

# APPLICATION FOR RECLAIMED WATER HAULING OPERATIONS

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\*\*\*IMPORTANT\*\*\*

Before completing this application, read the application instructions to determine the information and attachments needed to complete the application. Incomplete applications will not be processed.

## A. Applicant Information

1. For the reclaimed water hauling operation (RWHO), provide the following:

a. RWHO identification and location information

Name:

Primary location name or other identifier:

Physical street or route address:

County or city:

Latitude:

Longitude:

b. RWHO owner

Name:

Mailing address (street or P.O. box, city, state and zip code):

Telephone number:

Fax number:

E-mail address:

c. RWHO operator

Name:

Mailing address (street or P.O. box, city, state and zip code):

Telephone number:

Fax number:

E-mail address:

2. For each secondary location of the RWHO, provide the following (attach additional information as needed):

Secondary location name or other identifier:

Physical street or route address:

County or city:

Latitude:

Longitude:

**B. Permitting Information**

1. Complete the following information regarding each system that will provide reclaimed water to the RWHO:

System type*	System name	Is system currently permitted by DEQ?	DEQ Permit number**	Reclaimed water type provided by system***

- \* For system type, select reclamation system, satellite reclamation system, conjunctive system, satellite reclamation system, or reclaimed water distribution system. Reclaimed water distribution systems may include, but are not limited to other RWHOs.
- \*\* Applicable only where the system is currently covered by a permit (i.e., a Virginia Pollutant Discharge Elimination System (VPDES) Permit or a Virginia Pollution Abatement (VPA) Permit) issued by DEQ or an authorization associated with one of these permits (e.g., administrative authorization or emergency authorization for water reclamation and reuse).
- \*\*\* For reclaimed water type, select Level 1, Level 2 or other as specified in the permit or authorization covering the system that will provide reclaimed water to the RWHO. Where the system is not currently permitted by DEQ, do not select a reclaimed water type.

2. Check the permit coverage type (a, b or c) that is most applicable to the RWHO, and provide the items indicated for that coverage (check only one):
- a. The RWHO is under common ownership or management with one or more systems identified in item B.1 and will be covered by the same permit or authorization covering the system(s):
    - (1) Enter the name of the system(s) as identified in item B.1:
  
    - and
    - (2) Submit this application with the Water Reclamation and Reuse Addendum to an Application for Virginia Pollutant Discharge Elimination System Permit or a Virginia Pollution Abatement Permit (or Application Addendum) completed for the system(s) identified in item B.2.a (1) above.

- b. The RWHO is **not** under common ownership or management with any of the systems identified in item B.1 and will be covered by a separate permit or authorization:
  - (1) Submit this application with the Virginia Pollution Abatement (VPA) Permit Application Form A completed for the RWHO; and
  - (2) If the RWHO will blend reclaimed water received from two or more systems identified in item B.1 for subsequent reuse, submit this application with the Application Addendum also completed for the RWHO.
- c. The RWHO is **not** under common ownership or management with any of the systems identified in item B.1, but qualifies and is applying for coverage in accordance with [9VAC25-740-40.D](#) under the permit or authorization issued to a system identified in item B.1:
  - (1) Enter the name of the system as identified in item B.1 that will extend permit coverage to the RWHO:
    - (2) Submit this application with the Application Addendum completed for the system identified in item B.2.c (1) above; and
    - (3) Attach, if one exists, a copy of the service agreement or contract that is or will be established between the RWHO and the system identified in item B.2.c (1).
- 3. If the RWHO is new, or existing and proposing a modification<sup>1</sup> or expansion at any of the locations identified in item A.1.a or A.2, attach to this application (i) a preliminary engineering report (PER), or (ii) a request to waive submittal of a PER or portion of a PER for the proposed modification<sup>1</sup> or expansion of the existing RWHO.

