

REVISED TENTATIVE AGENDA AND MINIBOOK
STATE WATER CONTROL BOARD MEETING

FRIDAY, SEPTEMBER 6, 2019

DOUBLETREE BY HILTON RICHMOND AIRPORT
BALLROOM 1 AND 2
445 INTERNATIONAL CENTER DRIVE
SANDSTON, VIRGINIA 23150

Convene – 10:00 a.m.

Agenda Item	Presenter	Tab
Minutes (June 27, 2019)		A
City of Alexandria Potomac Yard Metrorail Station Project Virginia Water Protection Permit	Beasley	B
Eastern Shore Poultry Facilities Groundwater Withdrawal Permits Ish Farm; Thomas Farm; Brady Farm; Van Tran Farm; Morey Farm; Vision Quest; Ed, Pat, and Brandy Sue Farm; Wishart's Point Farm; Trader Farms (E.T. Trader Farm, Jan Trader Farm, Parks Farm; Dennis Farm; Old Mill Farms; Giuse Farm; Chattha Livestock Poultry Farm; Shore Time Poultry, LLC; Tai Dat, LLC; HT Poultry Farm; Peter and Mary Farm; Eagle, Birdie, Superior Farm; Greenes Poultry Farm; Eddie Kelley Farm; Nguyen and Emily Poultry Farm; Elahi LLC; Excel Farm; Tanner Farm; Elite Farm; Mason Farm; RW Farms, LLC; Holland Homestead, Backwoods, and Horsey Poultry Farms; Justice Poultry Farm, Inc.; Chicken Bacon Ranch; Fulushou Inc.; Levi's Farm LLC; Last Hurrah LLC; Luu Farm (Spring & Phoenix Farms); Davis Wharf Farm; McChicken Farms; Brittney Poultry Farm, LLC; Miller Time Farm; Turkey Run Farm; Sanns on the Shore Farm; Pixies Poultry; Seaside Poultry Farm; Summer's Rest Farm; Shore Livestock; Teresa Farms	DEFERRED TO FUTURE MEETING DUE TO EXPECTED INCLEMENT WEATHER - MOST LIKELY ON THE AGENDA FOR DECEMBER 13, 2019 MEETING	
Board Memorandum, Draft Permit Summary Table and Summary of Comments		C
Draft Permit and Fact Sheet for Sanns of the Shore (includes Alternative Source Special Condition)		D
Draft Permit and Fact Sheet for Morey Farm (no Alternative Source Special Condition)		E
Remaining 43 Draft Permits		F
Total Maximum Daily Loads (TMDLs) - Approval of One Report (Bacteria TMDL for the Bullpasture River in Highland County) and Adoption of Corresponding Wasteload Allocation	Meadows	G
Significant Noncompliance Report	Sadtler	H
Consent Special Order - Pilot Travel Centers LLC, Pilot Travel Center #4649 (Rockbridge Co.)	Severs	I
[Items Below Not Before 1:00 p.m.]		
Division Directors' Report	Schneider/Davenport	
Public Forum (time for this item not to exceed 45 minutes)		
Future Meetings (December 13, 2019)		

ADJOURN

NOTE: The Board reserves the right to revise this agenda without notice unless prohibited by law. Revisions to the agenda include, but are not limited to, scheduling changes, additions or deletions. Questions on the latest status of the agenda should be directed to Cindy M. Berndt at (804) 698-4378.

PUBLIC COMMENTS AT STATE WATER CONTROL BOARD MEETINGS: The Board encourages public participation in the performance of its duties and responsibilities. To this end, the Board has adopted public participation procedures for regulatory action and for case decisions. These procedures establish the times for the public to provide appropriate comment to the Board for its consideration.

For REGULATORY ACTIONS (adoption, amendment or repeal of regulations), public participation is governed by the Administrative Process Act and the Board's Public Participation Guidelines. Public comment is accepted during the Notice of Intended Regulatory Action phase (minimum 30-day comment period) and during the Notice of Public Comment Period on Proposed Regulatory Action (minimum 60-day comment period). Notice of these comment periods is announced in the Virginia Register, by posting to the Department of Environmental Quality and Virginia Regulatory Town Hall web sites and by mail to those on the Regulatory Development Mailing List. The comments received during the announced public comment periods are summarized for the Board and considered by the Board when making a decision on the regulatory action.

For CASE DECISIONS (issuance and amendment of permits), the Board adopts public participation procedures in the individual regulations which establish the permit programs. As a general rule, public comment is accepted on a draft permit for a period of 30 days. In some cases a public hearing is held at the conclusion of the public comment period on a draft permit. In other cases there may be an additional comment period during which a public hearing is held.

In light of these established procedures, the Board accepts public comment on regulatory actions and case decisions, as well as general comments, at Board meetings in accordance with the following:

REGULATORY ACTIONS: Comments on regulatory actions are allowed only when the staff initially presents a regulatory action to the Board for final adoption. At that time, those persons who commented during the public comment period on the proposal are allowed up to 3 minutes to respond to the summary of the comments presented to the Board. Adoption of an emergency regulation is a final adoption for the purposes of this policy. Persons are allowed up to 3 minutes to address the Board on the emergency regulation under consideration.

CASE DECISIONS: Comments on pending case decisions at Board meetings are accepted only when the staff initially presents the pending case decision to the Board for final action. At that time the Board will allow up to 5 minutes for the applicant/owner to make his complete presentation on the pending decision, unless the applicant/owner objects to specific conditions of the decision. In that case, the applicant/owner will be allowed up to 15 minutes to make his complete presentation. The Board will then allow others who commented at the public hearing or during the public comment period up to 3 minutes to exercise their rights to respond to the summary of the prior public comment period presented to the Board. No public comment is allowed on case decisions when a FORMAL HEARING is being held.

POOLING MINUTES: Those persons who commented during the public hearing or public comment period and attend the Board meeting may pool their minutes to allow for a single presentation to the Board that does not exceed the time limitation of 3 minutes times the number of persons pooling minutes, or 15 minutes, whichever is less.

NEW INFORMATION will not be accepted at the meeting. The Board expects comments and information on a regulatory action or pending case decision to be submitted during the established public comment periods. However, the Board recognizes that in rare instances new information may become available after the close of the public comment period. To provide for consideration of and ensure the appropriate review of this new information, persons who commented during the prior public comment period shall submit the new information to the Department of Environmental Quality (Department) staff contact listed below at least 10 days prior to the Board

meeting. The Board's decision will be based on the Department-developed official file and discussions at the Board meeting. In the case of a regulatory action, should the Board or Department decide that the new information was not reasonably available during the prior public comment period, is significant to the Board's decision and should be included in the official file, the Department may announce an additional public comment period in order for all interested persons to have an opportunity to participate.

PUBLIC FORUM: The Board schedules a public forum at each regular meeting to provide an opportunity for citizens to address the Board on matters other than those on the agenda, pending regulatory actions or pending case decisions. Those persons wishing to address the Board during this time should indicate their desire on the sign-in cards/sheet and limit their presentations to 3 minutes or less.

The Board reserves the right to alter the time limitations set forth in this policy without notice and to ensure comments presented at the meeting conform to this policy.

Department of Environmental Quality Staff Contact: Cindy M. Berndt, Director, Regulatory Affairs, Department of Environmental Quality, 1111 East Main Street, Suite 1400, P.O. Box 1105, Richmond, Virginia 23218, phone (804) 698-4378, fax (804) 698-4346, e-mail: cindy.berndt@deq.virginia.gov.

Additional Meeting Information:

- Attendees are not entitled to be disorderly or disrupt the meeting from proceeding in an orderly, efficient, and effective fashion. Disruptive behavior may result in a recess or removal from the meeting.
- Possession or use of any device that may disrupt the conduct of business is prohibited, including but not limited to: voice-amplification equipment; bullhorns; blow horns; sirens, or other noise-producing devices; as well as signs on sticks, poles or stakes; or helium-filled balloons.
- Attendees shall not block or gather in exits, doors, or aisles.
- All attendees are asked to be respectful of all speakers.
- Rules will be enforced fairly and impartially not only to ensure the efficient and effective conduct of business, but also to ensure no interference with the business of the hotel, its employees and guests.
- All violators are subject to removal.

Briefing Memorandum for Issuance of a Virginia Water Protection (VWP) Individual Permit - Potomac Yard Metrorail Station, draft VWP Permit No. 19-0170 - City of Alexandria:

I. PROJECT BACKGROUND

Project Description

Joint Permit Application (JPA) Number 19-0170 was submitted on February 6, 2019, by the applicant, City of Alexandria. The City proposes to construct a 46,922 square foot Metrorail station with an associated entrance pavilion, entrance points, stormwater management facilities, construction staging areas, and 3,750 linear feet of new or re-aligned track. No parking facilities are associated with this project. The project is located east of Potomac Avenue, west of George Washington Memorial Parkway, and north of Potomac Greens Drive in the City of Alexandria, Virginia.

On October 3, 2017, the City originally submitted JPA No. 17-1756 for this project. DEQ public noticed a draft permit on September 27, 2018. DEQ received 86 individual comments of which 80 requested a public hearing. In response to comments received during the public comment period, staff determined that additional information was required from the applicant. Subsequently, the City withdrew that JPA (17-1756) to prepare additional clarification and information with the intention to resubmit the application. A new JPA was received by DEQ on February 6, 2019, with JPA No. 19-0170. DEQ notified the commenters of the application withdrawal and did not issue the VWP permit.

Because of the substantial public interest in the previous application and the City's proposed construction schedule, the City requested that DEQ forego the initial public comment period on the draft permit and immediately proceed to a public hearing for the current application. DEQ agreed to this request and the applicant published a public notice for the proposed hearing on June 13, 2019.

Proposed Impacts

The draft permit authorizes the total impact of 3.57 acres of surface waters, consisting of 1.56 acres of permanent impacts and 2.01 acres of temporary impacts.

- Permanent impacts consist of 0.92 acre of palustrine forested (PFO) wetland and 0.64 acre of palustrine emergent (PEM) wetland for station construction and other associated permanent infrastructure.
- Temporary impacts consist of 1.10 acres of PFO wetland and 0.91 acre of PEM wetland for construction access/egress, laydown areas, and construction storage.

Proposed Compensation

The proposed permit requires that the City purchase wetland mitigation credits in the amounts shown below as compensatory mitigation for proposed impacts. In accordance with VA Code §62.1-44.15:23(A), all credits will be purchased from a DEQ-approved mitigation bank within the same United States Geological Survey Hydrologic Unit Code (HUC) as the project site, or in an adjacent HUC and in the same river watershed.

The wetlands were the location of oil/water separator ponds and while the wetlands have been historically disturbed, wetlands in dense urban areas serve an increased role in water quality, habitat, and aesthetics. Therefore, this permit requires compensation higher than the minimum ratios. Compensation ratios will be 4:1 replacement to loss ratio for PFO impacts and 2:1 replacement to loss ratio for PEM impacts. The permit also requires 1:1 compensation for the temporal loss of function for the temporary impacts to 1.10 acre of PFO, as it could take years to restore the full function of a forested wetland. The permit requires

the restoration of temporary impacts and the re-establishment of the Torrey's Rush colony within the temporary impact restoration area.

Impact	Mitigation Ratio	Required Mitigation Bank Credits
0.92 acre forested wetlands (permanent)	4:1	3.68 wetland credits
0.64 acre emergent wetlands (permanent)	2:1	1.28 wetland credits
1.10 acre forested wetlands (temporary)	1:1	1.10 wetland credits and on-site restoration
0.91 acre emergent wetlands (temporary)	1:1	on-site restoration

Authorization to Convene a Public Hearing

Due to the significant public interest in the previous application (JPA No. 17-1756), the City requested DEQ hold a public hearing regarding the proposed issuance of 19-0170. The Director authorized a public hearing on May 13, 2019.

Draft Permit and Hearing Public Notice

The public notice of the draft permit and public hearing was published in the *Washington Post* on June 13, 2019. Notification of the draft permit and public hearing, and copies of the public notice were sent to the locality in which activities are proposed.

Public Hearing

The public hearing was held on July 16, 2019, from 7:00 p.m. to 9:00 p.m. at the Oswald Durant Arts Center in the City of Alexandria. Mr. James Lofton served as the Hearing Officer. An informal briefing session was held prior to the hearing. During the hearing, there were 31 speakers.

Public Comment

During the public comment period, June 13 through July 31, 2019, staff received written and oral comments from a total of 76 individuals or organizations/local government, including elected officials Mayor Justin Wilson, Senator Adam Ebbin, Delegate Mark Levine, and Councilman Canek Aguirre. The organizations and/or local government represented were:

- Visit Alexandria
- Potomac Yard Civic Association
- Alexandria Small Business Development Center
- Alexandria Economic Development Partnership
- Northern Virginia Transportation Authority
- Northern Virginia Transportation Commission
- Alexandria Transit Company
- Alexandria Chamber of Commerce
- Environmental Council of Alexandria
- Virginia Department of Rail and Transportation
- Virginia Native Plant Society

- Virginia Native Plant Society, Potowmack Chapter

Of the comments submitted, 45 commenters were in support of the project and 31 commenters were opposed to the draft permit.

II. SUMMARY OF COMMENTS DURING PUBLIC COMMENT PERIOD

The comments received during the comment period for the project regard the following:
support

1. Habitat and Wetland Poorly Characterized
2. Compensation
3. Project does not account for all impacts (including secondary or off-site)
4. Floodplain Impacts
5. Threatened and Endangered Species
6. DEQ Process
7. Purpose and Need
8. LEDPA Determination
9. Noise and Vibration Impacts at Alternative A vs. Alternative B
10. Proximity of Alternative A and Alternative B
11. Alternative A – Protective Shell
12. Contaminated Soils
13. History of Process
14. Request Reports to DEQ be Public
15. Historic Properties

1. Support

Staff received comments in support of the project and permit.

Staff Response:

Staff has no response to these comments.

2. Habitat Loss and Wetland Poorly Characterized

Staff received comments about the importance of wetlands and that the wetlands proposed for impact are not accurately characterized. The comments focused on:

- *These wetlands are valuable ecological resources which support large hardwood trees and wildlife and Alternative B destroys the habitat of numerous plant and animal species, mature trees, aesthetic value, and functions of the current wetlands onsite.*
- *The wetlands are connected to an adjacent historic tidal wetland system.*
- *The impacted wetlands are tidal.*
- *The wetland delineation was completed during the winter and does not accurately reflect the vegetation of the site.*
- *State critically-imperiled Torrey's rush and the state-imperiled River bulrush are present at Alternative B or in the adjacent freshwater marsh.*

Staff Response:

In response to comments that tidal wetlands could be present within the proposed work area of the project, DEQ consulted with the Virginia Marine Resources Commission (VMRC) to confirm the lack or presence of tidal wetlands within the construction area. Tidal wetlands are defined in Virginia Water Protection Permit (VWP) Program Regulations (9VAC25-210) as vegetated and non-vegetated wetlands as defined in 'Chapter 13 –

Wetlands' of 'Title 28.2 – Fisheries and Habitat of the Tidal Waters' of the Code of Virginia; VMRC implements this section of state law. VMRC confirmed via letter on March 15, 2019, to DEQ that there are no impacts to areas under VMRC jurisdiction (i.e. tidal wetlands). In response to citizen comments about whether the project will potentially impact tidal wetlands, VMRC stated they inspected the site several times in order to make the determination that the proposed work does not impact tidal wetlands.

The VWP Regulations require the wetlands be identified in accordance with the U.S. Army Corps of Engineers (USACE) "Wetland Delineation Manual, Technical Report Y-87-1, January 1987, Final Report" (Federal Manual) and any regional wetland supplements approved for use by USACE. The USACE confirmed the wetland delineation originally on September 28, 2012, and reconfirmed the delineation in September 2017. The delineation process identifies the wetland boundaries and is not intended to be a plant inventory.

On May 31, and June 17, 2019, DEQ received comments from the Virginia Department of Conservation and Recreation (DCR) noting the presence of Torrey's rush (*Juncus torreyi*) on the project site. Torrey's rush is designated as secure throughout its total range and as critically imperiled within its range in Virginia. In response to comments that the wetland delineation does not provide comprehensive vegetation data and acknowledging that Torrey's rush was found after the draft permit was issued, DEQ requested that the applicant provide an inventory of plant species within the impact area. Stantec conducted the survey in July 2019, and submitted it to DEQ on August 6, 2019. The plant inventory identifies 107 species of which Torrey's rush is the only species of special concern. Torrey's rush occurs on-site in an approximately 400 square foot colony adjacent to the existing railway and a paved trail. Torrey's rush comprises approximately 45% of the aerial plant coverage in this 400 square foot area. Other plant species associated with the colony include rough barnyard grass, devil's beggartick (*Bidens frondosa*), broadleaf cattail, shallow sedge (*Carex lurida*), strawcolored flatsedge (*Cyperus strigosus*), and common reed.

Staff visited the site on January 17, 2019, June 19, 2019, and July 23, 2019, during the pre-application and permit process and the permit file contains the below documents which staff believes sufficiently details the proposed wetland impact characteristics.

- Joint Permit Application (JPA) Section 1.2 and 1.3 provides a site history
- JPA Appendix H -Wetland Delineation Report
- JPA Section 5.1.2 and Appendix K Functional assessment
- JPA D Draft Special Use Permit provides a detailed tree survey.
- JPA Appendix I – Tidal Survey
- Joint Permit Application Appendix J- Habitat Assessment
- Plant inventory submitted August 6, 2019

3. Compensation

Staff received comments that the compensation is not adequate to offset the wetland impacts. The comments focused on:

- *The mitigation plan is not commensurate to the impacts.*
- *Credits purchased should be more localized than the entirety of the watershed.*
- *Remediation of a wetland is not possible.*
- *It will take many years for any planted trees to reach maturity.*
- *DEQ does not have the authority to allow mitigation in another state and it will not compensate citizens of the City of Alexandria.*
- *The permit includes a condition that allows the City to purchase credits if the restoration does not work.*

Staff Response:

The VWP Regulation establishes a preferred sequence (based on ecological performance) of the types of compensatory mitigation used to compensate for unavoidable impacts to wetlands. In accordance with 9VAC25-210-116.C.2, when considering options for providing the required compensatory mitigation, DEQ shall consider the type and location options in the following order:

- a) Mitigation bank credits;
- b) In-lieu fee program credits;
- c) Permittee-responsible mitigation under a watershed approach;
- d) Permittee-responsible mitigation through on-site and in-kind mitigation;
- e) Permittee-responsible mitigation through off-site or out-of-kind mitigation;
- f) Restoration, enhancement, or preservation of upland buffers adjacent to wetlands when utilized in conjunction with subdivision 2a, 2b, 2c, 2d, or 2e of this subsection and when consistent with subsection A of this section; and
- g) Preservation of wetlands when utilized in conjunction with subdivision 2a, 2b, 2c, 2d, or 2e of this subsection and when consistent with subsection A of this section.

