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Atkins, Lou (MRC)

From: Owen, Randy (MRC)
Sent: Monday, October 30, 2017 11:13 AM
To: MRC - jpa Permits
Subject: FW: VWP Permit 14-0343: Minor Modification #2
Attachments: 14-0343_Transmittal_Letter_MinorMod2_2017-10-30.pdf; 14-0343_Permit_MinorModification2_2017-10-30.pdf; 14-0343_permit_MinorModification2FactSheet2017-10-30.pdf

From: McGurk, Brian (DEQ)
Sent: Monday, October 30, 2017 10:19 AM
To: Steve Nichols <snichols@fluvannacounty.org>
Cc: Brandon Searcey <Brandon.Searcey@timmons.com>; Ewing, Amy (DGIF) <Amy.Ewing@dgif.virginia.gov>; Goodwin, Christian <cgoodwin@louisiana.org>; bbd304@comcast.net; Vanderploeg, Steven A NAO (Steven.A.Vanderploeg@usace.army.mil) <Steven.A.Vanderploeg@usace.army.mil>; Owen, Randy (MRC) <Randy.Owen@mrc.virginia.gov>; odwreview (VDH) <odwreview-VDH@cov.virginia.gov>
Subject: VWP Permit 14-0343: Minor Modification #2

Mr. Nichols

Attached are the documents pertaining to the Department's approval of your request for a Minor Modification of VWP Permit 14-0343, which is effective today.

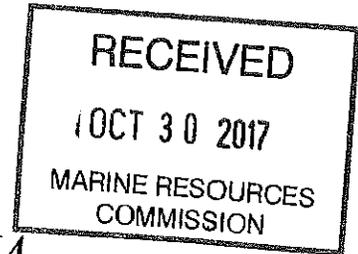
Please respond to acknowledge your receipt of these documents, and let me know if you have any questions.

Brian

Brian McGurk, P. G.
Office of Water Supply
Virginia Department of Environmental Quality

brian.mcgurk@deq.virginia.gov
804-698-4180
mailing address: P.O. Box 1105, Richmond VA 23218





COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

October 30, 2017

James River Water Authority
c/o Mr. Steven M. Nichols, Fluvanna County Administrator
132 Main Street
P.O. Box 540
Palmyra, Virginia 22963

SENT VIA E-MAIL
RECEIPT CONFIRMATION REQUESTED

Re: Virginia Water Protection (VWP) Individual Permit Number 14-0343
James River Water Supply Project, Fluvanna County, Virginia
Approval of Request for Minor Modification

Dear Mr. Nichols:

The Virginia Department of Environmental Quality (DEQ) has received your request to modify VWP Individual Permit No. 14-0343 issued on November 20, 2015.

In an email dated May 19, 2017, and subsequent emails dated August 30, 2017 and September 28, 2017, Timmons Group requested the modification to reduce the number and acreage of surface water impact sites and to revise the requirements for mussel surveys and related time-of-year restrictions to protect state threatened and endangered mussel species at stream crossings along the proposed raw water pipeline. An adjustment to the required wetland compensatory mitigation credits was also requested, based upon the reduction in proposed impacts.

In accordance with your request and pursuant to the VWP Permit Program Regulation 9 VAC 25-210-180 and § 401 of the Clean Water Act Amendments of 1977, Public Law 95-217, DEQ approves your request to modify the above referenced permit. DEQ has determined that this request qualifies for a Minor Modification in accordance with VWP Permit Program Regulation 9 VAC 25-210-180(E)(7). The Permit Cover Page, Special Conditions Part I.A.2-4, Part I.B.2, Part I.C.1, Part I.C.7a, Part I.D, Part I.F.3, Part I.H.1, Attachment B and Attachment C have been modified to reflect the Minor Modification.

Please note that this letter is an official component of the permit and should be retained in your files. Should you have any questions, please contact Brian McGurk at (804) 698-4180, Brian.McGurk@deq.virginia.gov, or at the above address.

Mr. Steven M. Nichols
VWP Individual Permit No. 14-0343
October 30, 2017
Page 2 of 2

Respectfully,



Scott W. Kudlas
Director, Office of Water Supply

Enclosures: Permit Cover Page, Part I - Special Conditions, Part II - General Conditions, Attachment A, Attachment B: Monthly VWP Permit Inspection Checklist, Attachment C: VWP Permit Construction Status Update Form, Permit Fact Sheet

cc: Mr. Goodman B. Duke, Chairman of James River Water Authority – VIA EMAIL
Mr. Christian Goodwin, Louisa County Administrator – VIA EMAIL
Mr. Brandon Searcy, Timmons Group – VIA EMAIL
Mr. Randy Owen, Virginia Marine Resources Commission – VIA EMAIL
Mr. Steven Vanderploeg, U.S. Army Corps of Engineers – VIA EMAIL
Ms. Amy Ewing, Virginia Department of Game and Inland Fisheries – VIA EMAIL
VDH Office of Drinking Water – VIA EMAIL



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

VWP Individual Permit Number 14-0343
Effective Date: November 20, 2015
Minor Modification No. 1: October 25, 2016
Minor Modification No. 2: October 30, 2017
Expiration Date: November 19, 2030

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

Based upon an examination of the information submitted by the owner, and in compliance with § 401 of the Clean Water Act as amended (33 USC 1341 et seq.) and the State Water Control Law and regulations adopted pursuant thereto, the State Water Control Board (board) has determined that there is a reasonable assurance that the activity authorized by this permit, if conducted in accordance with the conditions set forth herein, will protect instream beneficial uses and will not violate applicable water quality standards. The board finds that the effect of the impact, together with other existing or proposed impacts to surface waters, will not cause or contribute to a significant impairment to state waters or fish and wildlife resources.

Permittee: James River Water Authority

Address: c/o Fluvanna County Administrator
132 Main Street, P.O. Box 540, Palmyra, Virginia 22963

Activity Location: The proposed intake is located on the north bank of the James River, just upstream of the confluence with the Rivanna River at the end of Route 624, near the Town of Columbia in Fluvanna County, Virginia. The proposed raw water transmission pipeline extends from the intake location through eastern Fluvanna County to the location of the proposed Louisa Water Treatment Plant near Ferncliff, Virginia.

Activity Description: This permit authorizes the construction and operation of a new surface water withdrawal intake to withdraw surface water from the James River as described in Part I.F and impacts to surface water associated with the installation of a raw water transmission pipeline from the intake structure to the location of the proposed Louisa Water Treatment Plant near Ferncliff, Virginia. Impacts to the James River associated with the construction of the intake structure are authorized for 0.08 acre (64 linear feet) of permanent impact and 0.82 acre (315 linear feet) of temporary impact. Impacts associated with the construction of a raw water transmission pipeline are authorized to permanently impact 0.082 acre of palustrine scrub-shrub

wetlands and 0.141 acre of palustrine forested wetland, and temporarily impact 0.996 acre of palustrine emergent wetland, 0.194 acre of palustrine scrub-shrub wetland, 0.083 acre of palustrine forested wetland and 2,688 linear feet of intermittent and perennial stream channels. Compensation for the permanent wetland impacts shall be provided through the purchase of 0.405 wetland credit from the Virginia Aquatic Resources Trust Fund and/or a DEQ approved mitigation bank that is authorized to sell credits for area in which the permitted impact site is located. The credit sale must be in accordance with the approved Mitigation Banking Instrument for the mitigation bank. Compensation for permanent stream channel impacts is not required.

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



Director, Office of Water Supply

10/27/17

Date

Part I – Special Conditions

A. Authorized Activities

1. This permit authorizes the construction and operation of a new surface water withdrawal intake to withdraw surface water from the James River as described in Part I.F and impacts to surface waters associated with the installation of a raw water transmission pipeline from the intake structure to the location of the proposed Louisa Water Treatment Plant near Ferncliff, Virginia.
2. This permit authorizes the following surface water impacts:
 - a. Impacts to the James River associated with the construction of the intake structure are authorized for 0.08 acre (64 linear feet) of permanent impact and 0.82 acre (315 linear feet) of temporary impact.
 - b. Impacts associated with the construction of a raw water transmission pipeline are authorized to permanently impact 0.082 acre of palustrine scrub-shrub (PSS) wetland and 0.141 acre of palustrine forested (PFO) wetland, and temporarily impact 0.996 acre of palustrine emergent (PEM) wetland, 0.194 acre of PSS wetland, 0.083 acre of PFO wetland and 2,688 linear feet of intermittent and perennial stream channels, including temporary impacts associated with construction of a pipeline crossing of the Rivanna River.
3. Authorized impacts shall be as depicted and listed on the following:
 - a. Sheet 1 entitled “Relocated Intake, Pump Station and Raw Water Pipeline Owned by the JRWA” dated June 26, 2016 and received June 27, 2016;
 - b. Unnumbered sheet entitled “Plan Set A: 24 inch Raw Water Main” dated April 14, 2016 and received June 27, 2016;
 - c. Sheet C-5 entitled “Intake and River Cross Section” dated May, 2015 and received June 27, 2016;
 - d. Sheet VMRC 2 entitled “Raw Water Main Rivanna River Crossing” dated February 24, 2016 and received June 27, 2016;
 - e. Index Maps 1 through 8 and index sheet, entitled “Figure 3: Preliminary Jurisdictional Waters of the U.S. Impacts Map”, dated June 22, 2016, revised January 3, 2017 and June 9, 2017, and received August 3, 2017;
 - f. Sheets 1 through 74, entitled “Preliminary Jurisdictional Waters of the U.S. Impacts Map – Detail”, dated June 22, 2016, revised January 3, 2017 and June 9, 2017, and received August 3, 2017;
 - g. Minor Modification 2 Impacts Table – James River Water Supply Project, dated June 8, 2017, and received August 3, 2017; and
 - h. Minor Modification 2: Wetland Compensatory Mitigation Summary, dated June 8, 2017 and received August 3, 2017.
4. Authorized activities shall be conducted as described in the Joint Permit Application dated March 12, 2014, and received March 14, 2014, the request for permit modification dated June 26, 2016 and received June 27, 2016, supplemental materials, revisions and clarifications received through

September 23, 2016, and the request for a second modification dated and received on May 18, 2017, and corresponding supplemental materials, revisions and clarifications received through September 28, 2017.