### C. General Information

- 1. If the owner identified in item A.1.b is applying for a variance to the Water Reclamation and Reuse Regulation in accordance with [9VAC25-740-55](#) for the RWHO, attach a completed [Water Reclamation and Reuse Variance Application](#) to this application.
- 2. Check all the reclaimed water types that will be distributed by the RWHO to end uses or users:
  - Level 1 reclaimed water (meeting the treatment standards specified in [9VAC25-740-70.A.1](#))
  - Level 2 reclaimed water (meeting the treatment standards specified in [9VAC25-740-70.A.2](#))
  - Other reclaimed water (meeting standards developed on a case-by-case basis in accordance with [9VAC25-740-70.D](#), [9VAC25-740-70.E](#) or [9VAC25-740-90.B](#))

The RWHO will blend reclaimed water. Refer to the Application Addendum for reclaimed water type(s) that will be distributed by the RWHO.

<sup>1</sup> For the purposes of this application, the modification of an existing RWHO is any change to the facilities or equipment of the operation that may result in the addition of new or revision of existing reclaimed water standards, monitoring requirements or conditions in the permit currently covering the RWHO.

3. Check or otherwise enter all proposed and existing reuses by all end users of the reclaimed water that will be distributed by the RWHO.

<b>Level 1 reuses*</b> <b>(Check all that apply)</b>		<b>Level 2 reuses*</b> <b>(Check all that apply)</b>		<b>Other reuses**</b> <b>(List below)</b>
<input type="checkbox"/>	All types of landscape irrigation in public access areas (i.e., golf courses, cemeteries, public parks, school yards and athletic fields)	<input type="checkbox"/>	Irrigation for any food crops commercially processed	
<input type="checkbox"/>	Toilet and urinal flushing	<input type="checkbox"/>	Irrigation for nonfood crops and turf, including fodder, fiber and seed crops; pasture for foraging livestock; sod farms; ornamental nurseries; and silviculture	
<input type="checkbox"/>	Firefighting or protection and fire suppression	<input type="checkbox"/>	Irrigation to establish vegetative erosion control at a construction site until construction is complete	
<input type="checkbox"/>	Outdoor reuse (i.e., lawn watering and noncommercial car washing)	<input type="checkbox"/>	Landscape impoundments with no potential for public access or contact	
<input type="checkbox"/>	Commercial car washes	<input type="checkbox"/>	Soil compaction	
<input type="checkbox"/>	Commercial air conditioning systems	<input type="checkbox"/>	Dust control	
<input type="checkbox"/>	Irrigation for any food crops not commercially processed, including crops eaten raw	<input type="checkbox"/>	Washing aggregate	
<input type="checkbox"/>	Landscape impoundments with potential for public access or contact	<input type="checkbox"/>	Making concrete	
<input type="checkbox"/>	Commercial laundries	<input type="checkbox"/>	Livestock watering that does not involve milking livestock	
<input type="checkbox"/>	Ship ballast	<input type="checkbox"/>	Aquaculture for the production of fish that will not be consumed raw	
<input type="checkbox"/>	Livestock watering that involves milking livestock	<input type="checkbox"/>	Stack scrubbing	
<input type="checkbox"/>	Aquaculture for the production of fish that will be consumed raw, such as for sushi	<input type="checkbox"/>	Street washing	
		<input type="checkbox"/>	Boiler feed	
		<input type="checkbox"/>	Once-through cooling	
		<input type="checkbox"/>	Recirculating cooling towers	

\* Level 1 and Level 2 reuses apply to only reuses of reclaimed municipal wastewater.

\*\* Enter reuses of reclaimed municipal wastewater not found in the first and second columns (Level 1 reuse and Level 2 reuse, respectively), reuses of reclaimed industrial wastewater not otherwise excluded per [9VAC25-740-50.A.5](#), and reuses involving below-ground drip irrigation proposed after October 1, 2008.

4. For each reuse listed under “Other reuses” in item C.3, complete items C.4.a through C.4.e (attach additional information as needed).
  - a. The name of the reuse, as identified in item C.3, and a description of the reuse.
  
  - b. A description of any known risks to human health associated with the reuse.
  
  - c. A description of public access and human exposure, including worker contact, to reclaimed water that will be caused by the reuse.
  
  - d. A description of the reclaimed water treatment necessary to prevent nuisance conditions by the reuse.
  
  - e. A description of the potential for improper or unintended use of reclaimed water related to the reuse.

**OR**

If previously submitted to DEQ, provide an alternate source of the information specified in items C.4.a through C.4.e.

Name of Reuse*	Description or title of alternate source**	DEQ office where alternate source was submitted***	Date of submittal to DEQ

\* Enter the name of the reuse as identified in item C.3.

