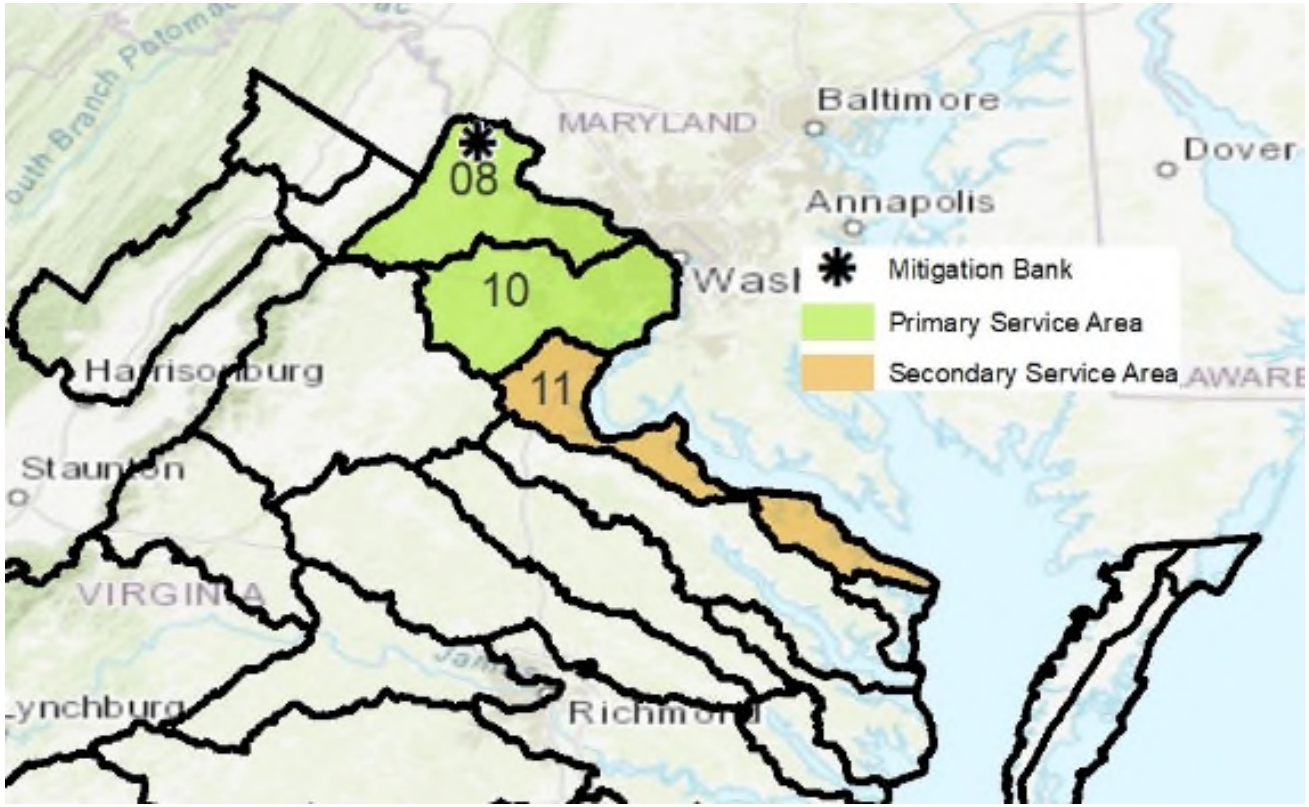
Example Service Area – James River



Example maximum extent for hypothetical mitigation bank in James River watershed.

DEQ

Example Service Area – Potomac River



Example maximum extent for a hypothetical mitigation bank in the Potomac River watershed.

DEQ

Mitigation and Nutrient Credit Workgroup

Recap from First Meeting

Sarah Woodford
Mitigation Specialist
Virginia Department of Environmental Quality
August 8, 2022

Workgroup Directives

- *What is the current and projected demand for wetland and stream mitigation credits by public and private entities?*

- *What are your recommendations for legislative and regulatory changes to increase the supply of wetland and stream mitigation credits and reduce volatility in the price of mitigation credits?*

DEQ

July 7 Recap – Supply and Demand

- Difficult to determine trends in demand, and timeline for supply based on data available
  - No all sales data is available
  - As-built generates different mitigation credit total
  - Future phases not to be built
  - Large transportation projects / mitigation credit purchases
  - Reserved mitigation credits
  - PRM project and credit tracking
- DEQ's PEEP System will track time required for mitigation credit releases
- **Request for non-tidal wetland graphs for demand per basin**

DEQ

July 7 Recap – Supply and Demand

- Accelerated mitigation credit release requests
- Alternative mitigation sites
- Public system or platform for tracking real-time available credits (with reserved credits deducted)
- Mitigation credit availability letters / permit requirements
- High cost of financial assurances required

Workgroup Directives

- *What methods are in place or could be developed for promoting the removal of obsolete dams and significant river obstructions by the private sector that maximize the input of private capital and minimize the need for public funding to facilitate the removal?*
- *What are your recommendations regarding the extent to which there is a scientific basis from a water quality and fish benefit perspective to expand existing service area limitations for mitigation credits generated by the removal of obsolete dams and significant river obstruction?*
- *What are the potential impacts for local and Chesapeake Bay water quality, ecological services, and fisheries as a result of the removal of such obsolete dams and significant river obstructions?*
- *What innovative dam removal partnerships and incentives are used in other states?*

DEQ

July 7 Recap – Dam Removal Projects

- Promoting removal of obsolete dams by private sector:
  - Compensatory mitigation
  - Not appropriate for nutrient trading program
  - Potential for species banking
  - Mitigation credits for species habitat improvement and/or protection
  - Traditional site protection mechanisms may not be feasible
  - Need landowner education / permissions
  - Provide landowner incentives
  - Dam Safety permitting or options for removal

July 7 Recap – Dam Removal Projects

- Scientific basis for expanding service area:
  - Example: South Anna River at Ashland Mill Dam
    - Proposed mitigation bank
    - High priority dam removal project in low mitigation credit demand watershed
    - Proposed to include adjacent river watersheds in service area for dam removal projects only
  - Opening up expanded service areas in one program may lead to all mitigation projects and/or nutrient projects requesting
  - All projects should follow mitigation program requirements
  - May not protect local water quality in adjacent river watersheds
  - May or may not satisfy no net loss of all stream functions in adjacent river watersheds
  - Service areas by eco-region in at least one other state or District

DEQ

July 7 Recap – Dam Removal Projects

- Ecological benefits / potential impacts:
  - Removes restrictions to fish migration
  - Anadromous and other fish habitat and populations
  - Population recovery and habitat restoration in same river watershed
  - Smaller ecological benefit to adjacent river watersheds
  - Chesapeake Bay ecological health benefits - Downstream
  - Lentic to lotic ecosystem change – more ecological uplift than traditional stream restoration
  - Mainly ecological benefits, not physical
  - Potential for thermal changes, temporary sedimentation downstream, buffer destabilization

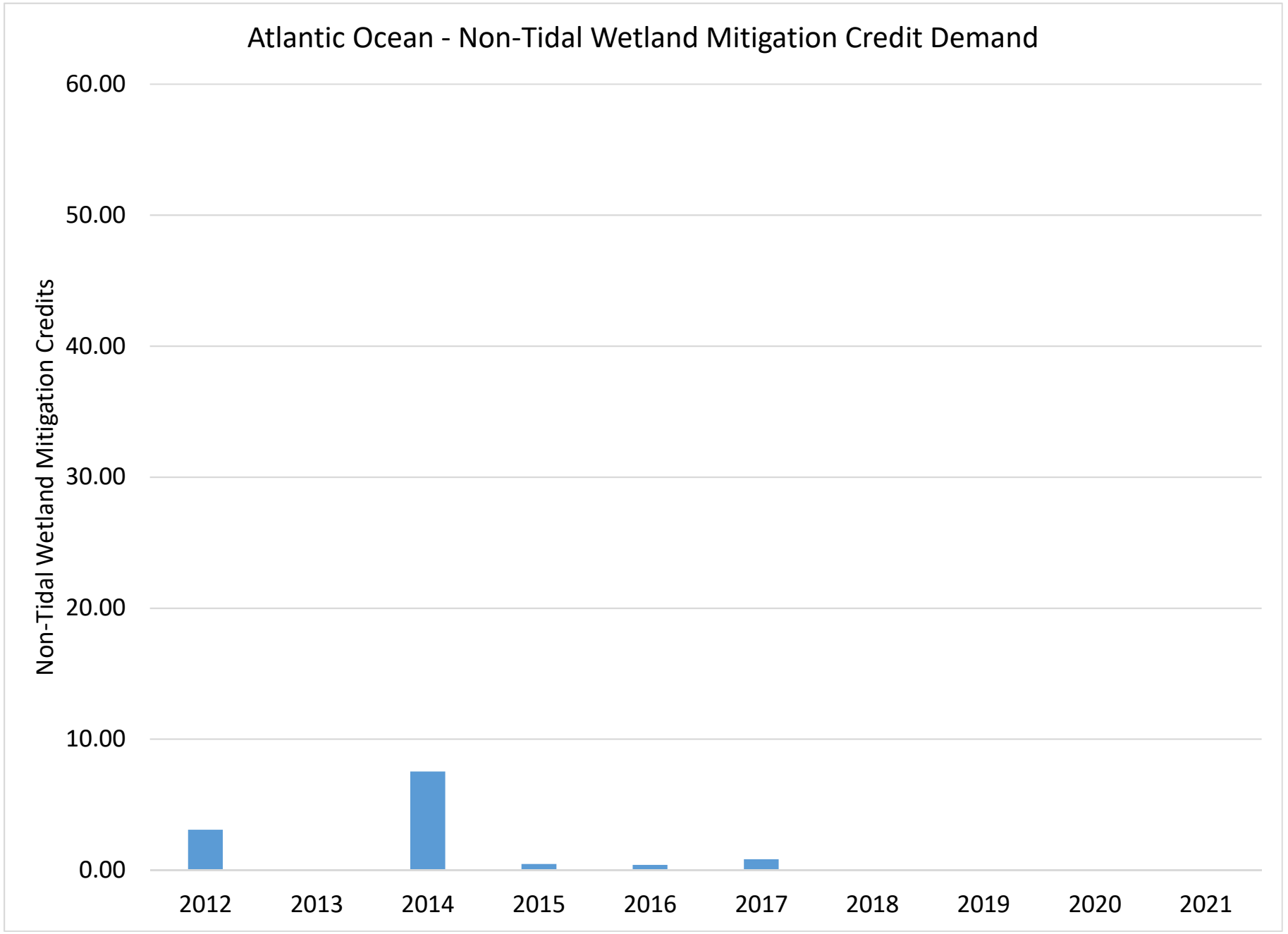
DEQ

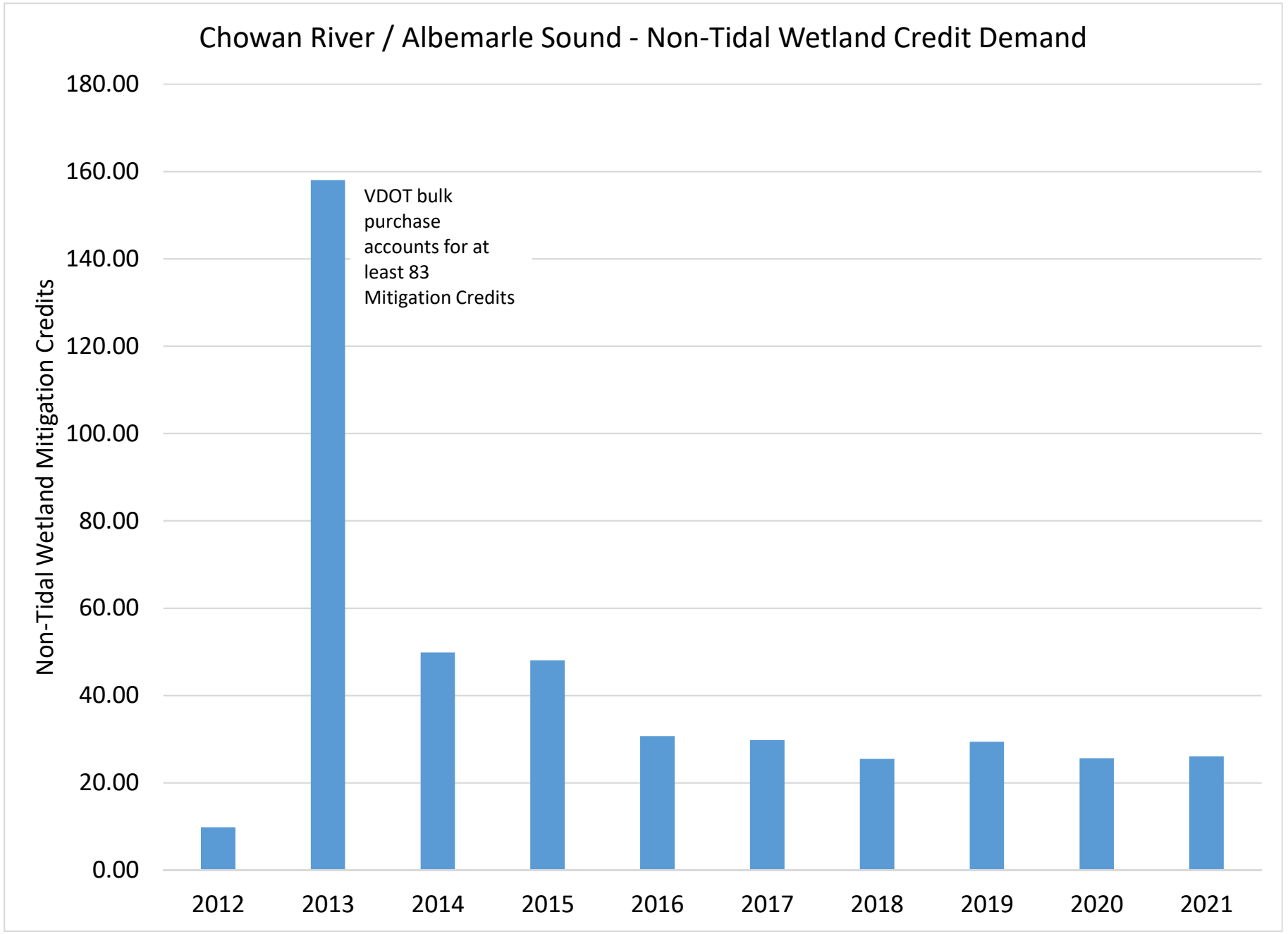
July 7 Recap – Dam Removal Projects

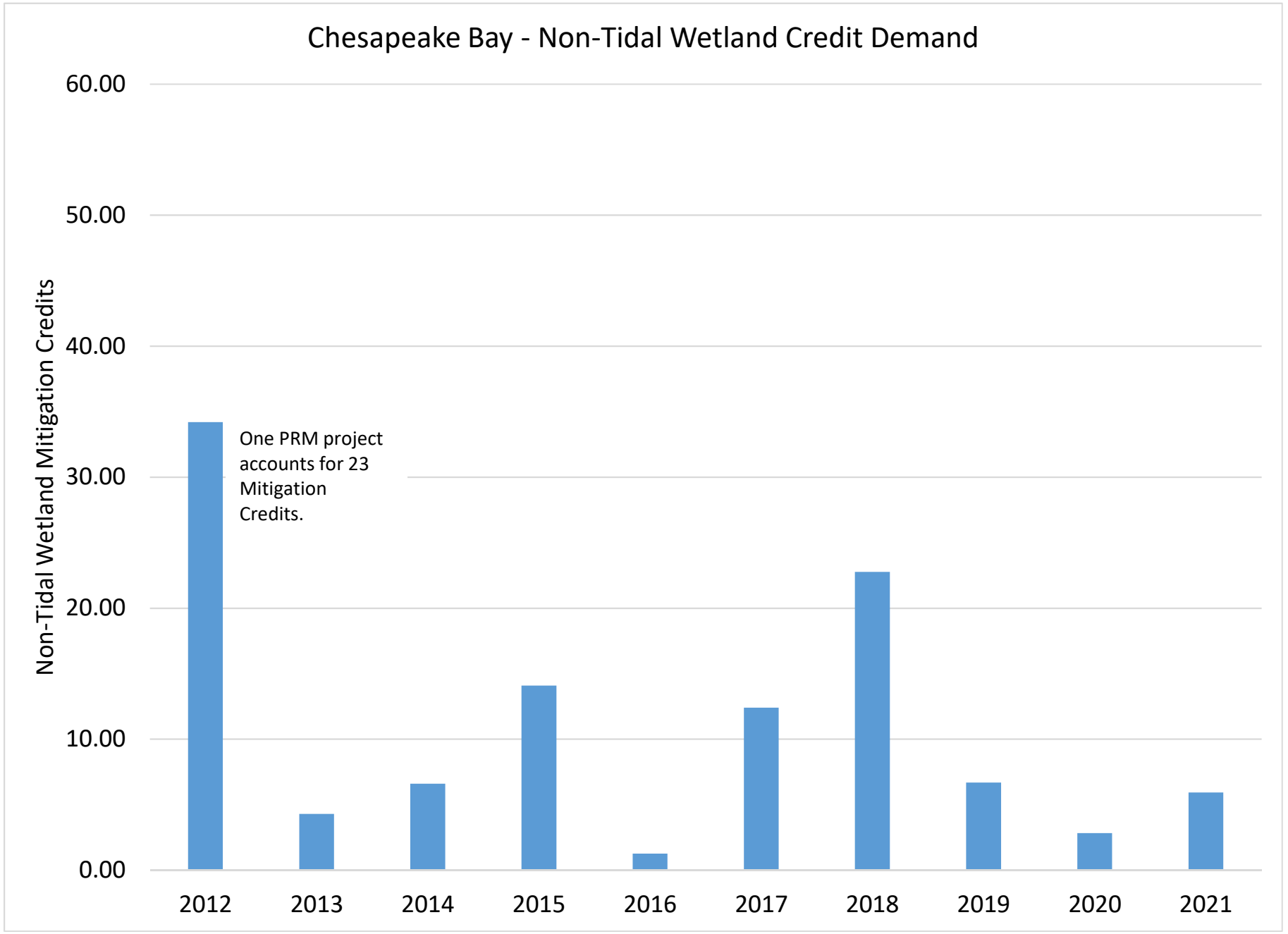
- Innovative dam removal partnerships in other states:
  - Public / private partnerships
  - Take advantage of government grant funding currently available