In their application, the City proposed the purchase of compensation credits at the standard 2:1 replacement to loss ratio for impacts to 0.92 acre of palustrine forested wetland (PFO) and 1:1 replacement to loss ratio for 0.64 acre of palustrine emergent wetland (PEM) impacts. The application also proposes restoration of the temporary impacts to 1.10 acre of PFO and 0.91 acre of PEM. While the wetlands have been historically disturbed, wetlands in dense urban areas serve an increased role in water quality and habitat; therefore, this permit requires compensation at a 4:1 replacement to loss ratio for PFO impacts and 2:1 replacement to loss ratio for PEM impacts. The permit also requires 1:1 compensation for the temporal loss of function for the temporary impacts to 1.10 acre of PFO, as it could take years to restore the full function of a forested wetland.

Impact Type	Proposed Compensation	Required Compensation
0.92 acre forested wetlands (permanent)	1.84 wetland credits	3.68 wetland credits
0.64 acre emergent wetlands (permanent)	0.64 wetland credits	1.28 wetland credits
1.10 acre forested wetlands (temporary)	On-site restoration	1.10 wetland credits and on-site restoration
0.91 acre of emergent wetlands (temporary)	On-site restoration	On-site restoration (including 400 square feet of Torrey’s rush)

Impacts to surface waters require compensatory mitigation sufficient to achieve no net loss of wetland acreage and no net loss of function of wetlands and surface waters. The permit requires the credits be purchased from a DEQ approved mitigation bank, an approved in-lieu fee fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ). Mitigation credits shall be purchased prior to taking any impacts on-site.

The applicant has indicated that they intend to purchase credits from the Buena Vista Wetland Mitigation Bank that is authorized to sell credits to compensate for impacts to wetlands in the lower Potomac Watershed and Hydrologic Unit Code (HUC) 02070010. The Buena Vista Wetland Mitigation Bank is located in King George County, Virginia. As of August 2019, there are six banks authorized to provide credits to the project site. Five of the banks are within 32-35 miles from the project site and one bank is 53 miles away. The Buena Vista Bank is the closest bank that has enough credits to cover the draft permit requirement. The Buena Vista Bank is located adjacent to a tidal wetland system to the Potomac River and offers a better landscape position in the watershed compared to the other banks. The use of Buena Vista Wetland Mitigation Bank fulfills the requirement of 9VAC25-210-116.C.2.

DEQ has overseen the restoration of many wetlands in accordance with regulations and DEQ has no reason to believe that the restoration of this project will not be successful. The application process required a conceptual restoration plan for the temporary impacts on-site. Subsequently, based on public comments, DEQ is proposing additional restoration requirements for the re-establishment of Torrey’s rush. The draft permit requires a more detailed Final Restoration Plan be submitted within 60 days of an approved permit. The Final Restoration Plan must be approved by DEQ prior to the commencement of any construction activities in wetlands. Part I Sections J-N of the permit detail all the informational, monitoring, and success requirements of the restoration work. The draft permit included a condition (Part I.N.3) that requires the purchase of credits if DEQ determines that corrective action cannot sufficiently address deficiencies in the wetland restoration performance. Staff received citizen

comments that this provides an avenue for the restoration to be not be successful. In response to the comment, staff removed this condition from the permit.

Through the Environmental Impact Statement process that preceded the VWP process, the City and the National Park Service developed an “Agreement Regarding Wetland Mitigation for the Potomac Yard Metro” dated November 1, 2016. As part of this agreement, the City is to contribute \$1 million per acre, not to exceed \$4.7 million, of impact to National Park Service wetland areas. The details of this compensation and where these monies are allocated are not within the purview of the VWP Program and are independent of any requirements of the proposed permit. The permit requires mitigation in addition to any compensation provided to the National Park Service developed in the Agreement. Any mitigation provided to the National Park Service does not offset or alter what is required or provided under the VWP Program.

4. Project does not account for all impacts (including secondary or off-site)

Staff received comments that the permit does not account for all the wetland impacts associated with the project.

The comments focused on:

- *The tidal channel will be used for stormwater runoff from the Potomac Yard development.*
- *Inadequate details in regards to stormwater management and erosion/sediment control.*
- *The proposed temporary impacts will be permanent.*
- *A ten-foot buffer around the tidal wetlands is inadequate.*

Staff Response:

DEQ’s Erosion and Sediment Control (ESC) Program (9VAC25-840), Stormwater Management (SWM) Program (9VAC25-870), and General Permit for Stormwater Discharges from Construction Activities in conjunction with the local government programs, have the primary responsibility to ensure that stormwater runoff during and post-construction are controlled. The City of Alexandria has been approved to implement the regulations as a Virginia Erosion and Sediment Control and Stormwater Management Program Authority; therefore, the City will be responsible for the receipt, review, and approval of the erosion and sediment control and stormwater management plan(s). DEQ has purview over the Erosion and Sediment Control and Stormwater Management Program and may independently conduct compliance inspections under these programs and the VWP Permit Program.

Construction activities will be occurring in and immediately adjacent to non-tidal wetlands and near tidal wetlands that are present adjacent to the non-tidal wetlands. There is a specific point where the tidal wetland is 10 feet from the temporary impact boundary (identified on cross-section 450+50 provided in Attachment M- Temporary Fill Cross-sections received on April 29, 2019). The draft permit requires: a minimum 10-foot buffer between the tidal wetland and the project limits; properly install and maintain a row of super silt fence a minimum of 10 feet from the tidal wetland to provide secondary sediment control; and, properly install and maintain a row of silt fence 5-feet landward of the super silt fence to provide primary sediment control. The condition is in the permit to ensure that more than the minimum erosion and sediment controls be employed at this location.

In response to citizen concerns, staff is proposing the draft permit be modified to require increased self-inspections from monthly to weekly, including walking the perimeter of the construction site, and that these reports be submitted monthly to DEQ verses keeping them on-site. This condition was added to increase the construction staff awareness of the adjacent wetlands and ensure frequent observations are taking place. This monitoring is in addition to the inspections and monitoring required by the ESC, SWM and Construction General Permit as well as any inspections conducted by DEQ, USACE, or the City of Alexandria staff.

The City is responsible for assuring that no unauthorized impacts occur beyond those that are authorized in the VWP Permit. In the event that unauthorized impacts occur, enforcement actions consistent with DEQ’s policies and practices will be taken.

5. Floodplain Impacts

Staff received comments about the existing flooding concerns in the City of Alexandria and how this permit/project will exasperate the flooding. The comments focused on:

- *The JPA does not adequately address the effects of fill within the floodplain and the flooding risks associated with Alternative B.*
- *The VWP Permit does not consider flooding.*
- *The JPA does not address flooding of the Metrorail Station.*
- *The JPA does not assess climate change consequences associated with Alternative B.*

Staff Response:

The local government manages impacts to floodplains in accordance with FEMA Regulations and the City's floodplain ordinance. The Alexandria City Department of Transportation and Environmental Services, which administers the floodplain regulations, indicated in a letter dated July 24, 2019, that the development has adequately demonstrated no significant impact on existing floodplains adjacent to the development and that the project would not increase the risk of flooding in the immediate vicinity.

The wetlands proposed for impact inherently function to absorb and store runoff during storm events. The SWM Program accounts for changes in stormwater runoff caused by the changes in land cover associated with development activities. The SWM Program requires that the volume, velocity, and peak discharge rate of stormwater runoff be controlled. The stormwater runoff during and post construction activities will be under the purview of City of Alexandria's Erosion and Sediment Control and Stormwater Management Programs. DEQ has regulatory oversight over the Erosion and Sediment Control and Stormwater Management Program and may independently conduct compliance inspections under the respective programs; however, the receipt, review, and approval of the erosion and sediment control and stormwater management plan(s) are completed by the local government program authority (City of Alexandria).

The proposed wetland impacts are located within a 655 acre watershed. The existing tracks are the west boundary of the watershed. The watershed drains to Four Mile Run and to tidal wetlands flowing into a tidal channel to the Potomac River. Staff does not anticipate the proposed impacts to exasperate flooding within the City of Alexandria because the entirety of the project area discharges to the Potomac River adjacent to the project and does not pass through the City's internal streets or storm sewer network.

Climate change is beyond the scope of VWP's regulatory authority. While DEQ acknowledges the concern regarding climate change, there is no statutory or regulatory authority to address this under the VWPP Permit Regulations.

6. Threatened and Endangered Species

Staff received comments that the project will affect state imperiled, threatened or endangered species. The comments focused on:

- *Lack of substantive discussion and data in the current JPA in regards to threatened and endangered species.*
- *Torrey's rush will be extirpated from the site and no mitigation is sufficient.*
- *River bulrush are documented onsite and not considered in the JPA.*
- *Potential habitat for the Sensitive Joint-vetch was found onsite and the survey is expired.*

Staff Response:

Based upon a review of the file materials and DEQ's coordination with other state agencies, the draft VWP Permit does not anticipate nor authorize any impacts to threatened or endangered species. Torrey's rush is rare in Virginia but is not threatened nor endangered.

During the VWP Permit application processing, staff coordinated the project with Virginia Department of Game and Inland Fisheries (DGIF) and DCR. DGIF provided comments that there were no threatened and endangered animals associated with the project. DCR provided comments on February 27, 2019, that they do not anticipate any impacts to natural heritage resources, including rare, threatened or endangered plants. DCR provided additional comments on May 31, 2019, indicating that Torrey's rush was reported to be on the project site. DCR staff confirmed the presence of Torrey's rush on June 10, 2019. Torrey's rush is not currently listed as threatened or endangered species by DCR. Coordination with these agencies did not indicate the presence of River bulrush (*Bolboschoenus fluviatilis*) or Sensitive Joint-vetch (*Aeschynomene virginica*) within the project footprint.

In response to the presence of Torrey's rush on-site in the location of the proposed Metrorail infrastructure, staff proposes a modification to the permit that requires that the wetland restoration plan include re-establishment of the Torrey's rush colony within or adjacent to the temporary impact restoration area. The proposed modification requires that the final restoration be provided to DEQ for review and approval before initiating work in surface waters and include the following:

- Multiple approaches to assure successful mitigation through relocation of mature plants, as well as planting of propagules and/or seeds, which have been successfully reared off site in greenhouse setting or on-site.
- The location where the colony will be re-established (the re-establishment zone);
- The method to harvest the on-site seed source (starting in June through September of 2019), transferrable rooting structures, individual plant specimens, and/or entire in-situ plant colony including associated soil media within the rooting zone;
- The method of re-establishment; and,
- Soil amendments (if applicable).

In response to concerns that the wetland delineation does not provide comprehensive vegetation data and acknowledging that Torrey's rush was found after the draft permit was issued, DEQ requested that the City provide an inventory of plant species within the impact area. The survey was conducted in July 2019, and submitted to DEQ on August 6, 2019, identifying 107 species in the wetland impact area, none of which are threatened or endangered. The survey found that vine cover, generally porcelain berry, is prevalent throughout the proposed impact area and accounts for the highest percent aerial plant coverage.

The documented Torrey's rush occurs in an approximately 400 square foot colony adjacent to the existing railway and a paved trail. Torrey's rush comprises approximately 45% of the aerial plant coverage within the 400 square foot area. Other plant species associated with the colony include rough barnyard grass, devil's beggartick, broadleaf cattail, shallow sedge, strawcolored flatsedge, and common reed.

Acknowledging that the results of the plant inventory reflect vegetative cover present at the time of the field investigation, no threatened or endangered, or additional rare species were found within the impact areas.

7. DEQ Process

Staff received comments that public noticing a draft permit indicates that DEQ has already made a decision on the permit. The comments focused on:

- *DEQ's mission statement is to protect the environment not support economic development.*
- *Issuing the permit would mean DEQ failed its mission to protect the environment.*
- *Public input is not considered by DEQ.*
- *DEQ has already decided to issue the permit.*

Staff Response:

DEQ implements and enforces laws passed by the General Assembly designed to protect human health and the environment in a fair, consistent, and transparent manner. The VWP regulations, 9VAC25-210, do not prohibit the taking of or impacts to wetlands and surface waters; they limit and prescribe how impacts may occur so as to avoid, minimize, and compensate such impacts to assure no net loss of wetlands. The application and draft permit for this project have been processed in accordance with the regulations in a consistent manner with past VWP permit actions.

DEQ is tasked with evaluating applications for VWP Permits in accordance with the applicable State Water Control Law and VWP Permit Regulations. When publishing an application and/or draft permit, DEQ will make a tentative decision to issue or deny and include it in the public notice. When a VWP permit application receives significant public interest, in accordance with 62.1-44.15:02, DEQ will schedule a public comment period that includes a public hearing and make a recommendation to be presented to the State Water Control Board (SWCB). In response to public comments, DEQ evaluates the concerns in light of the VWP Permit regulations and makes

appropriate recommendations to the Board. DEQ does not make the final decision, the SWCB, a separate entity from DEQ, makes the final decision.

8. Purpose and Need

Staff received comments that the purpose of the project provided in the application is not approvable. The comments focused on:

- The City of Alexandria changed their purpose in the revised JPA.
- The USACE should not have accepted the changed purpose.
- The purpose is too narrow and only allows Alternative B to meet the purpose.
- Economic development should not be considered in an environmental permit.
- Development will occur (regardless of Metrorail) in Potomac Yard because land in the area is finite.

Staff Response:

The City originally submitted an application for this project on October 3, 2017, (JPA No. 17-1756), which was subsequently withdrawn by the City. A new Joint Permit Application was received on February 6, 2019, and staff has reviewed this application in accordance with the VWP regulations. DEQ is required to evaluate the application in context of the VWP regulation, but does not have authority over whether the applicant elects to withdraw an application or modify portions of their application, including the project purpose.

The purpose of the project stated in the application is “to maximize access to local and regional transit to and from the Potomac Yard area along the U.S. Route 1 corridor for the greatest number of current and future residents, employees, and businesses in support of currently proposed and anticipated development in the area over the next several decades consistent with the adopted North Potomac Yard Small Area Plan, without excessive disruption of the current rail services while providing for the safety of workers and the general public.” An applicant’s purpose and need must be sufficiently specific to enable a review of avoidance and minimization of alternatives. Staff recognizes that this project has a very specific project purpose and staff requested specific information about how Alternatives A, B-CSX, and D performed in meeting the purpose. Based upon review the JPA and the responses provided, the City has sufficiently explained the various components of their purpose statement. The various components are described below and in more detail in the Fact Sheet, as to their relevance to the proposed project.

- To maximize access to local and regional transit to and from the Potomac Yard area along the U.S. Route 1 corridor for the greatest number of current and future residents, employees, and businesses...
The application states the number of persons with “access” to the station reflects the number of residents, workers, and expected visitors within walking distance of the station. In other words, maximum access is synonymous for the amount of high-density, high-value, walkable development that will be supported by the station. The application explains that the conventional metric for land use and transportation planning is that the public will be willing to walk between 0.25 mile (5-minute walk) and 0.5 mile (10-minute walk) to access public transportation. The *Washington Metropolitan Area Transit Authority Station Area Planning Guide* (2017) projects ridership to decrease between 0.25 to 0.5 mile walking distances and significantly decrease when the walking distance is greater than 0.5 mile. The application explains that being a joint development partner with WMATA in creating a transit oriented development, they must fully integrate WMATA’s transit access requirements, standards, and guidelines into the master plan. This Metrorail station does not include parking facilities as it is intended to support a transit-orientated urban development.
- ...In support of currently proposed and anticipated development in the area over the next several decades consistent with the adopted North Potomac Yard Small Area Plan...
The North Potomac Yard Small Area Plan (NPYSAP) was adopted by City Ordinance 4673 on June 12, 2010, and updated in 2017. It envisions North Potomac Yard as an environmentally and economically sustainable and diverse 21st century urban, walkable, transit-oriented, mixed-use community that completes a vital link in the open space and transit networks in the City. The land use strategy of the plan is fundamentally based on proximity to the Metrorail station, high-capacity transit, and market conditions. The North Potomac Yard is comprised of Landbay F and is also referred to as Coordinated Development District #19 (CDD #19). The NPYSAP guides the high-density development and redevelopment of

Landbay F. Benefits of high-density development can be hindered by an increase in traffic congestion, thus the application highlights the need for the redevelopment to be transit oriented, placing the majority of high density redevelopment within a 0.25 mile and 0.5 mile radius of the future station. Development outside of the radii will happen at a slower rate and will tend to be a lower density. The NPYSAP indicates the Metrorail station is required at the location of Alternative B for the high-density transit-oriented development to be feasible.

- ... Without excessive disruption of the current rail services while providing for the safety of workers and the general public.

The application states that excessive disruptions of rail services would be counterproductive to facilitating a transit-oriented environment because major disruptions to Metrorail service have long-term impacts on the public's perception and use of the system. Extended shutdowns will require mitigation such as bus shuttles to replace rail services and adding additional capacity to existing routes, while night and weekend shutdowns can significantly extend a construction timeline. Additionally, the application states that the City has a duty to protect its citizens, employees, and contractors from unreasonable harm and therefore, if any alternative does not adequately provide for the safety of workers and the general public, it cannot meet the overall project purpose.

While considering the project purpose it is also important to note that staff's analysis is not based solely on Alternative B meeting the project's purpose but is also being done in consideration of practicability of each Alternative after considering cost, existing technology, and logistics in light of the overall purpose and need.

Comments pertaining to the USACE's process are outside the purview of the VWP regulations and DEQ's permit process.