\*\* An alternate source must contain the most current information regarding the reuse.

\*\*\* Select the abbreviation of the DEQ office: Northern Regional Office (NRO), Piedmont Regional Office (PRO), Tidewater Regional Office (TRO), Valley Regional Office (VRO), Blue Ridge Regional Office (BRRO), or South West Regional Office (SWRO).

5. For each location of the RWHO identified in items A.1.a and A.2, provide the following:
- a. Equipment and facilities information.

Name or other identifier of the RWHO location*	Tank trucks - total number**	Tank trucks - total capacity (gal)***	Filling stations - total number**	Filling stations - total capacity (gal)***	Storage facilities - total number**	Storage facilities - total capacity (gal)***

\* Enter the name or identifier of the primary location (see item A.1.a) and each secondary location (see in item A.2) of the RWHO.

\*\* Enter the total number of tank trucks, filling stations or storage facilities at each location.

\*\*\* Enter the total capacity (expressed in units of gallons) for the total number of tank trucks, filling stations or storage facilities at each location.

- b. Location map. Attach to this application a scaled map of the RWHO location.
- c. Reclaimed water analyses. Attach to this application all measurements and analyses of reclaimed water monitored at the RWHO location, and during the 12 most recent months prior to the submittal date of this application.

**OR**

If previously submitted to DEQ, provide an alternate source of the information, map or analyses specified in items C.5.a, C.5.b or C.5.c, respectively.

Name or other identifier of the RWHO location*	Description or title of alternate source**	DEQ office where alternate source was submitted***	Date of submittal to DEQ

\* Enter the name or identifier of the primary location (see item A.1.a) and each secondary location (see in item A.2) of the RWHO.

\*\* Indicate to which item (e.g., C.5.a, C.5.b or C.5.c) the alternate source applies. An alternate source must contain the most current information or maps, or analyses performed within the 12 most recent months prior to the submittal date of this application for the RWHO.

\*\*\* Select the abbreviation of the DEQ office: Northern Regional Office (NRO), Piedmont Regional Office (PRO), Tidewater Regional Office (TRO), Valley Regional Office (VRO), Blue Ridge Regional Office (BRRO), or South West Regional Office (SWRO).

## D. Reclaimed water management (RWM) plan

Provide all applicable information specified in Section D to develop a new RMP plan or amend an existing RWM plan for the RWHO.

1. Information required for all RWM plans. Include in the RWM plan the following:
  - a. A description and map of the expected service area to be covered by the RWHO.
  - b. A current inventory of reclaimed water system and nonsystem storage facilities within the service area of the RWHO.
  - c. A water balance that accounts for the volumes of reclaimed water to be received, stored, reused and discharged or disposed by the RWHO.

**OR**

If previously submitted to DEQ, provide an alternate source of the information specified in items D.1.b and D.1.c. **Note: Do not provide an alternative source in lieu of submitting the information specified in item D.1.a.**

Description or title of alternate source*	DEQ office where alternate source was submitted**	Date of submittal to DEQ

\* Indicate to which item (e.g., D.1.b or D.1.c) the alternate source applies. An alternate source must contain the most current information.

\*\* Select the abbreviation of the DEQ office: Northern Regional Office (NRO), Piedmont Regional Office (PRO), Tidewater Regional Office (TRO), Valley Regional Office (VRO), Blue Ridge Regional Office (BRRO), or South West Regional Office (SWRO).

2. Additional information required for the RWM plan. Where the RWHO will not be the exclusive end user of reclaimed water that it distributes for reuse, include in the RWM plan the following that apply:
  - a. Examples of service agreements or contracts to be established between the RWHO and end users regarding implementation of and compliance with the RWHO's RWM plan.
  - b. A description of how the RWHO will monitor the volume of reclaimed water consumed by each end user.
  - c. An education and notification program.
  - d. A cross-connection prevention program.
  - e. A description of (i) how the RWHO will maintain the quality of each reclaimed water type specified in item C.2 to meet the minimum standards for intended reuse of that water identified in item C.3; and (ii) contingency measures to eliminate or minimize the potential for the RWHO to deliver substandard reclaimed water to end users.
  - f. Information regarding new end users or new reuses of reclaimed water to be distributed by the RWHO where the RWHO is currently authorized by DEQ.