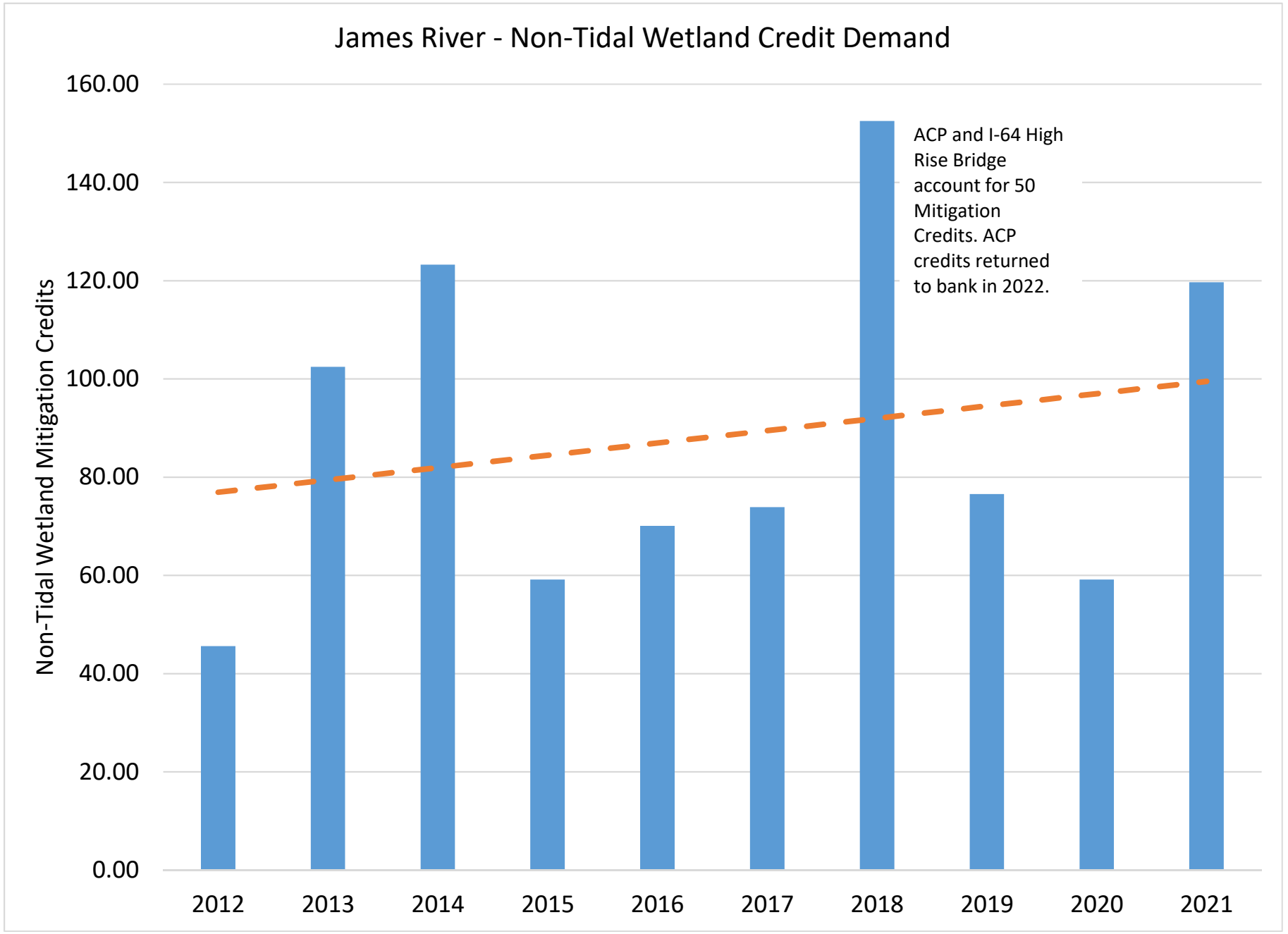
Additional Comments?

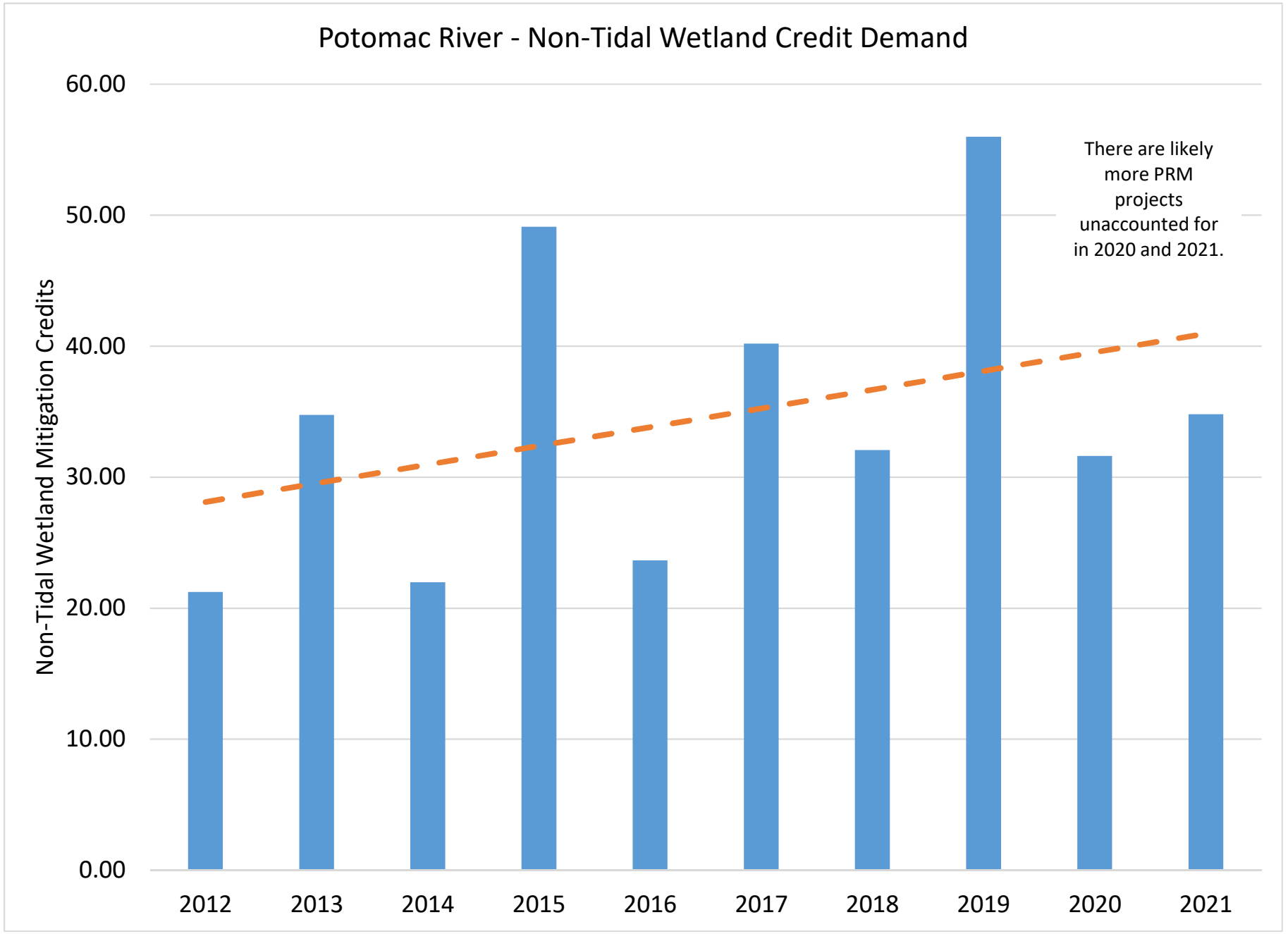
Attachment 1

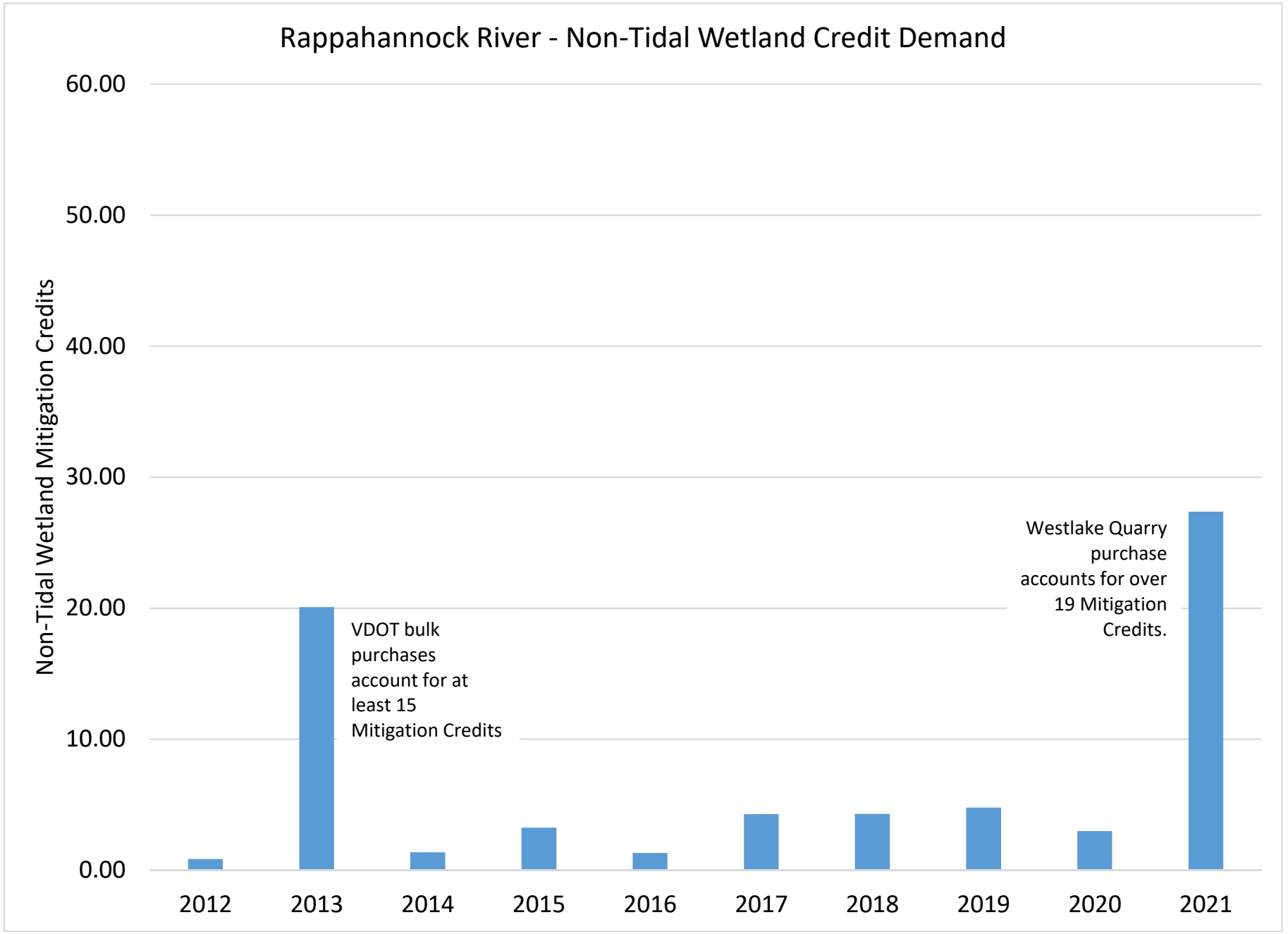

Atlantic Ocean - Non-Tidal Wetland Mitigation Credit Demand
Non-Tidal Wetland Mitigation Credits
60.00
50.00
40.00
30.00
20.00
10.00
0.00
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

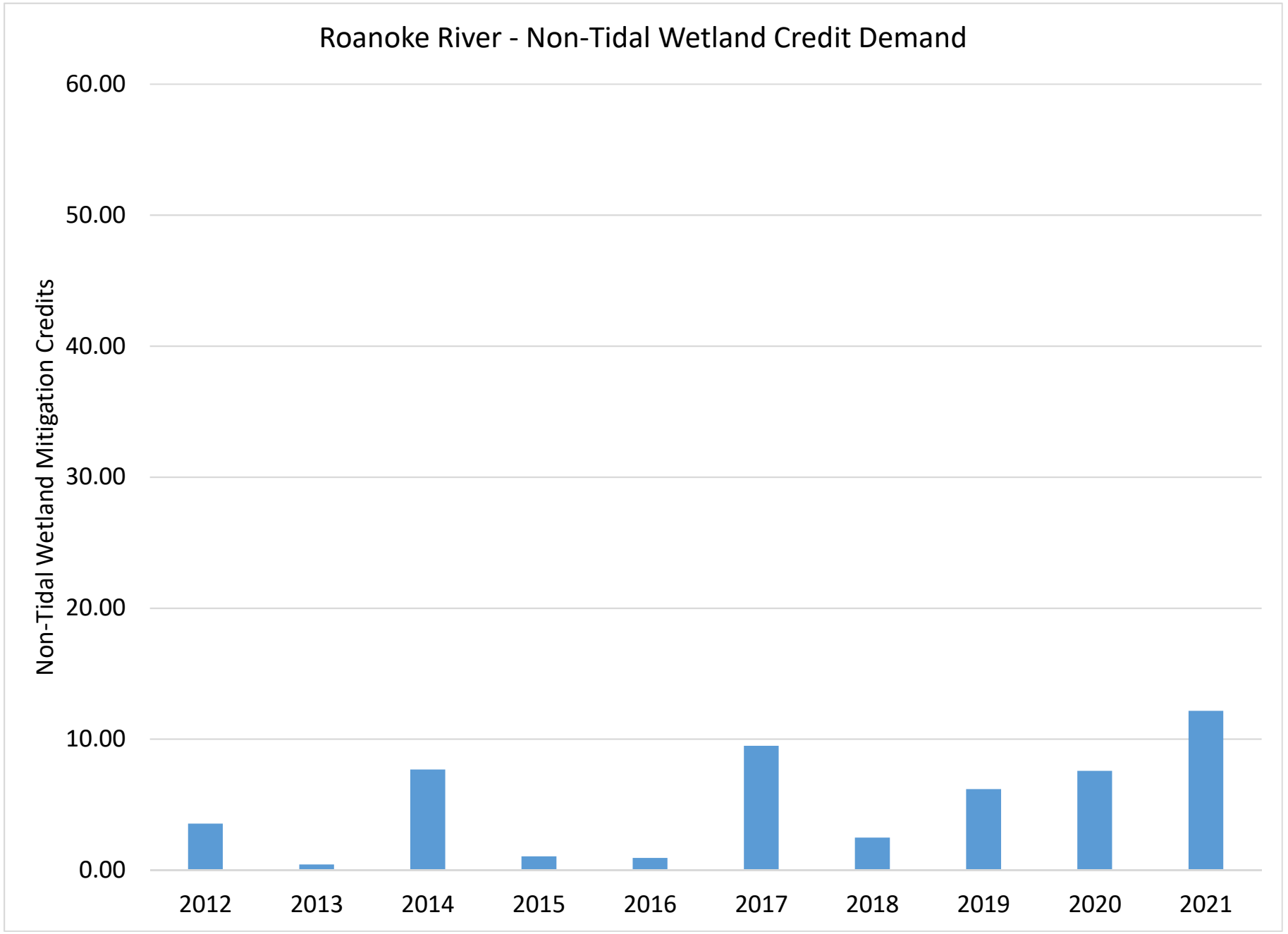

Chowan River / Albemarle Sound - Non-Tidal Wetland Credit Demand
Non-Tidal Wetland Mitigation Credits
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
VDOT bulk purchase accounts for at least 83 Mitigation Credits
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