5. The permittee shall notify the DEQ prior to any additional impacts to surface waters, including wetlands; of any modifications of the intake structure; and of any change to the type of surface water impacts associated with this project. Any additional impacts, modifications, or changes shall be subject to individual permit review and/or modification of this permit.

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, including water withdrawals, or any permit requirement that has not been completed, including compensation provisions.
2. The permittee shall submit a new permit application at least 270 days before the expiration date of this permit, if the surface water withdrawal activities are to be continued.

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 § 62.1-44.3 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 (including public water supply), agricultural uses, electric power generation, commercial, and industrial uses.
2. No activity shall substantially disrupt the movement of aquatic life indigenous to the water body, including those species that 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. No activity shall cause more than minimal adverse effect on navigation, and no activity shall block more than half of the width of the stream at any given time.
5. The activity shall not impede the passage of normal or expected high flows, and any associated structure shall withstand expected high flows.
6. Continuous flow of perennial springs shall be maintained by the installation of spring boxes, French drains, or other similar structures.

7. Construction activities shall be conducted in accordance with the below Time-of-Year Restrictions:
- a. To protect state-endangered Brook Floaters and state-threatened Atlantic Pigtoes and Green Floaters, or other state or federally listed mussel species, activities shall be conducted in accordance with any Time-of-Year restriction(s) recommended for listed species by the Virginia Department of Game and Inland Fisheries. The permittee shall retain a copy of the agency correspondence concerning the Time-of-Year restriction(s), or the lack thereof, for the duration of the construction phase of the project. Construction activities within the confines of the cofferdam are not included within any Time-of-Year Restrictions.
 - b. No instream work in the James River or in the Rivanna River shall occur from March 15 through June 30 of any year to protect anadromous fish. Construction activities within the confines of the cofferdam are not included within this Time-of-Year Restriction.
8. All excavation, dredging, or filling in surface waters shall be accomplished in a manner that minimizes bottom disturbance and turbidity.
9. All in-stream activities shall be conducted during low-flow conditions whenever practicable.
10. 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.
11. 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.
12. Measures shall be employed at all times to prevent and contain spills of fuels, lubricants, or other pollutants into surface waters.
13. Machinery or heavy equipment in temporarily impacted wetlands shall be placed on mats or geotextile fabric, or other suitable means shall be implemented, to minimize soil disturbance to the maximum extent practical. Mats, fabrics, or other measures shall be removed as soon as the work is complete in the temporarily impacted wetland.
14. Heavy equipment is authorized for use within the stream channel during project construction or stream restoration activities when site conditions prohibit access from the streambank. The equipment shall be stationed on cobble bars and the activities conducted in the dry or during low flow conditions, whenever possible.
15. Temporary disturbances to wetlands, stream channels, and/or stream banks during project construction activities shall be avoided and minimized to the maximum extent practicable.

16. All temporarily disturbed wetland areas shall be restored to preconstruction conditions within 30 calendar days of completing work in the areas, which shall include re-establishing pre-construction contours, and planting or seeding with appropriate wetland vegetation according to cover type (emergent, scrub/shrub, or forested), except for invasive species identified on DCR's Invasive Alien Plant Species of Virginia list. The permittee shall take all appropriate measures to promote and maintain the revegetation of temporarily disturbed surface waters through the second year post-disturbance.
17. All temporarily impacted streams and stream banks shall be restored to their original elevations and contours within 30 calendar days following the construction at that stream segment, and the banks shall be seeded or planted with the same vegetative cover type originally present along the banks, including supplemental erosion control grasses if necessary but not including invasive species identified on DCR's Invasive Alien Plant Species of Virginia list.
18. All materials (including fill, construction debris, excavated materials, and woody materials, that are temporarily placed in wetlands, in stream channels, or on stream banks) shall be placed on mats or geotextile fabric, shall be immediately stabilized to prevent the material or leachate from entering surface waters, and shall be entirely removed within 30 calendar days following completion of that construction activity. After removal, disturbed areas shall be returned to original contours, shall be stabilized, and shall be restored to the original vegetated state within 30 calendar days.
19. Temporary in-stream construction features such as cofferdams shall be made of non-erodible materials.
20. Virginia Water Quality Standards shall not be violated in any surface waters as a result of the project activities.
21. All non-impacted surface water and any required upland buffers 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*.
22. All required notifications and submittals shall include project name and permit number and be submitted to the DEQ office stated below, to the attention of the Water Withdrawal Permit Manager, unless directed in writing by DEQ subsequent to the issuance of this permit: Department of Environmental Quality, Office of Water Supply, P.O. Box 1105, Richmond, Virginia 23218.
23. 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.

24. 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."

25. Any fish kills or spills of fuels or oils shall be reported to DEQ immediately upon discovery at (804) 698-4000. 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.
26. 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. Stream Modifications, Including Installation of the James River Intake and Raw Water Transmission Line Stream Crossings

1. The permittee shall perform a mussel survey and relocation, if required, prior to commencing work in any of the following authorized impact areas:
 - a. Impact locations 1 and 2 (James River intake);
 - b. Impact location 8 (Rivanna River);
 - c. Impact location 43 (Byrd Creek);
 - d. Impact location 74 (Horsepen Creek); and
 - e. Impact locations 59 and 72, if threatened or endangered species are found at impact locations 43 and 74, respectively.

All work at stream crossing impact sites not listed above shall occur when the stream is not flowing or behind cofferdams. No flow "dry" conditions can be naturally occurring (seasonal break in flow) or created through the installation of cofferdams or similar techniques to isolate the impact site.

2. Each mussel survey shall be performed 100 meters upstream through 400 meters downstream of each authorized impact area identified in Part I.D.1 no more than six months prior to the start of construction at each location, unless otherwise approved by Virginia Department of Game and Inland Fisheries (DGIF) and DEQ. Each survey shall be performed by a qualified, permitted

biologist and conducted in accordance with DGIF and U.S. Fish and Wildlife Services draft Freshwater Mussel Guidelines for Virginia dated March 7, 2008, or as amended.

3. The permittee shall submit a report or reports summarizing the results of each mussel survey to DGIF and DEQ for review and approval. The agencies review and approval of surveys completed for impact locations 1, 2 and 7 through 11 shall be completed prior to commencing work in the James River or the Rivanna River. The agencies review and approval of mussel surveys completed for impact locations 43 and 74 shall be completed prior to commencing work at impact locations 59 (unnamed tributary to Byrd Creek) and impact location 72 (unnamed tributary to Horsepen Creek), or any other impact location identified as a perennial stream tributary to Byrd Creek (impact locations 52, 63, 80, 84, 105, 109, 113, 114 and 117). The report(s) shall reference DGIF's project number: ESSLog# 22598. Based upon the results, DGIF will provide final recommendations regarding the protection of listed species known from the area. The recommendations may include relocations of documented listed species, and/or requests for adherence to TOYR at sites not currently listed in Part I.D.1. Mussel relocations shall be conducted in accordance with the DGIF and U.S. Fish and Wildlife Services draft Freshwater Mussel Guidelines for Virginia dated March 7, 2008, or as amended.
4. To minimize harm to the aquatic environment and its residents resulting from use of the Tremie method to install concrete, installation of grout bags, and traditional pouring of concrete, such activities shall occur only in the dry, allowing all concrete to harden and cure prior to contact with open water.
5. Redistribution of existing stream substrate for erosion control purposes is prohibited.
6. Material removed from the stream bottom shall not be deposited into surface waters unless otherwise authorized in this permit.
7. Riprap apron for all outfalls shall be designed in accordance with Virginia Erosion and Sediment Control Handbook, Third Edition, 1992, or the most recent version in effect at the time of construction.
8. For streambank protection activities, structures and backfill shall be placed as close to the streambank as practical, while still avoiding and minimizing impacts to surface waters to the maximum extent practical. No material shall be placed in excess of the minimum necessary for erosion protection.
9. Asphalt and materials containing asphalt or other toxic substances shall not be used in the construction of submerged sills, breakwaters, dams, or weirs.

E. Installation of Utilities

1. All utility line work in surface waters shall be performed in a manner that minimizes disturbance in each area. Temporarily disturbed surface waters shall be restored in accordance with Part I.C.16, C.17, and C.18, unless otherwise authorized by this permit.

2. Material resulting from trench excavation may be temporarily sidecast into wetlands not to exceed a total of 90 calendar days, provided the material is not placed in a manner such that it is dispersed by currents or other forces.
3. The trench for a utility line cannot be constructed in a manner that drains wetlands (e.g., backfilling with extensive gravel layers creating a French drain effect).

F. Surface Water Withdrawals

1. Surface water withdrawn from the James River and authorized under this permit shall be only used for public water supply.
2. The safe yield of the surface water withdrawal project as authorized under this permit is the annual average daily volume of 4.12 million gallons per day (mgd).
3. The withdrawal of water from the James River shall not exceed the limits established in the table below. The withdrawal limits are to be phased in based upon completion of capital improvements necessary to begin water service to areas identified for each Tier.