**OR**

If previously submitted to DEQ, provide an alternate source of the information specified in items D.2.a through D.2.e. **Note: Do not provide an alternative source in lieu of submitting the information specified in item D.2.f.**

Description or title of alternate source*	DEQ office where alternate source was submitted**	Date of submittal to DEQ

\* Indicate to which item (e.g., D.2.a, D.2.b, D.2.c, D.2.d or D.2.e) the alternate source applies. An alternate source must contain the most current information.

\*\* Select the abbreviation of the DEQ office: Northern Regional Office (NRO), Piedmont Regional Office (PRO), Tidewater Regional Office (TRO), Valley Regional Office (VRO), Blue Ridge Regional Office (BRRO), or South West Regional Office (SWRO).

3. Irrigation reuse information required for the RWM plan. Where the RWHO will distribute reclaimed water for irrigation reuse to end users, including but not limited to, an end user that is the RWHO, provide the following that apply:
  - a. Type(s) of irrigation reuse by the end users that will receive reclaimed water from the RWHO:
    - Nonbulk irrigation reuse - reuse of reclaimed water for irrigation of a total area less than or equal to five acres on one contiguous property.
    - Bulk irrigation reuse - reuse of reclaimed water for irrigation of a total area greater than five acres on one contiguous property.
  - b. The concentration of total nitrogen (N) and total phosphorus (P) present or expected to be present in the reclaimed water that will be distributed by the RWHO for irrigation reuse:
    - Annual average concentrations less than or equal to 8.0 mg/l total N and 1.0 mg/l total P (BNR).
    - Annual average concentrations greater than 8.0 mg/l total N or 1.0 mg/l total P (non-BNR)
  - c. A description of how the RWHO will ensure that end users will achieve supplemental rates of irrigation for the type(s) of irrigation reuse checked in item D.3.a (attach additional information as needed):
  - d. Where the RWHO will distribute non-BNR reclaimed water (see item D.3.b) to nonbulk irrigation reuse (see item D.3.a), describe measures that will be implemented to manage nutrient loads from the nonbulk irrigation reuse within the service area of the RWM plan (see item D.1.a) (attach additional information as needed):



- e. Where the RWHO will distribute reclaimed water to bulk irrigation reuse sites (see item D.3.a) under common ownership or management with the RWHO, provide the following for each of these sites (attach additional information as needed):

Bulk irrigation reuse site name or other identifier	Net acreage*	Location description and map**

\* Net acreage of the bulk irrigation reuse site after setbacks required in accordance with [9VAC25-740-170.H](#) are deducted from the gross acreage.

\*\* Attach to this application as part of the RWM plan, a map displaying the location of the bulk irrigation reuse site. Where there are multiple sites listed that are within close proximity of each other, the map may display the location of more than one site.

- f. For each bulk irrigation reuse site identified in item D.3.e, submit the following information:

- (1) A nutrient management plan, if applicable; and
- (2) A site plan.

**OR**

If previously submitted to DEQ, provide an alternate source of the applicable information, maps and site plans specified in items D.3.a through D.3.e, and D.3.f (2). **Note: Do not provide an alternative source in lieu of submitting the information specified in item D.3.f (1), if applicable.**

Description or title of alternate source*	DEQ office where alternate source was submitted**	Date of submittal to DEQ

\* Indicate to which item (e.g., D.3.a, D.3.b, D.3.c, D.3.d, D.3.e or D.3.f (2)) the alternate source applies. An alternate source must contain the most current information.

\*\* Select the abbreviation of the DEQ office: Northern Regional Office (NRO), Piedmont Regional Office (PRO), Tidewater Regional Office (TRO), Valley Regional Office (VRO), Blue Ridge Regional Office (BRRO), or South West Regional Office (SWRO).

## E. Consent to Receive and Certify Receipt of Electronic Mail

Check only one of the following to consent or decline to receive electronic mail from DEQ as follows:

- Applicant or permittee consents to receive by electronic mail the permit and any plan approvals associated with the permit that may be issued for the proposed pollutant management activity, and to certify receipt of such electronic mail when requested by the DEQ.
- Applicant or permittee declines to receive by electronic mail the permit and any plan approvals associated with the permit that may be issued for the proposed pollutant management activity.