9. LEDPA Determination

Staff received comments that Alternative B is not demonstrated to be the Least Environmentally Damaging Practicable Alternative (LEDPA). The comments focused on:

- *The impacts of the other alternatives have not been fully examined and were not ever seriously considered.*
- *The LEDPA has yet to be discovered.*
- *The bus alternative was not fully assessed.*
- *Practicability statements made in the JPA are hypothetical and not adequately quantified, including cost.*
- *Cost analysis in 2012 demonstrated Alternative B cost more than Alternative A and additional costs have been erroneously applied to other Alternatives.*
- *Cost for Alternative B does not account for the South entrance enhancement currently being considered by the City.*
- *Alternative B-CSX is the LEDPA and negotiations with CSX have not been fully pursued.*
- *Alternative B-CSX could work in conjunction with the future High Speed Rail project.*

Staff Response:

The details of Alternatives Analysis are contained in the application materials and the Fact Sheet for the draft permit. After several requests for additional information and analyses, staff determined the application materials satisfy the requirements of 9VAC25-210-80, demonstrating that Alternative B, although having the most wetland impacts of the alternatives evaluated in the application, is the least environmentally damaging practicable alternative taking into account cost, existing technology, and logistics in light of overall project purpose. Purpose, cost, and logistics are detailed in the fact sheet and are summarized in the following paragraphs; staff did not consider technology to be a deciding factor in differentiating between the alternatives.

Purpose: The JPA for this project submitted on February 6, 2019, provided practicability analyses for each alternative under the current zoning proposal (North Potomac Yard Small Area Plan or NPYSAP). The City's analysis concluded that Alternative B is the only alternative that provides walkable access to every re-developable parcel in Potomac Yard and the majority of the existing homes and business in the southern portion of Potomac Yard. Alternative B provides maximum access and the highest density of re-development.

Staff requested an analysis of how the land area could be rezoned to best support a Metrorail Station at Alternative A and B-CSX in order to be sure that the NPYSAP zoning was not limiting the potential for Alternative A and B-CSX to support re-development and provide maximum access. Staff did not request this analysis for Alternative D as the application materials demonstrated that Alternative D was 84% more expensive than Alternative B and included logistical challenges such as constructing a bridge over Four Mile Run. The rezoning analysis did not change the conclusion that Alternative B is the only practicable alternative and highlighted the cost and logistical challenges of rezoning.

The application indicates that a Bus Alternative was considered in the EIS process; however, it was not provided in the VWP Permit application as a viable alternative as it does not support the project purpose.

Cost: The initial application submitted on February 6, 2019, included cost estimates from the Environmental Impact Statement (EIS) process. Staff requested a more up to date and detailed cost analysis. The additional information received on March 11, 2019, and April 29, 2019, clarified that the estimated cost to construct Alternative B is \$320 million, which is based primarily on the actual budget figures from the executed design-build contract. Alternative B costs approximately \$78 million (25%) less than Alternative A, \$243 million (76%) less than Alternative B-CSX, and \$269 million (84%) less than Alternative D. The City states that a 20% percent increase in cost (\$64 million) to the City is determined to be not practicable.

The application materials also explain the project tax revenue and debt service cost associated with each alternative, which is a function of how and when the high value, dense, walkable development will occur in relation to each alternative. The below table summarizes the findings.

Alternative	Station Cost (millions)	Tax Revenue (millions)	New Office Space (million sq.ft.)	Metro Access (workers and residents)
Alt. B	\$320	\$2,771	4.1	23,238
Alt. A	\$398	\$2,205	2.8	15,951
Alt. B-CSX	\$563	\$2,255	3.1	20,208

The cost associated with an enhanced south entrance at the Alternative B scenario is not included in the application cost analysis because the enhancement was removed from the project. Subsequently, the Commonwealth of Virginia announced in a Memorandum of Understanding dated November 12, 2018, its intention to grant \$50 million toward the enhancement of a south entrance to the Potomac Yard Metro station. Based upon information provided by the City, it is staff’s understanding that the City has requested the Potomac Yard Contractor to evaluate an option that would enhance the south access point to the proposed Metrorail Station and remain within the \$50 million offered by the Commonwealth and without delaying the station opening date so that limited or no additional cost would be realized by the City.

Logistics: The application materials state that Alternative B-CSX is located on property owned by CSXT and occupied by a rail line heavily used by CSX, Amtrak, and VRE. The application states that it is not likely that the City could obtain land owned by CSXT and obtain approval to disrupt service and relocate portions of the track. If negotiations were possible, it could take several years to reach an agreement and there is no reasonable guarantee that an agreement could be reached. The application includes comments provided during the DEIS process from Virginia Department of Rail and Public Transportation (VDRPT) and VRE which objected to the B-CSX design option based on impacts to existing rail operations. The DRPT provided comments in support of Alternative B during the VWP Permit public comment period. The application explains that the delay in construction would not facilitate the planned development to accommodate the City’s projected growth. The application states that given

that the land is situated on property owned by CSXT and cannot be reasonably obtained; Alternative B-CSX is not practicable when evaluating logistical constraints.

The City provided information that the future High Speed Rail project is a VDRPT project funded by the Commonwealth. The proposed project includes improving CSX track existing alignment in the Potomac Yard whereas the B-CSX Alternative would require realignment of the tracks; therefore, the B-CSX Alternative does not have any cost savings associated with this proposed future project by VDRPT.

10. Noise and Vibration Impacts at Alternative A vs. Alternative B

Staff received comments that the noise and vibration impacts associated with Alternative A were not thoroughly/accurately vetted in the application. The comments focused on:

- *Construction noise and vibration impacts would be the same between Alternative A and Alternate B.*
- *Other occurrences of excessive vibrations occurring at other Metro and rail sites was not discussed in the JPA analysis.*
- *Consequences of exceeding WMATA and Federal Transit Administration vibration criteria is not discussed in terms of project practicality.*

Staff Response:

Noise and vibrations were one of the environmental factors considered in the EIS processes. The application materials explain that the WMATA Noise and Vibration criteria are design standards incorporated into the WMATA Manual of Design Criteria (2016) that sets standards for all projects, and that construction of Alternative A would make the existing noise and vibration impacts substantially worse both during the multi-year construction period and during operation of the station. Failure to satisfy those standards could force WMATA to employ mitigation measures for the impacts of noise and/or vibration. Accordingly, these potential impacts on the project are factored into the practicability analysis as part of the contingency in the cost estimate for Alternative A. The application states that it is not reasonably possible to quantify the “consequences” with respect to Alternative A with any substantial degree of certainty at this time because the mitigation measures would have to be developed in discussions with WMATA, FTA, and affected homeowners and would be driven in large part by future discretionary decisions of WMATA and FTA.

The application states that exceedances occur at other lines either temporarily or permanently. A permanent exceedance typically occurs due to a change in the surrounding environment. The example provided was that the Blue and Yellow lines were constructed on undeveloped land and adjacent to an active rail yard in Northern Alexandria. Later, a landowner built a townhome community immediately adjacent to Blue and Yellow lines transit rail. In these cases, any permanent exceedance from WMATA’s rail activity is considered ‘grandfathered’ in, meaning no remedial work would be required at this site under WMATA’s standards. Construction of Alternative A would create a new noise and vibration impact both during the construction period and during operation of the station.

11. Proximity of Alternative A and Alternative B

Staff received comments that Alternative A and Alternative B are within 200 feet of each other and it is not clear why these are not more similar in terms of access.

Staff Response:

Staff recognizes the footprint of the north ramp of Alternative A and the south ramp of Alternative B are very close. However, the entrance/exit for Alternative B is approximately 1,000 feet closer to North Potomac Yard than Alternative A. The consequence of this is discussed in Comment Number 8 - Purpose and Need.

12. Alternative A – Protective Shell

Staff received comments that the Protective Shell associated with Alternative A is erroneous, that a shell structure is not required, and that Alternative B has similar risks.

Staff Response:

The application states there is no feasible way to construct a Metrorail station around and overtop of an operating rail line without extraordinary mitigation safety measures, such as a protective shell (also referred to as a “protective structure”) or a rail line shutdown and that traditional construction techniques cannot be safely employed at Alternative A. The worksite for Alternative A would be above and within one foot of the active rail as where Alternative B is 15 feet from the third rail at its closest point, but generally is further away.

Staff requested additional information about the need and cost of the protective shell on February 21, 2019, and April 1, 2019. In response, the City submitted an updated and detailed cost evaluation of Alternative A, including the protective shell. The estimated cost of the protective shell is \$20 million which includes:

- i. design, materials, and construction of the protective structure;
- ii. engineering services to design the station over and around the structure;
- iii. additional time (estimated to be at least 6 months) added to the construction schedule to construct station elements during weekend and night periods when trains are not running;
- iv. removal and disposal of the protective structure;
- v. real estate accommodations; and,
- vi. insurance

The application provided the below table to summarize the safety factors associated with Alternative A as compared to Alternative B.

Factor	Alternative A	Alternative B
Proximity to electrical current	<p>Worksite is immediately adjacent (within a foot) to third rail, with electrical current on both sides of the railroad, for a distance of at least 600 feet (the length of the station platform).</p> <p>Arcing of current is a concern. This risk is mitigated but not entirely eliminated by the protective shell.</p>	<p>The worksite is isolated from electrical current by distance and a fence. The construction site is 15 feet from the third rail at its <i>closest</i> point, but generally is much further away.</p> <p>Although arcing possible up to 100 feet, much of the construction activity will be outside that distance, except during the two weekend shutdowns to re-align the track. The third rail will be de-energized during these times.</p>
Potential for fouling tracks by falling debris and tools.	<p>Worksite is immediately adjacent (less than 1 foot) to and above the operating railroad, for a distance of at least 600 feet (the length of the station platform).</p> <p>Falling debris and tools have the potential to foul the tracks creating an unsafe situation. This risk is partially mitigated but not eliminated by protective shell.</p>	<p>Construction zone is separated from the operating railroad. The closest point is approximately 15 feet from the operating railroad.</p> <p>Reduced potential for fouling the operating tracks due to falling equipment.</p>
	Worksite is immediately adjacent (less than 1 foot) to and above the operating	

<p>Potential for fouling tracks due to overhead crane work.</p>	<p>railroad, for a distance of at least 600 feet (the length of the station platform).</p> <p>Worksite is immediately adjacent (less than 1 foot) to and above the operating railroad, for a distance of at least 600 feet (the length of the station platform).</p> <p>Overhead work has the potential to foul the tracks creating an unsafe situation over the entire duration of construction. This risk is partially mitigated by railroad shutdowns when overhead work is taking place.</p>	<p>Construction zone is separated from the operating railroad (except for pedestrian bridge over the CSX tracks, which is common to both alternatives). Most overhead work will not threaten operating railroad.</p> <p>With no material being lifted <i>over</i> the operating tracks for most elements of station construction, the only relevant risk is of a crane in close proximity to the tracks tipping over (rare occurrence), but this is a common risk for both alternatives.</p>
---	--	--

13. Contaminated Soils

Staff received comments that the project will disrupt and expose contaminated soils onsite.

Staff Response:

The application provided details regarding the project area’s history of disturbance and land modification from heavy industrial use as a railyard, resulting in soils contaminated with heavy metals and hydrocarbons. Based on the information provided in the Environmental Assessment, remedial efforts began in 1993, and in 1998 the U.S. Environmental Protection Agency deemed the site cleanup complete.

A condition is in the draft permit requiring a soil management plan be submitted to DEQ to ensure that soil being removed from the site is tested and handled in accordance with any Virginia waste management regulations.

14. History of Process

Staff received comments about the inadequacies of various local zoning processes, EIS process, and negotiations with National Park Service. The comments focused on:

- *The Final EIS violates NEPA because it only analyzes the preferred alternative and the no-build alternative.*
- *The City has a history of not disclosing pertinent information to citizens.*
- *Alternative A would have already been constructed by now.*
- *Political influence has impacted the regulatory process.*
- *The EIS process did not account for Amazon and Virginia Tech.*
- *The EIS process did not take into account recent flooding and should be revisited.*
- *Alternative A was the original site selection.*
- *Until recently, the location of Alternative B was considered part of a Scenic Easement.*
- *The National Park Service should not have traded land.*

Staff Response:

It is not DEQ’s purview to revisit the decision of the NEPA process. The application incorporates the DEIS and FEIS which describes how the applicant evaluated and eliminated previously considered alternatives; however, the application proposes four build alternatives, referred to as A, B, B-CSX, and D, that were proposed by the City as most supporting of the project purpose and documents an alternative analysis for the purposes of the VWP Permit application.

The VWP permit process requires that the application demonstrate an accurate and thorough alternatives analysis. This requirement must be fulfilled regardless of the sequences in which the alternatives were identified or the history of the project. DEQ has no authority under either the Code of Virginia (§62.1-44.15:20) or the Virginia Administrative Code (9VAC25-210-10, et seq.) to require preparation of an EIS or EA, new or revised, for this

project. While these comments on the history of this project at the local government and NEPA review level have been noted, these concerns are not within the purview of the VWPP Program. DEQ must evaluate the currently proposed project for compliance with the VWPP Permit Regulation.

The process and conclusions of the City's negotiations with the National Park Service are not within the purview of DEQ regulatory authority.

15. Request Reports to DEQ be Public

Staff received comments that the mandatory inspection reports required by DEQ be made public.

Staff Response:

The City has committed to posting the inspection reports submitted to DEQ on-line at <https://www.alexandriava.gov/potomacyard/default.aspx?id=101657> along with the other information for this project. In addition, DEQ will promptly respond to any request for copies of documents associated with this project in accordance with DEQ's Freedom of Information Act Policy.

16. Historic Properties

Staff received comments that the project will negatively effective many Historic Properties and the USACE is required to take these effects into account.

Staff Response:

The VWP regulations do not require an applicant to address historic sites for a VWP permit. The USACE must address such considerations through their permitting process.

III. SUMMARY OF CHANGES TO DRAFT PERMIT IN REPONSE TO CITIZEN COMMENTS

In response to public comment and additional comments received from Department of Conservation and Recreation, staff is proposing the following changes to the draft permit.

- Part I.F.1.a and c. were modified to require additional pre-construction photographs to document the existing condition of adjacent wetlands.
- Part I.F.2 was modified to require that weekly self-inspections be submitted to DEQ monthly instead of being kept on-site.
- Part I.H.3 was added to provide clarity that the permit requires the successful restoration of 1.10 acre of PFO and 0.91 acre of PEM wetland.
- Part I.H.4 was added to require the on-site reestablishment of Torrey's rush that would be disturbed by the permanent impact area.
- Part I.J.1.b was added to require specific information on how Torrey's rush will be re-established in the temporary impact restoration area for DEQ's review and approval.
- Part I.J.1.e was modified to account for upland soil piles within the project area and address that the permittee shall re-establish 1.10 acre of forested and 0.91 acre of emergent wetlands.
- Part I.K.4.a.vii and b.ii. were modified to update the link to DCR's invasive plant list.
- Part I.K.4.b.iv was added to require that the 400 square foot Torrey's rush colony be re-established with a 45% cover density.
- Part I.K.5 was modified to specify that soils also be evaluated in the Torrey's rush re-establishment zone.
- Part I.L.5 was modified to specify vegetative monitoring take place within the Torrey's rush re-establishment zone.
- Part I.L.6.e was added to specify when vegetative data is to be collected within the Torrey's rush re-establishment zone.

- Part I.N.1 was modified to include specifics on corrective action plan monitoring within the Torrey's rush re-establishment zone.
- Part I.N.2.d was added to define a Significant Corrective action at the Torrey's rush re-establishment zone.
- Part I.N.3 was removed to alleviate concern that permit allowed for the wetland restoration to not be successful.

VWP Individual Permit Number 19-0170

Effective Date: DRAFT

Expiration Date: DRAFT

VIRGINIA WATER PROTECTION PERMIT ISSUED PURSUANT TO THE STATE WATER CONTROL LAW AND SECTION 401 OF THE CLEAN WATER ACT

In compliance with § 401 of the Clean Water Act, as amended (33 USC § 1341) and the State Water Control Law and regulations adopted pursuant thereto, the board has determined that there is a reasonable assurance that this VWP permit, if complied with, will protect instream beneficial uses, will not violate applicable water quality standards, and will not cause or contribute to a significant impairment of state waters or fish and wildlife resources. In issuing this VWP permit, the board has not taken into consideration the structural stability of any proposed activities.

Permittee: City of Alexandria

Address: 301 King Street, Suite 3500, Alexandria, Virginia 22314

Activity Location: The project is east of Potomac Avenue, west of George Washington Memorial Parkway, and north of Potomac Greens Drive in the City of Alexandria, Virginia.

Activity Description: The permittee proposes to construct a new Metrorail Station, associated tracks, and additional auxiliary structures on approximately 18.39-acre site known as “Potomac Yard Metrorail Station.” Permitted activities shall be conducted as described in the Joint Permit Application dated and received on February 6, 2019, and supplemental materials, including appendices, revisions and clarifications received May 21, 2019.

Authorized Surface Water Impacts:

This permit authorizes the total impact of 3.57 acres of surface waters, consisting of 1.56 acres of permanent impacts and 2.01 acres of temporary impacts. Permanent impacts are to 0.92 acre of palustrine forested (PFO) wetland and 0.64 acre of palustrine emergent (PEM) wetland. Temporary impacts are to 1.10 acres of PFO wetland and to 0.91 acre of PEM wetland. Authorized surface water impacts shall be as depicted on the impacts maps entitled *Potomac Yard Metro Station Impacts Map* and *Potomac Yard Metro Station Impacts Inset Section*, dated March 2019, and received March 11, 2019.

Compensation:

The permittee shall compensate for the authorized surface water impacts through the following:

1. Compensation for permanent wetland impacts shall be provided through the purchase of 4.96 wetland credits from a DEQ approved mitigation bank, in-lieu fee fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ).
2. Compensation for temporal loss of function from temporary impacts to PFO wetland shall be provided through the purchase of 1.10 wetland credits from a DEQ approved mitigation bank, in-lieu fee fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ).

3. Mitigation bank credits shall be purchased prior to the purchase of in-lieu fee program credits in accordance with 9VAC25-210-116.C.2.
4. The credit sale shall be in accordance with the approved Mitigation Banking Instrument for the mitigation bank.

The permitted activity shall be in accordance with this Permit Cover Page, Part I - Special Conditions, and Part II - General Conditions.