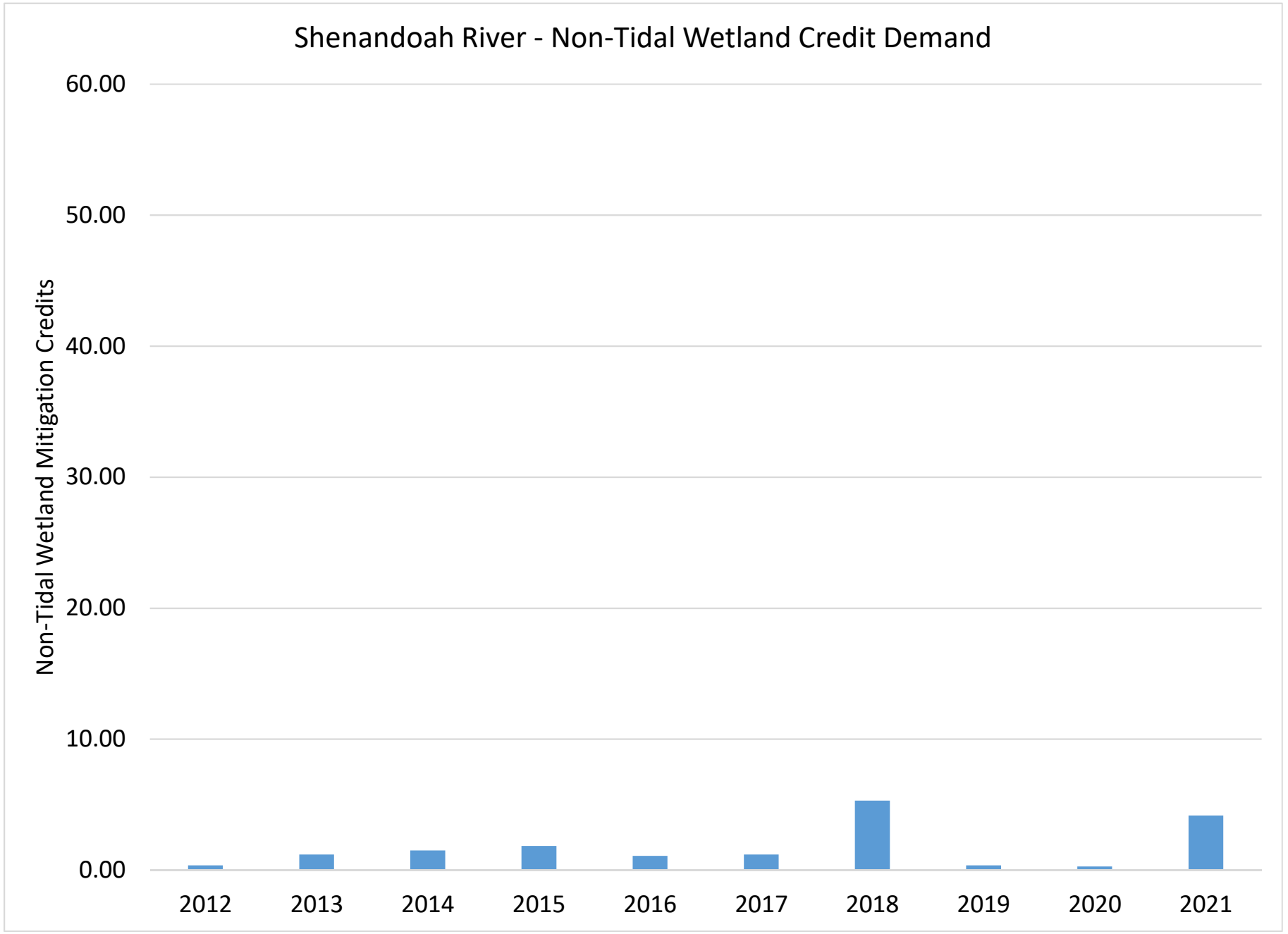

Chesapeake Bay - Non-Tidal Wetland Credit Demand
Non-Tidal Wetland Mitigation Credits
60.00
50.00
40.00
30.00
20.00
10.00
0.00
One PRM project accounts for 23 Mitigation Credits.
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

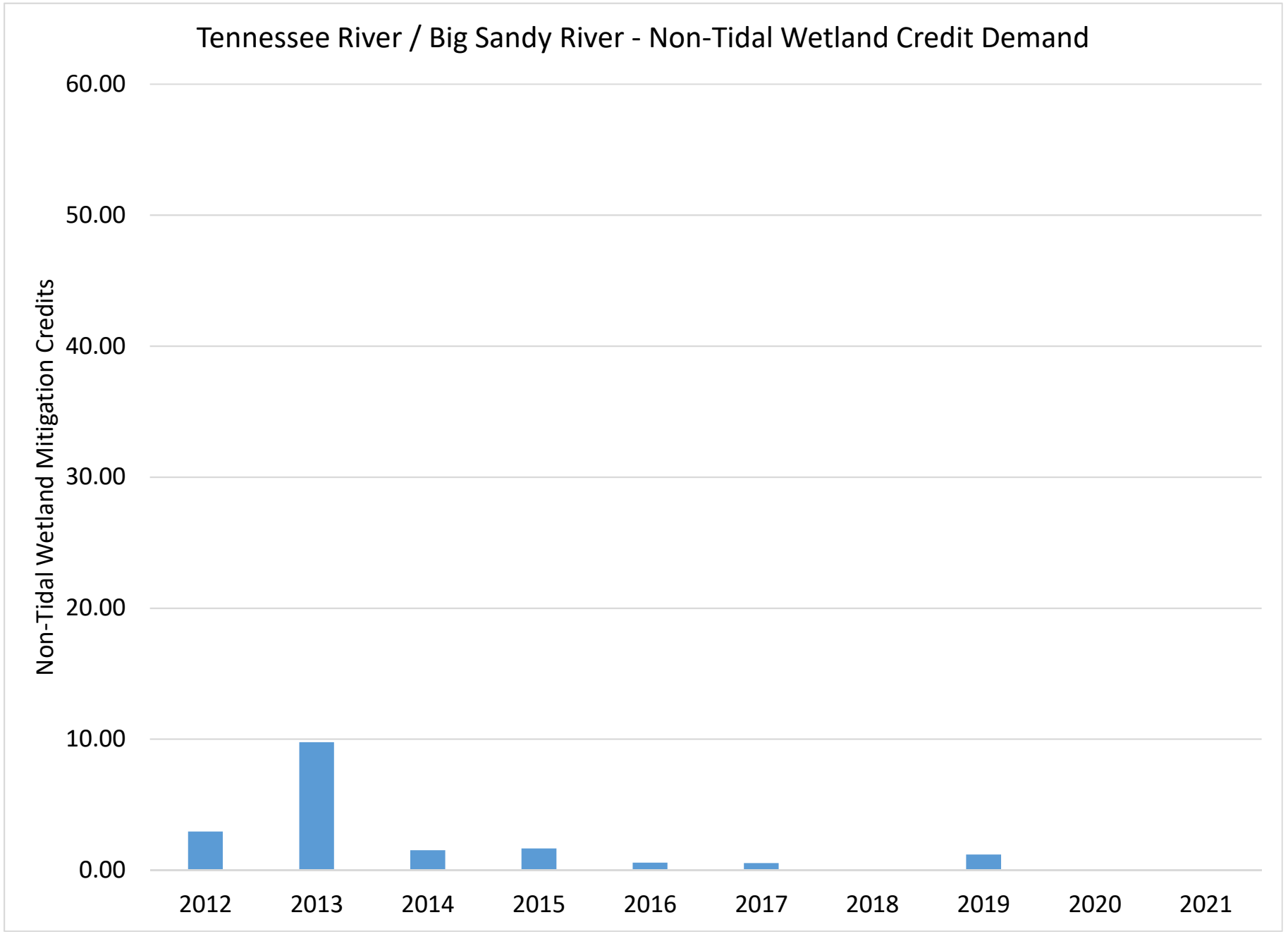

James River - Non-Tidal Wetland Credit Demand
Non-Tidal Wetland Mitigation Credits
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
ACP and I-64 High Rise Bridge account for 50 Mitigation Credits. ACP credits returned to bank in 2022.

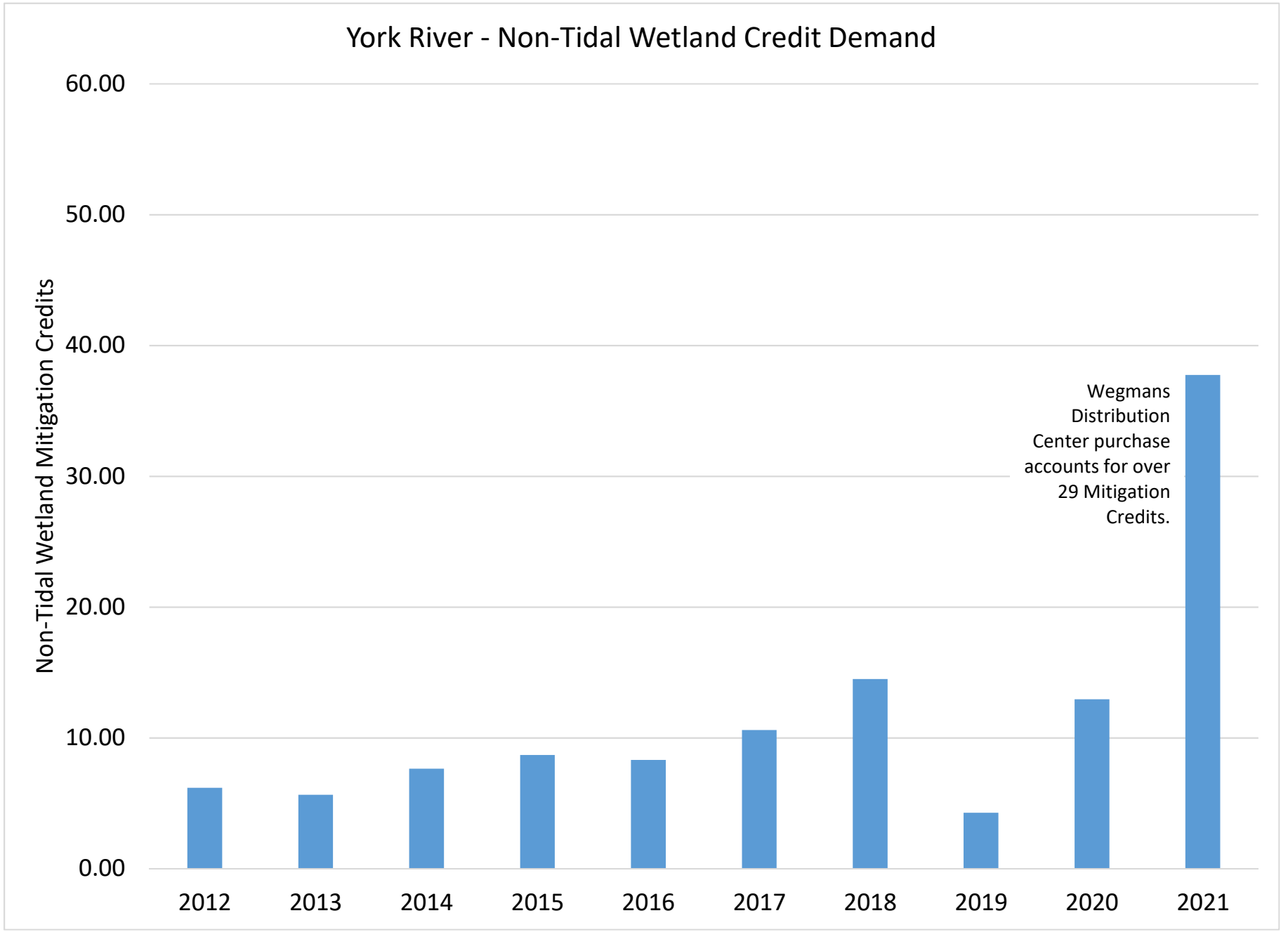

Potomac River - Non-Tidal Wetland Credit Demand
Non-Tidal Wetland Mitigation Credits
60.00
50.00
40.00
30.00
20.00
10.00
0.00
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
There are likely more PRM projects unaccounted for in 2020 and 2021.

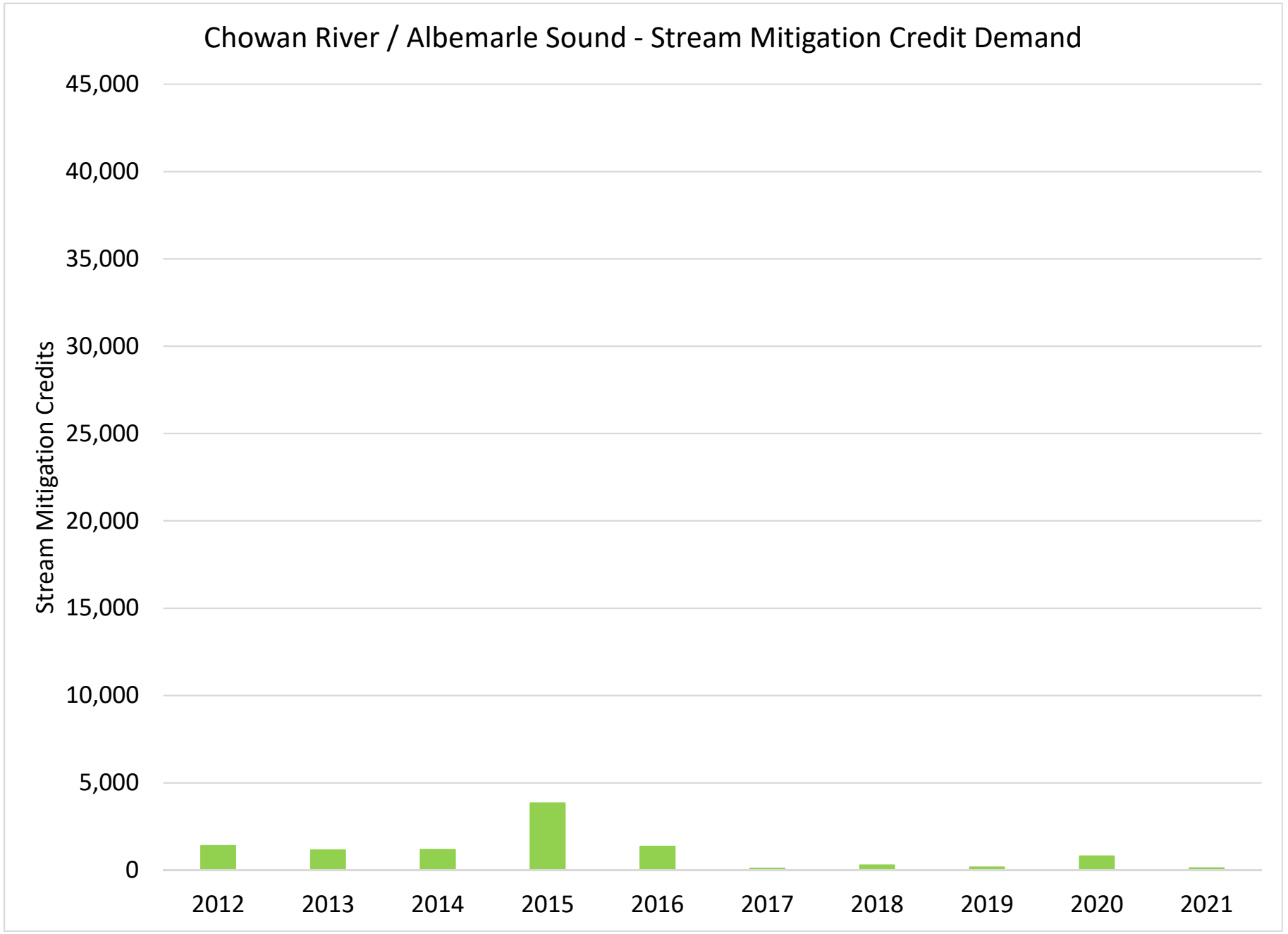

Rappahannock River - Non-Tidal Wetland Credit Demand
Non-Tidal Wetland Mitigation Credits
60.00
50.00
40.00
30.00
20.00
10.00
0.00
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
VDOT bulk purchases account for at least 15 Mitigation Credits
Westlake Quarry purchase accounts for over 19 Mitigation Credits.