Tier	Maximum Daily Withdrawal (mgd)	Maximum Monthly Withdrawal (mg)	Maximum Annual Withdrawal (mg)
1	5.73	117.4	1,008
2	7.45	152.7	1,311
3	8.39	172.0	1,477

- a. Tier 1 contains the withdrawal limits to meet the justified demands of the service areas of Zion Crossroads and Ferncliff in Louisa County and Fluvanna CWS in Fluvanna County and the economic development prospects as identified in the application for both Counties.
 - b. Tier 2 contains the withdrawal limits to meet the justified demands of the service areas identified in Tier 1 and the service areas of Shannon Hill, Town of Louisa, Town of Mineral, Louisa County Water Authority and Lake Anna in Louisa County.
 - c. Tier 3 contains the withdrawal limits to meet the justified demands of the service areas identified in Tier 2 and the service areas of Gum Springs in Louisa County and the Fork Union, Columbia and Palmyra CWS in Fluvanna County.
4. The localities (Fluvanna and Louisa Counties) through the permittee shall provide to DEQ for review no later than June 30, 2017 for Tier 1 and within three (3) years of permit issuance for Tier 2 and 3, a plan(s) that identifies the specific capital improvements and associated schedule for completion that Fluvanna and Louisa Counties must implement to treat and transport water withdrawn from the authorized intake to service areas identified for each Tier in Part I.F.3. Any changes to the plan(s) that relates to this permit shall be submitted to DEQ for review. The plan(s) shall include, at a minimum, the following for each Tier:
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- a. Summarize the capital improvements that must be completed for water to be transported from the authorized intake, treated and distributed to the service areas identified for each Tier. These capital improvements shall include infrastructure such as pipelines, water treatment plants and associated storage facilities.
 - b. Identify the location(s) of wastewater treatment facilities, both private and municipal, that will treat any part of the water withdrawn from the authorized intake and the watershed to which the return flow will be discharged.
 - c. The anticipated dates to complete each phase of the identified capital improvements.
5. The withdrawal limits established in Part I.F.3 are authorized in accordance with the following:
- a. Tier 1: The permittee shall submit to DEQ for review and approval by January 1, 2018 written confirmation that capital improvements identified in the plan required by Part I.F.4 for Tier 1 are complete to obtain authorization to withdraw water at the volumes identified under this Tier.
 - b. Tier 2: The permittee shall submit to DEQ for review and approval by January 1, 2021 written confirmation that capital improvements identified in the plan required by Part I.F.4 for Tier 2 are complete to obtain authorization to withdraw water at the volumes identified under this Tier.
 - c. Tier 3: The permittee shall submit to DEQ for review and approval by January 1, 2023 written confirmation that capital improvements identified in the plan required by Part I.F.4 for Tier 3 are complete to obtain authorization to withdraw water at the volumes identified under this Tier.
 - d. Should capital improvements necessary to begin water service to areas identified for a specific Tier be completed later in the permit term than identified above, the permittee may submit to DEQ for review and approval a request for authorization of withdrawal limits established for a specific Tier. Any such request shall include written confirmation that capital improvements identified in the plan required by Part I.F.4 for a specific Tier are complete to obtain authorization to withdraw water at the volumes identified under that Tier and discussion of project status including justification for the request.
 - e. If capital improvements for a specific Tier are complete for only a portion of the service area or areas identified for that Tier, the permittee may submit to DEQ for review and approval a request for a portion of the withdrawal volumes for a specific Tier sufficient to meet the demands of those service area or areas. Any such request shall include the following: proposed revision to the specific Tier, including water demands associated with the service area or areas as identified in the application materials, written confirmation that capital improvements identified in the plan required by Part I.F.4 are complete for those service area or areas, and discussion of project status including justification for the request. Any such request will require a modification of the permit, which may be considered under

a minor modification, to adjust the withdrawal volumes for a particular Tier, not to exceed the volumes identified for Tier 3 in Part I.F.3.

6. The permittee shall estimate flows at the James River intake in units of cubic feet per second (cfs) on a daily basis by monitoring the stream flow gages detailed herein and by applying the equation "Flows at the intake = $(Q_{SC} + Q_{HD} + Q_{SL}) * 1.03$," where:
 - a. Q_{SC} is the previous day's provisional mean daily flow at the U.S. Geologic Survey (USGS) gage No. 02029000 (James River at Scottsville, Virginia);
 - b. Q_{HD} is the previous day's provisional mean daily flow at the USGS gage No. 02030000 (Hardware River BL Briery Run near Scottsville, Virginia);
 - c. Q_{SL} is the previous day's provisional mean daily flow at the USGS gage No. 02030500 (Slate River near Arvonias, Virginia);
 - d. 1.03 is the adjustment factor for drainage area.
7. The permittee shall make reasonable effort to coordinate with the operators of the Cobbs Creek Reservoir when provisional stream flows at the permittee's intake estimated in accordance with Part I.F.6 is equal to or less than the 10th percentile flow of 778 cfs. Coordination shall occur in accordance with the DEQ approved protocol required by Part I.F.8.
8. Prior to withdrawing surface water from the James River, the permittee shall develop and submit for DEQ approval a protocol for coordinating with the operators of the Cobbs Creek Reservoir when provisional stream flows at the intake fall below the 10th percentile, as identified in Part I.F.7. Such protocol, to the extent reasonable, should be developed in coordination with the operators of the Cobbs Creek Reservoir, with assistance by DEQ. The protocol shall include, at a minimum, the permittee informing the operators of the Cobbs Creek Reservoir of their current and intended operations and stipulating the frequency of periodic updates during extended low flow events. DEQ shall have 30 days from receipt of the proposed protocol to review and provide comments.
9. The permittee shall submit a drought management plan to DEQ for review and approval 90 days prior to initiating the surface water withdrawal. Any revisions to the approved plan shall be submitted to DEQ for review and approval prior to implementing the change. The plan shall include, at a minimum, the following:
 - a. Development of drought stages, including when and how each stage will be implemented. The emergency drought stage shall be initiated when a drought emergency is declared by the Commonwealth of Virginia in the Northern Piedmont Drought Evaluation Region or the Middle James Drought Evaluation Region or by either Fluvanna or Louisa County in accordance with either County's Drought Management Ordinance. Once authorization is granted by DEQ to the permittee to withdrawal volumes above those identified in Tier 1 (Part I.F.3), voluntary and mandatory drought stages shall be initiated when the fourteen (14) day rolling average of James River flows at the intake are equal to or less than the

values in the below table. James River flows at the intake shall be estimated in accordance with Part I.F.6.

Drought Stage	James River Flow at Intake, 14-day Rolling Average (cfs)	
	November - June	July - October
Voluntary	≤ 1,241	≤ 975
Mandatory	≤ 913	≤ 750

- b. Requirement to operate the James River intake in a manner that ensures the instantaneous withdrawal does not exceed 13,980 gallons per minute (31.1 cfs) during the Mandatory Drought Stage.
 - c. A description of the conservation measures to be implemented during each drought stage.
10. When a drought emergency is declared by the Commonwealth of Virginia in the Northern Piedmont Drought Evaluation Region or the Middle James Drought Evaluation Region or by either Fluvanna or Louisa County in accordance with either County's Drought Management Ordinance, the permittee shall implement either the provisions directed by the Commonwealth, the Drought Management Ordinance, the Drought Management Plan required by Part I.F.9 of this permit or the mandatory conservation measures as detailed in Attachment A of this permit, whichever is the most restrictive. The permittee shall be responsible for determining when drought emergencies are declared. The permittee shall retain records documenting that mandatory conservation measures were implemented during declared drought emergencies.
 11. The intake screens shall be designed so that screen openings are not larger than 1 millimeter in width and height and the screen face intake velocities are not greater than 0.25 feet per second.
 12. The permittee shall monitor withdrawals from the James River on a daily basis using flow totalizer technology to confirm that the withdrawals are in compliance with this permit. Such meters shall produce volume determinations within plus or minus 5 percent of actual flows. A defective meter or other device must be repaired or replaced within 60 days. A defective meter is not grounds for not reporting the withdrawals. During any period when a meter is defective, generally accepted engineering practice shall be used to estimate withdrawals and the period during which the meter was defective must be clearly identified in the report.
 13. On each day that pumping occurs, the permittee must monitor and record the following, for each pump:
 - a. Date and time.
 - b. Total amount of water withdrawn each day.

- c. The maximum rate of withdrawal that occurred each date (in gpm).
 - d. The provisional stream flow in cfs as measured at the following stream gages: USGS gage No. 02029000 (James River at Scottsville, Virginia), USGS gage No. 02030000 (Hardware River BL Briery Run near Scottsville, Virginia), and USGS gage No. 02030500 (Slate River near Arvon, Virginia).
 - e. The provisional stream flow at the intake in cfs as estimated in accordance with Part I.F.6.
 - f. Identify whether stream flows at the intake fell below the 10th percentile requiring coordination with the operators of the Cobbs Creek Reservoir and if water supply storage releases from the upstream Cobbs Creek Reservoir occurred.
14. The permittee shall submit a water withdrawal monitoring report to DEQ semi-annually. The semi-annual monitoring period shall be as follows: January through June and July through December. The daily records shall be tabulated by month. The report shall be submitted to DEQ by January 31st and July 31st of every year within the permit term. Submittal of the report may take the form of electronic reporting or another form determined to be acceptable by DEQ. In the event the electronic reporting system is not available, the permittee may submit the report by electronic mail. The report shall include the following information:
- a. The permittee's name and address.
 - b. The permit number.
 - c. The source(s) from which water is withdrawn.
 - d. The location (latitude and longitude) of the water withdrawal.
 - e. Information listed in Part I.F.13.
 - f. The cumulative volume (million gallons) of water withdrawn each month and for the calendar year.
 - g. The average daily volume (mgd) of water withdrawn as calculated the last day of the monitoring period.
 - h. In the last report for the calendar year, the largest single day withdrawal volume (mgd) that occurred in the year and the month in which it occurred.
 - i. The method of measuring each withdrawal.
 - j. Documentation of any coordination conducted in accordance with Part I.F.7 during the reporting period.