## F. 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.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name of person signing above (printed or typed): \_\_\_\_\_

Title of person signing above: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name of person signing above (printed or typed): \_\_\_\_\_

Title of person signing above: \_\_\_\_\_

# APPLICATION FOR RECLAIMED WATER HAULING OPERATIONS

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## APPLICATION INSTRUCTIONS

### WHO SHOULD COMPLETE THIS APPLICATION

Owners or operators of reclaimed water hauling operations must complete this application. A reclaimed water hauling operation (RWHO) transports and distributes reclaimed water to one or more end users, including an end user that is also the hauling operation. Components of RWHOs include, at a minimum, tank trucks or other equipment used to haul reclaimed water; may additionally include reclaimed water storage facilities, reclaimed water filling stations, and facilities or equipment considered necessary to maintain the quality of reclaimed water distributed by the hauling operation; and must comply with applicable design criteria specified in [9VAC25-740-110](#).B and C.

### WHAT PROJECTS DO NOT REQUIRE THE APPLICATION

It is not necessary to complete this application for the following:

1. Existing RWHOs permitted by DEQ to distribute or reuse reclaimed water prior to October 2, 2008 unless proposing an expansion or modification<sup>1</sup> of the existing facilities.
2. Facilities or activities that are specifically excluded or prohibited by [9VAC25-740-50](#) of the Water Reclamation and Reuse Regulation.

### WHO TO CONTACT FOR ASSISTANCE AND WHERE TO FILE THE APPLICATION

For assistance with questions about the application and instructions, contact the DEQ regional office covering the physical location and service area of the RWHO. Submit the completed application to the same office unless instructed otherwise. DEQ regional office information can be found on the DEQ website at <http://www.deq.virginia.gov/Locations.aspx> or obtained by calling the DEQ Central Office in Richmond, Virginia at (804) 698-4000.

### INSTRUCTIONS TO COMPLETE THE APPLICATION

For each RWHO, complete and submit this application. Where the RWHO will have multiple locations or large discrete service areas within one or more localities, additional separate applications and permits may be required. For assistance with application requirements for a RWHO or other questions about the application and instructions, contact a DEQ regional office covering all or portions of the RWHO's location(s) or service area(s). For DEQ regional office information, refer to "WHO TO CONTACT FOR ASSISTANCE AND WHERE TO FILE THE APPLICATION" in the application instructions above.

Complete all applicable items of the application in the spaces, tables or boxes provided, or attach information as specified. Indicate on the cover or other prominent location of each attachment the item of the application for which the attachment is being submitted (e.g., item C.1, item C.5.b, item C.5.c, etc.).

Information required to complete the application may be provided, in part, by referencing alternative sources of information previously submitted to the DEQ unless changes have occurred that require the submission of new or more current information. Exceptions to referencing alternative sources are noted in the following instructions.

Unless provided in the footnotes of the application instructions, definitions for terms used in the application are contained in [9VAC25-740-10](#) of the Water Reclamation and Reuse Regulation.

<sup>1</sup> For the purposes of this application, the modification of an existing RWHO is any change to the facilities or equipment of the operation that may result in the addition of new or revision of existing reclaimed water standards, monitoring requirements or conditions in the permit currently covering the RWHO.

## LIST OF ABBREVIATIONS AND ACRONYMS

BNR	Biological Nutrient Removal
DEQ	Department of Environmental Quality
E&N program	Education and Notification program
N	Nitrogen
NMP	Nutrient Management Plan
P	Phosphorus
PER	Preliminary Engineering Report
RWHO	Reclaimed Water Hauling Operation
RWM plan	Reclaimed Water Management plan
VPA Permit	Virginia Pollution Abatement Permit
VPDES Permit	Virginia Pollutant Discharge Elimination System Permit

### A. Applicant Information

**A.1** Reclaimed Water Hauling Operation (RWHO). Complete the following:

- Identification and location information of the RWHO that is to be authorized for the transport and distribution of reclaimed water to end users for approved reuses in accordance with [9VAC25-740-10 et seq.](#) The name of the RWHO is to apply to all locations (primary and secondary), facilities and equipment identified in this application and under common ownership or management with the RWHO. Where the RWHO will have more than one location for reclaimed water facilities and equipment, identify and provide information for a primary location under item A.1.a and secondary locations under item A.2. Provide information for only locations that are or will be used by the RWHO.
- Owner name and contact information. The owner is the person or entity that owns the RWHO identified in item A.1.a.
- Operator name and contact information. The operator is the person or entity that operates and manages the RWHO identified in item A.1.a. The operator may also be the owner identified in A.1.b.