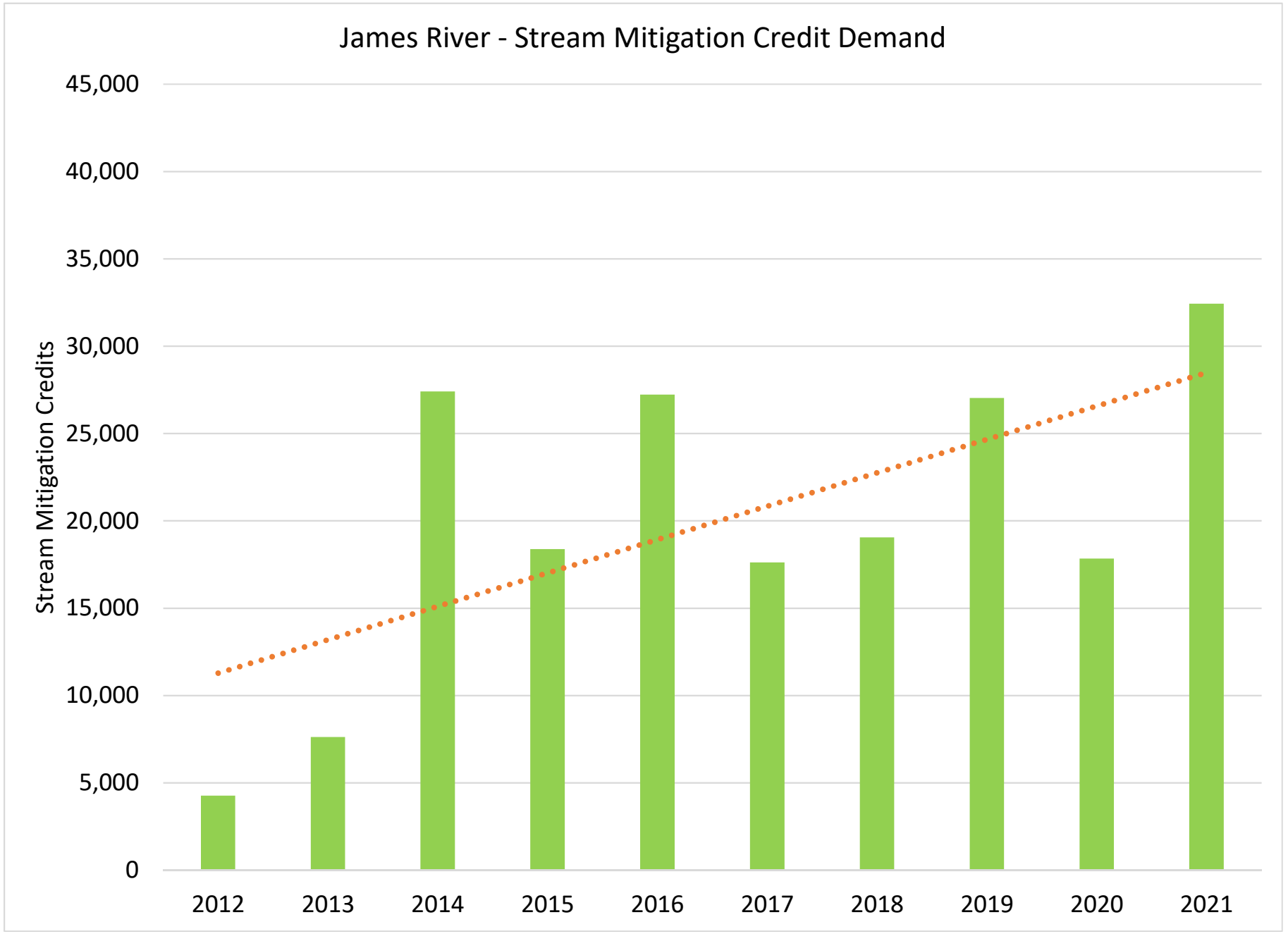

Roanoke River - Non-Tidal Wetland Credit Demand
Non-Tidal Wetland Mitigation Credits
60.00
50.00
40.00
30.00
20.00
10.00
0.00
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

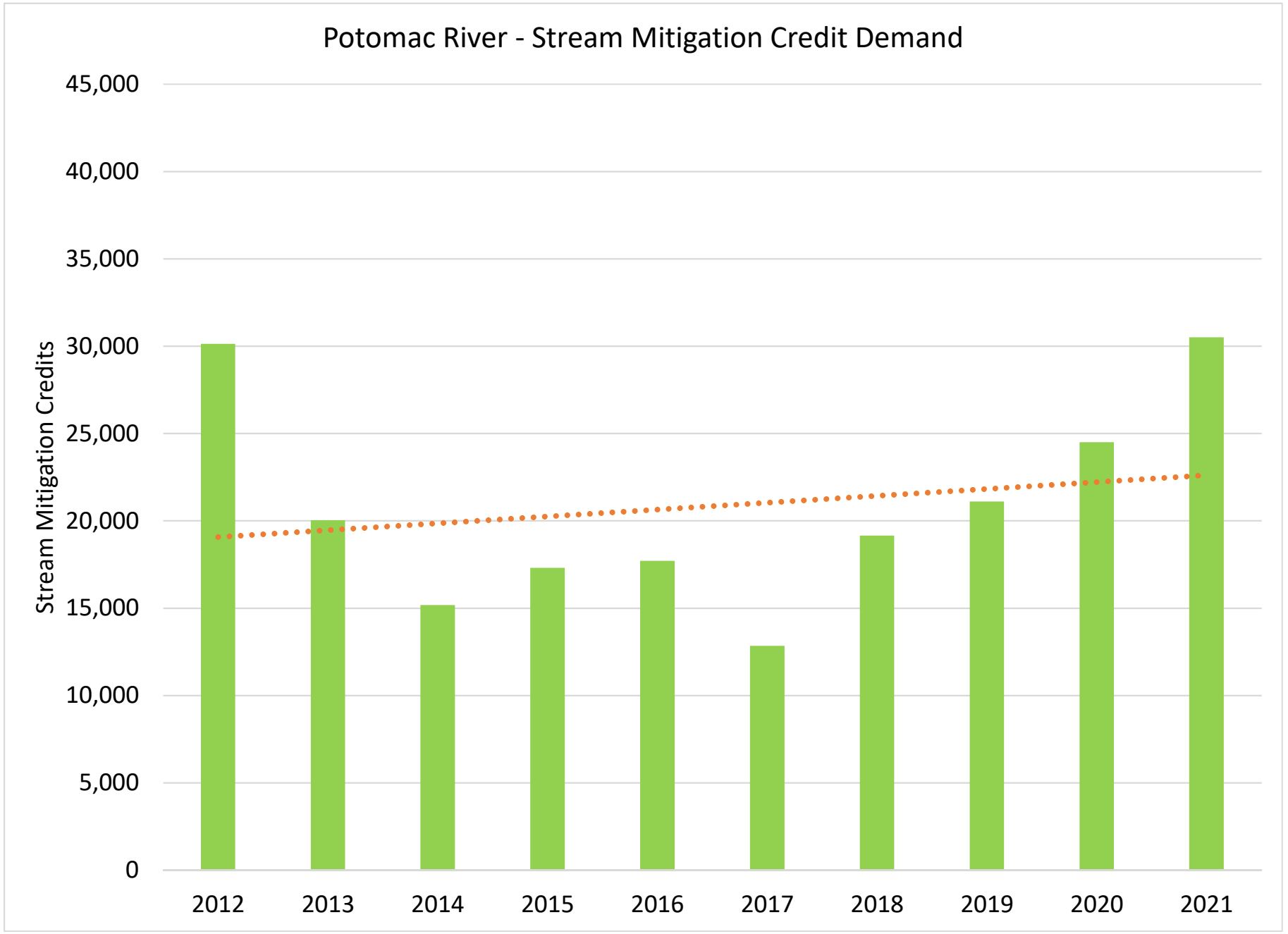

Shenandoah River - Non-Tidal Wetland Credit Demand
Non-Tidal Wetland Mitigation Credits
60.00
50.00
40.00
30.00
20.00
10.00
0.00
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

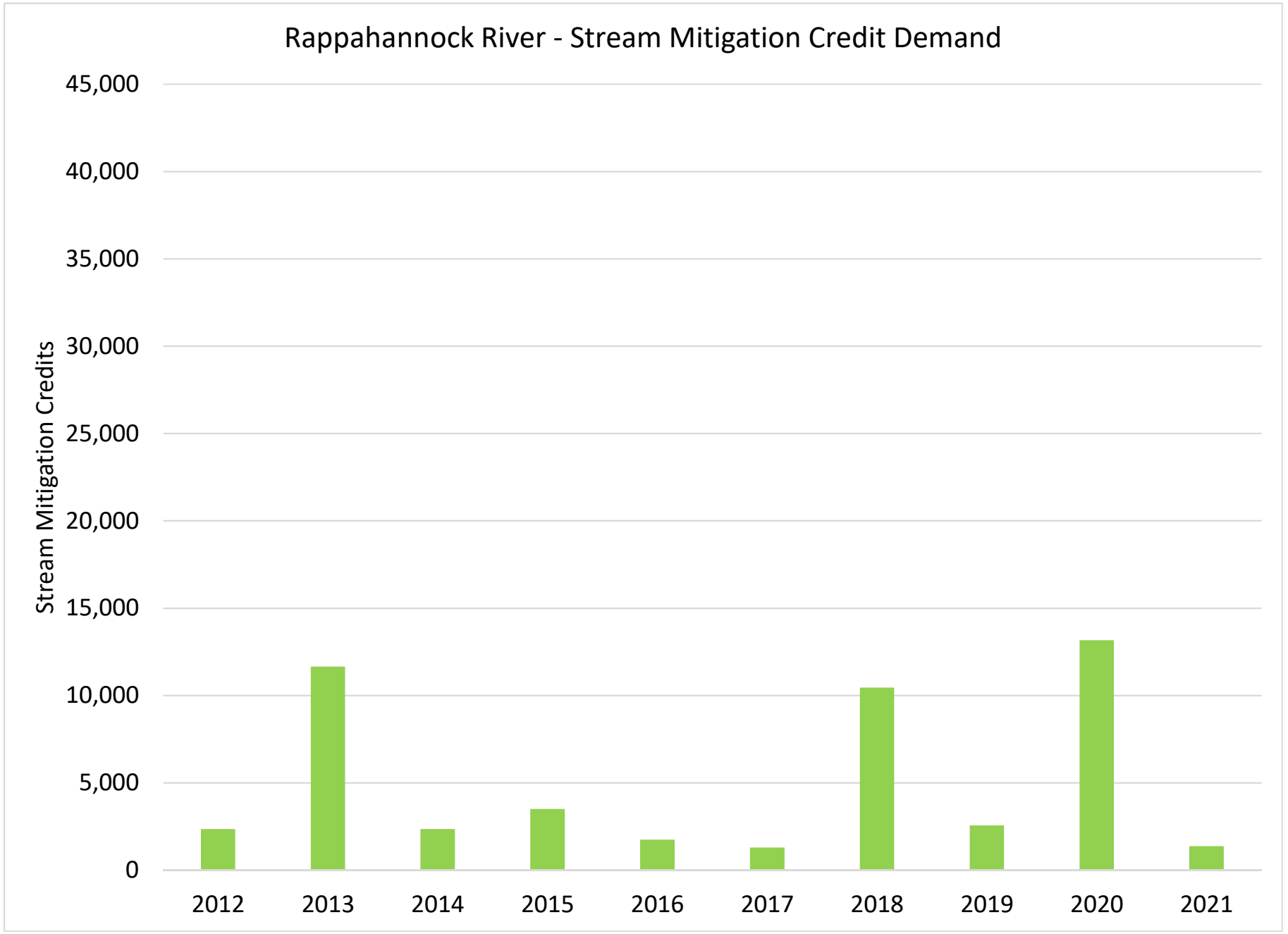

Tennessee River / Big Sandy River - Non-Tidal Wetland Credit Demand
Non-Tidal Wetland Mitigation Credits
60.00
50.00
40.00
30.00
20.00
10.00
0.00
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

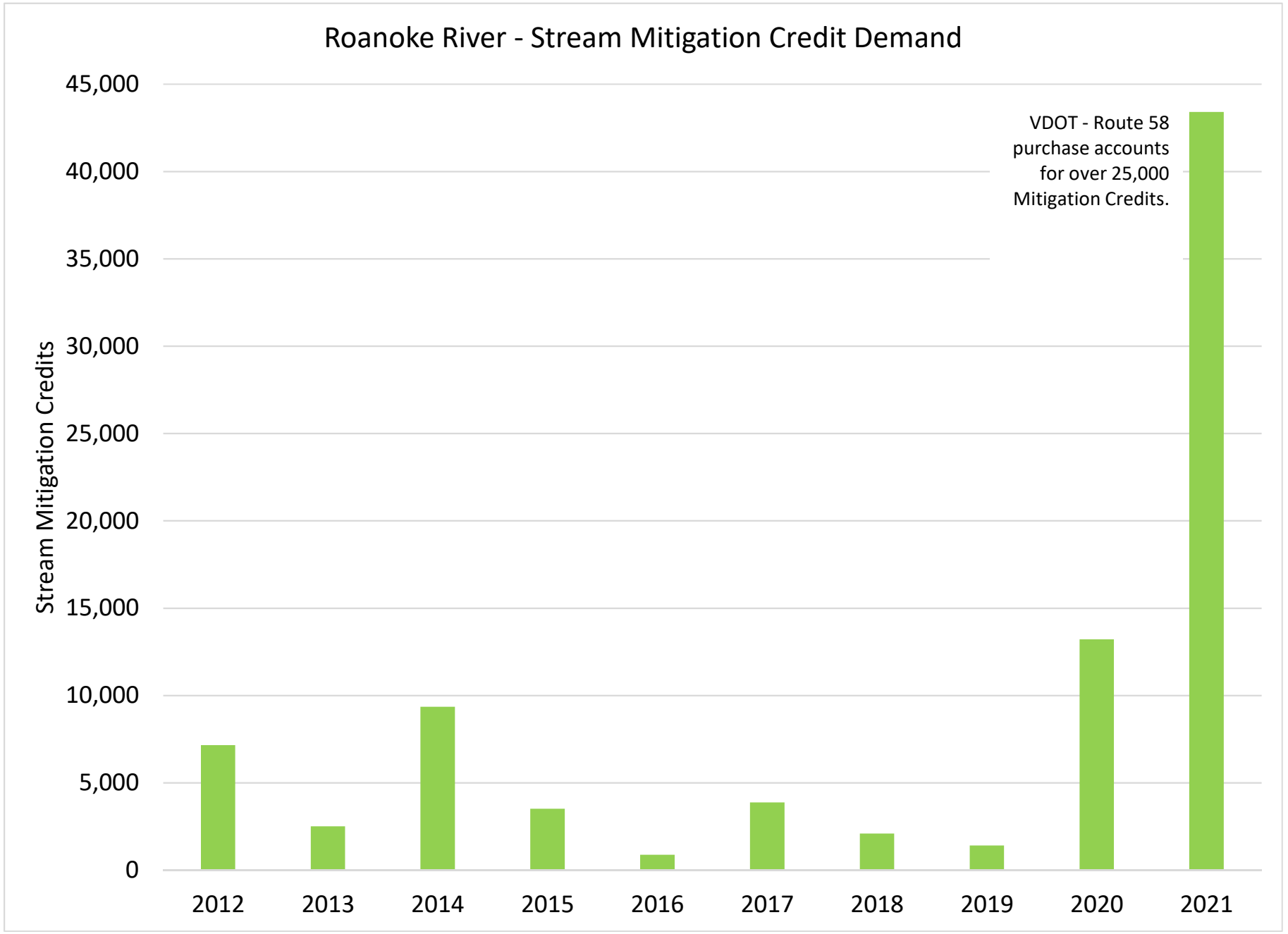

York River - Non-Tidal Wetland Credit Demand
Non-Tidal Wetland Mitigation Credits
60.00
50.00
40.00
30.00
20.00
10.00
0.00
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Wegmans Distribution Center purchase accounts for over 29 Mitigation Credits.