- k. If during a semi-annual reporting period a drought emergency is declared, the report shall include a summary of mandatory conservation measures implemented during the drought event.
15. Water withdrawal monitoring and reporting activities shall comply with this section, Part I.C, and Part II. All records and information that result from the monitoring and reporting activities required by this permit, including any records of maintenance activities to the withdrawal system, shall be retained for the life of the permit. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or as requested by the State Water Control Board.

G. Construction Monitoring and Submittals (Impact Sites)

1. Final plans for the project construction activities authorized by this permit shall be submitted thirty (30) calendar days prior to initiating any land disturbance or construction in permitted impact areas. Construction shall be performed in accordance with the final construction plans submitted to DEQ, which shall be in compliance with the permit. Any changes to the final plans for permitted areas shall be submitted to DEQ immediately upon determination that changes are necessary. DEQ approval shall be required prior to implementing the changes.
2. 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 a projected schedule for initiating and completing work at each permitted impact area.
3. Site inspections shall be conducted at least once every calendar month and recorded on the *Monthly VWP Permit Inspection Checklist* (Attachment B) by the permittee or the permittee's qualified designee during active construction within authorized surface water impact areas. Monthly inspections shall be conducted in the following areas: all authorized permanent and temporary impact areas; all avoided surface waters, including wetlands, stream channels, and open water; surface water areas within 50 feet of any land disturbing activity; and all on-site areas designated for permanent preservation. The *Monthly VWP Permit Inspection Checklist* (Attachment B) shall be completed in its entirety for each monthly inspection and shall be kept on-site and made available for review by DEQ staff upon request during normal business hours.
4. The *VWP Permit Construction Status Update Form* (Attachment C) shall be completed in June and December and shall be submitted and received by DEQ no later than January 31st and July 31st of every year for the duration of this permit. The *VWP Permit Construction Status Update Form* (Attachment C) 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 commenced;
 - b. Construction activities have commenced;
 - c. Construction activities have commenced but are currently inactive, or;

- d. Construction activities are complete.
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 the completed *Monthly VWP Permit Inspection Checklist* (Attachment B), 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 permitted impact areas authorized under this permit.

H. Compensatory Mitigation

1. Compensation for the permanent impact of 0.141 acre of palustrine forested wetland shall be provided through the purchase of 0.282 wetland credit from the Virginia Aquatic Resources Trust Fund and/or a DEQ approved mitigation bank that is authorized to sell credits for the area in which the permitted impact sites are located. The credit sale must be in accordance with the approved Mitigation Banking Instrument for the mitigation bank.
2. Compensation for the permanent impact of 0.082 acre of palustrine scrub-shrub wetland shall be provided through the purchase of 0.123 wetland credit from the Virginia Aquatic Resources Trust Fund and/or a DEQ approved mitigation bank that is authorized to sell credits for the area in which the permitted impact sites are located. The credit sale must be in accordance with the approved Mitigation Banking Instrument for the mitigation bank.
3. Documentation that an approved wetland mitigation bank has debited the required mitigation credits from the mitigation bank ledger shall be submitted to and received by DEQ prior to initiating work in permitted impact areas.

Part II – General Conditions

A. Duty to Comply

The permittee shall comply with all conditions of the VWP permit. Nothing in the VWP permit regulations shall be construed to relieve the permittee of the duty to comply with all applicable federal and state statutes, regulations and prohibitions. Any VWP permit violation is a violation of the law, and is grounds for enforcement action, VWP permit termination, revocation, modification, or denial of an application for a VWP permit extension or reissuance.

B. Duty to Cease or Confine Activity

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the activity for which a VWP permit has been granted in order to maintain compliance with the conditions of the VWP permit.

C. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any impacts in violation of the permit which may have a reasonable likelihood of adversely affecting human health or the environment.

D. VWP Permit Action

1. A VWP permit may be modified, revoked and reissued, or terminated as set forth in 9 VAC 25-210 et seq.
2. If a permittee files a request for VWP permit modification, revocation, or termination, or files a notification of planned changes, or anticipated noncompliance, the VWP permit terms and conditions shall remain effective until the request is acted upon by the board. This provision shall not be used to extend the expiration date of the effective VWP permit. If the permittee wishes to continue an activity regulated by the VWP permit after the expiration date of the VWP permit, the permittee must apply for and obtain a new VWP permit or comply with the provisions of 9 VAC 25-210-185 (VWP Permit Extension).

VWP permits may be modified, revoked and reissued or terminated upon the request of the permittee or other person at the board's discretion, or upon board initiative to reflect the requirements of any changes in the statutes or regulations, or as a result of VWP permit noncompliance as indicated in the Duty to Comply subsection above, or for other reasons listed in 9 VAC 25-210-180 (Rules for Modification, Revocation and Reissuance, and Termination of VWP permits).

E. Inspection and Entry

Upon presentation of credentials, any duly authorized agent of the board may, at reasonable times and under reasonable circumstances:

1. Enter upon any permittee's property, public or private, and have access to, inspect and copy any records that must be kept as part of the VWP permit conditions;
2. Inspect any facilities, operations or practices (including monitoring and control equipment) regulated or required under the VWP permit; and
3. Sample or monitor any substance, parameter or activity for the purpose of ensuring compliance with the conditions of the VWP permit or as otherwise authorized by law.

F. Duty to Provide Information

1. The permittee shall furnish to the board any information which the board may request to determine whether cause exists for modifying, revoking, reissuing or terminating the VWP permit, or to determine compliance with the VWP permit. The permittee shall also furnish to the board, upon request, copies of records required to be kept by the permittee.
2. Plans, specifications, maps, conceptual reports and other relevant information shall be submitted as required by the board prior to commencing construction.

G. Monitoring and Records Requirements

1. Monitoring of parameters, other than pollutants, shall be conducted according to approved analytical methods as specified in the VWP permit. Analysis of pollutants will be conducted according to 40 CFR Part 136 (2000), Guidelines Establishing Test Procedures for the Analysis of Pollutants.
2. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
3. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart or electronic recordings for continuous monitoring instrumentation, copies of all reports required by the VWP permit, and records of all data used to complete the application for the VWP permit, for a period of at least three years from the date of the expiration of a granted VWP permit. This period may be extended by request of the board at any time.
4. Records of monitoring information shall include:
 - a. The date, exact place and time of sampling or measurements;
 - b. The name of the individuals who performed the sampling or measurements;
 - c. The date and time the analyses were performed;
 - d. The name of the individuals who performed the analyses;

- e. The analytical techniques or methods supporting the information such as observations, readings, calculations and bench data used;
- f. The results of such analyses; and
- g. Chain of custody documentation.

H. Transferability

This VWP permit may be transferred to a new permittee only by modification to reflect the transfer, by revoking and reissuing the permit, or by automatic transfer. Automatic transfer to a new permittee shall occur if:

1. The current permittee notifies the board within 30 days of the proposed transfer of the title to the facility or property;
2. The notice to the board includes a written agreement between the existing and proposed permittee containing a specific date of transfer of VWP permit responsibility, coverage and liability to the new permittee, or that the existing permittee will retain such responsibility, coverage, or liability, including liability for compliance with the requirements of any enforcement activities related to the permitted activity; and
3. The board does not within the 30-day time period notify the existing permittee and the new permittee of its intent to modify or revoke and reissue the VWP permit.

I. Property rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize injury to private property or any invasion of personal rights or any infringement of federal, state or local law or regulation.

J. Reopener

Each VWP permit shall have a condition allowing the reopening of the VWP permit for the purpose of modifying the conditions of the VWP permit to meet new regulatory standards duly adopted by the board. Cause for reopening VWP permits includes, but is not limited to when the circumstances on which the previous VWP permit was based have materially and substantially changed, or special studies conducted by the board or the permittee show material and substantial change, since the time the VWP permit was issued and thereby constitute cause for VWP permit modification or revocation and reissuance.

K. Compliance with State and Federal Law

Compliance with this VWP permit constitutes compliance with the VWP permit requirements of the State Water Control Law. Nothing in this VWP permit shall be construed to preclude the institution of any legal action under or relieve the permittee from any responsibilities, liabilities, or other penalties established pursuant to any other state law or regulation or under the authority preserved by § 510 of the Clean Water Act.

L. Severability

The provisions of this VWP permit are severable.

M. Permit Modification

A VWP permit may be modified, but not revoked and reissued except when the permittee agrees or requests, when any of the following developments occur:

1. When additions or alterations have been made to the affected facility or activity which require the application of VWP permit conditions that differ from those of the existing VWP permit or are absent from it;
2. When new information becomes available about the operation or activity covered by the VWP permit which was not available at VWP permit issuance and would have justified the application of different VWP permit conditions at the time of VWP permit issuance;
3. When a change is made in the promulgated standards or regulations on which the VWP permit was based;
4. When it becomes necessary to change final dates in schedules due to circumstances over which the permittee has little or no control such as acts of God, materials shortages, etc. However, in no case may a compliance schedule be modified to extend beyond any applicable statutory deadline of the Act;
5. When changes occur which are subject to "reopener clauses" in the VWP permit; or
6. When the board determines that minimum instream flow levels resulting from the permittee's withdrawal of water are detrimental to the instream beneficial use and the withdrawal of water should be subject to further net limitations or when an area is declared a Surface Water Management Area pursuant to §§ 62.1-242 through 62.1-253 of the Code of Virginia, during the term of the VWP permit.