Thomas A. Faha, Regional Director

Date

Part I – Special Conditions

A. Authorized Activities

1. This permit authorizes the total impact of 3.57 acres of surface waters, consisting of 1.56 acres of permanent impacts and 2.01 acres of temporary impacts.
 - a. Permanent impacts consist of 0.92 acre of palustrine forested (PFO) wetland and 0.64 acre of palustrine emergent (PEM) wetland.
 - b. Temporary impacts consist of 1.10 acres of PFO wetland and 0.91 acre of PEM wetland.
 - c. Authorized surface water impacts described under this condition shall be as depicted on the impacts maps entitled *Potomac Yard Metro Station Impacts Map* and *Potomac Yard Metro Station Impacts Inset Section*, dated March 2019, and received March 11, 2019.
2. The permittee shall conduct authorized activities as described in the Joint Permit Application dated and received February 6, 2019, and supplemental materials, revisions and clarifications received through May 21, 2019.
3. The permittee shall immediately notify the DEQ of any changes to the authorized activities or impacts map that affect permitted areas or any changes to the design or type of construction activities in surface waters authorized by this permit. Any additional impacts, modifications, or changes shall be subject to individual permit review and/or modification of this permit and require DEQ approval.

B. Permit Term

1. This permit is valid for **fifteen (15) years** from the date of issuance. A new permit may be necessary for the continuance of the authorized activities or any permit requirement that has not been completed, including compensation provisions.
2. The permittee shall notify DEQ in writing at least 120 calendar days prior to the expiration of this permit if reissuance will be requested.

C. Standard Project Conditions

1. The activities authorized by this permit shall be executed in such a manner that any impacts to beneficial uses are minimized. As defined in § 62.1-10(b) of the Code, "beneficial use" means both instream and offstream uses. Instream beneficial uses include, but are not limited to, the protection of fish and wildlife habitat, maintenance of waste assimilation, recreation, navigation, and cultural and aesthetic values. The preservation of instream flows for purposes of the protection of navigation, maintenance of waste assimilation capacity, the protection of fish and wildlife resources and habitat, recreation, cultural and aesthetic values is an instream beneficial use of Virginia's waters. Offstream beneficial uses include, but are not limited to, domestic uses (including public water supply), agricultural uses, electric power generation, commercial uses, and industrial uses. Public water supply uses for human consumption shall be considered the highest priority.
2. No activity shall substantially disrupt the movement of aquatic life indigenous to the water body, including those species which normally migrate through the area, unless the primary purpose of the activity is to impound water.

3. Flows downstream of the project area shall be maintained to protect all uses.
4. All construction, construction access, and demolition activities associated with this project shall be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by this permit. Wet, excess, or waste concrete shall be prohibited from entering surface waters.
5. All fill material placed in surface waters shall be clean and free of contaminants in toxic concentrations or amounts in accordance with all applicable laws and regulations.
6. Measures shall be employed at all times to prevent and contain spills of fuels, lubricants, or other pollutants into surface waters.
7. Virginia Water Quality Standards shall not be violated in any surface waters as a result of the project activities.
8. All non-impacted surface waters that are within the project or right-of-way limits, and that are within fifty feet of any project activities, shall be clearly flagged or demarcated for the life of the construction activity within that area. The permittee shall notify all contractors and subcontractors that *no activities are to occur in these marked areas*.
9. All required notifications and submittals shall include project name and permit number and be submitted electronically to vwp.nro@deq.virginia.gov or mailed to the DEQ office stated below, to the attention of the VWP permit manager, unless directed in writing by DEQ subsequent to the issuance of this permit: Department of Environmental Quality- Northern Regional Office, 13901 Crown Court, Woodbridge, Virginia 22193.
10. All reports required by this permit and other information requested by DEQ shall be signed by the permittee or a person acting in the permittee's behalf, with the authority to bind the permittee. A person is a duly authorized representative only if *both* criteria below are met. If a representative authorization is no longer valid because of a change in responsibility for the overall operation of the facility, a new authorization shall be immediately submitted to DEQ.
 - a. The authorization is made in writing by the permittee.
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

11. All submittals shall contain the following signed certification statement:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate,

and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

12. Any fish kills or spills of fuels or oils shall be reported to DEQ immediately upon discovery at (703) 583-3800. If DEQ cannot be reached, the spill shall be reported to the Virginia Department of Emergency Management (DEM) at 1-800-468-8892 or the National Response Center (NRC) at 1-800-424-8802.
13. DEQ shall be notified in writing within 24 hours or as soon as possible on the next business day when potential environmentally threatening conditions are encountered which require debris removal or involve potentially toxic substances. Measures to remove the obstruction, material, or toxic substance or to change the location of any structure are prohibited until approved by DEQ.

D. Temporary Impacts

1. All temporarily disturbed wetland areas shall be returned to preconstruction wetland elevations and replanted in accordance with the DEQ approved Final Restoration Plan no later than March 31, 2022.
2. At the location between the tidal wetland and the project limits, as identified on cross-section 450+50 provided in Attachment M- Temporary Fill Cross-sections received on April 29, 2019, the permittee shall:
 - a. establish and maintain a minimum 10-foot buffer between the tidal wetland and the project limits;
 - b. properly install and maintenance a row of super silt fence a minimum of 10 feet from the tidal wetland to provide secondary sediment control; and,
 - c. properly install and maintenance a row of silt fence 5-feet landward of the super silt fence to provide primary sediment control.

E. Stormwater Management Structures

1. Any outfalls and overflow structures shall be constructed and maintained to prevent downstream sediment deposition, erosion, or scour that may be associated with normal flow and any expected storm flows. Construction shall include the use of an appropriately sized riprap outlet protection apron at the outfall site.
2. Draining of a stormwater management facility shall be performed by a method that prevents downstream sediment deposition, erosion, or scour.

F. Project Construction Monitoring and Submittals (Impact Sites)

1. The permittee shall submit written notification at least **ten (10) calendar days** prior to the initiation of land disturbance or construction activities in permitted areas. The notification shall include preconstruction photographs, and projected schedule for initiating and completing work at each permitted impact area.
 - a. Preconstruction photographs shall be taken at each [cross-section of the temporary impacts depicted on Attachment M - Temporary Fill Cross-Sections received on April 4, 2019, impact area](#) prior to initiation of activities within impact areas.

- b. Photographs shall depict the impact area and the non-impacted surface waters immediately adjacent to and down gradient of each impact area.
 - c. Each photograph shall be labeled to include the following information: permit number, [cross-section location](#)~~impact area number~~, date and time of the photograph, name of the person taking the photograph, photograph orientation, and photograph subject description.
2. Site inspections shall be conducted **once every calendar week** and recorded on the *Weekly VWP Permit Inspection Checklist (Attachment 1)* by the permittee or the permittee's qualified designee during active construction within authorized surface water impact areas. Weekly inspections shall be conducted in the following areas: all authorized permanent and temporary impact areas; the perimeter of the project construction area that is adjacent to surface waters, including wetlands, stream channels, and open water; and, surface water areas within 50 feet of any land disturbing activity. The *Weekly VWP Permit Inspection Checklist (Attachment 1)* shall be completed in its entirety for each weekly inspection and shall be [submitted to DEQ monthly. kept on-site and made available for review by DEQ staff upon request during normal business hours.](#)
 3. The *VWP Permit Construction Status Update Form (Attachment 2)* enclosed with this permit shall be completed in June and December of every year for the duration of this permit. The *VWP Permit Construction Status Update Form (Attachment 2)* shall include reference to the VWP permit authorization number and one of the following statements for each authorized surface water impact location:
 - a. Construction activities not yet started;
 - b. Construction activities started;
 - c. Construction activities started but are currently inactive; or,
 - d. Construction activities complete.
 4. The *VWP Permit Construction Status Update Form (Attachment 2)* shall be submitted and must be received by DEQ no later than January 10 and July 10 of every year.
 5. The permittee shall notify DEQ within 24 hours of discovering impacts to surface waters including wetlands, stream channels, and open water that are not authorized by this permit. The notification shall include photographs, estimated acreage and/or linear footage of impacts, and a description of the impacts.
 6. The permittee shall submit written notification of completion within 30 calendar days after the completion of all activities in all permanent permitted impact areas authorized under this permit.

G. Soil Management

1. The permittee shall submit a soil management plan to address the management of potentially contaminated soils that may be encountered during site development within 60 days of the effective date of this permit, and prior to any construction activity in permitted impact areas. The plan should include, at a minimum: a summary of soil conditions at the project site; procedures for characterizing the material, whether in place or in stockpiles; sampling frequency and analytical parameters; on site management of excavated material; removal, including transportation considerations; disposal locations; and project summary.

H. Compensatory Mitigation

1. The permittee shall compensate for permanent wetland impacts through the purchase of 4.96 wetland credits, consisting of 3.68 credits for impacts to 0.92 acre of PFO and 1.28 credits for impacts to 0.64 acre of PEM, from a DEQ approved mitigation bank, an approved in-lieu fee fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ). Mitigation bank credits shall be purchased prior to the purchase of in-lieu fee program credits in accordance with 9VAC25-210-116.C.2. The credit sale shall be in accordance with the approved Mitigation Banking Instrument for the mitigation bank.
2. The permittee shall compensate for temporal loss of function due to temporary impacts to PFO wetland through the purchase of 1.10 wetland credits from a DEQ approved mitigation bank, an approved in-lieu fee fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ). Mitigation bank credits shall be purchased prior to the purchase of in-lieu fee program credits in accordance with 9VAC25-210-116.C.2. The credit sale shall be in accordance with the approved Mitigation Banking Instrument for the mitigation bank.
3. The permittee shall restore 1.10 acre of palustrine-forested wetland and 0.91 acre palustrine emergent wetland on-site in accordance with the DEQ approved Final Restoration Plan and no later than March 31, 2022.
4. The permittee shall compensate for impacts to Torrey's rush (*Juncus torreyi*) by creating a re-establishment zone, comprised of a minimum 400 square foot colony with Torrey's rush at a minimum of 45% coverage. The re-establishment shall occur within the temporary impact restoration area or in the adjacent wetlands. The re-establishment shall be in accordance with the DEQ approved Final Restoration Plan.
- ~~3.5.~~ The permittee shall submit documentation to DEQ prior to initiating work in permitted impact areas that 6.06 wetland credits were acquired and debited from the ledger of a DEQ approved mitigation bank, in-lieu fee fund, or a combination thereof.

I. On-Site Restoration Standard Conditions

1. The final wetlands and/or stream restoration plan (the Plan), as prepared in accordance this VWP Permit, shall be submitted to DEQ within 60 days of the effective date of this permit and approved in writing by DEQ prior to any construction activity in permitted impact areas. The Plan as approved by DEQ shall be an enforceable requirement of this permit. Any change to the approved Plan must be submitted to DEQ for approval prior to implementing the change. The vegetation used shall be native species common to the area, shall be suitable for growth in local wetland or riparian conditions, and shall be from areas within the same or adjacent U.S. Department of Agriculture Plant Hardiness Zone or Natural Resources Conservation Service Land Resource Region as that of the project site.
2. Herbicides or algicides shall be used in accordance with the application rate and method of application in accordance with the manufacturers' requirements and applicable local, state, and federal regulations.
3. All *non-impacted surface waters* and designated upland buffers that are within the restoration site limits, that are within fifty feet of any restoration site activities, and that are within the project or right-of-way limits shall be clearly flagged or marked for the life of the construction activity within

that area. The permittee shall notify all contractors and subcontractors that *no activities are to occur within these marked areas*.

J. Wetland Restoration Site Construction: Tasks, Monitoring, and Submittals

1. The permittee shall submit a Final Wetland Restoration Plan (the Plan), which shall include all the information provided in the conceptual restoration plan and, at a minimum, the following information:
 - The goals and objectives of the plan, how the restoration is replacing/enhancing/preserving wetland functions, the components of the compensation expressed in acres (rounded to the nearest 100th acre) and square footage, the proposed vegetation types, and the wetland classification.
 - Torrey's rush re-establishment plan. The plan shall include multiple approaches to assure successful mitigation through relocation of mature plants, as well as planting of propagules and/or seeds that have been successfully reared off site in greenhouse setting or on-site. The plan should include:
 - i. The location where the colony will be re-established (the re-establishment zone);
 - ii. The method to harvest the on-site seed source (starting in June through September of 2019), transferrable rooting structures, individual plant specimens, and/or entire in-situ plant colony including associated soil media within the rooting zone;
 - iii. The method of re-establishment; and,
 - iv. Soil amendments (if applicable).
 - Wetland delineation confirmation, data sheets, and survey-located wetland maps for existing surface waters on the restoration site, and any collected information on reference wetlands adjacent to or near the restoration site.
 - A location map, including the restoration site boundaries, the latitude and longitude (to the nearest second) at the center of the restoration site, and the watershed name and the fourth order subbasin, as defined by the hydrologic unit boundaries of the National Watershed Boundary Dataset, in which the restoration site is located.
 - A spot elevation survey. The survey shall be conducted by a licensed land surveyor and certified by a licensed surveyor, licensed professional engineer, or licensed landscape architect. The survey shall document spot elevations (in feet above mean sea level) in locations representative of the temporary impacted forested wetland and emergent wetland system that are within +/- 0.2 feet (2.5 inches) of the wetland prior to commencement of the temporary impact, to be used as reference elevations to set the grade for the restored wetland. This permit does not require the permittee to restore the pre-construction elevation of the upland piles of soil currently present in the authorized temporary impact area. These dispersed upland areas are to be restored to the pre-construction elevations necessary to achieve the re-establishment of 1.10 acre of forested and 0.91 of emergent of the adjacent wetlands.
 - Provide the start and end dates of the growing season, as defined below:
 - i. For the purpose of this determination, the growing season is defined as the period in which the 24-hour average air temperatures are expected to be above 28°F in 5 out of 10 years; or,
 - ii. Define the period during which the soil temperature at the project locations is greater than biological zero: (41°F) at a depth of 50 cm (19.7 inches), if such data is available.
 - A site access plan.
 - A monitoring plan, with defined goals.

- A drawing(s) depicting the location of photo-monitoring stations, monitoring wells, soil sampling points, reference wetlands (if applicable), and vegetative monitoring plot(s)/transect(s).
 - Define the sampling method and sizing of vegetative monitoring plot(s)/transect(s).
 - Monitoring wells shall be proposed at a minimum density of 3 per acre. The plan shall include specific details on the monitoring wells, monitoring device, and monitoring methodology.
 - An abatement and control plan for undesirable plant species, including the type of herbicides or algicides to be used, and their application rate and method of application in accordance with the manufacturers' requirements, as applicable.
 - A planting scheme and schedule, including but not limited to, the plant species, wetland indicator status and sizing to be planted, zonation, and acreage of each vegetation type proposed.
 - A soil preparation and amendment plan addressing both topsoil and subsoil conditions, permeability, and the need for soil amendments and/or structural modification (i.e. surface scarification or tilling).
 - Grading and Erosion and Sediment Control Plans.
 - A construction and Plan implementation schedule.
2. Photographs of existing conditions shall be taken prior to commencing activities at the restoration site.

Photographs shall be taken at a height of approximately five to six feet and from fixed-point stations, preferably at the same location as that of each the planned monitoring wells. Photographs shall be taken in each of the four cardinal directions (north, east, south, and west). Permanent markers shall be established to ensure that the same locations on the site are used for future monitoring events. Each photograph taken shall be labeled with the permit number, the name of the restoration site, the photo station number, the photograph orientation, the date and time of the photograph, the name of the person taking the photograph, and a brief description of the subject of the photograph. This information shall be provided as a separate attachment to each photograph, if necessary.

3. DEQ shall be notified in writing at least **ten (10) calendar days** prior to the initiation of restoration grading at the restoration site. The notification shall include a projected schedule of activities, Plan implementation, and construction completion.
4. Photographic monitoring of restoration site activities shall be required at the end of each month during restoration grading and site preparation activities to document that construction activities are being performed in manner to prevent impacts to adjacent surface waters.
- a. Photographic monitoring shall be conducted by the following method:
 Photographs shall be taken at a height of approximately five to six feet and from fixed-point stations, preferably at the same location as that of each planned monitoring well. Photographs shall be taken in each of the four cardinal directions (north, east, south, and west). Permanent markers shall be established to ensure that the same locations on the site are used for future monitoring events. Each photograph taken shall be labeled with the permit number, the name of the restoration site, the photo station number, the photograph orientation, the date and time of the photograph, the name of the person taking the photograph, and a brief description of the photograph subject. This information shall be provided as a separate attachment to each photograph, if necessary.
- b. For temporary disturbances to surface waters, the permittee shall conduct photographic monitoring at each temporary impact location after the temporary disturbance activity is complete in order to document that the area has been restored in compliance with these permit conditions.

5. After the wetland restoration site reaches final grade, but prior to planting, the permittee shall submit to DEQ a post-grading survey that confirms final grade is consistent with preconstruction wetland elevations. The survey shall be conducted by a licensed land surveyor and certified by a licensed surveyor, licensed professional engineer, or licensed landscape architect. The survey shall document spot elevations (in feet above mean sea level) that are within +/- 0.2 feet (2.5 inches) of the elevations indicated in the site restoration grading plan. This permit does not require the permittee to restore the pre-construction elevation of the upland piles of soil presently dispersed in the temporary impact area. These dispersed upland areas are to be restored to the pre-construction elevations of the adjacent wetlands.
6. Restoration site Restoration Monitoring Reports shall be submitted within 30 calendar days of each monitoring event. The reports shall include the following, as appropriate:
 - a. A summary of restoration progress, including any problems encountered and the proposed corrective actions or the DEQ-approved corrective actions taken.
 - b. Properly labeled photographs as detailed in Part J.2 & 4. The first restoration monitoring report shall include the photographs taken at the restoration site prior to initiation of land disturbance or restoration activities at the restoration site.