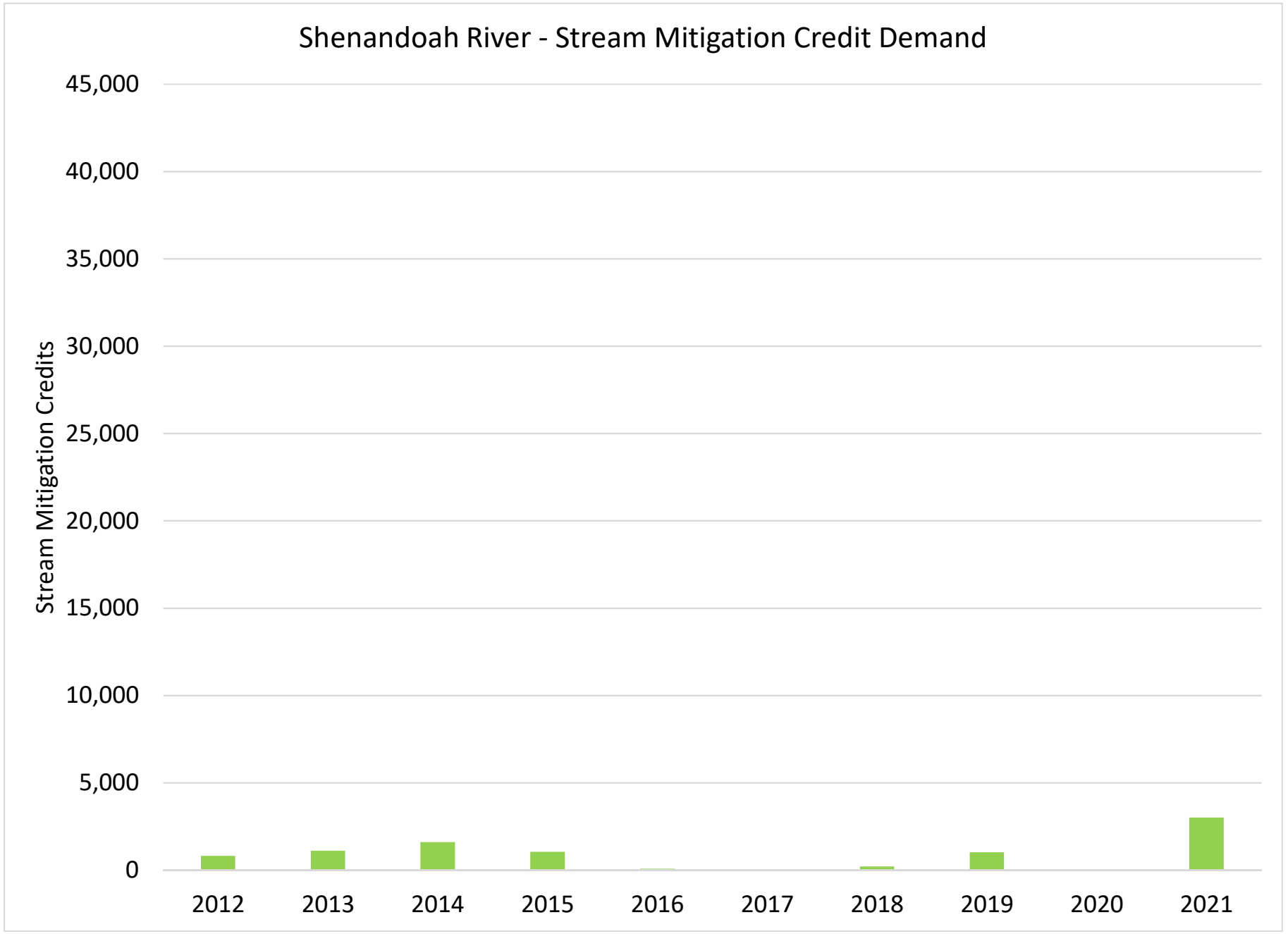

Chowan River / Albemarle Sound - Stream Mitigation Credit Demand
Stream Mitigation Credits
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

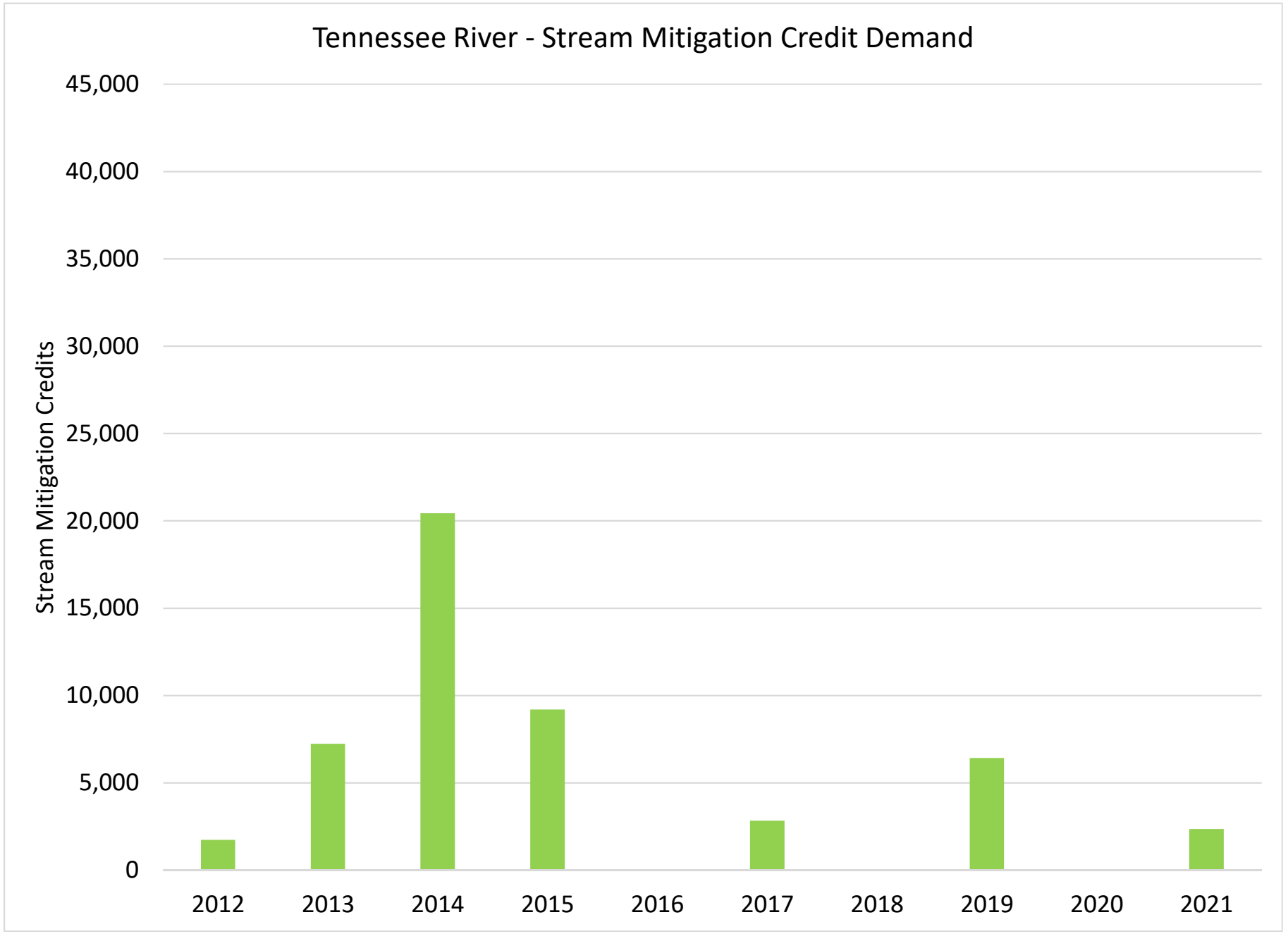

James River - Stream Mitigation Credit Demand
Stream Mitigation Credits
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

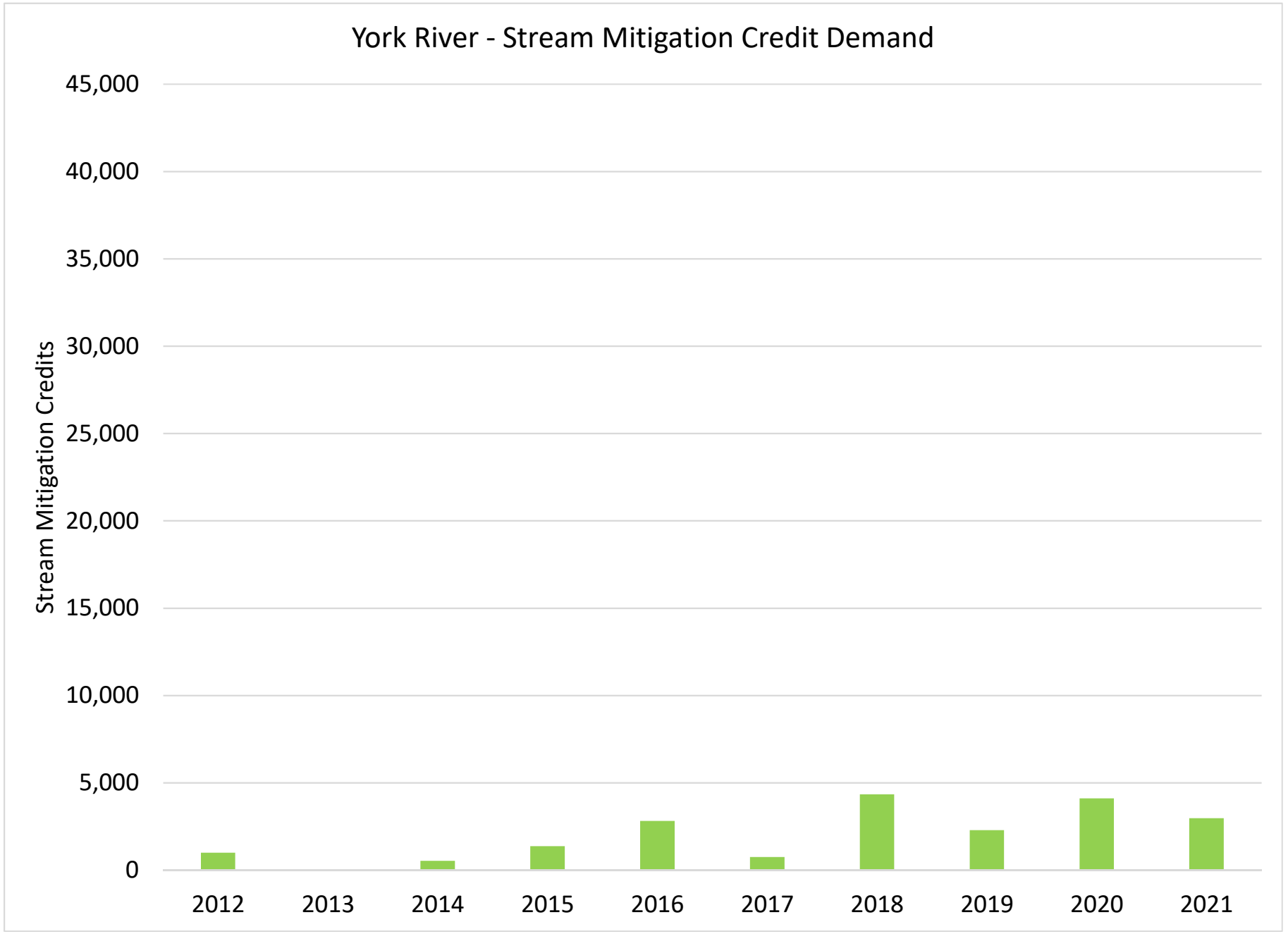

Potomac River - Stream Mitigation Credit Demand
Stream Mitigation Credits
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


Rappahannock River - Stream Mitigation Credit Demand
Stream Mitigation Credits
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

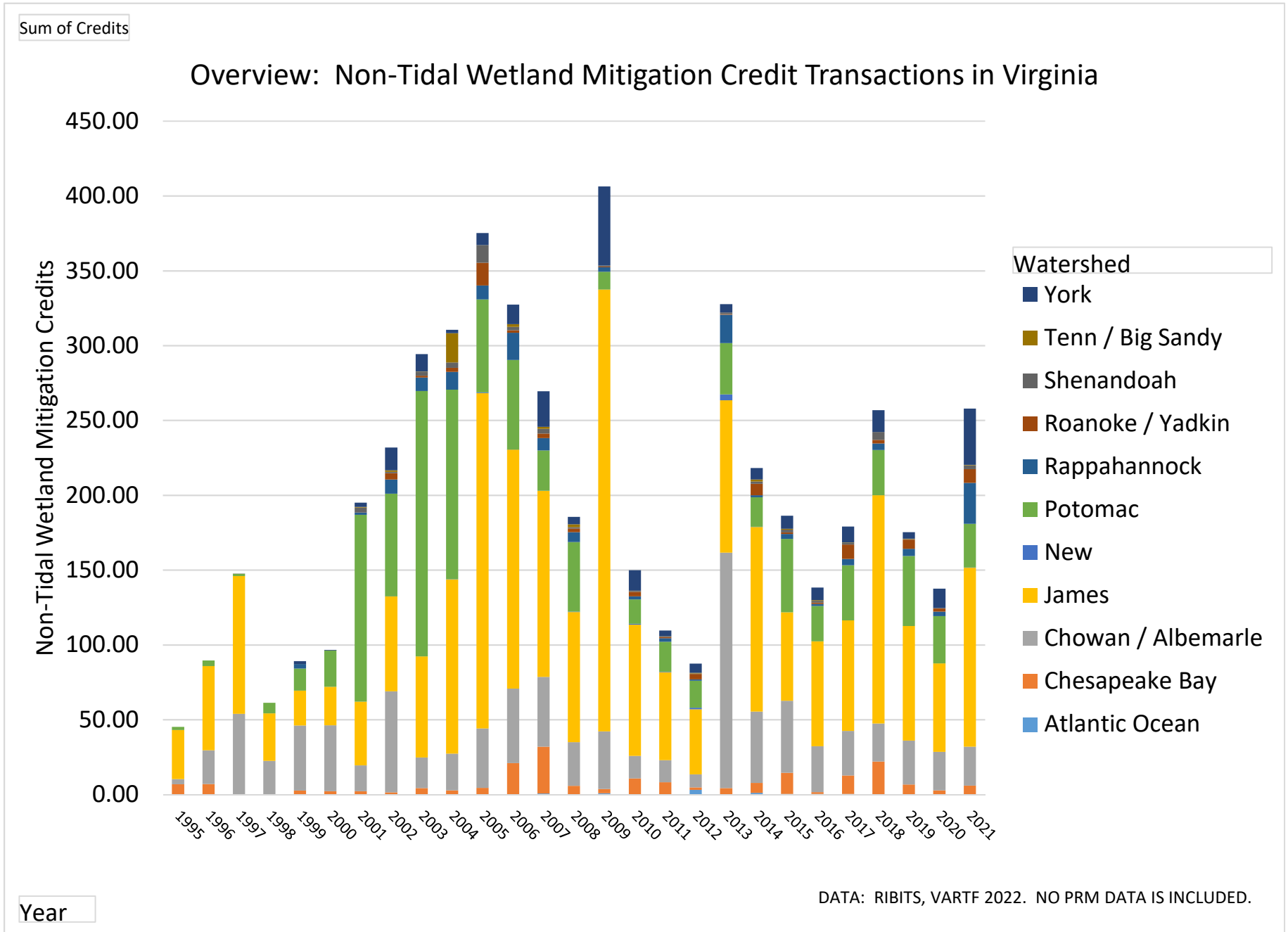

Roanoke River - Stream Mitigation Credit Demand
Stream Mitigation Credits
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
VDOT - Route 58 purchase accounts for over 25,000 Mitigation Credits.
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