N. Permit Termination

After notice and opportunity for a formal hearing pursuant to Procedural Rule No. 1 (9 VAC 25-230-100) a VWP permit can be terminated for cause. Causes for termination are as follows:

1. Noncompliance by the permittee with any condition of the VWP permit;
2. The permittee's failure in the application or during the VWP permit issuance process to disclose fully all relevant facts or the permittee's misrepresentation of any relevant facts at any time;
3. The permittee's violation of a special or judicial order;
4. A determination by the board that the permitted activity endangers human health or the environment and can be regulated to acceptable levels by VWP permit modification or termination;
5. A change in any condition that requires either a temporary or permanent reduction or elimination of any activity controlled by the VWP permit; and
6. A determination that the permitted activity has ceased and that the compensatory mitigation for unavoidable adverse impacts has been successfully completed.

O. Civil and Criminal Liability

Nothing in this VWP permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability

Nothing in this VWP permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under § 311 of the Clean Water Act or §§ 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Unauthorized Discharge of Pollutants

Except in compliance with this VWP permit, it shall be unlawful for the permittee to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances;
2. Excavate in a wetland;
3. Otherwise alter the physical, chemical, or biological properties of state waters and make them detrimental to the public health, to animal or aquatic life, to the uses of such waters for domestic or industrial consumption, for recreation, or for other uses;
4. On or after October 1, 2001 conduct the following activities in a wetland:
 - a. New activities to cause draining that significantly alters or degrades existing wetland acreage or functions;

- b. Filling or dumping;
- c. Permanent flooding or impounding;
- d. New activities that cause significant alteration or degradation of existing wetland acreage or functions.

R. Permit Extension

Any permittee with an effective VWP permit for an activity that is expected to continue after the expiration date of the VWP permit, without any change in the activity authorized by the VWP permit, shall submit written notification requesting an extension. The permittee must file the request prior to the expiration date of the VWP permit. Under no circumstances will the extension be granted for more than 15 years beyond the original effective date of the VWP permit. If the request for extension is denied, the VWP permit will still expire on its original date and, therefore, care should be taken to allow for sufficient time for the board to evaluate the extension request and to process a full VWP permit modification, if required.

Attachment A – Water Conservation

Mandatory Non-essential Water Use Restrictions

The following non-essential water uses will be prohibited during periods of declared drought emergencies. Please note the exceptions that follow each prohibited use. These prohibitions and exceptions will apply to uses from all sources of water and will only be effective when the Governor of Virginia or the Virginia Drought coordinator declares a Drought Emergency. Water use restrictions shall not apply to the agricultural production of food or fiber, the maintenance of livestock including poultry, nor the commercial production of plant materials, *provided that best management practices are applied to assure the minimum amount of water is utilized.*

1. *Unrestricted irrigation of lawns is prohibited.*

- Newly sodded and seeded areas may be irrigated to establish cover on bare ground at the minimum rate necessary for no more than a period of 60 days. Irrigation rates may not exceed one inch of applied water in any 7-day period.
- Gardens, bedding plants, trees, shrubs and other landscape materials may be watered with hand held containers, hand held hoses equipped with an automatic shutoff device, sprinklers or other automated watering devices at the minimum rate necessary but in no case more frequently than twice per week. Irrigation should not occur during the heat of the day.
- All allowed lawn irrigation must be applied in a manner to assure that no runoff, puddling or excessive watering occurs.
- Irrigation systems may be tested after installation, routine maintenance or repair for no more than ten minutes per zone.

2. *Unrestricted irrigation of golf courses is prohibited.*

- Tees and greens may be irrigated between the hours of 9:00 p.m. and 10:00 a.m. at the minimum rate necessary.
- Localized dry areas may be irrigated with a hand held container or hand held hose equipped with an automatic shutoff device at the minimum rate necessary.
- Greens may be cooled by syringing or by the application of water with a hand held hose equipped with an automatic shutoff device at the minimum rate necessary.
- Fairways may be irrigated between the hours of 9:00 p.m. and 10:00 a.m. at the minimum rate necessary not to exceed one inch of applied water in any ten-day period.
- Fairways, tees and greens may be irrigated during necessary overseeding or resodding operations in September and October at the minimum rate necessary. Irrigation rates during this restoration period may not exceed one inch of applied water in any seven-day period.

- Newly constructed fairways, tees and greens and areas that are re-established by sprigging or sodding may be irrigated at the minimum rate necessary not to exceed one inch of applied water in any seven-day period for a total period that does not exceed 60 days.
- Fairways, tees and greens may be irrigated without regard to the restrictions listed above so long as:
 - The only water sources utilized are water features whose primary purpose is stormwater management;
 - Any water features utilized do not impound permanent streams;
 - During declared Drought Emergencies these water features receive no recharge from other water sources such as ground water wells, surface water intakes, or sources of public water supply; and,
 - All irrigation occurs between 9:00 p.m. and 10:00 a.m.
- All allowed golf course irrigation must be applied in a manner to assure that no runoff, puddling or excessive watering occurs.
- Rough areas may not be irrigated.

3. ***Unrestricted irrigation of athletic fields is prohibited.***

- Athletic fields may be irrigated between the hours of 9:00 p.m. and 10:00 a.m. at a rate not to exceed one inch per application or more than a total of one inch in multiple applications during any ten-day period. All irrigation water must fall on playing surfaces with no outlying areas receiving irrigation water directly from irrigation heads.
- Localized dry areas that show signs of drought stress and wilt (curled leaves, foot-printing, purpling) may be syringed by the application of water for a cumulative time not to exceed fifteen minutes during any twenty four hour period. Syringing may be accomplished with an automated irrigation system or with a hand held hose equipped with an automatic shutoff device at the minimum rate necessary.
- Athletic fields may be irrigated between the hours of 9:00 p.m. and 10:00 a.m. during necessary overseeding, sprigging or resodding operations at the minimum rate necessary for a period that does not exceed 60 days. Irrigation rates during this restoration period may not exceed one inch of applied water in any seven-day period. Syringing is permitted during signs of drought stress and wilt (curled leaves, foot-printing, purpling).
- All allowed athletic field irrigation must be applied in a manner to assure that no runoff, puddling or excessive watering occurs.

- Irrigation is prohibited on athletic fields that are not scheduled for use within the next 120-day period.
 - Water may be used for the daily maintenance of pitching mounds, home plate areas and base areas with the use of hand held containers or hand held hoses equipped with an automatic shutoff device at the minimum rate necessary.
 - Skinned infield areas may utilize water to control dust and improve playing surface conditions utilizing hand held containers or hand held hoses equipped with an automatic shutoff device at the minimum rate necessary no earlier than two hours prior to official game time.
4. ***Washing paved surfaces such as streets, roads, sidewalks, driveways, garages, parking areas, tennis courts, and patios is prohibited.***
- Driveways and roadways may be pre-washed in preparation for recoating and sealing.
 - Tennis courts composed of clay or similar materials may be wetted by means of a hand-held hose equipped with an automatic shutoff device at the minimum rate necessary for maintenance. Automatic wetting systems may be used between the hours of 9:00 p.m. and 10:00 a.m. at the minimum rate necessary.
 - Public eating and drinking areas may be washed using the minimum amount of water required to assure sanitation and public health.
 - Water may be used at the minimum rate necessary to maintain effective dust control during the construction of highways and roads.
5. ***Use of water for washing or cleaning of mobile equipment including automobiles, trucks, trailers and boats is prohibited.***
- Mobile equipment may be washed using hand held containers or hand held hoses equipped with automatic shutoff devices provided that no mobile equipment is washed more than once per calendar month and the minimum amount of water is utilized.
 - Construction, emergency or public transportation vehicles may be washed as necessary to preserve the proper functioning and safe operation of the vehicle.
 - Mobile equipment may be washed at car washes that utilize reclaimed water as part of the wash process or reduce water consumption by at least 10% when compared to a similar period when water use restrictions were not in effect.
 - Automobile dealers may wash cars that are in inventory no more than once per week utilizing hand held containers and hoses equipped with automatic shutoff devices, automated equipment that utilizes reclaimed water as part of the wash process, or automated equipment where water

consumption is reduced by at least 10% when compared to a similar period when water use restrictions were not in effect.

- Automobile rental agencies may wash cars no more than once per week utilizing hand held containers and hoses equipped with automatic shutoff devices, automated equipment that utilizes reclaimed water as part of the wash process, or automated equipment where water consumption is reduced by at least 10% when compared to a similar period when water use restrictions were not in effect.
 - Marine engines may be flushed with water for a period that does not exceed 5 minutes after each use.
6. *Use of water for the operation of ornamental fountains, artificial waterfalls, misting machines, and reflecting pools is prohibited.*
- Fountains and other means of aeration necessary to support aquatic life are permitted.
7. *Use of water to fill and top off outdoor swimming pools is prohibited.*
- Newly built or repaired pools may be filled to protect their structural integrity.
 - Outdoor pools operated by commercial ventures, community associations, recreation associations, and similar institutions open to the public may be refilled as long as:
 - Levels are maintained at mid-skimmer depth or lower;
 - Any visible leaks are immediately repaired;
 - Backwashing occurs only when necessary to assure proper filter operation;
 - Deck areas are washed no more than once per calendar month (except where chemical spills or other health hazards occur);
 - All water features (other than slides) that increase losses due to evaporation are eliminated; and
 - Slides are turned off when the pool is not in operation.
 - Swimming pools operated by health care facilities used in relation to patient care and rehabilitation may be filled or topped off.
 - Indoor pools may be filled or topped off.
 - Residential swimming pools may be filled only to protect structural integrity, public welfare, safety and health and may not be filled to allow the continued operation of such pools.
8. *Water may be served in restaurants, clubs, or eating-places only at the request of customers.*



MONTHLY VWP PERMIT INSPECTION CHECKLIST (Attachment B)

An inspection of all permitted impact areas, avoided waters and wetlands, and permanently preserved waters, wetlands and upland areas must be conducted at least once every month during active construction activities. Maintain this record on-site and available for inspection by DEQ staff.