K. Wetland Restoration Success Criteria

1. The wetland restoration site as identified in the conceptual restoration plan *Potomac Yard Metrorail Station Civil; East Side; Wetlands Restoration Plan*, (2 sheets), dated December 27, 2018, and received February 6, 2019, and subsequent DEQ approved final plan submittal in accordance with VWP Permit 19-0170, and approved by DEQ shall meet success criteria required in this permit.
2. Success criteria, as stipulated by this Permit, is required to be met across the entire wetland restoration area, with randomly selected monitoring locations utilizing an appropriate selection means, and representative of each distinct resource type (i.e. zonation). All means or averages of plot data must apply to a distinctly homogenous area, with the number of sampling points and frequency of observation sufficient to allow for appropriate statistical inference. In the event that the monitoring does not accurately reflect the conditions of the entire site, additional monitoring will be required.
3. The site shall be inundated (flooded or ponded) or the water table is ≤ 12 inches below the soil surface for ≥ 14 consecutive days during the growing season every monitoring year. Site hydrology shall not exceed surficial inundation tolerances of the planted vegetation species. Hydrology shall be demonstrated via the use of monitoring wells at a minimum density of 3 monitoring wells per acre. In situations of inundation, the depth of inundation is to be reported at each monitoring well location.
4. Wetland vegetation shall meet all of the following criteria, as applicable based on defined end-resource type:
 - a. **Non-tidal Forested Wetlands**
 - i. A density of 400 woody living stems per acre greater than 12 inches in height in monitoring periods 1, 2, and 3 shall be maintained.

- ii. A density of 400 woody living stems per acre and greater than 24 inches in height in monitoring years 4 and 5 shall be maintained.
- iii. A density of 400 woody living stems per acre and greater than 36 inches in height in monitoring year 7.
- iv. The 400 woody stems shall be comprised of only native tree and shrub species, of which not less than 50% shall be native tree species.
- v. All woody species criteria shall be achieved at minimum in the last two monitoring years without supplemental planting. Woody stem counts include living, vigorous woody stems both planted and volunteer.
- vi. Native herbaceous plant coverage shall be at least 60% by the end of the first growing season, and at least 70% each monitoring year thereafter. Any seeds used for plant establishment should conform to the Virginia Seed Law (Sections 3.1-262 Code of Virginia) and Virginia Seed Regulations (2 VAC 5-290-10 et seq) and shall be free of tall fescue, Bermuda grass, and other allelopathic turf grass species, as well as plant species on the Virginia Department of Conservation and Recreation's Invasive Alien Plant List.
- vii. No more than 10% aerial cover and/or cumulative areas larger than 0.25 acre in size dominated by invasive species may be present in each cell, field, block, or transect. Invasive species are identified on the Virginia Department of Conservation and Recreation's Invasive Alien Plant list. This list of invasive plants may be found at http://www.dcr.virginia.gov/natural_heritage/documents/invlist.pdf; <https://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2014.pdf>
- viii. Woody stems must present wetland vegetation dominance, defined as a vegetation community where more than 50% of all dominant species are facultative ("FAC") or wetter using "routine delineation methods" as described in the "Corps of Engineers Wetland Delineation Method," Technical Report 87-1 ("1987 Manual") or the Eastern Mountain and Piedmont Regional Supplement must be achieved.
- ix. Emergent vegetation must present wetland vegetation dominance, defined as a vegetation community where more than 50% of all dominant species are facultative ("FAC") or wetter using "routine delineation methods" as described in the "Corps of Engineers Wetland Delineation Method," Technical Report 87-1 ("1987 Manual") or the Eastern Mountain and Piedmont Regional Supplement must be achieved.

b. Non-tidal Emergent Wetland

- i. Native non-invasive herbaceous plant coverage shall be at least 60% by the end of the first growing season, and at least 80% each monitoring year thereafter. Any seeds used for plant establishment should conform to the Virginia Seed Law (Sections 3.1-262 Code of Virginia) and Virginia Seed Regulations (2 VAC 5-290-10 et seq) and shall be free of tall fescue, Bermuda grass, and other allelopathic turf grass species, as well as plant species on the Virginia Department of Conservation and Recreation's Invasive Alien Plant List.
- ii. No more than 10% aerial cover and/or cumulative areas larger than 0.25 acre in size dominated by invasive species may be present in each cell, field, or block. Invasive species are identified on the Virginia Department of Conservation and Recreation's Invasive Alien Plant list. This list of invasive plants may be found at http://www.dcr.virginia.gov/natural_heritage/documents/invlist.pdf; <https://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2014.pdf>;
- iii. Emergent vegetation must present wetland vegetation dominance, defined as a vegetation community where more than 50% of all dominant species are facultative ("FAC") or wetter using "routine delineation methods" as described in the "Corps of Engineers Wetland Delineation

Method," Technical Report 87-1 ("1987 Manual") or the Eastern Mountain and Piedmont Regional Supplement must be achieved.

iv. The Torrey's rush re-establishment zone shall meet the above PEM vegetative success criteria, and shall achieve a Torrey's rush density of at a minimum 45% coverage over a 400 square area.

5. Soil Success Criteria shall be evaluated for wetland restoration areas located on non-hydric soils and- the Torrey's rush re-establishment area. In that event, the following success criteria shall be followed:
 - a. For fine textured soils (silts, clays, loams), positive indicators of hydric soil formation must be demonstrated within 12 inches of the soil surface. Groundwater monitoring may be used as a positive indicator for all monitoring years after reaching the final grade, in which case, wells must demonstrate free water within 12 inches of the surface for at least 15 consecutive days during the growing season.
 - b. For coarse textured (sandy) surface soils (A horizon), positive indicators of hydric soil formation must be demonstrated within 6 inches of the soil surface. Groundwater monitoring may be used as a positive indicator for all monitoring years after reaching the final grade, in which case, wells must demonstrate free water within 6 inches of the surface for at least 15 consecutive days during the growing season.
 - c. Positive indicators of hydric soil formation may include redoximorphic features including, but not limited to redox concentrations, redox depletions, reduced matrices, positive tests with α,α' diperydyl, or other field indicators contained in the Field Indicators of Hydric Soils of the U.S.
 - d. A complete soil morphologic description shall be documented pre- and post-restoration and at the 3rd, 4th, 5th and 7th monitoring year to document changes in overall soil morphology, particularly the development of redoximorphic features over time (such as a reduction in matrix chroma or the development of redox depletions), to demonstrate that soils at the site have achieved hydric soil conditions. At a minimum, soil profiles to a depth of 18 inches shall be described at a distance of 10 to 30 feet from each monitoring well.
6. Final release of the site contingent upon DEQ (if applicable) approval of all defined success criteria being met, and that the site has successfully resulted in the restoration of the defined acreage of wetland and associated buffer, with site-wide vegetation coverage of relative uniformity, and trees of sufficient height as to afford a measure of temporal replacement.

L. Success Monitoring Requirements

1. Monitoring activities shall occur during the growing season, and during the 1st, 2nd, 3rd, 4th, 5th, and 7th monitoring year, and shall adhere to the following:
 - a. The 1st monitoring period shall be the 1st growing season after the completion of grading and planting.
 - b. If all success criteria have not been met in any monitoring year, then a monitoring report shall be required for each consecutive year until two sequential annual reports indicate that all criteria have been successfully satisfied. This shall be required regardless of the monitoring year; and,
 - c. The monitoring period shall be extended for adherence to all applicable success criteria defined in Part I.L., to include additional monitoring years if all success criteria are not met the final two monitoring years.
 - d. For any year in which planting is conducted, monitoring of vegetation shall take place at least 6 months following planting.

2. Visual observations shall be conducted and descriptions provided with each monitoring report in narrative form along with documentation by one of the following means: (i) ground level photographs, taken facing north, south, east and west, from photo-monitoring stations located in the vicinity of each vegetation monitoring plot/transect and monitoring well. Permanent markers for the photo-monitoring stations at each monitoring well shall be established to ensure that the same locations (and view directions) are monitored in each monitoring period.
3. Hydrology monitoring shall be conducted each monitoring period during the growing season to demonstrate achievement of the hydrology performance criterion for either 60 days of continuous automated monitoring or 8 consecutive weekly measurements. (Actual monitoring may be of longer duration, as needed, to obtain verification of wetland hydrology). For surface saturation driven systems located on top of a clayey substrate, soil saturation measurement devices may be used in lieu of groundwater wells and other secondary hydrology indicators to determine groundwater elevations and/or hydro period in these wetlands areas. Specific details on the soil saturation measurement device and location or groundwater monitoring wells shall be provided in the final Plan documents (Section A) for DEQ and USACE approval.
4. Soil morphologic observations shall be conducted pre- and post-restoration and at the 3rd year and each monitoring event thereafter. The assessment shall include the location of soil samples, which shall be within 10 to 30 feet of each monitoring well, and include a complete soil profile down to 18 inches and observations of overall soil characteristics indicative of hydric soils, including but not limited to redox depletions or reduction in matrix chroma.
5. Vegetative monitoring plots/transects shall assess a minimum of 10% of the site and there shall be at least one monitoring plot/transect per resource type/zonation [including the Torrey's rush re-establishment zone](#).
 - a. Transects shall cross the wetland or buffer area with a width not less than 5 feet for woody plants and 1 foot for herbaceous species.
 - b. Appropriate methods shall be used to randomly locate vegetative monitoring plots/transects within sample areas (transects with random number generators, GIS randomization methods, etc.).
 - c. Plots/transects shall be re-established in new random locations each year, unless otherwise authorized by DEQ staff.
6. The following vegetation data shall be collected along each transect or within each plot during monitoring events, as applicable based on resource type/zonation:
 - a. In monitoring years 1, 2, and 3, number of living woody stems and species composition of stems \geq 12 inches.
 - b. In monitoring years 4 and 5, number of living woody stems and species composition of stems \geq 24 inches.
 - c. In monitoring year 7, number of stems and species of living wood stems \geq 36 inches.
 - d. The following parameters are to be calculated based on woody stems (as applicable based on resource type/zonation) that meet prescribed height requirements within a given monitoring year:
 - i. Percentage of woody stems comprised of volunteers;
 - ii. Number of stems, percentage of herbaceous coverage, and the species composition of for both woody and herbaceous vegetation across all vegetative strata; the percentage dominant FAC or wetter; and an inventory of all dominant vegetation species for woody and herbaceous vegetation;

- iii. Number, species, and percent cover of invasive plants; and,
 - iv. Number of dead stems total and per species, and estimated survival rate total and per species (as a percentage) of plantings.
- e. Torrey's rush re-establishment zone
- i. In each monitoring year, the number Torrey's rush plants including comparison of plant density and percent cover to original Torrey's rush population impact area.

M. Restoration Success Reporting

1. Reports shall be submitted to the DEQ by December 31st. Each report shall provide all monitoring data and necessary analyses demonstrating the site's performance in meeting the defined success criteria.
2. Each monitoring report shall include:
 - a. A general description of the site, including a site location map and the location of photo monitoring stations, visual markers, vegetation monitoring plots/transects, soil sampling points, monitoring wells, and if applicable, reference wetlands;
 - b. The number, species and location and any plantings during the current monitoring year;
 - c. A detailed narrative summarizing the condition of the restoration site;
 - d. Any maintenance activities that occurred;
 - e. Results of required vegetation monitoring;
 - f. Results of hydrologic monitoring;
 - g. Soil assessment profiles and observations. Describe the soil profile, including a table with the following for each soil profile: depth, color, texture, horizon, matrix color, redoximorphic features, redox color, and redox feature abundance, and field indicators of hydric soil;
 - h. Visual assessment observations and photographs; and,
 - i. Analysis and conclusion as to the whether the site is meeting the defined success criteria, and meeting the goals and objectives of the Plan.

N. Restoration Corrective Action

1. In the event that any success criteria are not met in any given year, corrective action shall be required. A corrective action plan shall be submitted to DEQ prior to or with the next required monitoring report. The corrective action plan shall clearly identify all deficiencies and describe specific corrective actions. If supplemental planting including in the Torrey's rush re-establishment zone, invasive species control or hydrologic modifications are required after the completion of the 2nd monitoring period, monitoring shall continue for each consecutive year until two annual sequential reports indicate that success has been achieved without corrective action.
2. Significant Corrective Action: In the event that the monitoring identifies a significant failure of the site to meet defined success criteria, DEQ shall be notified within 30 days of the observation and a Corrective Action Plan (CAP) shall be submitted to DEQ within 60 days of the observation for review and approval. Significant Corrective action is defined as any of the following during or after the 3rd growing season or monitoring event:
 - a. Having to replant as a result of > 50% mortality of planted woody stems, or the density of woody stems greater than 12 inches in height are less than 200 living stems per acre;
 - b. Having to alter hydrology or planting scheme because vegetative communities are not dominated by FAC or wetter species; or,

c. Having to alter hydrology controls to meet wetland hydrology.

d. Due to >50% mortality of Torrey's rush, having to re-plant Torrey's rush from original seed/plant stock material as identified in the re-establishment plan.

The CAP shall include a schedule of corrective action activities. Once the CAP is approved by DEQ, it shall be implemented within the time frames approved in the CAP. In the event that Significant Corrective Action is required, the monitoring term shall begin at Year 1 the following growing season.

Approval of 45 Poultry Farm Groundwater Withdrawal Permits, Accomack

County:

EXECUTIVE SUMMARY: At the September 6, 2019 meeting of the State Water Control Board (Board), the Board will consider the issuance of 45 Groundwater Withdrawal Permits for poultry farms in Accomack County, Virginia. The Board initially saw these facilities as part of a set of 57 Consent Special Orders in September 2018. This memorandum provides a brief background summary of the groundwater withdrawal permitting program, the effort to address groundwater withdrawals from agricultural activities, the draft permits, and comments received during the public notice period and during the public hearing. Finally, a summary of the staff responses to comments is included.

I. BACKGROUND

Groundwater Withdrawal Permitting Program and its Implementation:

The permitting of groundwater withdrawals began in 1973, and in 1978, the Board designated the Eastern Shore Groundwater Management Area. The Ground Water Management Act of 1992 (§ 62.1-254 of the Code of Virginia) replaced the Groundwater Act of 1973. The current program requires permits for the withdrawal of 300,000 gallons or more in any month.

In accordance with the applicable statutes and regulations, the Department of Environmental Quality (DEQ) evaluates any proposed withdrawal from an aquifer in the Eastern Shore Groundwater Management Area in the context of aquifer pressure. Up to 80% of the aquifer pressure head within an aquifer may be withdrawn for beneficial use as long as such a withdrawal preserves 20% of the aquifer pressure head above each confined aquifer over the long term. Groundwater levels are used as a surrogate for aquifer pressure. DEQ uses a groundwater flow model to evaluate the drawdown of each withdrawal permit application, in conjunction with all other known withdrawals, to determine that water levels will remain above that “critical surface”. DEQ models all total permitted withdrawals every day for a 50-year period. In other words, DEQ models the maximum permitted volume of the withdrawal for every proposed and permitted user as if this maximum volume is pumped every day as a constant-rate withdrawal for 50 years into the future. This conservative approach is intended to account for uncertainties in aquifer response to these withdrawals and not having information for every single withdrawal allowed under the regulations. It also provides a level of protection to existing users from potential impacts by evaluating a higher withdrawal than will be seen in reality, i.e. actual operation at maximum levels by all users does not happen in practice. This modeling is a significant part of the Technical Evaluation used for determining whether a particular withdrawal complies with the regulatory standard for protecting the aquifer.

Over its entire period of implementation, the groundwater withdrawal permitting program has been implemented as a “first come, first served” program. The statute and regulations do not provide for the advanced reservation of available supply other than the 20% cushion against aquifer dewatering. This approach embodies the principle that all landowners have a reasonable expectation of using the groundwater under their property. Further, an advance reservation of groundwater for a particular type of use as a priority has not been implemented due to the extensive number of diverse existing users, the absence of specific legislative or regulatory authorities, and the technical and fiscal challenges of such an approach. There is also no requirement expressed in the program authorities that certain users use specific aquifers or part of the aquifer system. In practice, this has meant that a water withdrawal permit with applicable and appropriate permit conditions was typically granted if the water was available from the aquifer requested without resulting in a violation of the 20% critical surface requirement.

In addition to the critical surface requirement, DEQ evaluates reductions to the aquifer pressure and corresponding water levels by simulating an Area of Impact (AOI) which encompasses the area where the proposed withdrawal may reduce the water level by one foot or more. Even very modest withdrawals may have an AOI that extends beyond the boundaries of the property where the proposed withdrawal is located. All withdrawals with an AOI that extends beyond the property line must include a mitigation plan as a condition of their permit that meets or exceeds the boilerplate plan recommended by DEQ. The plan lays out a process designed to establish an even playing field for all parties. The permittee has the rebuttable presumption that they may be the cause of impacts to existing wells using the same aquifer within their AOI. If an existing groundwater user is within the area of impact, there is a rebuttable presumption that the withdrawal caused the impact. Alternatively, if the claimant is NOT in the area of impact, the rebuttable presumption is that the withdrawal did not cause the impact. In addition, there are many things that can go wrong with a well that are not the responsibility of the party making the permitted withdrawal such as a silted screen, substandard well construction, and several types of well pump failures. The potentially impacted party has the burden to provide information regarding their well to show that the well problem they have is not a result of impacts other than the withdrawal by the permittee. Multiple existing permit holders may have mitigation responsibility for any given well.

Special permit conditions to collect site-specific data and analyze any resulting changes in the modeled simulation of each withdrawal are common practice. These data allow for continuous improvement of our understanding of the aquifer system and keep our modeling tools current. New data may also support a future action by DEQ, such as a permit modification.

Addressing Poultry Use on the Eastern Shore:

Poultry farms use groundwater to provide drinking water to their birds as well as to supply water to either misting systems or evaporative cooling pads designed to regulate temperatures in the house and keep the birds cool. Cooling is primarily required in summer.

In response to DEQ's 2017 Compliance Assistance Framework, staff began an outreach effort in the Eastern Shore Groundwater Management Area to identify groundwater users that may meet permit thresholds but did not have a groundwater withdrawal permit. During that effort, 33 poultry farms in Accomack County applied for groundwater withdrawal permits. An additional 51 poultry facilities failed to respond to the original compliance assistance efforts of staff. Of those 51 additional facilities, 23 were determined by DEQ staff to need a groundwater withdrawal permit to operate.

On September 20, 2018, the State Water Control Board approved Consent Special Orders (CSO) for 57 poultry facilities currently operating without groundwater withdrawal permits in Accomack County. One of the orders was terminated as it was issued to a facility that received a separate order under a different name and therefore was a duplicate. Two of the 56 facilities were able to document use below 300,000 gallons a month and will not require a groundwater withdrawal permit. The remaining 54 facilities submitted groundwater withdrawal permit applications by October 1, 2018, as required by the CSO.

The applications were reviewed and technical evaluations were completed on all 54 facilities. Staff prepared draft permits based on these evaluations.