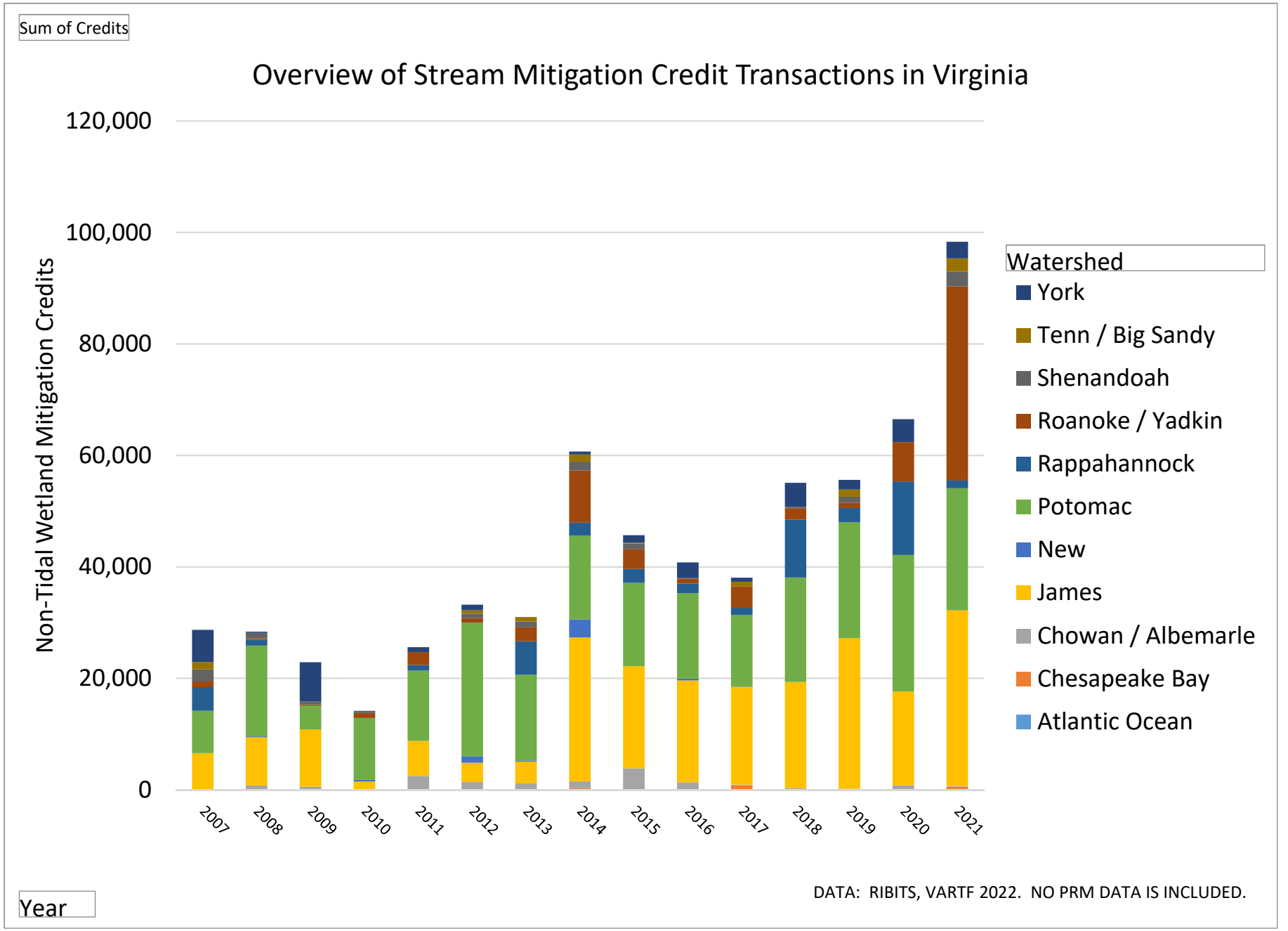

Shenandoah River - Stream Mitigation Credit Demand
Stream Mitigation Credits
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


Tennessee River - Stream Mitigation Credit Demand
Stream Mitigation Credits
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


York River - Stream Mitigation Credit Demand
Stream Mitigation Credits
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

Attachment 2


Sum of Credits
Overview: Non-Tidal Wetland Mitigation Credit Transactions in Virginia
Non-Tidal Wetland Mitigation Credits
450.00
400.00
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Year
Watershed
York
Tenn / Big Sandy
Shenandoah
Roanoke / Yadkin
Rappahannock
Potomac
New
James
Chowan / Albemarle
Chesapeake Bay
Atlantic Ocean
DATA: RIBITS, VARTF 2022. NO PRM DATA IS INCLUDED.


Sum of Credits
Overview of Stream Mitigation Credit Transactions in Virginia
Non-Tidal Wetland Mitigation Credits
120,000
100,000
80,000
60,000
40,000
20,000
0
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Watershed
York
Tenn / Big Sandy
Shenandoah
Roanoke / Yadkin
Rappahannock
Potomac
New
James
Chowan / Albemarle
Chesapeake Bay
Atlantic Ocean
Year
DATA: RIBITS, VARTF 2022. NO PRM DATA IS INCLUDED.

Appendix B: Workgroup Meeting Minutes

Meeting Minutes
Thursday, July 7, 2022

Workgroup to Study Issues Related to Mitigation and Nutrient Credit Programs
DEQ Central Office, Third Floor Conference Room
1111 East Main Street, Richmond, Virginia

Members Present: Phil Abraham, Steven Barrs, Chris Boies, Andrew Clark, , Robert Condrey, Jeff Corbin, John Foote, Brent Fults, Kathy Hoverman, Casey Jensen, Dave Jordan, Mark Killgore, Terry Lasher, Patrick Link (T.J. Mascia and Jennifer Van Houten's alternate), Justin Mackay-Smith, Amy Martin, Serena McClain, Martha Moore, Kelby Morgan, Lisa Ochsenhirt (Justin Curtis's alternate), Tim Owen, Bobby Proutt, Jeanne Richardson, Nikki Rovner, Peggy Sanner, Kyle Shreve, Bill Street, Chris Swanson, Shannon Varner, Brian Wagner, Alan Weaver

Members Absent: Sara Aman, George Bryant, Howard Epstein, Greg Garman, Kirk Havens, Rene Hypes, Adrienne Kotula, Samuel Markwith, Chris Miller, Evan Ocheltree, Randy Owen, Jennifer Perkins, Fritz Schneider, Jeff Waldon

Other Attendees: Zach Jacobs, Karen Johnson, Zach LeMaste, Jon Roller

DEQ Staff Attendees: Brandon Bull, Melanie Davenport, Dave Davis, Sara Felker, Angela Jenkins, Tyler Monteith, Mike Rolband, Hannah Schul, Sarah Woodford

The meeting convened at 9:00 AM. The meeting adjourned at 4:45 PM.

1) Welcome from DEQ Director [Mike Rolband, DEQ]: Mr. Rolband welcomed the workgroup members and thanked them for their participation. He provided an overview of the General Assembly's workgroup directives.

2) Introductions [Angela Jenkins, DEQ]: Ms. Jenkins had the Workgroup members and attending DEQ staff introduce themselves with their respective affiliations. She also reviewed building facilities information and emergency exit procedures.

Workgroup Directive #1 – Supply and Demand for Mitigation Credits

3) Presentation – "Supply and Demand for Mitigation Credits" [Sarah Woodford, DEQ]: Ms. Woodford presented on the current supply and demand for mitigation credits in Virginia based on data from DEQ's CEDS database, the U.S. Army Corps of Engineers' (Corps) Regulatory Banking and In-Lieu Fee Tracking System (RIBITS) database, and in-lieu fee mitigation provider annual reports. Several requests and comments were received during Ms. Woodford's presentation:

    a. Request for graphs depicting the non-tidal wetland demand trend over the last 10 years by river basin

b. The supply presented for "Future Mitigation Credits" are skewed by future mitigation bank phases from approved mitigation banks that will never be built. Also skewed by potential mitigation credits in RIBITS not being updated to reflect as-built mitigation credits after construction.
c. Many older mitigation banks have no requirement to report mitigation credit sales in RIBITS, which skews demand data
d. Large-scale transportation projects skew demand data, making it hard to gauge an annual average demand
e. 3rd Party Mitigation Providers (Sponsors) have no way to indicate or track reserved credits per basin. There is too large a legal liability to regulatory agencies to track reserved credits (in RIBITS, particularly).
f. Wetland and stream mitigation credit demand are likely higher because the numbers presented may not account for all Permittee Responsible Mitigation that occurred.

4) Around the Table Questions [Angela Jenkins, DEQ]: Ms. Jenkins solicited thoughts and questions based upon the following questions:

What is the current and projected demand for wetland and stream mitigation credits by public and private entities?

What are your recommendations for legislative and regulatory changes to increase the supply of wetland and stream mitigation credits and reduce volatility in the price of mitigation credits?

Questions and comments raised by the workgroup members and DEQ staff included:

a. How can the time it takes to release credits be tracked? Answer: DEQ's forthcoming Permit Enhancement and Evaluation Platform (PEEP) may track this time period
b. RIBITS does not accurately portray mitigation credit availability.
    i. Mitigation credit reservation is not tracked.
    ii. RIBITS operates off the best information available.
    iii. Would the mitigation banking community be willing to deduct or show reserved mitigation credits for a more accurate picture?
        1) Sponsors not willing because reserved credit sales are not guaranteed yet
        2) Several other members indicated general hesitancy to share reserved mitigation credit information
        3) Corps indicated reserved mitigation credit information will not be tracked in RIBITS, too large of a legal liability for the regulatory agency.
        4) Future phases may never be built
c. Economic factors of supply for Sponsors include funding the mitigation bank upfront and not seeing a return on investment until mitigation credits are released
d. How can mitigation banks receive mitigation credit releases sooner?
    i. Answer: The Corps' Regulatory Guidance Letter (RGL) 19-01 allows for accelerated mitigation credit releases. These accelerated releases have been implemented in the Potomac River watershed so far. Pricing in the Potomac allows Sponsors to absorb the cost of required financial assurance mechanisms.

e. Discussion of potential ways to increase supply.
    i. Industrial sites such as Superfund sites to convert to wetlands
    ii. Need different ways to generate mitigation credits because running out of land
    iii. There is competition with nutrient banking
    iv. Expand Geographic Service Areas so watersheds with higher demand can purchase mitigation credits from further away?
        1) Goal is to restore ecological functions and services near where the impacts occur as a basic regulatory concept
f. Potential development of a commodity market
    i. Improve system to be more efficient and transparent
    ii. Need a system to provide mitigation credit availability information to permittees and sponsors
    iii. Sponsors provide mitigation credit availability letters to permittees, but permittees are not bound and can buy mitigation credits from another bank or sponsor
        1) Could Sponsors make mitigation credit availability letters contractual?
        2) Some Sponsors have expiration dates on letters, some don't.
g. Potential development of a public/private partnership mitigation credit information platform
    i. High number of permittees
    ii. Could it be required or be voluntary?
    iii. Could show permittees real time mitigation credit information
    iv. Could be created and driven by sponsors
h. Land availability is a huge issue
    i. No longer 100+ acre sites available, now smaller acre sites
    ii. Need to find ways to lower costs to make smaller sites viable
    iii. Demand is increasing
i. Propose other ways to generate mitigation credits?
    i. Rare, Threatened, and Endangered Species Adjustment Factors available according to the Unified Stream Methodology (USM) for stream mitigation credits.
    ii. Also discussed by Interagency Review Team for wetland mitigation
j. Can the long-term release of mitigation credits be shortened?
    i. Sponsors would see return on investment sooner, more economically feasible
    ii. Abbreviated release schedule?
    iii. If all mitigation credits are released, regulatory agencies have no leverage if there are performance or non-compliance issues, except for financial assurance mechanisms
k. Financial assurance (FA) mechanisms
    i. Basing the FA on the cost of replacement mitigation credits is too high in high demand basins
    ii. If a project is meeting performance, why are financial assurances needed?

iii. How big of a problem is mitigation bank failure? Looking at historical data of closed mitigation banks, in how many years did the mitigation banks meet 100% performance?
iv. FA money could be spent on ecological improvements instead
v. Sponsors take on full liability
vi. DEQ's obligation is to the statute of no net loss

l. Reducing stream and wetland buffer width requirements, as a way to increase mitigation credit supply
i. Discussed at June 2022 3rd Party Mitigation Providers Meeting hosted by DEQ and the Corps
ii. Reduced buffer is an easier sell to land owners, could open up more site opportunities
iii. Nutrient banks only require 35 feet
iv. Buffers in valleys can be tight

<u>Workgroup Directive #2 – Incentivizing Dam Removal Projects in Virginia</u>

5) Presentation – "Incentivizing Dam Removal Projects" [Sarah Woodford, DEQ]: Ms. Woodford presented on Geographic Service Areas for wetland and stream mitigation according to the current Code of Virginia. She presented maps of wetland and stream mitigation river watersheds, the physiographic provinces of Virginia, and the Hydrologic Unit Code map of Virginia. Example Service Area maps in the James River and Potomac River watersheds were presented.

6) Around the Table Questions [Angela Jenkins, DEQ]:

What methods are in place or could be developed for promoting the removal of obsolete dams and significant river obstructions by the private sector that maximize the input of private capital and minimize the need for public funding to facilitate the removal?

What are your recommendations regarding the extent to which there is a scientific basis from a water quality and fish benefit perspective to expand existing service area limitations for mitigation credits generated by the removal of obsolete dams and significant river obstructions?

What are the potential impacts for local and Chesapeake Bay water quality, ecological services, and fisheries as a result of the removal of such obsolete dams and significant river obstructions?

What innovative dam removal partnerships and incentives are used in other states?

Questions and comments raised by the Workgroup members and DEQ staff included:

a. Original proposed legislation from Sponsor of the proposed South Anna River at Ashland Mill Dam Mitigation Bank (AMD) seeking different service area for large-scale dam removal projects generating stream mitigation credits.

i. AMD is a high priority dam removal within the Chesapeake Bay watershed, according to several major ranking systems for dam removal projects.
ii. AMD is located in a high supply, low demand watershed (York River)
iii. Proposed bill would allow dam removal projects on a 4th order or higher stream to have the Service Area as currently allowable by the Code (York River) as well as the adjacent river watersheds (James River and Rappahannock River) upstream from the Chesapeake Bay to the first significant impediment to fish passage. Permittees in the adjacent river watersheds could use up to 75% stream mitigation credits from the AMD mitigation bank to cover mitigation requirements. The remaining 25% would need to be obtained from a mitigation bank in the river watershed of the impact. Permittees would be have to buy 1.5 times the number of mitigation credits otherwise required by their permits.

b. Department of Wildlife Resources (DWR) supports dam removal for ecological benefits to anadromous fish, including American eel and shad
c. Does dam removal in the York River watershed enhance all stream functions in the Rappahannock or James Rivers?
    i. Does not satisfy no net loss
    ii. Adding adjacent watershed has overall benefit to Chesapeake Bay (ecological benefits, not physical)
    iii. Research shows that most fish return to their stream of origin, but about 6% may stray into adjacent river watersheds.
d. Allowing expanded Service Areas for dam removal alone is unfair to other wetland and stream mitigation Sponsors. Dam removal should follow the rules all Sponsors follow.
e. All trading programs need to protect local watersheds as well as the Chesapeake Bay. If the Service Area is expanded in one program, would that lead to expansion in other areas?
f. Science supports dam removal as providing more ecological uplift than a local, traditional stream restoration project. Lentic ecosystem to lotic ecosystem.
g. To attract private funds for dam removal, could consider public/private partnership to use available federal infrastructure money
h. Landowner permission is a large hurdle for dam removal. Need cooperation/permission and incentives for removal. Dam owner education across agencies could be beneficial
i. DCR Dam Safety Program options for obsolete dam owners include lowering the dam, removing it, or bringing it to code
j. Is there research showing dam removal has been successful for anadromous fish?
    i. DWR cited research on shad from the Virginia Institute for Marine Science indicating removal provides a small population recovery
    ii. Dam removal means no restriction to potential habitat
k. Dam removal results in thermal impacts, sedimentation downstream, buffer stabilization
l. Incentives for dam removal?
    i. Use public money for removal, private money to monitor, and a partnership for long term management
    ii. Need financial incentives for dam owners

iii. One current incentive is through mitigation crediting
iv. Regulatory agencies have less flexibility to incentivize within trading programs

m. What is the proposed monitoring duration for dam removal?
    i. Answer: Ten years is proposed for the AMD bank with renegotiation after 5 years
n. Species banking was discussed
    i. For mitigation banking, tie back to no net loss of stream functions for permanent stream impacts. Rare, Threatened, and Endangered Species mitigation credits are available within USM.
    ii. Other species credits were discussed.
    iii. Potential for anadromous fish passage impacts in other programs to use AMD mitigation credits as compensation for these projects?
o. Site protection impossible on a large river
    i. Too many landowners
    ii. Huge land area
    iii. Potential for another dam to be put in upstream in the future? Agencies provide checks to keep from happening

<u>Workgroup Directive #3 – Nonpoint Source Nutrient Trading Service Areas and the Conversion of Agricultural Lands</u>

7) Presentation – "Introduction to Nonpoint Source Nutrient Trading Service Areas and the Conversion of Agricultural Lands" [Sara Felker, DEQ]: Ms. Felker presented data on the nonpoint source nutrient trading program, including bank locations, acreage by county, and information on the use of credits by 8-Digit HUC.

8) Around the Table Questions [Angela Jenkins, DEQ]:

To what extent are nutrients being generated through the conversion of important, prime, or unique farmland?