Project Name	James River Water Supply Project	VWP Permit #	14-0343	Inspection Date	
Inspector Name & Affiliation		Phone # & Email Address			

Based on a reading of VWP Permit No. 14-0343, including authorized impacts as identified by the plans listed in Special Condition Part I.A.3 of the permit, and my inspection on the date referenced above, to the best of my knowledge this project (___ is in compliance / ___ is not in compliance) with the VWP Permit.

List the Impact Site Number(s) inspected on this date: _____

I certify that the information contained in this report 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.

Signature of Inspector

Date

REVIEWED DURING SITE INSPECTION	Yes	No	N/A	Notes & Corrective Action Taken / Date Completed (use back of page if necessary)
Unauthorized impacts to surface waters, including wetlands, or upland preservation areas have occurred .* (This includes sedimentation impacts due to inadequate or failed erosion controls.)	<input type="checkbox"/>	<input type="checkbox"/>		
Non-impacted wetlands, streams and preservation areas within 50 feet of construction are clearly marked to prevent unpermitted impacts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Temporary impacts are being restored to original contours, stabilized, and allowed to re-establish with wetland vegetation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Construction activities are not substantially disrupting aquatic life movement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
E&S controls are present, properly maintained, and functioning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
In-stream work is being performed in the dry with the appropriate use of cofferdams, sheetpiling, etc., to minimize stream bottom disturbance and turbidity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pipes and/or culverts for road crossings are countersunk to provide for the re-establishment of low flow fish passage and/or a natural stream bottom.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Time-of-year restrictions regarding impacts to surface waters are being adhered to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water quality monitoring is being conducted during stream impacts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Streams and wetlands are free from any sheen or discoloration that may indicate a spill of oil, lubricants, concrete or other pollutants. **	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Heavy equipment is placed on mats or geotextile fabric when working in wetlands.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Exposed slopes/stream banks are stabilized immediately upon completion of work in each impact area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

* If unauthorized impacts have occurred, you must email or fax a copy of this report to DEQ within 24 hours of discovery.
Email: Previn.Smith@deq.virginia.gov or Fax: 804-698-4302

**** Any fish kills, or spills of fuels or oils must be reported immediately upon discovery to DEQ at 804-527-5020. If outside of normal business hours, contact Virginia Dept. of Emergency Management at 1-800-468-8892 or the National Response Center at 1-800-424-8802.**

Notes

Please note that the permit contains additional construction conditions other than those listed above. The permittee is responsible for compliance with all conditions in the permit. Problems or concerns associated with these other conditions should be noted below.



VWP PERMIT CONSTRUCTION STATUS UPDATE FORM (Attachment C)

Attached to VWP Permit No. 14-0343, issued on November 20, 2015, and modified on October 25, 2016, and October 30, 2017.

Date (check one):

June ____, _____

December ____, _____

VWP Permit No: _____ 14-0343 _____

Project Name: _____ James River Water Supply Project _____

Status within each authorized surface water impact location, as identified by the plans listed in Special Condition Part I.A. 3 of the permit: (check one of the following status options for each impact number/location for authorized impacts numbered 1 through 158.)

Impact number	Construction activities started	Construction activities not started	Construction activities started but currently not active	Construction activities complete

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 violation.

Authorized Signature: _____

Print Name: _____

Title: _____

Phone: _____

Date: _____

Email: _____

SEND TO: Previn.Smith@deq.virginia.gov or VA DEQ, Office of Water Supply (Attn: Previn Smith), P.O. Box 1105, Richmond, VA 23218

October 30, 2017

FACT SHEET

Minor Modification No. 2 of Virginia Water Protection Individual Permit No. 14-0343
James River Water Supply Project, Fluvanna County, Virginia

DEQ has reviewed the request for a modification of Virginia Water Protection (VWP) Individual Permit Number 14-0343 and determined that the proposed changes qualify for a minor modification of the VWP permit in accordance with VWP Permit Program Regulation 9 VAC 25-210-180.E 1, 5, and 6, and 9 VAC25-210-380.B.2. Based on the information provided in the application and in compliance with § 401 of the Clean Water Act as amended (33 USC 1341 et seq.) and the State Water Control Law and regulations, DEQ has determined that there is a reasonable assurance that the activity authorized by this permit will not adversely affect existing beneficial uses.

Surface water impacts have been avoided and minimized to the maximum extent practicable. The proposed permit also addresses no net loss of wetland acreage and function through compensatory mitigation. Permitted wetland impacts have been inventoried in evaluating this proposed permit.

The following details the minor modification application review process.

1. Minor Modification Processing Dates:

Modification requested:	May 17, 2017
Coordination request to DGIF:	May 19, 2017
Request for additional information sent:	May 24, 2017 and June 9, 2017
Additional information received:	May 24, 2017, August 3, 17 & 30, 2017, and September 28, 2017
Responses from DGIF:	May 30, 2017, June 12, 2017, & August 28, 2017
Minor Modification Permit Approved:	October 30, 2017

2. Project Description:

The James River Water Authority (JRWA) proposes to construct and operate a new raw water intake to withdraw surface water from the James River, just upstream of its confluence with the Rivanna River, and install associated water lines to meet the water demands associated with the Counties of Fluvanna and Louisa. The types of water use are residential, commercial, and industrial.

3. Minor Modification Description:

This action is a minor modification to the permit issued on November 20, 2015 and modified October 25, 2016. The construction activities of the permitted project consist of the following: intake structure, pump station, electrical/control building, and installation of a raw water transmission line from the intake structure to the location of a new water treatment plant near the Ferncliff community in Louisa County.

The following changes were made to permit conditions as part of this modification:

- 1) Parts I.A.2-4 were modified to allow for a reduction in permanent and temporary surface water impacts associated with installation of the raw water transmission pipeline;
- 2) Part I.B.2 was revised to include a requirement to submit an application for a new permit at least 270 days prior to the expiration date of the current permit;
- 3) Part I.C.1. was revised to include the current definition of “beneficial uses” from § 62.1-44.3 of the State Water Control Law that was incorporated into the 2016 revision of the VWP Permit Program Regulation (9VAC25-210-10).
- 4) Part I.C.7.a was modified to specify that activities related to construction of the raw water transmission pipeline should be conducted in accordance with any time-of-year restrictions (TOYR) recommended by DGIF with respect to state or federally listed mussel species;
- 5) Part I.D. was modified to clarify the requirements for mussel surveys at stream crossings related to construction of the raw water transmission pipeline, and a new special condition (Part I.D.3) was added to require mussel surveys at two specific stream crossing locations;
- 6) Part I.F.3 was modified to include a reduction in authorized withdrawals of 27.375 million gallons per year (mgy), which is equivalent to an annual average daily withdrawal of 75,000 gallons per day (0.075 million gallons per day (mgd)); and
- 7) Part I.H.1 was modified to account for a proposed reduction in permanent wetland impacts and subsequent reduction in required wetland mitigation credits.

Parts I.A.2-4:

The U.S. Army Corps of Engineers (USACE) Nationwide Permit (12) number NAO-2016-1198, issued on February 22, 2017 for construction of the raw water transmission line and a water treatment plant near Ferncliff in Louisa County, authorized surface water impacts associated with a 15-ft wide construction easement at many of the stream crossing locations. The impact maps associated with the current VWP permit used a 30-ft construction easement at many of these impact locations. As a result, the current VWP permit authorizes a larger number of temporary impact sites than the USACE permit. The permittee requested that the VWP permit be modified so that the surface water impacts associated with the construction of the raw water transmission pipeline match those authorized by the NWP (12) permit. The permittee submitted revised impact maps and tables with adjusted impact locations and areas. These documents can be found in the permit file.

Part I.B.2:

This condition previously required the permittee to notify DEQ at least 120 days prior to permit expiration if an extension will be requested. However, section 9VAC25-210-350, which was added to the VWP regulations in 2016, specifically requires the submittal of a new permit application at least 270 days prior to the permit expiration date. Inclusion and compliance with this revised condition will then allow DEQ to grant an administrative continuance of the permit if the new permit hasn't been issued for the next 15-year term by the time of the current expiration date (November 19, 2030).

Part I.C.1:

This condition was revised to use the updated definition of “beneficial use” that is currently listed in the VWP Permit Program Regulation (9VAC25-210-10) as revised in 2016, and defined in § 62.1-44.3 of the State Water Control Law.

Part I.C.7a:

The current VWP permit requires TOYR for instream work in any stream channel to protect the state-endangered brook floater and state-threatened Atlantic pigtoe and green floater mussel species. This condition was written prior to the first modification that added construction of the extended raw water transmission pipeline from Rte 6 in Fluvanna County to the Ferncliff area in Louisa County. There are 56 stream crossings proposed for the raw water transmission pipeline. Twenty-three (23) of these proposed crossings are located at perennial streams and thirty-three (33) are located at intermittent and/or ephemeral stream channels.