**A.2** RWHO secondary locations. Complete the name or identifier, and location information for each secondary location of the RWHO. Secondary locations of the RWHO are under common ownership or management with the primary location of the RWHO identified in item A.1.a, and support the activities of the RWHO related to the transport and distribution of reclaimed water to end users for approved reuses.

### B. Permitting Information

**B.1** Systems providing reclaimed water to the RWHO. In the table provided, enter the type and name of each system that will provide reclaimed water to the RWHO, indicate whether the system is currently covered by a permit, enter, as applicable, the permit number, and enter the reclaimed water type the system will provide to the RWHO. The system type may be a reclamation system, satellite reclamation system, conjunctive system, satellite reclamation system, or reclaimed water distribution system, including a distribution system that is another RWHO. Permit coverage of the system refers to a permit, such as a Virginia Pollutant Discharge Elimination System (VPDES) Permit or a Virginia Pollution Abatement (VPA) Permit, or an authorization associated with one of these permits (e.g., an administrative authorization or emergency authorization) to produce or distribute reclaimed water. Reclaimed water type refers to Level 1, Level 2 or other as specified in the permit or authorization covering the system. **Note: If the system is not permitted by DEQ to produce or distribute reclaimed water at the time this application is submitted, the RWHO may not be permitted to receive reclaimed water from the system.**

**B.2** Permit coverage type and other application submittals. Check the permit coverage type that is most

applicable to the RWHO (e.g., B.2.a, B.2.b or B.2.c), and provide the items indicated under the specific coverage. Additional forms for permit coverage, such as the Virginia Pollution Abatement Permit Application Form A and the Water Reclamation and Reuse Addendum to an Application for Virginia Pollutant Discharge Elimination System Permit or a Virginia Pollution Abatement Permit (or Application Addendum), are available at DEQ's website (<http://www.deq.virginia.gov>) or may be obtained from a DEQ regional office. For DEQ regional office information, refer to "WHO TO CONTACT FOR ASSISTANCE AND WHERE TO FILE THE APPLICATION" in the application instructions above.

Where the RWHO will be a component of a larger reclaimed water distribution system, consisting, for example of the RWHO and more stationary components, such as in-ground pipes and pump stations, check the box under item B.2.a, complete and submit an Application Addendum for the reclaimed water distribution system, and submit this application with the Application Addendum.

**B.3 Preliminary engineering reports.** A preliminary engineering report (PER) is required for a new RWHO, and for the modification<sup>1</sup> or expansion of an existing RWHO ([9VAC25-740-120.A.](#)), including all locations of the RWHO identified in items A.1.a and A.2. More than one PER may be required for the RWHO determined by the number and size of the RWHO locations, and the facilities present at each RWHO location. For only proposed modification<sup>1</sup> or expansion of an existing RWHO, a request to waive submittal of a PER or portion of a PER may be attached to the addendum in lieu of a PER. DEQ may grant such a request based on project information previously submitted to the agency, and the scope of the proposed modification<sup>1</sup> or expansion.

Where new reuses will be added to the RWM plan under Section D of this application for an existing RWHO, and may require reclaimed water types other than those currently distributed by the RWHO (see item C.2), any changes to the operation to distribute the other reclaimed water type may require submission of a PER. For example, where an existing RWHO that currently stores and distributes Level 2 reclaimed water will add a new reuse that will require Level 1 reclaimed water, it may be necessary for the RWHO to modify or expand its existing facilities to include separate storage facilities for the Level 1 reclaimed water. Based on the scope of the changes to the RWHO storage facilities and other equipment to accommodate the new reuse, a PER may be required for the changes.