Questions and comments raised by the Workgroup members and DEQ staff included:

a. An ask was made to compare acreages of unique, prime, and important farmland to acreages of converted acres under the NPS trading program by overlaying the conversion bank areas with the mapped areas of unique, prime, and important agricultural lands. Further analysis will require better maps of bank conversion areas that bank sponsors may be able to provide.
b. One workgroup member noted a current mapping effort to identify converted agricultural land, prime farmland, and important farmland throughout the state that could be of use to the workgroup.
c. One workgroup member noted that 36% of the parcels converted for nutrient credits in Clarke County were considered prime, important, or unique farmland, compared with 24% of the county itself considered prime, important, or unique farmland.

d. Several members expressed their anecdotal experience is that less valuable farmland is typically converted.
e. Others in the group felt that the analysis of this historical data is not helpful for the future direction of the program due to revised land conversion rates and general shift away from land conversion activities under the program.
f. Several members, including representatives from Clarke County, voiced concerns that a disproportionate amount of prime, important, or unique acres of agricultural land are being converted under the nutrient trading program. They expressed a desire to remain an agricultural community and believe that land use decisions in northern Virginia are negatively impacting the retention of farmland in adjacent communities. Members were also concerned that a future supply shortage of nutrient credits could once again make land conversion activities viable in the county again even with the revised nutrient crediting rates.

What are the potential impacts of restricting the generation of credits on any parcel of important, prime, or unique farmland acquired for generating credit?"

a. The group expressed general concern with attempting to have localities dictate whether they are allowed to convert agricultural land for generating nutrient credits under the program.
b. Questions were raised on whether this is an important discussion to have if it is not as economically advantageous to convert agricultural land under the programs revised land conversion nutrient crediting rates.
c. Several people requested finer-scale data on farmland classification.
d. The group questioned whether the language in the proposed amendment would also restrict the development of other stream restoration projects in rural counties.
e. Rather than a complete restriction, members proposed that there be a maximum percentage of an agricultural parcel for conversion.
f. Members referenced ranking data used by other governmental agencies to assess the relative importance of farmland for funding programs and suggested this data may be used for analyzing land conversion applications.

What would the effect be of requiring credit purchases from the same HUC, if available, before looking at adjacent HUCs?

a. The group asked if nutrient service areas could be expanded to allow areas of high development to purchase nutrient credits from a greater area.
b. A request was made that the program look into separating the Shenandoah and Potomac watersheds to be two separate tributaries as opposed to them being combined as they are now.
c. Members expressed concern on how this would impact existing nutrient banks that were established under the previous requirements.
d. There were questions about the usefulness of such restrictions given the impacts of recently enacted local water quality restrictions.

Are there other changes in the nutrient credit trading regulations and/or underlying statutory authority to reduce the loss of important, prime, or unique farmland?

a. Incentivize other practices, such as wetlands restorations or targeting the conversion of pastureland/sub-prime agricultural land, to shift the focus away from prime, important, or unique farmland? Shoreline restorations were also mentioned as a viable alternative. Members suggested a "multiplier" be included to increase or reduce the number of nutrient credits to generate, similar to the Unified Stream Methodology mitigation credit methodology discussed in an earlier discussion. Others voiced their opinion that this shift was already occurring and did not need to be further incentivized.
b. Is it possible to place limitations on agricultural property purchases when the intent is to enroll the property as a nutrient bank? Would this just shift the business model to "easement" agreements where the existing farmer maintains ownership to avoid the requirement?
c. Would increasing financial incentives to farmers to keep land in active agriculture prevent land use conversions?
d. Allow localities to make a finding that this program is hurting their economy and restrict the nutrient trading program. If a finding is made that a locality was disproportionately losing farmland, allow nutrient credit purchasers to use nutrient credits from an expanded service area and/or restrict nutrient credits from the impacted locality.
e. Some members of the group expressed a possibility of giving localities more authority on property uses. Some of the ideas included conditional use permits for all land activities or laws that allow localities to restrict nutrient bank creation. It was suggested that a Commonwealth attorney review the existing laws to determine whether localities could restrict nutrient bank creation under current law.

9) Next Steps

a. Next Workgroup meeting Monday, August 8, 2022
b. Draft meeting minutes will be distributed

Meeting Minutes
Monday, August 8, 2022

Workgroup to Study Issues Related to Mitigation and Nutrient Credit Programs
DEQ Central Office, Third Floor Conference Room
1111 East Main Street, Richmond, Virginia

Members Present: Chris Boies, Andrew Clark, Mike Collins (Jeff Waldon's alternate), Robert Condrey, Jeff Corbin, Justin Curtis, John Foote, Kathy Hoverman, James Hutzler, Rene Hypes, Casey Jensen, Dave Jordan, Adrienne Kotula, Terry Lasher, Patrick Link (T.J. Mascia & Jennifer Van Houten's alternate), Justin Mackay-Smith, Amy Martin, Martha Moore, Kelby Morgan, John Olenik (Chris Swanson's alternate), Erin Reilly (Bill Street's alternate), Jeanne Richardson, Nikki Rovner, Peggy Sanner, Kyle Shreve, Sarah Thomas (Phil Abraham's alternate), Shannon Varner, Alan Weaver, Charles Wilson

Members Absent: Sara Aman, Steven Barrs, George Bryant, Howard Epstein, Brent Fultz, Greg Garman, Kirk Havens, Mark Killgore, Samuel Markwith, Serena McClain, Chris Miller, Evan Ocheltree, Tim Owen, Randy Owen, Jennifer Perkins, Bobby Proutt, Fritz Schneider

Other Attendees: Cecilia Boyd, Jim Eisenhardt, Karen Johnson

DEQ Staff Attendees: Brandon Bull, Melanie Davenport, Dave Davis, Sara Felker, Tyler Monteith, Hannah Schul, Sarah Woodford

The meeting convened at 9:00 AM. The meeting adjourned at 4:15 PM.

1) Welcome from the Director of Water Permitting Division [Melanie Davenport, DEQ]: Ms. Davenport welcomed the workgroup members and thanked them for their participation in the second workgroup meeting.

2) Introductions [Melanie Davenport, DEQ]: Ms. Davenport had the workgroup members and attending DEQ staff introduce themselves with their respective affiliations. She also reviewed the building facilities information and emergency exit procedures.

Workgroup Directive #3 – Retiring Farmland for Nutrient Credits and Nutrient Service Area Revisions

3) Introduction [Sara Felker, DEQ] – Ms. Felker gave an overview of the content discussed at the previous workgroup meeting on July 7, 2022, as well as a reminder of the three workgroup directives the group was tasked with.

4) Around the Table Questions [Sara Felker, DEQ]:

   Questions and comments raised by the workgroup members and DEQ staff included:

   What are the potential impacts of restricting the generation of credits on any parcel of important, prime, or unique farmland acquired for generating credit?

a) Some members expressed concern that there is not yet enough data readily available to answer this question.
    i) HB 894 was mentioned, which should result in the creation of a map or repository of prime farmland in the Commonwealth led by the Virginia Department of Agricultural and Consumer Services (VDACS), with an initial report expected by December 1, 2022. Recommendations were also made regarding the importance of ground-truthing the data if limiting the inclusion of prime agricultural land in the nutrient trading program is being considered, while others were concerned with using this dataset as the basis for decisions without reviewing it first.
    ii) It was also recommended that a definition for prime agricultural lands be standardized across programs throughout the Commonwealth. HB 206 was referenced as a good basis, where "Prime Agricultural Soils" are defined as "Soils recognized as prime farmland by the US Department of Agriculture…" This was further defined as Class I and II soils. Others noted additional complications for how to categorize crop to hay land conversion activities, since the land would still remain in agricultural production. The group also noted that the designations for "Unique" and "Important" agricultural lands were too broad in definition and scale to be included for limiting land conversion activities.
b) Comments were made to make it clear that this workgroup should focus on land conversion activities. Incidental land conversion, including the 35-foot riparian buffer requirements for stream restoration practices, should not be considered as part of these discussions. HB 1283 was noted to focus on land conversion activities, but that this further clarification could be made.
c) Concerns were raised about what the potential effects of limiting prime agricultural land conversion activities could be on credit supply and credit prices.
d) In Maryland's program the state designates prime farmland based on site-specific evaluations. If determined that part of the property contains prime agricultural land then land conversion would be limited.
e) Various workgroup members expressed the following concerns: land conversion affects communities and the impacted localities should have additional authority to restrict enrollment in the program; property owners should be able to decide what they do on their own property; and there shouldn't be a government program incentivizing land conversion.

What would the effect be of requiring credit purchases from the same HUC, if available, before looking at adjacent HUCs?

a) A suggestion from the previous workgroup meeting to separate the Shenandoah and Potomac watersheds into separate tributaries was discussed. It was mentioned that the two are combined now to match the Virginia Pollutant Discharge Elimination System (VPDES) permit requirements and would require a change to § 62.1-44.15:35.
b) Concerns were raised for how the program would handle potential trade restrictions by HUC for banks that are already approved. It was recommended that banks be grandfathered to their current service areas.

Are there other changes in the nutrient credit trading regulations and/or underlying statutory authority to reduce the loss of important, prime, or unique farmland?

a) Representatives from VDOT and the home builders association expressed concern that any change in market requirements would increase costs, which would be passed on to the public.

b) There were multiple questions about the ability of localities to implement their own permitting requirements for nutrient banks. Concern was expressed that localities cannot regulate nutrient trading without express direction from the legislature. Some were concerned that a statewide program could be changed by local ordinances while others expressed a desire for local regulation.
c) A recommendation was made to divide the workgroup members into the categories of agricultural conservationists, land developers, and the nutrient banking community in order to develop a set of recommendations from each group. This was recommended due to the varying viewpoints held by each group regarding the limiting of land conversion activities, and how those unique perspectives will limit the ability to reach consensus for the workgroup as a whole. The recommendations from each category can then be shared with the General Assembly.

5) The following items were tested for consensus:
   a) There should be a consistent definition of prime agricultural soils across programs for the purposes of mapping. Specifically "prime agricultural soils" should be defined as it is in HB206: "soils recognized as prime farmland by the U.D. Department of Agriculture…" (which refers to Class I and II soils).
      (1) Fully Support - 16
      (2) Do Not Fully Support But Do Not Oppose - 9
      (3) Opposed - 0
   b) Any legislation addressing land conversion for nutrient credit generation should be limited to agricultural to forest land conversion. Forest land conversion does not include stream restoration projects and associated buffers.
      (1) Fully Support - 14
      (2) Do Not Fully Support But Do Not Oppose - 6
      (3) Opposed - 0
   c) Restricting the conversion of prime agricultural soil lands to forest for the purpose of generating nutrient credits could: reduce supply and increase the price of nutrient credits, allow for the preservation of land with prime soils for non-silviculture agricultural use, and the impacts cannot be quantified until a prime agricultural soils map is created per HB 894.
      (1) Fully Support - 19
      (2) Do Not Fully Support But Do Not Oppose - 2
      (3) Opposed – 0

<u>Workgroup Directive #1 – Supply and Demand for Mitigation Credits</u>

6) Introduction [Sarah Woodford, DEQ] – Ms. Woodford gave an overview of the content discussed at the previous workgroup meeting on July 7, 2022, as well as a reminder of the workgroup directives the group was tasked with.

7) Ms. Woodford asked workgroup members whether they wanted DEQ to discuss the agenda attachments (graphs depicting historic mitigation credit demand and credit sales in Virginia). No workgroup members wanted to review the attachments.

8) Around the Table Questions [Sarah Woodford, DEQ]:

What is the current and projected demand for wetland and stream mitigation credits by public and private entities?

What are your recommendations for legislative and regulatory changes to increase the supply of wetland and stream mitigation credits and reduce volatility in the price of mitigation credits?

Questions and comments raised by the workgroup members and DEQ staff included:

a) The potential for a mitigation credit commodity market was discussed. DEQ staff stated that they met with Director Rolband, who is very interested in creating the commodity market. A stakeholders meeting may be established in the future, likely a year away.
b) Legislation was previously approved to expand service areas (2021) to increase competition and the number of banks, as well as expediting bank approvals. This legislation has led to a number of requests and approvals for service area expansions.
c) The previously proposed legislation (2022) would have removed the requirement to look for available mitigation credits within a Primary Service Area to serve impacts before going to available mitigation credits within a Secondary Service Area to serve impacts. One workgroup member mentioned that this does no good if there are no approved mitigation banks with credits available. DEQ questioned whether it was appropriate to remove this requirement, given that the change would be at odds with other permitting requirements for in-kind mitigation and guidance for "ecologically and environmentally preferable" mitigation options, which must take into account proximity of a given mitigation site to project impacts.
d) The Wetland and Stream Replacement Fund established under Code of Virginia was discussed. DEQ and U.S. Army Corps of Engineers (Corps) staff identified issues with the language of the Code that established the Fund, which directly conflicts with the Corps' and EPA's 2008 Final Mitigation Rule. Therefore, the Fund cannot be implemented without a change in the Code. Other concerns raised by DEQ staff included questions regarding who would implement the projects, avoiding conflict of interest, providing adequate funding or budget for program operation, and need for additional staff. One workgroup member stated that this seemed like a more long-term solution. Another workgroup member stated that DEQ may not want to prioritize this potential solution over other potential work and solutions to increase mitigation credit supply.
e) Regarding Mitigation Banking Instruments, workgroup members stated they support accelerated credit releases. They suggested decreasing buffer width requirements or increasing credit yields to make banks more feasible financially. Buffer width requirements were discussed at the June 2022 3rd Party Compensation Providers Meeting. This issue may also come up at the September 2022 3rd Party Mitigation Providers Meeting, where a new Mitigation Monitoring Report Template will also be presented to increase monitoring report review efficiency.
f) Workgroup members discussed increasing advance mitigation credits for the Virginia Aquatic Resources Trust Fund (an in-lieu fee mitigation program operated by The Nature Conservancy). DEQ discussed that this has been done several times over the last couple years, in river watersheds with high credit demand, and may be done again.

g) Workgroup members raised the idea of selling excess mitigation credits from projects. There are several ways that this does happen in the current mitigation program (i.e. permittee may utilized unused mitigation credits from another one of their permits, permittee may sell mitigation credits back to the mitigation bank or site). For the permittee to be able to sell them to another permittee specifically, there would need to be a commodity market established.
h) Turning mitigation credits from permanent to term credits was discussed. Several DEQ staff pointed out that Code of Virginia and Virginia Administrative Code state there must be permanent no net loss, and term credits would not be compatible with this statutory requirement.

<u>Workgroup Directive #2 – Incentivizing Dam Removal Projects in Virginia</u>

9) Introduction [Sarah Woodford, DEQ] – Ms. Woodford gave an overview of the content discussed at the previous workgroup meeting on July 7, 2022, as well as a reminder of the workgroup directives the group was tasked with.

10) Around the Table Questions [Sarah Woodford, DEQ]:

What methods are in place or could be developed for promoting the removal of obsolete dams and significant river obstructions by the private sector that maximize the input of private capital and minimize the need for public funding to facilitate the removal?

What are your recommendations regarding the extent to which there is a scientific basis from a water quality and fish benefit perspective to expand existing service area limitations for mitigation credits generated by the removal of obsolete dams and significant river obstructions?

What are the potential impacts for local and Chesapeake Bay water quality, ecological services, and fisheries as a result of the removal of such obsolete dams and significant river obstructions?