The permittee initially requested that Part I.C.7.a be revised to require a TOYR condition only for those proposed stream crossings that are less than one mile upstream of the Rivanna River and the James River. After subsequent correspondence and discussions with DGIF (see Section 7 below), the applicant submitted a revised request on August 30, 2017. The revised request proposed TOYR requirements for the following:

- instream work within the James River (impacts 1 & 2);
- the proposed Rivanna River stream crossing (impact 8); and
- 4 proposed crossings of perennial and intermittent streams that discharge directly to the Rivanna River (impacts 7, 9, 10 & 11),

The permittee will also observe a TOYR at the proposed crossing of Byrd Creek (impact 43), a tributary to the James River and the proposed crossing of Horsepen Creek (impact 74), a tributary to Byrd Creek if recommended by DGIF, based upon mussel survey results.

DGIF has recommended mussel surveys at all of these proposed impact locations (see Section 7 below). Therefore, Part I.C.7.a was revised to require the permittee to conduct activities in accordance with any Time-of-Year restriction(s) recommended by DGIF with respect to any state or federally listed mussel species. Construction activities within the confines of a coffer dam are not included in any TOYR. However, the coffer dam must be installed and uninstalled outside the TOYR period.

Part I.D

The current permit requires mussel surveys and relocations (if required) only with reference to work in the James River or along its shoreline, and does not include mussel survey requirements for instream work related stream crossings conducted for installation of the raw water transmission pipeline. The permittee proposed that, because the Rivanna River is a designated T&E water due to the presence of state-endangered brook floater and state-threatened Atlantic pigtoe and green floater mussel species, a mussel survey requirement should also be required for the proposed Rivanna River crossing (impact 8). After subsequent correspondence and discussions with DGIF (see Section 7 below), the applicant submitted a revised request on August 30, 2017. The revised request proposed mussel surveys at the following impact sites in addition to the James River intake location (impacts 1 & 2):

- the proposed Rivanna River stream crossing (impact 8);
- the proposed crossing of Byrd Creek, a tributary to the James River (impact 43); and
- the proposed crossing of Horsepen Creek, a tributary to Byrd Creek (impact 74).

The permittee proposed that, if T&E mussel species are found as a result of the survey at impact site 43, an additional mussel survey should be conducted at the next upstream crossing in the Byrd Creek watershed (impact 59). Likewise, an additional survey would be conducted at impact site 72 (an

unnamed tributary to Horsepen Creek) if the survey at impact site 74 resulted in the presence of T&E species at that location.

Part I.D.1 was revised to include requirements for mussel surveys (and relocations if needed) at the proposed stream crossings at the Rivanna River, and at impact sites 43 (Byrd Creek) and 74 (Horsepen Creek). The permittee's suggested requirement for additional surveys, if needed, at impact locations 59 and 72 was also added.

Part I.F.3:

When the application for VWP permit no. 14-0343 (reissuance of previous permit no. 04-0805) was evaluated, the permittee's projected demand calculations included an annual average demand of 75,000 gpd for the then-proposed Fluvanna Community Water System (CWS). This annual demand was included because at the time the permittee understood that the Fluvanna Correctional Center for Women (FCCW) future water demand would be accounted for by this permit. Consequently, an annual average demand of approximately 1.07 mgd for the Fluvanna CWS was included in the total authorized withdrawals. However, the FCCW submitted an application during 2016 for reissuance of their existing VWP permit no. 95-0957. During the evaluation of this application (assigned the new number 16-0946) FCCW indicated that, pursuant to an October 16, 2013 Memorandum of Agreement (MOA) with JRWA, FCCW would be supplying up to 75,000 gpd to the Fluvanna CWS during the next 15-year permit term. Therefore, in order to resolve a potential duplication of authorized withdrawals, JRWA requested modification of Part I.F.3 to reduce the authorized maximum annual withdrawal by 27.45 mgd (annual average of 75,000 gpd), with the modification applied to the Fluvanna CWS service area. Table 1 below (revised from Table 2 in the Fact Sheet prepared for the November, 2015 reissuance of this permit) lists the revised justified demands for the JRWA service areas, with those for the Fluvanna CWS and subsequent Totals and Grand Totals listed in bold italics.

Table 1: JRWA Revised Water Demands by Service Area*

Service Area	Average Daily Demand (gpd)		Peak Daily Demand (gpd)	
	Year 2030	Year 2045	Year 2030	Year 2045
Louisa County:				
Gum Spring	118,409	185,455	177,614	278,182
Ferncliff	154,773	242,844	232,160	364,266
Shannon Hill	77,500	122,037	116,250	183,054
Zion Crossroads	712,045	989,837	1,068,068	1,484,755
LCWA	73,020	71,798	109,530	107,697
Town of Louisa	392,736	532,043	589,104	798,064
Town of Mineral	148,317	223,338	222,476	335,007
Lake Anna	1,009,242	1,582,930	1,513,863	2,374,394
Economic Development Prospects	400,000	750,000	600,000	1,125,000
<i>Subtotal</i>	<i>3,086,042</i>	<i>4,700,282</i>	<i>4,629,063</i>	<i>7,050,419</i>
Fluvanna County:				
Columbia CWS	5,158	7,768	7,736	11,651
Fork Union CWS	226,020	339,030	339,030	508,545
Palmyra CWS	70,730	125,634	106,095	188,450
<i>Proposed Fluvanna CWS</i>	<i>995,541</i>	<i>1,649,246</i>	<i>1,493,312</i>	<i>2,473,869</i>
Economic Development Prospects	300,000	525,000	450,000	787,500
<i>Subtotal</i>	<i>1,597,449</i>	<i>2,646,858</i>	<i>2,396,173</i>	<i>3,970,015</i>

James River Water Supply Project				
TOTAL	4,683,491	7,346,960	7,025,238	11,020,434
7.5 percent water losses	351,262	551,022	526,893	826,533
Minus 1 mg WTP capacity provided from the Northeast Creek Reservoir	-1,000,000	-1,000,000	-1,000,000	-1,000,000
GRAND TOTAL	4,034,753	6,897,982	6,552,131	10,846,967

Staff evaluated the permittee’s demand using the revised average daily grand total demand of 4.04 mgd projected for Year 2030, using the same calculations as those used for the 2015 reissuance, to determine the following revised withdrawal limits for the permit period:

- Average Daily: 4.035 mgd
- Peak (maximum) day: $4.035 \times 1.89 \times 1.10 = 8.39$ mgd
 - Peak Day Factor (1.89) obtained from application.
 - VDH certification (10 percent capacity)
- Maximum Monthly: $4.035 \times 1.25 \times 1.10 \times 31 = 171.99$ million gallons (mg)
 - Peak Month Factor (1.25) using standard factor.
 - VDH certification (10 percent capacity)
- Maximum Annual: $(4.03 \times 366) = 1,476.81$ mg

Based upon the revised water demands by service area (Table 1), updated withdrawal limits by Tier were calculated and are listed below. For further information, see the Fact Sheet dated November 20, 2015 in the permit file.

Table 2: Updated Withdrawal Limits by Tier

Tier	Maximum Daily Withdrawal (mgd)	Maximum Monthly Withdrawal (mg)	Maximum Annual Withdrawal (mg)
1	5.73	117.4	1,008
2	7.45	152.7	1,311
3	8.39	172.0	1,477

- a. Tier 1 contains the withdrawal limits to meet the justified demands of the service areas of Zion Crossroads and Ferncliff in Louisa County and Fluvanna CWS in Fluvanna County and the economic development prospects as identified in the application for both Counties.
- b. Tier 2 contains the withdrawal limits to meet the justified demands of the service areas identified in Tier 1 and the service areas of Shannon Hill, Town of Louisa, Town of Mineral, Louisa County Water Authority and Lake Anna in Louisa County.
- c. Tier 3 contains the withdrawal limits to meet the justified demands of the service areas identified in Tier 2 and the service areas of Gum Springs in Louisa County and the Fork Union, Columbia and Palmyra CWS in Fluvanna County

The volumes calculated above by staff are the basis for limits in the permit for this project.

Part I.H.1:

The current permit requires compensation for permanent impacts to 0.155 acre of PFO wetland in the form of a purchase of 0.310 wetland credit. The proposed permanent PFO impacts were reduced to 0.141 acre. At the same 2:1 mitigation ratio, the resulting purchase requirement is 0.282 wetland credits. There was no change to the PSS permanent impact of 0.082 acre (required mitigation credit of 0.123). Therefore, the total wetland mitigation credit purchase requirement was changed from 0.433 to 0.405.

4. Avoidance and Minimization Efforts

The permittee's efforts to avoid and minimize impacts to surface waters resulting from the proposed project modifications included the reduction of the width of maintained easements from 30 ft. to 15 ft. at many locations throughout the length of the raw water transmission line. This change reduced the area of proposed permanent wetland impact sites from 0.237 acres to 0.223 acre. Total temporary stream impacts were reduced from 6,190 linear feet to 3,003 linear feet.

5. Surface Water Impacts

The proposed permanent and temporary stream impacts due to intake construction are the same as previously authorized. No permanent stream impacts due to the construction of the raw water transmission line are proposed.