Of the 54 facilities with draft permits, 49 agreed to proceed with the advertisement of a public notice of their draft permit on May 24, 2019 in the Eastern Shore Post. Five facilities did not advertise a public notice, and staff notified them in writing of the requirements of the CSO and the ability to withdraw their individual permit applications. To date, none of the five facilities has responded to the written notice. Due to the lack of response

by these five facilities, these draft permits are not included in the recommended Board action. In addition, four of the 49 facilities failed to install the proper meters and comply with the CSO reporting requirements. Staff is proceeding with written notice of our intent to consider denial of these applications as well. Since the NOV's have not been addressed to DEQ's satisfaction, these draft permits are not included in the recommended Board action.

II. DRAFT PERMITS

Today, staff is recommending that the Board take action on 45 draft permits. The draft permits consist of three parts. Part I, Operating Conditions, establishes withdrawal limits and reporting requirements, identifies the specific wells authorized by the permit, provides pump intake limits to protect the aquifer, establishes requirements related to the Water Conservation and Management Plan (WCMP), and where required, incorporates a Mitigation Plan into the permit. Mitigation plans are required for any facility for which the technical evaluation documents an area of impact that extends beyond the property boundaries. Of the 45 draft permits, 41 include a requirement for a mitigation plan. All of the draft permits include a WCMP.

Part II, Special Conditions, includes facility specific special conditions that are included based on results of the application review and technical evaluation. These include the following requirements: collection of geophysical logs (34 of 45 permits include this condition), determination and reset of pump intakes (34 of 45 permits), flow through meter installation and verification (45 of 45 permits), camera surveys to identify undocumented well construction (12 of 45 permits), water quality monitoring (4 of 45 permits), and alternative source investigations (26 of 45 permits).

The technical evaluations indicated that each of the proposed withdrawals meet the criteria laid out in 9VAC25-610-110.D. The model simulations did not result in a drawdown of the water levels below a point 80% of the distance between the land surface and the top of the aquifer. For four of the farms along the coast, the evaluations did indicate the potential to impact water quality via saltwater intrusion, which resulted in special conditions for water quality monitoring in the permits for those farms.

All wells associated with the 45 facilities are screened in the confined aquifers comprised of the Upper, Middle, and Lower Yorktown-Eastover aquifer, and the aquifer pressure head met the criteria specified in the regulations. In order to determine the viability of the surficial aquifer to supply water to any of the poultry farms in the future, and to determine what portions of the use it can supply (drinking water or cooling water or both), site-specific data will be necessary. Withdrawals from the surficial aquifer have the potential to present water quality challenges in the form of iron forming bacteria and increased vulnerability to surface contaminants, and drinking water for poultry must be of higher quality than the cooling water. However, prudent management of the groundwater system compels a more thorough investigation of alternative sources of supply for some facilities. There are four facilities that modeling indicates will result in local changes to chloride concentrations by as much as 90 milligrams/liter. In addition, 22 facilities are within the two largest cones of depression¹ within the aquifer system created by the two poultry processing plants. Based on current permitted withdrawal with all of these proposed poultry facilities, while still compliant with the regulatory criteria, water levels under each processing plant are expected to be within tens of feet of the critical surface by the end of the 50-year modeling period. Over the long term, the withdrawals from these 22 facilities have the potential to expand the overall impact of these cones of depression. Special conditions require alternative source investigations for these 26 farms to assess the capacity and quality of the surficial aquifer to serve as a groundwater source.

¹ A cone of depression occurs in an aquifer when groundwater is pumped from a well. In an unconfined surficial aquifer, this is an actual depression of the water levels. In confined aquifers, the cone of depression is a reduction in the pressure head surrounding the pumped well.

Part III, General Conditions, is standardized and included in all groundwater withdrawal permits. This section includes conditions that identify broad duties of the permittee to comply, to cease or confine activity, to mitigate, and to provide information, as well as general requirements for metering and equipment standards, monitoring and record maintenance, and new well construction. Part III also provides the process and requirements for minor and major modifications, as well as for permit reopening and permit renewals. This section is the same for all 45 draft permits.

Please see Facility Index for a summary of the particular limits and special conditions that are included in each draft permit. The differences in draft permit conditions are the result of unique circumstances related to specific site conditions or aquifer response, or unique facility operations or conditions. The Facility Index does include the four facilities (highlighted in yellow in a separate table below the others) that did advertise the public notice on May 24, 2019 and were presented at the public hearings but are not included in today's recommendation. Exclusion of these four facilities in the index would not substantially lower the estimated combined withdrawal of 390.2 million gallons annually, or combined average of 1.07 million gallons per day.

III. PUBLIC NOTICE, HEARINGS, AND COMMENTS

Because of significant public interest in the draft permits, staff recommended holding three public hearings noticed concurrently with the public notices for the 49 draft permits. On April 2, 2019, the Director granted the requested hearings. The Eastern Shore Post published notices for each of the 49 draft permits and notification of three public hearings on May 24, 2019. The three hearings were held on the following dates: 1) June 24, 2019 at Arcadia High School in Accomack County, 2) June 25, 2019 at Eastern Shore Community College in Accomack County, and 3) June 26, 2019 at Northampton High School in Northampton County. Ms. Jasinski was the hearing officer for the first hearing and Mr. Wayland was the hearing officer for the second hearing. DEQ staff convened the third public hearing. During the hearings, 18 speakers provided comments. The written comment period concluded on July 12, 2019. Staff received 57 written comments. A summary of the comments and staff responses is provided below.

IV. SUMMARY OF PUBLIC COMMENTS AND DEQ STAFF RESPONSES

Generally, the oral and written comments received fall into the following categories:

- 1) comments about the use of potential alternative sources, including the surficial water table (Columbia) aquifer;
- 2) comments about the hydrogeology and the technical evaluation process;
- 3) comments about the mitigation plan process, including potential environmental justice issues; and
- 4) miscellaneous comments.

PUBLIC NOTICE, HEARINGS, AND COMMENTS

Because of significant public interest in the draft permits, staff recommended holding three public hearings noticed concurrently with the public notices for the 49 draft permits. On April 2, 2019, the Director granted the requested hearings. Public notices for each of the 49 draft permits including notification of three public hearings were published in the Eastern Shore Post on May 24, 2019. The three hearings were held on the following dates: 1) June 24, 2019 at Arcadia High School in Accomack County presided by Hearing Officer Paula Jasinski, member of the State Water Control Board, 2) June 25, 2019 at Eastern Shore Community College in Accomack County presided by Hearing Officer Robert H. Wayland, III of the State Water Control Board, and 3) June 26, 2019 at Northampton High School in Northampton County presided by Hearing Officer Scott Kudlas of the Department of Environmental Quality. During the hearings, 18 speakers provided

comments. The written comment period concluded on July 12, 2019. Staff received fifty-seven written comments. A summary of the comments and staff responses is provided below.

Alternate Water Sources of Supply

Comment 1: Water recycling should be analyzed and considered as an option to supplement groundwater use (e.g. collecting rainwater runoff from poultry house roofs, integrating the wastewater treatment system in Onancock to recharge the aquifer).

Response 1: *Thank you for your comment. Poultry farms do use recirculation of water in the cooling systems. The systems rely on evaporative cooling where water is run over an element to cool the air that is pushed through by fans. Water that is not absorbed by the element or by the air returns to a trough to be recirculated. This process greatly reduces water use for the cooling systems versus a system that does not recirculate. Strict quality requirements limit to some extent the means of water recycling discussed in the comment. The intent of water conservation plans required by the draft permits is to improve the efficiency, over the permit term, of water use. Rooftop rainwater collection would require significant storage but may warrant further evaluation as a supplement to groundwater. Aquifer recharge using surface water or treated wastewater is outside of the purview of this permitting effort and the program as a whole as it is overseen by the U.S. Environmental Protection Agency rather than DEQ.*

Comment 2: All poultry permits should require early permit term testing of the Columbia aquifer and all poultry permittees should be required to use the Columbia aquifer if the water quality and quantity are deemed sufficient, especially for cooling mechanisms. Options other than the Yorktown-Eastover aquifer that is needed for current and future Eastern Shore residents should be used by the poultry facilities.

Response 2: *Thank you for your comment. All facilities currently comply with the regulatory criteria as submitted. However, prudent management of the groundwater system compels a more thorough site specific investigation of alternative sources of supply for some facilities. Investigation of the Columbia aquifer is included as a special condition in permits for 26 farms where multiple Areas of Impact (AOI's) within a single aquifer overlap with the largest cones of depression and/or where the potential for reduced water quality from saltwater intrusion is indicated in the Technical Evaluation. The investigation due dates for an alternative aquifer source vary, by facility, from two to six years from the permit issuance date. This schedule was designed to allow DEQ staff to be present with the well driller for the collection of this site specific information and prioritizes the facilities staff thinks will have the most benefit to sustainable aquifer management. DEQ will evaluate the results of the investigations and permits may be reopened to address the findings. 9VAC25-610-310.B.1 provides the Department the authority to reopen and modify any permit when new information becomes available about the groundwater withdrawal covered by the permit, or the impact of the withdrawal, which was not available at permit issuance and would have justified the application of different conditions at the time of issuance.*

Comment 3: Criteria for the water quality and quantity of Columbia aquifer use need to be explained and made accessible to the public.

Response 3: *Thank you for your comment. Decisions about the yield and quality of the groundwater within the Columbia aquifer are site specific. These determinations are best made case-by-case based on the specific hydrogeologic data and operation at each farm.*

Comment 4: There are concerns about the impacts of Brittany Poultry Farm (GW0077800) and Tanner's Place (GW0073700) seeing as they are adjacent facilities. It is requested that they both be required to utilize the Columbia aquifer for their cooling mechanisms.

Response 4: *Thank you for your comment. The Columbia aquifer may be a viable alternative for these poultry farms. However, decisions about the yield and quality of the groundwater within the surficial aquifer are site specific. These determinations are best made case-by-case based on the specific hydrogeologic data and operation at each farm. The draft permits for Brittany Poultry Farm (GW0077800) and Tanner Farm (GW0073700) each include a special condition requiring a site specific investigation of the Columbia aquifer, including: collection of geophysical information and construction of a test well to evaluate both water quality and capacity. 9VAC25-610-310.B.1 provides the Department the authority to reopen and modify any permit when new information becomes available about the groundwater withdrawal covered by the permit, or the impact of the withdrawal, which was not available at permit issuance and would have justified the application of different conditions at the time of issuance. Once investigations of the Columbia aquifer are complete and reviewed, DEQ may reopen the permits should new data support such an action.*

Comment 5: Due to a residence with a well downstream, and in close proximity to, Chattha Farm (GW0073100), it is requested that this facility utilizes the Columbia aquifer for its cooling mechanisms. Since this facility has previously been out of compliance, it should be monitored more closely than the requirements outlined in its draft permit.

Response 5: *Thank you for your comment. The Columbia aquifer may be a viable alternative for this poultry farm. However, decisions about the yield and quality of the groundwater within the Columbia aquifer are site specific. These determinations are best made case-by-case based on the specific hydrogeologic data and operation at each farm. The draft permit for Chattha Farm (GW0073100) does include a special condition requiring a site specific investigation of the Columbia aquifer, including: collection of geophysical information and construction of a test well to evaluate both water quality and capacity. 9VAC25-610-310.B.1 provides the Department the authority to reopen and modify any permit when new information becomes available about the groundwater withdrawal covered by the permit, or the impact of the withdrawal, which was not available at permit issuance and would have justified the application of different conditions at the time of issuance. Once investigations of the Columbia aquifer are complete and reviewed, DEQ may reopen the permits should new data support such an action. As with all facilities, Chattha Farm will be inspected by DEQ to ensure compliance with the groundwater withdrawal permit, should it be issued. DEQ uses a risk-based inspection process and each facility's compliance history will factor into how often the facility is inspected.*

Comment 6: The process of re-opening a permit to include the use of the Columbia aquifer (where applicable) should be officially written out and explained. Is an official request required? How formal/informal is this process?

Response 6: *Decisions about the yield and quality of the groundwater within the Columbia aquifer are site specific. These determinations are best made case-by-case based on the specific hydrogeologic data and operation at each farm. 9VAC25-610-310.B.1 provides the department the authority to reopen and modify any permit when new information becomes available about the groundwater withdrawal covered by the permit, or the impact of the withdrawal, which was not available at permit issuance and would have justified the application of different conditions at the time of issuance. Once investigations of the Columbia aquifer are complete and reviewed, DEQ may reopen the permits should new data support such an action.*

Comment 7: There is concern about the cost impacts associated with certain special conditions required for farmers. Due to this cost burden, it is requested that the deadline for meeting these conditions (e.g. test wells and geophysical boreholes) is extended to three years.

Response 7: *Thank you for your comment. GW-2 (Uniform Water Well Completion Reports) and geophysical logs are required by regulation. Facilities that lacked site-specific GW-2 (Uniform Water Well Completion Reports) and geophysical logs were prioritized to obtain this information for evaluation earlier in the permit term. The alternative source investigations required for some facilities provide necessary data to evaluate the viability of the Columbia aquifer and collection of this data during the first third of the permit term is a priority of the Department. Due dates range from two to six years after the permit issuance date. This schedule was designed to allow DEQ staff to be present with the well driller for the collection of this site specific information.*

Comment 8: Since all current applicants are farmers with existing wells, they should not be required to build new wells unless cost-share incentives are made available to complete these requirements.

Response 8: *Thank you for your comment. No draft groundwater withdrawal permit specifically requires new wells to be built. Twenty-six of the 45 draft permits have requirements to conduct alternative source investigations. These investigations may result in requirements for a facility to utilize the Columbia aquifer, at which time the applicant could request a modification to the permit or DEQ could reopen the permit per 9VAC25-610-310.B.1 to require installation of new wells. DEQ is not aware of any cost-share incentives available for construction of new wells.*

Comment 9: It is requested that DEQ remove Section K under general conditions for any permittees that are not requesting or required to build additional wells (or include language that this condition only applies to the installation of new wells).

Response 9: *Thank you for your comment. Section K is included within the General Conditions section of the permit that is included in all groundwater withdrawal permits. Section K covers requirements associated with any new well construction and must be included in the permit to cover any unforeseen or prospective well construction (such as a well replacement for a failed well or a new well) that may happen during the permit term. Section K does not require any new wells to be constructed.*

Comment 10: Groundwater withdrawal data and test well data should be made available to the public in a timely manner.

Response 10: *Thank you for your comment. All groundwater withdrawal data and test well data is freely available to the public in accordance with the Freedom of Information Act (FOIA). Staff processes requests for such information in a timely manner in compliance with FOIA requirements.*

Hydrogeology and Technical Evaluation Process

Comment 11: How much water is in the Yorktown-Eastover aquifer and what is the aquifer recharge rate. How do the Chesapeake Bay and Atlantic Ocean impact the Yorktown-Eastover aquifers water quantity and quality?

Response 11: *Thank you for your comment. It is not physically possible to directly measure the volume of groundwater within the Eastern Shore Aquifer System. The complex relationships between rainfall, estimated recharge aquifer pressure head, aquifer response to groundwater withdrawal, and groundwater sustainability*

cannot be reduced to a single metric. All efforts to quantify recharge are estimates and must be evaluated within the context of the assumptions used to derive them. To represent these interactions and evaluate site-specific and long-term impacts, DEQ uses the Eastern Shore Groundwater Flow Model. The model simulates the transition zone between the aquifer, the Atlantic Ocean, and the Chesapeake Bay. While this transition zone is generally at equilibrium, changes in quantity occur over decades and centuries while water quality changes from lateral intrusion occur generally over centuries and geologic time scales.

Comment 12: The total daily consumption of the Yorktown-Eastover Aquifer is already near its recharge rate. Why is DEQ planning to issue the permits if negative impacts are expected? The number of permits should be limited to conserve the groundwater resources on the Eastern Shore and permits should be issued incrementally rather than all at once in order to prevent negative impacts.

Response 12: *Thank you for your comment. Based on our technical evaluations DEQ does not expect impacts beyond what is specified as acceptable in the groundwater withdrawal regulations. 9VAC25-610-110.D.3.h requires DEQ to complete a technical evaluation of the proposed withdrawal to "demonstrate that the stabilized effects from the proposed withdrawal in combination with the stabilized combined effects of all existing lawful withdrawals will not lower water levels, in any confined aquifer that the withdrawal impacts, below a point that represents 80% of the distance between the land surface and the top of the aquifer". The technical evaluations showed limited drawdown from the proposed withdrawals that comply with all regulatory requirements. In no case were critical cells (areas where water levels are modeled to fall below the 80% criteria discussed above) created.*

Comment 13: The effect lowering the Yorktown-Eastover aquifer will have on Northampton is unknown. There is little knowledge about lateral movement of groundwater. There is also a concern about potential salt water intrusion. The modeling should also include a risk analysis on the effects of climate change.

Response 13: *Thank you for your comment. The interrelationship between withdrawals and aquifer response is complex. This complexity is why models are necessary to evaluate groundwater withdrawals individually and cumulatively. While DEQ has a high degree of confidence in the predictive ability of the model based on information collected by both DEQ and the U.S. Geological Survey from groundwater monitoring wells throughout the Eastern Shore, it is correct that all models have differing levels of uncertainty. DEQ is using a systematic approach to identify areas of model and scientific uncertainty and is systematically addressing them through ongoing model maintenance and basic research with the U.S. Geological Survey. The modeling assumptions used by DEQ is very conservative in a number of ways. The modeling uses the maximum permitted amount every day over a 50-year simulation period for the proposed withdrawal and all other permitted withdrawals. The modeling includes nearly all of the potential drawdown effects from the withdrawal that will occur prior to reaching equilibrium with the aquifer system. In general, climate change is not expected to significantly affect confined groundwater systems except from changes to recharge rates and from surficial aquifer chloride contamination resulting from repeated inundation events. Climate models are consistently predicting that in the Mid-Atlantic, from Virginia and further north, there will be increases in precipitation. This increase in precipitation will likely increase recharge rates. Lateral salt water intrusion from increased hydrostatic pressure associated with sea level rise is not expected to change the fundamental rates of change within the confined aquifer system.*

Comment 14: How is water prioritized during drought conditions and what recourse do Eastern Shore Residents have during drought conditions.