## C. General Information

**C.1 Variance application.** In accordance with [9VAC25-740-55](#), any person or entity wishing to initiate a project for the production, distribution, or reuse of reclaimed water that is not excluded from the requirements of the Water Reclamation and Reuse Regulation per [9VAC25-740-50](#), may apply to DEQ for a variance from the design, construction, operation, or maintenance requirements of the regulation. If applying for this variance, complete and attach a [Water Reclamation and Reuse Variance Application](#) (Variance Application) to this application. Additional information is provided in the instructions of the Variance Application.

**C.2 Reclaimed water types distributed by RWHO.** Check the boxes that correspond with all the reclaimed water types that will be distributed by the RWHO to end uses or users. Because most RWHOs will not produce the reclaimed water that they distribute to end uses or users, the reclaimed water type distributed by the RWHO will, in most cases, be the same as that provided by the system(s) identified in item B.1 to the RWHO. An exception to this would be where the RWHO blends all or a portion of the reclaimed water that it receives from two or more systems identified in item B.1 for subsequent reuse. In this case, also complete and submit an Application Addendum for the RWHO, and check the box "The RWHO will blend reclaimed water. Refer to the Application Addendum for reclaimed water type(s) that will be distributed by the RWHO." under item C.2 of this application.

**C.3 Reclaimed water reuses by all end users.** In the table provided, check or, as applicable, enter the types of all proposed and existing reuses by all end users, including but not limited to an end user that is the RWHO, of reclaimed water that will be distributed by the RWHO.

<sup>1</sup> For the purposes of this application, the modification of an existing RWHO is any change to the facilities or equipment of the operation that may result in the addition of new or revision of existing reclaimed water standards, monitoring

requirements or conditions in the permit currently covering the RWHO.

Reuses with check boxes listed under “Level 1 reuses” and “Level 2 reuses” in the first two columns of the table apply to only reclaimed municipal wastewater. Reuses of reclaimed municipal wastewater not found in the first two columns, or all reuses of reclaimed industrial wastewater not otherwise excluded per [9VAC25-740-50.A.5](#) (see item B.2.b) must be entered under “Other reuses” in the third column of the table. Reuses involving below-ground drip irrigation proposed after October 1, 2008 must also be entered under “Other reuses” regardless of the type of wastewater (municipal or industrial) used to produce the reclaimed water for this reuse.

Additional information regarding “Other reuses” listed in item C.3 is to be provided in item C.4.

**C.4** Additional information regarding “Other reuses”. Reuses identified in item C.3 under “Other reuses” may require reclaimed water treated to meet standards other than or in addition to standards for Level 1 or Level 2 reclaimed water ([9VAC25-740-70.A](#)) for the protection of public health and the environment. The information provided in item C.4 will be used by DEQ to evaluate the suitability of the reclaimed water type(s) that will be distributed by the RWHO (see item C.2) to each of the “Other reuses” identified in item C.3. **Note: If DEQ determines, based on the information provided in item C.4, that reclaimed water types to be distributed by the RWHO will not be suitable for an “Other reuse” identified in item C.3, the RWHO will not be authorized to distribute reclaimed water to that “Other reuse”.**

For each reuse identified in item C.3 under “Other reuses”, complete items C.4.a through C.4.e. If an alternate source of the information for these items has previously been submitted to DEQ and no changes have or will occur that would require the submission of new or more current information, a description or title of the alternate source, including the DEQ regional office where it was submitted and the date of its submittal, may be provided in lieu of completing the same information in items C.4.a through C.4.e.

**C.5** RWHO equipment and facilities information, location map, and reclaimed water analyses. For each location of the RWHO identified in items A.1.a and A.2, provide the information, map and analyses specified in items C.5.a, C.5.b and C.5.c, respectively. If alternative sources of the information and attachments for items C.5.a through C.5.c have previously been submitted to DEQ, and no changes have or will occur that would require the submission of new or more current materials, descriptions or titles of alternate sources, including the DEQ regional office where they were submitted and the date of their submittal, may be provided in lieu of completing items C.5.a through C.5.c.

**C.5.a** Equipment and facilities information. For the primary location of the RWHO identified in item A.1.a and each secondary location of the RWHO identified in item A.2, enter in the table provided the name or other identifier of the RWHO location, and the total number and total capacity (in gallons) of all tank trucks, filling stations and storage facilities that will be part of the RWHO at that location.