Construction of the proposed raw water transmission line as now proposed would cause permanent conversion impacts of 0.141 acre for palustrine forested wetlands (PFO), which is a reduction of 0.14 acre from the previously authorized 0.155 acre (Table 3). Construction of the proposed raw water transmission line would cause permanent conversion impacts of 0.082 acre of palustrine scrub-shrub (PSS) wetlands, which is the same as previously authorized. Therefore, the total proposed permanent wetland impact equals 0.223 acre. The previously authorized permanent wetland impact for raw water line construction was for 0.237 acre. Therefore, the modification results in a reduction in total permanent wetland impact of 0.014 acre.

Construction of the proposed raw water transmission line as now proposed would temporarily impact a total of 0.991 acre of Palustrine Emergent Wetland (PEM), a reduction of 0.317 acre from the previously authorized 1.313 acres. The modification would temporarily impact 0.194 acre of PSS wetlands (a reduction of 0.055 acre from the previously authorized 0.249 acre), and 0.083 acre of PFO wetlands (a reduction of 0.09 acre from the previously authorized 0.173 acre). Temporary stream impacts due to the construction of the raw water transmission line would total 3,003 linear feet, compared to the previously authorized 6,190 linear feet. These temporary stream impacts include 190 linear feet (0.309 acre) related to an optional open-cut crossing of the Rivanna River at the same location where a directionally drilled crossing was proposed in the original JPA.

Table 3: Surface Water Impacts:

Impact Type	Previously Permitted Impact (ac)	Modified Permitted Impact (ac)
PEM-permanent	0	0
PSS-permanent	0.082	0.082
PFO-permanent	0.155	0.141
PEM-temporary	1.313	0.991

PSS-temporary	0.249	0.194
PFO-temporary	0.173	0.083
Stream-permanent	64 linear ft	64 linear ft
Stream-temporary	6,190 linear ft	3,003 linear ft

The necessary and unavoidable temporary impacts to wetlands and streams located within the construction easement encompassing the construction of the raw water transmission line will be restored by the permittee to avoid permanent impacts at these locations. All temporary impact sites will be returned to their pre-existing surface contours after disturbance and stabilized by applying an appropriate seed mix. PFO and PSS wetlands that are temporarily impacted will also be planted with native woody stems of species appropriate for wetland conditions at a minimum density of 400 stems per acre.

This permit authorizes the following surface water impacts:

- impacts to the James River associated with the construction of the intake structure are authorized for 0.08 acre (64 linear feet) of permanent impact and 0.82 acre (315 linear feet) of temporary impact, and
- impacts associated with the construction of a raw water transmission line from the intake location to the proposed location of a new water treatment plant near Ferncliff in Louisa County are authorized to permanently impact 0.082 acre of palustrine scrub-shrub (PSS) wetlands and 0.141 acre of palustrine forested (PFO) wetlands, and temporarily impact 0.996 acre of palustrine emergent (PEM) wetlands, 0.194 acre of PSS wetlands, 0.083 acre of PFO wetlands and 2688 linear feet of intermittent and perennial stream channels.

Authorized impact areas shall be as depicted and listed on the following:

- Sheet 1 entitled “Relocated Intake, Pump Station and Raw Water Pipeline Owned by the JRWA” dated June 26, 2016 and received June 27, 2016;
- Unnumbered sheet entitled “Plan Set A: 24 inch Raw Water Main” dated April 14, 2016 and received June 27, 2016;
- Sheet C-5 entitled “Intake and River Cross Section” dated May, 2015 and received June 27, 2016;
- Sheet VMRC 2 entitled “Raw Water Main Rivanna River Crossing” dated February 24, 2016 and received June 27, 2016;
- Index Maps 1 through 8 and index sheet, entitled “Figure 3: Preliminary Jurisdictional Waters of the U.S. Impacts Map”, dated June 22, 2016, revised January 3, 2017 and June 9, 2017, and received August 3, 2017;
- Sheets 1 through 74, entitled “Preliminary Jurisdictional Waters of the U.S. Impacts Map – Detail”, dated June 22, 2016, revised January 3, 2017 and June 9, 2017, and received August 3, 2017;
- Minor Modification 2 Impacts Table – James River Water Supply Project, dated June 8, 2017, and received August 3, 2017; and
- Minor Modification 2: Wetland Compensatory Mitigation Summary, dated June 8, 2017 and received August 3, 2017.

Water quality impacts are expected to be temporary and minimal provided the permittee abides by the conditions of the permit. A loss of state waters shall occur. However, the impacts have been avoided and minimized to the greatest extent practicable.

6. Compensation for Unavoidable Surface Water Impacts

To provide compensation for permanent wetland impacts due to the relocation and extension of the raw water transmission line, the permittee will purchase off-site wetland mitigation credits from a Wetland and Stream Mitigation Bank that is authorized to sell credits in the watershed where the impacts are located (Rivanna River/Byrd Creek). Wetland mitigation credits will be purchased using standard compensatory mitigation ratios:

- 2:1 compensation ratio for permanent impacts to PFO wetlands (0.141 acre X 2 = 0.282 credits)
- 1.5:1 compensation ratio for permanent impacts to PSS wetlands (0.082 acre X 1.5 = 0.123 credits)

Therefore the permittee will purchase a total of 0.405 wetland mitigation credits. The permittee performed a search of the U.S. Army Corps of Engineers Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) dated September 8, 2016, which indicated that adequate credits were available. However, if adequate credits are not available when needed, the permittee will purchase credits from the Virginia Aquatic Resources Trust Fund. The permittee also submitted a Wetland Credit Availability letter from James River Mitigation LLC dated September 4, 2016 that stated the availability at that time of 1.33 wetland credits.

7. Relevant Regulatory Agency Comments

Staff coordinated with DGIF regarding the request for modification on May 19, 2017. DGIF responded via email on May 30, 2017 with a request for additional information regarding the details of the proposed stream crossings (exact locations, stream type (ephemeral, intermittent or perennial), and whether mussel surveys had already been performed.

After subsequent consultation and discussions between DGIF, DEQ staff, and the permittee, DGIF recommended TOYR and the performance of mussel surveys from 100 meters upstream to 400 meters downstream at two perennial stream crossings (impact locations 43 and 74). DGIF also recommended that, based on the results of these surveys, additional mussel surveys and TOYR may be required at impact location 59 (upstream of impact location 43 on Byrd Creek) and impact location 72 (upstream of impact location 74 on Horsepen Creek, a perennial tributary to Byrd Creek), and potentially other upstream locations on these streams.

DGIF noted that for crossings of ephemeral or intermittent streams, work should be performed when the stream is not flowing or in the dry behind cofferdams, and, in these cases, adherence to TOYR would not be needed. DGIF also noted that their comments were related to the waterline project only (north of Rte 6). However, they supported the need for specifying TOYR and mussel surveys at impact locations in the James and Rivanna rivers and TOYR for the small direct tributaries to the Rivanna south of Rt 6 (impact locations 1, 2, and 7 through 11). Staff further coordinated with DGIF on October 19, 2017, with a request to review an initial draft of the related special conditions. DGIF responded with suggested changes on October 23, 2017,

Part I.C.7.a was revised to include the recommendations made by DGIF regarding TOYR. Part I.D was expanded to include requirements for mussel surveys at the Rivanna River crossing and at the most downstream crossings of Byrd Creek (impact location 43) and Horsepen Creek (impact location 74). The revised condition also requires the submittal of a survey report or reports for DEQ and DGIF approval, with the potential for additional surveys at the next upstream perennial stream crossings (impact locations 59 and 72), or other impact locations, if listed species are found at the locations of the initial surveys.

8. Riparian/Adjacent Landowner Notification

Notifications to riparian landowners and the local government were not conducted because no new or increased impacts were proposed.

9. Revisions to Part I - Special Conditions

Staff revised the following conditions of the permit:

- Parts I.A 1 through 4 were changed to identify and describe the authorization for the impacts to surface waters associated with construction of the raw water transmission pipeline and the corresponding changes in proposed permanent and temporary impacts.
- Part I.B.2 was revised to include a requirement to submit an application for a new permit at least 270 days prior to the expiration date of the current permit.
- Part I.C.7.a was revised to require the permittee to conduct activities in accordance with any Time-of-Year restriction(s) recommended by DGIF with respect to any state or federally listed mussel species. Construction activities within the confines of a coffer dam are not included in any TOYR.
- Part I.D was revised and expanded to require mussel surveys at specified impact locations where stream crossings are proposed across the Rivanna River (impact location 8), Byrd Creek (impact location 43), and Horsepen Creek (impact location 74) no more than six months prior to the start of construction at each location. Part I.D.1.f includes a provision that, if threatened or endangered species are found by the mussel surveys at impact locations 43 and 74, additional mussel surveys will be required at impact locations 59 (unnamed tributary to Byrd Creek) and impact location 72 (unnamed tributary to Horsepen Creek), respectively, or other perennial stream sites as recommended by DGIF.
- Part I.F.3 was revised to incorporate a reduction in authorized withdrawals from the James River intake due to the change in source (FCCW rather than this permit) for a portion of the Fluvanna CWS service area.
- Part I.H.1 was revised to account for the reduction in permanent impacts to PFO wetlands.

10. Staff Findings and Recommendations:

- The proposed activity is consistent with the provisions of the Clean Water Act and State Water Control Law, and will protect instream beneficial uses.
- The proposed permit addresses avoidance and minimization of wetland impacts to the maximum extent practicable.
- The effect of the impact, together with other existing or proposed impacts to wetlands, will not cause or contribute to significant impairment of state waters or fish and wildlife resources.

- The proposed permit conditions address no net loss of wetland acreage and function through compensatory mitigation and adequately assess compensation implementation via success monitoring and reporting.

Staff recommends VWP Individual Permit Number 14-0343 be modified as proposed.

Approved:



Director, Office of Water Supply

10/27/17
Date