Response 14: *Thank you for your comment. DEQ does not anticipate impacts associated with drought within the confined Yorktown-Eastover aquifers. While there is the potential to increase pumping during drought,*

the maximum pumping is still limited by the permit and the Areas of Impact (AOIs) evaluated represent the maximum withdrawal allowed. The probability of drought impacts on the surficial or Columbia aquifer is far more likely.

Comment 15: If each Area of Impact circle represents 50 years of groundwater depletion, what is the result if multiple overlap? Does this accelerate the depletion process? (A specific example of concern was the Van Tran (GW0075400) and Guise (GW0075800) farms.)

Response 15: *Thank you for your comment. The Area of Impact (AOI) represents the maximum area where the groundwater level will be drawn down by 1 foot if the pumping remains at the maximum withdrawal level. Using a 50-year simulation captures 97% of the impact that would be expected to come from that withdrawal before it reaches equilibrium with the aquifer system. Any impacts from overlapping cones of depression are accounted for since the modeling also evaluates the cumulative impact of all of the poultry withdrawals in conjunction with all existing known withdrawals.*

Comment 16: Why were different calculation methods for withdrawal limits done for some facilities (for example Van Tran (GW0075400) and Guise (GW0075800)). Calculations and explanations should be written out and provided to the public. Methods of calculation for withdrawal limits should be more standardized. All withdrawals being considered are currently based on estimates and actual meter data should be reviewed by DEQ.

Response 16: *Thank you for your comment. Water use estimates were provided in each application with calculations showing how the estimates were used to derive the requested limits. These calculation sheets were included in the draft permit packages for public review. More than one acceptable way was available to applicants to estimate their requested withdrawal amounts. The two most common methods are the use of actual metered data (or partial record metered data), and the use of data from a comparable facility (farm). Given the limited availability of recorded metered data specific to these farms for both poultry water consumption (drinking water) and water used in the cooling systems, a combination of a standard specified method and the use of partial record metered data and comparable facilities was used. DEQ worked with stakeholders and academic experts in this field to develop a process to estimate cooling water use based on house size. This standardized method was used for each farm to estimate cooling water use. For drinking water use, some meter data existed, and applicants and consultants used drinking water use records for either the applicant's farm or a similar farm to estimate drinking water need. While water use could reasonably be expected to be similar among poultry farms of similar size, it is clear from the meter data received to date, that water use does in fact differ from farm to farm depending on operation, type and stocking density of birds, type and age of equipment installed in the poultry houses, and other operating factors. It is common to use estimates when meter data is not initially available. Over the course of a permit term, more data is collected and will be considered in reviewing the permitted withdrawal amounts at the time of permit reissuance or during the permit term on a case-by-case basis using the reopener clause included in each groundwater withdrawal permit.*

Comment 17: What opportunities are there to re-examine and re-open permits based on results of monitoring and water usage? Would this occur on a case-by-case basis or require a request?

Response 17: *Thank you for your comment. All groundwater withdrawal permits include reopener clauses that allow the permit to be reopened by DEQ. 9VAC25-610-310.B.1 provides the Department the authority to reopen and modify any permit when new information becomes available about the groundwater withdrawal covered by the permit, or the impact of the withdrawal, which was not available at permit issuance and would have justified the application of different conditions at the time of issuance. DEQ regularly reviews*

withdrawal reporting for each permit to identify cases where withdrawal limits may be too high. Decisions regarding whether to reopen and adjust permit limits are made in accordance with the regulations and on a case-by-case basis.

Comment 18: Based on projections, several growers are only using about 70% of their proposed permitted amount. Farmers are not the integrators, and are contracted out as a growing commodity. Farmers are working toward environmental efficiency with the use of updated temperature control methods and water recycling.

Response 18: *Thank you for your comment. Groundwater withdrawal permits are developed based on the reasonably anticipated need as documented in the permit application. All groundwater withdrawal permits include reopener clauses that allow the permit to be reopened by DEQ. DEQ regularly reviews withdrawal reporting for each permit to identify cases where withdrawal limits may be too high. Decisions regarding whether to reopen and adjust permit limits are made in accordance with the regulations and on a case-by-case basis.*

Mitigation Plans (includes environmental justice analysis)

Comment 19: The mitigation plans do not provide enough protection for residents and small businesses. What is DEQ's role in the mitigation process? These plans should be revisited to include potable water being provided within 12 hours rather than 72 hours, and a neutral mitigation panel should be created to handle these processes.

Response 19: *Requirements for mitigation plans are set forth in the Groundwater Withdrawal Regulations under 9VAC25-610-110.D.3.g. The mitigation plans establish a process that allows permittees and other well users to address issues without further involvement from DEQ. While DEQ does not monitor or track claims under mitigation plans, the Hampton Roads Planning District Commission does for permittees in their member localities. There were 24 claims since 1994 and no claim since 2009. DEQ created, consistent with the applicable regulations, a standard mitigation plan process used in the program for over 25 years. The boilerplate mitigation plan is provided to all applicants whose Area of Impact (AOI) extends beyond the property boundary where the wells are located. Of the 45 applicants, 41 required mitigation plans. The draft permits for all 41 facilities used the boilerplate mitigation plan without modification and therefore the plans, incorporated by reference in the draft permits, meet the regulatory requirements. In situations where there is a loss of potable supply (public and private) the local health department and emergency management personnel are immediately involved in addressing the potable water need.*

Comment 21: The language in the mitigation plan does not make sense. In para. 3, the 2nd sentence says, "Due to these findings. Van Tran recognizes that there will be a rebuttable presumption that water level declines that cause adverse impacts to existing groundwater users within the area of impact are due to this withdrawal." However, the next sentence says "... however, there is a rebuttable presumption that Van Tran/Tran Farm has not caused the adverse impact." Please clarify.

Response 21: *The full text of that portion of the plan is provided as follows: "Due to these findings, Van Tran recognizes that there will be a rebuttable presumption that water level declines that cause adverse impacts to existing groundwater users within the Area of Impact are due to this withdrawal. Claims may be made by groundwater users outside this area; however, there is a rebuttable presumption that Van Tran / Tran Farm has not caused the adverse impact." These two sentences provide the basis under which a rebuttable presumption can be made according to the plan. If an existing groundwater user is within the area of impact, there is a rebuttable presumption that the withdrawal caused the impact. Alternatively, if the claimant is NOT in the area of impact, the rebuttable presumption is that the withdrawal did not cause the impact. In addition,*

there are many things that can go wrong with a well that are not the responsibility of the party making the permitted withdrawal such as a silted screen, substandard well construction, and several types of well pump failures. Multiple existing permit holders already have mitigation responsibility for wells referenced by the commenter.

Comment 22: A special condition should be included in the permits that requires a "Well Arbitration Agreement" to be initiated. This is to offer protection to landowners within a facility's Area of Impact. The details of this Well Arbitration agreement are listed as follows: 1) Applicant agrees to pay for hydrologist or well driller chosen by the homeowner to establish a baseline of a potentially affected well. 2) A copy of these results go to the applicant, homeowner, and county clerk. 3) If a claimant says their water use has been impacted negatively, the applicant/permittee will pay for a well investigation conducted by a hydrologist/well driller chosen by the claimant. 4) If the investigation concludes that there was a negative water impact, the applicant/permittee will provide potable water for drinking (bottled water) and washing/flushing (tanker water). 5) If the investigation concludes that there was a negative water impact, the applicant/permittee will pay for remediation actions (deepening well, relocation of well, lowering of screen, etc.).

Response 22: *Requirements for mitigation plans are set forth in the Groundwater Withdrawal Regulations under 9VAC25-610-110.D.3.g. The proposed "Well Arbitration Agreement" appears to address the same issues that the Mitigation Plan is intended to address. Multiple existing permit holders already have mitigation responsibility for wells referenced by the commenter. In circumstances where parties are not in agreement over potential impacts, mitigation plans do include the provision for a committee of three experts (professional engineers, hydrogeologist, or similar experience/expertise) to resolve such disagreements. This panel is composed of a groundwater/technical representative for the permittee, a representative for the claimant, and one mutually agreed upon representative. The panel provides a pathway to resolve disagreements based on technical analysis.*

Comment 23: All landowners within an Area of Impact should be given written notification (in English and Spanish) by DEQ, at the expense of the applicant, within four weeks of permit approval. This notification should include DEQ contact information and an explanation of a mitigation response program. Why hasn't DEQ already taken these actions as a part of the permitting process?

Response 23: *Thank you for your comment. 9VAC25-610-250 of the Groundwater Withdrawal Regulations set forth the public notice requirements for issuance of a groundwater withdrawal permit. These requirements include publishing a public notice at the applicant's expense in a newspaper of general circulation in the area. DEQ's efforts to keep the citizens of the Eastern Shore informed of the agency process and progress have exceeded the regulatory requirements for processing permit applications. DEQ held multiple public information meetings and public hearings in three locations on the Eastern Shore to provide the greatest possible opportunity for citizens to stay informed and participate in the process. In addition, over the last two years, there has been substantial media coverage of the consent orders and these permits. There have been more than two dozen news stories in print, television, and on radio on the issue.*

Comment 24: The requirement of an applicant to notify all landowners within their respective Area of Impact would be inappropriate, as it is not authorized by current regulations.

Response 24: *Thank you for your comment. 9VAC25-610-250 of the Groundwater Withdrawal Regulations set forth the public notice requirements for issuance of a groundwater withdrawal permit. DEQ complied with all state and regulatory requirements for public notice and comment.*

Comment 25: Will there be a depletion of property value as a result of the Areas of Impact that will occur as a result of poultry operations? Does DEQ take this into consideration?

Response 25: *Thank you for your comment. DEQ does not take impact on property value into consideration as it is outside our regulatory authority.*

Comment 26: An Environmental Justice Analysis should be done on all poultry facilities in this permit term.

Response 26: *The State Water Control Law, The Ground Water Management Act of 1992, and the Groundwater Withdrawal Regulations were established and designed to conserve, protect and beneficially utilize groundwater of the Commonwealth to ensure the public welfare, safety and health for all people. The draft poultry farm permits will ensure compliance with these groundwater laws and regulations to protect the public welfare, safety and health for the residents of the Eastern Shore.*

DEQ does not choose the locations of these facilities or approve the zoning that allows these facilities to be constructed. DEQ does review the withdrawals and determines whether the proposed aquifer can accommodate the withdrawal without violating the regulatory water level standards. DEQ also ensures that each permit with an Area of Impact that extends beyond the property on which the well is located includes a mitigation plan that ensures that adverse impacts to existing groundwater users is included as a condition of each permit. Pursuant to 9VAC25-610-110 D 3 g. approvable plans must include the following:

- (1) The rebuttable presumption that water level declines that cause adverse impacts to existing wells within the area of impact are due to the proposed withdrawal;*
- (2) A commitment by the applicant to mitigate undisputed adverse impacts due to the proposed withdrawal in a timely fashion;*
- (3) A speedy, nonexclusive, low-cost process to fairly resolve disputed claims for mitigation between the applicant and any claimant; and*
- (4) The requirement that the claimant provide documentation that he is the owner of the well; documentation that the well was constructed and operated prior to the initiation of the applicant's withdrawal; the depth of the well, the pump, and screens and any other construction information that the claimant possesses; the location of the well with enough specificity that it can be located in the field; the historic yield of the well, if available; historic water levels for the well, if available; and the reasons the claimant believes that the applicant's withdrawals have caused an adverse impact on the well.*

All of the draft permits whose areas of impact extend beyond the boundaries of the farm property include mitigation plans that meet these requirements.

Executive Order 29 was issued by Governor Northam and established the Virginia Council on Environmental Justice. This executive order indicates environmental justice is “the fair treatment and meaningful involvement of all people regardless of race, color, faith, national origin, or income, in the development, implementation, and enforcement of environmental laws, regulations, and policies.” In April 2019, DEQ issued an Unsealed Request for Proposal for a qualified external consultant to conduct an environmental justice study for the agency. Through this URFP, research will be conducted to identify options and recommendations for DEQ in order to develop a strategic approach focused on environmental justice issues.

DEQ's efforts to keep all the citizens of the Eastern Shore informed of the agency process and progress have exceeded the regulatory requirements for processing permit applications. DEQ held multiple public information meetings and public hearings in three locations on the Eastern Shore to provide the greatest possible opportunity for citizens to stay informed and participate in the process. In addition, over the last two years, there has been substantial media coverage of the consent orders and these draft permits. There have been more than two dozen news stories in print, television, and on radio on the issue.

Finally, DEQ does not regulate individual private wells and their construction. Prior to 2015, DEQ did not have the authority to require registration of individual private wells and was unable to collect information on the construction of these wells in Groundwater Management Areas. Without information on the depth of each well, the aquifer it withdraws from, the depth of the screen and pump, modeling cannot determine the probability of an adverse impact with certainty.

Miscellaneous Comments

Comment 27: DEQ should provide a complete account of all poultry operations on the Eastern Shore, and explain why the number of facilities during this permit term fell from 84 in 2017 to 56 in 2018.

Response 27: *Thank you for your comment. DEQ provided a complete account in June at the three public hearings held on the Eastern Shore. In 2017, DEQ began an outreach effort in the Groundwater Management Areas to identify groundwater users that may meet permit thresholds but do not yet have a permit. During that effort, 33 poultry farms applied for groundwater withdrawal permits. An additional 51 poultry farms were contacted by DEQ and 23 of those farms were identified as potentially requiring a permit. On September 20, 2018, the State Water Control Board approved consent orders for 57 facilities, including the original 33 facilities and the additional 23 identified by DEQ. One of the orders was terminated as it was issued to a facility that received a separate order under a different name and therefore was a duplicate. Two of the remaining 56 facilities were able to document use below 300,000 gallons a month and will not require a groundwater withdrawal permit. The remaining 54 facilities submitted Groundwater Withdrawal Permit applications by October 1, 2018, as required by the orders. Of those 54 poultry farms, 49 chose to proceed with the publication of a public notice of the draft permit while five poultry farms chose not to proceed with the publication of a public notice. The facilities choosing not to proceed with the publication of a public notice did so because either recent metered data indicated use below the permit threshold, or the facilities are ceasing operations, and DEQ is pursuing a final action with these facilities to terminate the draft permits developed under the consent special order.*

Comment 28: The permitting process for these poultry operations should have been completed before the wells were built. All future groundwater permits should be drafted before the well construction begins.

Response 28: *Thank you for your comment. As provided in 9VAC25-610-94, the groundwater permit application process requires a completed well construction report for all existing wells associated with the application on the Water Well Completion Form (GW2). The regulation also provides that other relevant information may be required for application evaluation (for example, planned well construction).*

Comment 29: DEQ's lack of penalties imposed on those facilities in violation of the compliance and permitting processes has resulted in little leverage and precedent moving forward. DEQ should no longer offer reprieve to poultry facilities that are out of compliance

Response 29: *Thank you for your comment. DEQ's enforcement mission is to apply a consistent response that returns a responsible party to compliance in an expeditious and equitable manner. DEQ follows a graduated enforcement approach to bring parties into compliance. Using the resources available, DEQ initiated a*

number of compliance/enforcement initiatives to address various unpermitted impacts to the groundwater resource over the last several years. Given the large number of parties identified as part of this agricultural sector initiative, the Consent Special Order was the most expeditious and equitable means to protect the resource. Failure to comply with the terms of the consent special orders or permits (should they be issued) will result in further enforcement actions with the potential for civil penalties.

Comment 30: What is the estimated quantity of agricultural water use (other than the poultry facilities currently undergoing the permitting process)? Do other agricultural facilities also have to apply for groundwater permits?

Response 30: *Thank you for your comment. Any groundwater user that withdraws 300,000 gallons or more in any month, including agricultural users, in a designated groundwater management area must apply for a Groundwater Withdrawal Permit. DEQ has issued Groundwater Withdrawal permits to numerous other agricultural uses. For example, groundwater withdrawals reported for agricultural uses for livestock on the Eastern Shore in 2018 equaled 40.62 million gallons. Actual reported use is expected to be lower than the total permitted volume as most permittees use less than their permitted amounts. Total permitted water use for agricultural facilities (not including the poultry farms covered in the proposed draft permits) across the entire Eastern Shore is approximately 1.5 billion gallons per year, or approximately 4.23 million gallons per day. Any facility that does not withdraw 300,000 gallons or more in any month, is excluded from the requirements of a Groundwater Withdrawal Permit as provided by 9VAC25-610-50.*

Comment 31: Permits for the poultry farms should be renewed every five years rather than 15 years due to potential climate change impacts.

Response 31: *Thank you for your comment. Groundwater Withdrawal Permit terms are set by § 62.1-266 of the Code of Virginia to a period not to exceed 15 years. The common permit term is 15 years unless there is a compelling reason related to uncertainties in the evaluation or groundwater availability. There is general scientific consensus that climate change may impact the hydrostatic boundary of the aquifer system at geologic time scale (i.e. thousands of years). The most likely climate change impacts associated with sea level rise is an impact to the surficial aquifer water quality due to deposition of salt water from related inundation events. This salt water will eventually migrate to lower aquifers over geologic time scales.*

Comment 32: The board should approve all permits as drafted, and utilize this process as an educational tool for managing future agricultural operations.

Response 32: *Thank you for your comment.*

Comment 33: It is requested that DEQ create standardized guidance and associated forms for poultry farming reporting requirements (i.e. water withdrawal reporting, water conservation, leak detection and repair, monitoring, etc.).

Response 33: *Thank you for your comment. A standardized boilerplate reporting form provided by DEQ is already in use for groundwater withdrawal reporting. However, DEQ recognizes additional guidance and training on the proper completion of this form may be beneficial.*

Comment 34: DEQ needs to update its software for withdrawal report submissions.

Response 34: *Thank you for your comment. Development of an online reporting tool is currently in the pilot/testing stage, and DEQ expects to make the option to report online available in the future.*

Comment 35: It is DEQ's duty to protect future water resources by the enforcement of sensible regulations.

Response 35: *Thank you for your comment.*

Comment 36: A local farmer should be included as a member of the State Water Control Board as a means of fairness and adequate representation during these proceedings.

Response 36: *Thank you for your comment. The Governor appoints members of the State Water Control Board consistent with the qualifications established in State Water Control Law (§ 62.1-44.2 et seq. of the Code of Virginia).*

Comment 37: The Department should have an active role in preventing the release of inadequately treated wastewater. What are the current regulations and reporting requirements for wastewater disposal? Does wastewater contamination risk increase in proportion to the original withdrawal amount?