What innovative dam removal partnerships and incentives are used in other states?

a) One Workgroup member clarified that thermal impacts might be changed to "thermal changes" for dam removal projects, because the temperature changes are usually mostly beneficial. Additionally, workgroup members indicated that sedimentation may occur downstream with or without dams, and potential sedimentation issues during dam removal are usually short term.
b) The workgroup discussed the potential to expand the mitigation service area for 4th order or higher streams for dam removal projects generating stream mitigation credits. Several members spoke about how dam removal provides benefits to the entire river system, not just the removal location.
c) One workgroup member asked whether the Unified Stream Methodology (USM) calculation of compensation requirements currently takes into account the proximity to impacts, and requires more compensation if in an adjacent river watershed. DEQ answered that USM does not take into account adjacent river watersheds, however, there was a multiplier in the previously proposed legislation for dam removal projects that was intended to have that effect.

d) One workgroup member asked if there were incentives for dam removal projects through mitigation crediting. DEQ answered that the USM includes the ability to grant Adjustment Factors on a site specific basis, such as cattle exclusion, watershed preservation, and rare, threatened and endangered species protection. Other adjustment factors may be created. For example, adjustment factors for proposed dam removal projects have been discussed, including for RTE species, anadromous fish passage, priority dam removals, water quality, etc.

e) Regarding species credits (non-mitigation credits), DEQ staff raised the question as to who would require compensation for species impacts. Would a species banking program be under DEQ or the Department of Wildlife Resources (DWR)? Would DEQ have to change permitting based on Threatened and Endangered Species impacts, including Time of Year Restrictions? There is potential for new legislation for a species banking program. DWR would still adhere to a Time of Year Restriction for anadromous fish, to avoid impacts, so the potential demand for anadromous fish species credits may be low.

f) Existing examples of innovative dam removal partnerships were discussed, including:
    a. Example: The Bloede Dam Removal had partnerships with the Maryland Department of Transportation, National Oceanic and Atmospheric Administration (NOAA), American Rivers, Maryland Department of Natural Resources, etc.
    b. Federal government grant funds partnered with matching private funds, these projects have pro-rating of mitigation credits
    c. Agencies that have involved or implemented public/private partnerships for dam removal: the Federal Emergency Management Agency (FEMA), NOAA, and the Federal Energy Regulatory Commission (FERC)
    d. Natural Resources Damage Assessment (NRDA) process
    e. Agreements for fish passage on hydropower dams
    f. One workgroup member pointed out that these are not necessarily innovative, only current practice. Public/private partnerships are the current way to get dams removed.

g) Need for incentivizing dam removal included dam owner education regarding their liability for dams on their property

11) The following item was tested for consensus:

a) Dam removal provides ecological benefits within the river watershed where the dam is located and those benefits outweigh the potential ecological impacts.
    1) Fully Support - 19
    2) Do Not Fully Support But Do Not Oppose - 2
    3) Opposed – 0

<u>Next Steps</u>

a) Next Workgroup meeting Tuesday, August 30, 2022

b) Draft meeting minutes will be distributed

Meeting Minutes
Tuesday, August 30, 2022

Workgroup to Study Issues Related to Mitigation and Nutrient Credit Programs
DEQ Piedmont Regional Office, Training Room
4949-A Cox Road, Glen Allen, VA 23060

Members Present: Phil Abraham, Chris Boies, Andrew Clark, Jeff Corbin, Justin Curtis, Steven Gallagher (Kelby Morgan's alternate), Charles Hegberg (Jeff Waldon's alternate), Kathy Hoverman, James Hutzler, Rene Hypes, Casey Jensen, Dave Jordan, Mark Killgore, Adrienne Kotula, Terry Lasher, Justin Mackay-Smith, Martha Moore, Evan Ocheltree, Tim Owen, Jennifer Perkins, Bobby Proutt, Nikki Rovner, Peggy Sanner, Bill Street, Chris Swanson, Jessie Thomas-Blate (Serena McClain's Alternate), Shannon Varner, Brian Wagner, Alan Weaver.

Members Absent: Sara Aman, Steven Barrs, George Bryant, Robert Condrey, Brad Copenhaver, Howard Epstein, John Foote, Brent Fultz, Greg Garman, Kirk Havens, Heidi Hertz, Samuel Markwith, Amy Martin, T.J. Mascia, Chris Miller, Randy Owen, Jeanne Richardson, Fritz Schneider, Jennifer Van Houten, Charles Wilson

Other Attendees: Joe Lerch, Karen Johnson, Chris Moore, Steve Yob

DEQ Staff Attendees: Brandon Bull, Melanie Davenport, Dave Davis, Sara Felker, Tyler Monteith, Hannah Schul, Sarah Woodford

The meeting convened at 9:00 AM. The meeting adjourned at 3:45 PM.

Workgroup Directive #1 – Supply and Demand for Mitigation Credits

1) Mitigation Working document [Sarah Woodford, DEQ] – Ms. Woodford displayed the Mitigation Working document on the projector screen and the workgroup reviewed the workgroup directive questions and answers related to "Supply and Demand for Mitigation Credits" together. The intent of the Mitigation Working document is that it is DEQ staff's outline for writing the mitigation portions of the legislative report.

2) Questions and comments raised by the workgroup members and DEQ staff included:

    a. One workgroup member stated that large public works projects can skew mitigation credit demand similar to linear transportation projects.
    b. Regarding a platform for mitigation credit tracking, the workgroup discussed the importance of client and permit information remaining confidential on the platform.
    c. Demand is variable and can change quickly. One project can completely change mitigation credit availability in a watershed. Construction is often delayed when no mitigation credits are available.

d. The creation of a public system or platform for tracking real-time available mitigation credits is a future priority of DEQ Director Mike Rolband and may require its own workgroup.
e. Members requested that historical mitigation credit supply and demand data be included in the report to the legislature. One member requested the introduction of the document to provide information on the mitigation and nutrient programs as many legislators are unfamiliar with the programs. This also should note differences between the two programs, including differences in types of impacts, quantities, and land required for operation of the individual programs.
f. Legislators need to be aware that even if Virginia statute for mitigation changes, federal law for mitigation may remain the same, ending in no change in the mitigation program.
g. Regarding staffing, one workgroup member stated that there are efforts by an outside coalition aimed at increasing federal funding for the Corps to hire more regulatory staff positions on a nationwide scale.
h. Ms. Woodford [DEQ] informed the workgroup that a Memorandum of Agreement (MOA) is being drafted by the Corps, which may result in DEQ assuming lead responsibility for monitoring report coordination, review, and associated credit releases. If you have any questions regarding the MOA, please get in touch with Jeanne Richardson [Corps].
i. Several members who are mitigation bank sponsors stated that the changes to be brought about by the Corps staff changes and the potential MOA increases the likelihood that they will propose new mitigation banks in the future. They stated that this change would speed the release of credits that are already requested, increase the speed at which new credits are approved and released, and help address supply issues.
j. The workgroup noted that there could be current and future potential staff workload issues and the need for additional funding and positions at both the Corps and DEQ should be evaluated.
k. Dave Davis [DEQ] informed the workgroup of DEQ's current development of a DEQ State Surface Water Delineator certification program, two components of which would be a professional wetland delineator (PWD) certification from the Department of Professional & Occupational Regulations (DPOR), and successful completion of a Stream Identification training class. The purpose of this program is to reduce the time necessary to confirm the locations of waters regulated by DEQ. In summary, a DEQ-certified SSWD consultant will submit state waters delineations with a JPA, and VWP staff will accept those delineations as meeting the requirements for a VWP permit. This certification would allow for desktop delineation confirmations with periodic quality control checks by DEQ staff. It has not been determined whether the Corps will accept these confirmations.
l. The need for the state legislature to consider additional funding for all mitigation program state advisory agencies (Department of Environmental Quality, Marine Resources Commission, Department of Historic Resources, Department of Wildlife Resources, Department of Conservation and Recreation, Department of Forestry) was identified.

m. There was discussion of accelerated credit releases. Ms. Woodford clarified how the Corps' Regulatory Guidance Letter 19-01 does not require the Corps Districts to implement the practice. There was discussion of the financial assurances required in Virginia by the Corps and DEQ, and that accelerated credit releases have been limited to high mitigation credit demand watersheds, thus far. One member suggested accelerated mitigation credit releases be made available in all watersheds in Virginia, not just those in high demand.
n. The Corps and DEQ are able to adjust current guidance and practice to include alternative mitigation sites and practices, including modified buffer widths and smaller site approval, if deemed appropriate for the program. This also includes impoundment and dam removals. One member discussed how adjustment to current review of mitigation sites (i.e. buffers) may be viewed different than new types of alternative mitigation sites (i.e. Superfund sites), especially in the amount of time required to review the mitigation proposal.
o. One member said that financial assurance amounts for accelerated releases should be reevaluated. The Virginia statute is broad regarding financial assurances.
p. Ms. Woodford brought up a potential new solution, originating from DEQ staff. Credit availability letters are non-contractual, but DEQ could put back into VWP permits the requirement to list the mitigation bank or ILF name from which the permittee plans to purchase mitigation credits. This having the intended effect of strengthening the permittee's resolve to purchase from the named mitigation site. Many members noted that naming the specific mitigation bank from which mitigation credits will be purchased in permits is not a desirable practice, especially from a permitting efficiency standpoint because the permit would need to be modified for a change in that name.
q. The workgroup discussed options for excess mitigation credits from a given permit. Return of excess mitigation credits to the bank sponsor may not be the most desirable option, according to several members. It could be better to sell directly to another permittee. This would create difficulties in mitigation credit tracking. One member expressed concern that a third-party could "warehouse" credits in a given watershed, fix higher prices, and sell for profit in the future. Another member expressed concern with third-party resale, and that it may hinder DEQ's ability to ensure resources are protected with no net loss and in kind mitigation. Another member identified this as a potential issue to be brought up in the public platform workgroup discussed in "d."
r. The workgroup discussed that the Wetland and Stream Replacement Fund would still be an option for increasing the supply of mitigation credits, even if it is not the highest priority option. DEQ continues to have concerns regarding additional staffing and funding for this program, should it be approved by the Corps as an in-lieu fee mitigation program. The workgroup discussed that it should stay on this list, but recommend that the legislature look into required program structure, staffing, and additional funding requirements.

<u>Workgroup Directive #2 – Incentivizing Dam Removal Projects in Virginia</u>

3) Introduction [Sarah Woodford, DEQ] – Ms. Woodford displayed the Mitigation Working document. The intent of the Mitigation Working document is that it is DEQ staff's outline for writing the mitigation portions of the legislative report.

4) [Sarah Woodford, DEQ] The workgroup reviewed the first workgroup directive question and answers related to "Incentivizing Dam Removal Projects in Virginia" together.

What methods are in place or could be developed for promoting the removal of obsolete dams and significant river obstructions by the private sector that maximize the input of private capital and minimize the need for public funding to facilitate the removal?

Workgroup comments included:

a. One member mentioned the DCR Dam Safety Program as a program that incentivizes removal as an available option for obsolete dams.
b. Workgroup members discussed other workgroups or partners involved in discussion regarding barrier removal, namely the Virginia Community Flood Preparedness Fund, the Virginia Stream Barrier Removal Task Force, and the Chesapeake Bay Fish Passage Workgroup.
c. One member mentioned that grant programs always look favorably upon and encourage matching funds for barrier removal projects from partners like the private sector and state governments.
d. One member mentioned that it can be difficult for private and public partnerships to allow for mitigation credits to be sold for profit by the private sector.

5) [Sarah Woodford, DEQ] The workgroup reviewed the second workgroup directive question related to "Incentivizing Dam Removal Projects in Virginia" together.

What are your recommendations regarding the extent to which there is a scientific basis from a water quality and fish benefit perspective to expand existing service area limitations for mitigation credits generated by the removal of obsolete dams and significant river obstructions?

Workgroup comments and discussion included:

a. Workgroup members stated that fish passage was thoroughly discussed in the three meetings but water quality was not.
b. Several members questioned whether there is a scientific basis from a water quality perspective, especially in an adjacent river watershed. Challenging to prove there are no water quality impacts, if mitigation is accepted from adjacent river watersheds.
c. One member asked the group to consider not just fish benefits, but benefits to benthic macroinvertebrates and other non-fish aquatic life.
d. One member asked the definition of significant river obstruction.
e. One member wanted to know whether the department could consider actual benefits to adjacent river watersheds, on a project-by-project basis.
f. Several members asked what the "conditions" would be, in the second statement. DEQ staff replied that the appropriate conditions might be formulated by the workgroup, if there was general consensus on the second statement.

g. One member suggested that the department might try a test project in Virginia.

6) The following two statements were tested for consensus:

   a. There is a scientific basis from a water quality and fish benefit perspective to justify expanding existing service area limitations for mitigation credits generated by the removal of obsolete dams and significant river obstructions into adjacent river watershed boundaries.
      i. Strongly Agree - 8
      ii. Can Live With It - 11
      iii. Strongly Oppose – 7

   b. Provided appropriate conditions are established, there is a scientific basis from a water quality and fish benefit perspective to justify expanding existing service area limitations for mitigation credits generated by the removal of obsolete dams and significant river obstructions into adjacent river watershed boundaries.
      i. Strongly Agree - 9
      ii. Can Live With It - 13
      iii. Strongly Oppose – 4

<u>Workgroup Directive #3 - Retiring Farmland for Nutrient Credits and Nutrient Service Area Revisions</u>

7) Introduction [Sara Felker, DEQ] – Ms. Felker gave an overview of the content discussed at the previous workgroup meetings on July 7, 2022 and August 8, 2022, as well as a reminder of the three workgroup directives the workgroup was tasked with.

8) Around the Table Questions [Sara Felker, DEQ]:

   What are the potential impacts of restricting the generation of nutrient credits on any parcel of important, prime, or unique farmland acquired for generating credit?

   What would the effect be of requiring nutrient credit purchases from the same HUC, if available, before looking at adjacent HUCs?

   Are there other changes in the nutrient credit trading regulations and/or underlying statutory authority to reduce the loss of important, prime, or unique farmland?

   Questions and comments raised by the workgroup members and DEQ staff included:

   a. One member felt that the items that had been tested for consensus from the previous workgroup meeting were sufficient recommendations in the interim until the mapping effort for prime agricultural soils has been completed.

      i. Members from the workgroup tasked with developing the Prime Agricultural Soils data layer felt they were on track for their initial deadline of 12/1/22 to have at least some sort of map provided.

1. Preliminary results have shown that approximately 17% of open land in Virginia is has prime agricultural soils after land that's already developed and the DOF forestry layer have been removed.

b. One member reiterated the view that localities should be given the ability to set a cap of allowable land conversion activities on prime agricultural soils.

i. One member felt that allowing for localities to restrict land conversions on an individual basis was less restrictive than having a state wide ordinance that limits land conversion activities on prime agricultural soils.

c. While there was no consensus on creating geographic trading restrictions, the Workgroup indicated that there should not be trading restrictions between counties.

d. Representatives from groups that use nutrient credits, including homebuilders associations, expressed concern that the storm water program depends on the ability to use nutrient credits and any restrictions that limit supply will have a detrimental effect on development around the state. They requested any restrictions that reduce the supply of nutrient credits be balanced with access to additional nutrient credits, such as opening up the service area to include the entire tributary or state. Further concern was expressed that there would be even fewer nutrient credits available if the 0.41 lbs P/ac/yr requirement for the stormwater is lowered.

e. One member noted that the benefits and detriments of land conversion projects may be viewed subjectively by county residents and that it is important to remember that not everyone views them as a nuisance project. Many may feel that land conversions are a positive activity that brings a benefit to their county.

f. A question was raised regarding whether or not each nutrient bank is required to have a forestry management plan. DEQ noted that yes, every land conversion project and they are publicly available upon request.

g. One member noted that in her opinion landowners should be allowed to convert their agricultural land to forest if they want to. However, a government agency should not be further incentivizing land conversion activities on prime agricultural soils, particularly when it is being done to offset urban development in other localities. Others in the workgroup noted that other government programs also exist that promote agricultural land preservation and conservation.

h. One member brought up the idea of potentially allowing for the creation of a nutrient bank with statewide applicability, where a nutrient bank could provide nutrient credits to development projects that would otherwise be purchasing nutrient credits from an adjacent HUC that contains a high percentage of prime agricultural soils. Others felt that this is similar to expanding the service area to the entire tributary and wondered if the Local Water Quality Guidance in the Nutrient Trading Program would limit this.

i. A question was raised as to whether there was a way to quantify what the higher cost would be to developers should land conversion nutrient credits be limited to non-prime agricultural soils?

j. It was proposed that, as a compromise, localities could set a limit on land conversion within their locality, if service areas could be expanded to allow for purchases within the entire tributary.

k. A concern was also raised around what would happen if land was incorrectly labeled as containing "prime agricultural soils." Excluding this land unnecessarily from participating in the program via land conversion activities would limit a farmer's ability to profit from his land. While restrictions may not be desirable, if enacted, farmers, landowners and bankers should be afforded a mechanism to rectify any incorrect designations of "prime agricultural soils."
l. The workgroup asked about whether localities received notification of new nutrient banks. DEQ staffed answered that new applications are listed on the DEQ website but not sent out for public notice. Localities are alerted when a nutrient bank receives an approval and/or a nutrient credit release.
m. Members suggested that localities could have the opportunity to provide input while the nutrient bank application is being reviewed by DEQ. However, the legislature would need to change the law or regulation to allow DEQ to consider the impact to "prime agricultural soils" in order for it to be part of the review criteria and the goal is to limit land conversion activities on these lands.
n. Members discussed alternative ways for farmers to benefit from prime farmland instead of participating in the program. VDACS staff discussed the Farmland Preservation Fund, which is money given to localities to purchase development rights on private lands. Because funding has been low for this program, localities are not able to compete with the possible monetary benefits of participating in the nutrient trading program. Many in the workgroup suggested that increasing this fund and the ability of a locality to purchase easements to meet their goals.
    i. It was additionally noted that easements put in place by localities could include restrictions on participating in the nutrient trading program. Additional restrictions could also be put on private property transactions if the landowner legally implements that restriction prior to the sale or as a condition of the sale.

9) The following item was tested for consensus:

    a. The Commonwealth should increase funding of the Farmland Preservation Fund to incentivize conservation of prime farmland through local purchasing of development rights (PDR).
        i. Fully Support – 16
        ii. Partially Support – 6
        iii. Oppose – 0

<u>Next Steps</u>

a) Ms. Woodford requested comments be submitted no later than September 15th in writing.

b) Draft meeting minutes will be distributed.