Response 37: *Thank you for your comment. The beneficial use for the requested groundwater is for use in on-demand watering of individual birds and for use in cooling systems with very minor amounts for general cleaning. Wastewater is not generally produced as a result of these activities. While the Department does have a role in management of runoff associated with poultry farms, this takes the form of dry waste/litter, which is separately administered through the Office of Land Application Programs.*

ID #	Permit Number	Farm Name	Owner/ Organization	Annual Withdrawal Limit (gallons)	Monthly Withdrawal Limit (gallons)	Approximate Radius of Area of Impact in Yorktown-Eastover Aquifer (in feet)			Permit Specific Special and Operating Conditions Included in Draft Permit						
						Upper	Middle	Lower	Geophysical Log	Pump Depth Determination	Well Construction Verification	Water Quality Monitoring	Well Abandonment	Alternative Source Investigations	Mitigation Plan
1	GW0072500	Ish Farm	Ish Farms, LLC	11,500,000	2,700,000	No impact	5280	5808	Yes	Yes	No	No	No	Yes	Yes
2	GW0072600	Brady Farm	Ryan Brady	9,900,000	2,700,000	5280	No impact	No impact	Yes	Yes	No	No	No	No	Yes
3	GW0072700	Morey Farm	Andrew Morey	8,800,000	2,300,000	2112	1056	5280	Yes	Yes	No	No	No	No	Yes
4	GW0072800	Ed, Pat, and Brandy Sue Farm	Edward Thornton	8,000,000	1,800,000	No impact	2112	1584	Yes	Yes	Yes	No	No	Yes	Yes
5	GW0072900	Trader Farms	E.T. Trader	9,500,000	1,600,000	No impact	5808	5280	Yes	Yes	Yes	No	No	No	Yes
6	GW0073000	Old Mill Farms	William Lovell	12,000,000	3,100,000	3168	2112	No impact	Yes	Yes	No	No	No	Yes	Yes
7	GW0073100	Chattha Farm	Mohammad Afzal Chattha	9,400,000	2,600,000	5280	5280	5280	Yes	Yes	No	No	No	Yes	Yes
9	GW0073300	HT Poultry Farm	Hieu H. Le	3,700,000	1,600,000	No impact	2640	No impact	No	No	No	No	No	No	Yes
10	GW0073400	Eagle Birdie Superior Farm	Tri Minh Tran	3,600,000	1,500,000	No impact	No impact	2112	Yes	Yes	Yes	No	No	Yes	Yes
11	GW0073500	Eddie Kelley Farm	Horace E. Kelley	11,900,000	3,000,000	2112	No impact	No impact	Yes	Yes	No	No	No	No	Yes
12	GW0073600	Elahi LLC	Iqbal Mohammad Goodman Poultry Farms, LLC	6,700,000	1,600,000	No impact	No impact	2460	Yes	Yes	No	No	No	Yes	Yes
13	GW0073700	Tanner Farm	Hai Van Tran & Dan T. Nguyen	8,000,000	2,500,000	1584	3168	1584	No	No	No	No	No	Yes	Yes
14	GW0073800	Mason Farm	Tull, LLC	7,500,000	2,000,000	3168	3696	3168	Yes	Yes	No	No	No	Yes	Yes
15	GW0073900	Holland Farms	Jessica L. Thomas	3,600,000	1,500,000	2640	No impact	No impact	Yes	Yes	Yes	No	No	Yes	Yes
16	GW0074000	Chicken Bacon Ranch	Last Hurreh LLC	4,600,000	1,100,000	No impact	1470	No impact	Yes	Yes	No	No	No	No	Yes
18	GW0074200	Last Hurreh Farm	Levi's Farm, LLC	11,300,000	3,100,000	No impact	5808	5808	No	No	No	No	No	Yes	Yes
19	GW0074300	Levi Farm LLC	Den V Luu	7,500,000	2,000,000	No impact	No impact	3696	Yes	Yes	No	No	No	Yes	Yes
20	GW0074400	Luu Farm	McChicken Farms LLC	10,600,000	3,300,000	1584	No impact	No impact	Yes	Yes	Yes	No	No	No	Yes
21	GW0074500	McChicken Farms	Miller Time, LLC	10,000,000	2,500,000	3696	4752	6336	No	No	No	Yes	No	Yes	Yes
22	GW0074600	Miller Time Farm	Sanns Farm, LLC	7,600,000	2,100,000	280	1300	No impact	No	No	No	No	No	Yes	Yes
23	GW0074700	Sanns of the Shore Farm		14,500,000	3,300,000	No impact	3168	4224	Yes	Yes	No	Yes	No	Yes	Yes



Department of Environmental Quality
Draft Groundwater Withdrawal Permit Facility Index

State Water Control Board - September 2019

ID #	Permit Number	Farm Name	Owner/ Organization	Annual Withdrawal Limit (gallons)	Monthly Withdrawal Limit (gallons)	Approximate Radius of Area of Impact in Yorktown-Eastover Aquifer (in feet)			Permit Specific Special and Operating Conditions Included in Draft Permit						
						Upper	Middle	Lower	Geophysical Log	Pump Depth Determination	Well Construction Verification	Water Quality Monitoring	Well Abandonment	Alternative Source Investigations	Mitigation Plan
24	GW0074900	Seaside Farm	Le Ung	10,000,000	2,500,000	No impact	No impact	No impact	No	No	No	No	No	No	No
25	GW0075000	Shore Livestock	Ali Razwan	9,000,000	2,200,000	No impact	1584	No impact	Yes	Yes	No	No	No	No	Yes
27	GW0075300	Thomas Farm	Thomas Family Farm LLC	4,100,000	1,100,000	No impact	1430	No impact	Yes	Yes	No	No	No	No	Yes
28	GW0075400	Van Tran Farm	Van T. Tran	19,400,000	4,400,000	7920	7920	7920	No	No	No	No	No	Yes	Yes
29	GW0075500	Vision Quest Farm	Vision Quest Enterprises, LLC	7,600,000	2,100,000	3880	No impact	No impact	Yes	Yes	No	No	No	Yes	Yes
30	GW0075600	Wishart's Point Farm	Nickolas J. Thomas	3,900,000	1,000,000	No impact	65	No impact	Yes	Yes	No	No	No	No	No
31	GW0075700	Dennis Farm	Dennis Farm, LLC	16,800,000	3,900,000	No impact	3168	2112	No	No	No	No	No	Yes	Yes
32	GW0075800	Giuse Farm	Hoi An Tran	11,300,000	3,000,000	4224	4224	4224	Yes	Yes	No	No	No	Yes	Yes
33	GW0075900	Shore Time Poultry Farm	Shore Time Poultry LLC	15,000,000	3,800,000	3696	4732	4224	Yes	Yes	No	Yes	No	Yes	Yes
34	GW0076000	Tai Det Farm	Danny Huynh	9,400,000	2,500,000	No impact	No impact	3696	Yes	Yes	No	No	No	Yes	Yes
35	GW0076300	Peter and Mary Farm	Hop Van Nguyen	3,300,000	900,000	115	No impact	No impact	Yes	Yes	Yes	No	No	No	No
36	GW0076400	Nguyen and Emily Farm	Hop Van Nguyen	3,200,000	800,000	No impact	No impact	2640	Yes	Yes	Yes	No	No	Yes	Yes
37	GW0076600	Greene's Poultry Farm	Phillip Greene	7,600,000	2,100,000	No impact	No impact	3696	No	No	No	No	No	Yes	Yes
38	GW0076700	Excel Farm	Tri Minh Tran	3,700,000	900,000	1056	510	1584	Yes	Yes	Yes	No	No	No	Yes
39	GW0076800	Elite Farm	Tri Minh Tran	4,500,000	1,100,000	1320	150	2112	Yes	Yes	Yes	No	No	No	Yes
40	GW0076900	RW & Mathews Farms	Ronnie and Barbara Matthews	3,000,000	700,000	No impact	150	No impact	Yes	Yes	No	No	No	No	Yes
41	GW0077000	Justice Poultry Farm, Inc.	James Justice	2,400,000	600,000	840	870	1584	Yes	Yes	Yes	No	No	No	Yes
42	GW0077300	Fuluzhou Inc.	Hein Tran	9,100,000	3,800,000	No impact	2112	4732	Yes	Yes	Yes	No	No	Yes	Yes
44	GW0077600	Davis Wharf Farm	Kenneth Blair	4,500,000	1,000,000	No impact	710	No impact	Yes	Yes	Yes	No	No	No	Yes
45	GW0077800	Brittany Poultry Farm LLC	Brittany Poultry Farm LLC	5,700,000	1,600,000	No impact	2112	No impact	Yes	Yes	No	Yes	No	Yes	Yes
46	GW0077900	Turkey Run Farm	Son Nguyen	9,700,000	2,800,000	No impact	2112	No impact	No	No	No	No	No	Yes	Yes

ID #	Permit Number	Farm Name	Owner/ Organization	Annual Withdrawal Limit (gallons)	Monthly Withdrawal Limit (gallons)	Approximate Radius of Area of Impact in Yorktown-Eastover Aquifer (in feet)			Permit Specific Special and Operating Conditions Included in Draft Permit						
						Upper	Middle	Lower	Geophysical Log	Pump Depth Determination	Well Construction Verification	Water Quality Monitoring	Well Abandonment	Alternative Source Investigations	Mitigation Plan
47	GW0078100	Pixies Poultry	Burke Palmer Booth	3,400,000	820,000	No impact	130	No impact	Yes	Yes	No	No	No	No	No
48	GW0078400	Summers Rest Farm	Tyler Ames	10,000,000	2,500,000	4224	4752	4752	Yes	Yes	No	No	No	Yes	Yes
49	GW0078500	Teresa Farm	Teresa Farms, LLC	12,900,000	2,900,000	2112	No impact	No impact	No	No	No	No	No	No	Yes
TOTALS									34	34	12	4	0	26	41

POULTRY FACILITY APPLICATIONS PENDING APPLICATION DENIAL PROCEEDINGS

ID #	Permit Number	Farm Name	Owner/ Organization	Annual Withdrawal Limit (gallons)	Monthly Withdrawal Limit (gallons)	Approximate Radius of Area of Impact in Yorktown-Eastover Aquifer (in feet)			Permit Specific Special and Operating Conditions Included in Draft Permit						
						Upper	Middle	Lower	Geophysical Log	Pump Depth Determination	Well Construction Verification	Water Quality Monitoring	Well Abandonment	Alternative Source Investigations	Mitigation Plan
8	GW0073200	Contrell Brown & Son Farm	Contrell Brown	2,600,000	700,000	1050	90	No impact	Yes	Yes	Yes	No	No	No	Yes
17	GW0074100	FPNA Farm	FPNA Farms Inc.	3,900,000	1,000,000	740	No impact	No impact	Yes	Yes	Yes	No	No	No	Yes
26	GW0075200	Spudog Farm	Spudog Farm Properties LLC	3,200,000	1,300,000	No impact	40	No impact	Yes	Yes	No	No	No	No	No
43	GW0077400	Rogers Farm	Antonio Rogers	2,800,000	800,000	400	No impact	No impact	Yes	Yes	Yes	No	No	No	Yes

Approval of One TMDL Report and Amendment of the Water Quality Management Planning

Regulation: Staff will ask the Board to approve portions of one TMDL report and adopt the corresponding amendment to Virginia's Water Quality Management Planning regulation. As of July 1, 2014, TMDL waste load allocations receive State Water Control Board approval prior to EPA approval due to amendments outlined in §2.2-4006.A.14 of the Code of Virginia. The TMDL report has been reviewed by EPA for required TMDL elements; however, it remains in draft form until State Water Control Board approval. Staff will propose the following Board actions:

Approval of one TMDL report and Amendment of Water Quality Management Planning regulation to incorporate one new WLA

1. The report titled, "*Bacteria TMDL Development for the Bullpasture River in Highland County, Virginia*" proposes E. coli reductions for the Bullpasture watershed and provides a new E. coli waste load allocation of 2.63E+12 counts/year. The specific portions of the TMDL report to be approved include the TMDL itself and all the TMDL allocation components, the pollutant reduction scenarios, implementation strategies, reasonable assurance that the TMDL can be implemented, and a summary of the public participation process.
2. The amendments consist of adding one new WLA that is included in the TMDL report reviewed by EPA. Staff will therefore propose that the Board, in accordance with §2.2-4006A.14 and §2.2-4006B of the Code of Virginia, adopt the amendments to the Water Quality Management Planning regulation (9 VAC 25-720).

The TMDL report was developed in accordance with Federal Regulations (40 CFR §130.7). The TMDL report was subject to the public participation process contained in §2.2-4006.A.14 of the Code of Virginia and DEQ's "Public Participation Procedures for Water Quality Management Planning" that the Board approved in September 2014. Written comments provided by stakeholders as well as the Commonwealth's responses are submitted to EPA together with the TMDL report. TMDL report is also made available to the public on DEQ's web site under

<http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/TMDL/TMDLDevelopment/DraftTMDLReports.aspx>.

The proposed final amendment to the Water Quality Management Planning regulation is exempt from the provisions of Article II of the Administrative Process Act. The TMDL WLA was published in the Virginia Register (Volume 35, Issue 25) on August 5, 2019, with a public comment period ending on September 4, 2019. Staff will provide an update on comments received at the September 6 Board meeting.

Report on Facilities in Significant Noncompliance: One new permittee was reported to EPA on the Quarterly Noncompliance Report as being in significant noncompliance (SNC) for the quarter ending March 31, 2019. The permittee, the facility and the reported instances of noncompliance are as follows:

Permittee/Facility: **Alexandria Renew Enterprises/Alexandria Renew Enterprises WWTP**
Type of Noncompliance: **Failure to Meet Permit Effluent Limits (Total Suspended Solids, TSS)**
City/County: Alexandria, Virginia
Receiving Water: Hunting Creek and Hooff Run
Impaired Water: Hunting Creek and Hooff Run are impaired for fish consumption and aquatic life uses. Hunting Creek is also impaired for recreation use. The causes of the fish consumption impairments are PCBs. Hunting Creek is subject to a PCB TMDL, Bacteria TMDL, and the Chesapeake Bay TMDL. Hooff Run is subject to the Chesapeake Bay TMDL and PCB TMDL.

River Basin: Potomac River Basin

Dates of Noncompliance: December 2018 and March 2019

Requirements Contained In: VPDES Permit

DEQ Region: Northern Regional Office

Alexandria attributes the exceedances to high levels of rainfall and the construction of upgrades at the Facility. The 2017 General Assembly passed legislation requiring Alexandria to reduce combined sewer overflows by 2025. To comply with the legislation, Alexandria developed a plan which includes upgrades to the Facility. Once complete the plan and upgrades should address the discharges and effluent violations. DEQ NRO staff is working with Alexandria to resolve the current enforcement action.

Pilot Travel Centers LLC, Pilot Travel Center #4649, Rockbridge County - Consent Order w/ Civil Charge: Pilot Travel Centers, LLC (Pilot) owns and operates a large, commercial fueling center, Pilot #4649, located at 713 Oakland Cr. in Raphine, Virginia (Facility). On May 1, 2018, DEQ received notification from Rockbridge County Fire and Rescue (RCFR) reporting a discharge of oil in the form of diesel fuel from the Facility. RCFR observed an oil sheen flowing throughout the length of Moores Creek between the Facility and Willow Lake located approximately 5,800 linear feet south of the Facility. RCFR was notified directly by a complainant. Several citizen complaints were also received after the initial notification from RCFR. DEQ did not receive notification or a 5-day letter from Pilot in accordance with the Permit.

On May 4 and May 9, 2018, DEQ visited the Facility and observed an oil sheen on Moores Creek, for approximately one-mile south, into Willow Lake, as well as oil stained vegetation along and in the creek, iron bacteria in the uplands of Willow Lake, and wildlife mortalities including: one dead muskrat, one dead groundhog, one dead opossum, and one dead snake along the banks of Moores Creek. On May 14, 2018, DEQ issued Notice of Violation (NOV) No. W2018-05-V-0001 to Pilot for the unpermitted discharge of oil and wastewater from the Facility, and for failure to report the discharge to DEQ. On May 29, 2018 and June 12, 2018, Pilot stated the likely source of the diesel fuel in the oil water separator (OWS), in the adjoining stormwater pond, and in Moores Creek, was from maintenance activities associated with the replacement of the motors in the diesel tanks. A maintenance contractor removed approximately 2,400 gallons of water/algae/product [diesel] from the tanks and improperly disposed of it all into the OWS at the Facility. The OWS at the Facility has a total capacity of 2,000 gallons. The OWS then discharges to an on-site treatment unit, referred to as an Eco-Pod tank, and ultimately into a stormwater pond, which then discharges to Moores Creek. On July 3, 2018, Pilot's consultant submitted the Site Characterization Report (SCR) to DEQ. Pilot's consultant estimated that 1,215 gallons of diesel fuel were recovered from, a combination, of the OWS and the Facility's stormwater pond, 11 tons of petroleum-contaminated soil were removed from the Facility, and downstream to the confluence of Moores Creek. Subsequent reporting showed that VPDES effluent limits had been violated for several months. From July 2018 to September 2018, Pilot's consultant monitored the stream, replacing booms and pads as needed, cleaned the Facility's OWS and wastewater treatment system, and proactively installed a forebay immediately down gradient of the stormwater management pond as an added line of defense to prevent future contamination from reaching Moores Creek. On December 5, 2018, DEQ closed the Pollution Complaint once containment and clean up was completed. DEQ did not observe ongoing impacts to Moores Creek and there are no remaining risks to sensitive receptors, human health, or the environment as a result of the oil discharge. On February 8, 2019, Pilot notified DEQ that it intended to allow its VPDES Permit to expire, and planned to eliminate the discharge and discharge pipe from the Facility. On April 2, 2019, Pilot submitted documentation with accompanying photographs to DEQ, confirming that the discharge pipe was capped on March 26, 2019. Pilot informed DEQ that the OWS will be monitored weekly, and will be pumped and hauled on an as needed basis. On April 4, 2019, DEQ staff visited the Facility and confirmed removal of the discharge and capping of the discharge pipe. Civil Charge: \$103,837.65. \$98,062.65 to be deposited into the Virginia Petroleum Storage Tank Fund, and \$5,775.00 to be deposited into the Virginia Environmental Emergency Response Fund.