Due to the mobile nature of tank trucks and where the RWHO will have multiple locations at which the same tank trucks may be parked but at different times, the total number of tank trucks at each RWHO location may be calculated by dividing the total number of tank trucks under the ownership or management of the RWHO by the number of RWHO locations where the tank trucks will be parked. The total capacity of the same tank trucks at each RWHO location may be calculated by determining the median capacity of all tank trucks under the ownership or management of the RWHO, and multiplying this value by the total number of tank trucks at each RWHO location.

Where a RWHO location will have reclaimed water storage facilities and filling stations, and all or a portion of the capacity of the filling stations is included in the capacity of the reclaimed water storage facilities, do not include that capacity in the total capacity entered for the filling stations.

**C.5.b** Location map. For each RWHO location identified in item C.5.a, attach to this application a scaled map that displays the name or other identifier of the RWHO location, legends, and the location of facilities and equipment that will be part of the RWHO at that location (e.g., parking and maintenance areas for tank trucks, storage facilities, filling stations, facilities or equipment considered necessary to maintain the quality of reclaimed water distributed by the RWHO, etc.). Ensure, as applicable, that the number of filling stations and storage facilities displayed on the map corresponds with the number of filling stations and storage facilities provided in item C.5.a for the same RWHO location.

**C.5.c** Reclaimed water analyses. For each RWHO location identified in item C.5.a, attach to this application all measurements and analyses of reclaimed water monitored at the RWHO location, and during the 12 most recent months prior to the submittal date of this application. Measurements and analyses may include, but are not limited to, those (i) required by a DEQ permit covering the RWHO, or (ii) performed independent of a permit issued by DEQ. Monitoring at the RWHO location applies to monitoring of facilities and equipment that are part of the RWHO, including tank trucks, storage facilities, filling stations and, as applicable, facilities or equipment considered necessary to maintain the quality of reclaimed water distributed by the RWHO.

## **D. Reclaimed water management (RWM) plan.**

**General instructions.** Section D of this application is the RWM plan for the RWHO. For a new or expanding RWHO, provide (i) the information specified in item D.1, (ii) all applicable information specified in item D.2 if the RWHO will not be the exclusive end user of reclaimed water that it distributes for reuse, and (iii) all applicable information specified in item D.3 if the RWHO will distribute reclaimed water to end users that include, but are not limited to, the RWHO for irrigation reuse. **Note: The RWHO is considered an “exclusive” end user if it will not distribute reclaimed water for reuse to end users in addition to or other than the owner or management of the RWHO, or the RWHO will at all times maintain control over all direct reuse of reclaimed water that it delivers to any site or facility regardless of who owns or manages the site or facility.**

Alternative sources of the information specified in Section D may be referenced in lieu of completing or attaching items under Section D where such information has previously been submitted to DEQ and no changes have occurred or will occur that would require the submission of new or more current information. Exceptions to referencing alternative sources are noted in the following instructions.

Changes to an existing RWM plan to add new end users or new reuses must be submitted to DEQ for approval. These changes may be submitted with or independent of an application to reissue or modify the permit authorizing the RWHO (see also instructions for item D.2.f).

**D.1 Information required for all RWM plans.** In the RWM plan submitted with this application, include the information specified in items D.1.a through D.1.c.

**D.1.a.** Description and map of the RWHO service area. The RWM plan must contain a description and map of the expected RWHO service area for the term of the permit that will cover the RWHO (i.e., five years for a VPDES permit or ten years for a VPA permit). The service area is the geographic area that will receive reclaimed water directly from the RWHO for reuses identified in item C.3.

In the description of the RWHO service area, include, at a minimum, the (i) size and geographic boundaries of the service area, and (ii) within the service area boundaries, the current and projected number of end users to receive reclaimed water from the RWHO and approximate percentages of the total reclaimed water to be delivered annually by the RWHO to each of the reuses identified in item C.3.

On the map of the RWHO service area, show and identify the geographic boundaries of the service area, and the location of all public potable water supply wells and springs, and public water supply intakes within these boundaries. This information is available upon request from the Virginia Department of Health, Office of Drinking Water at central and field office locations (<http://www.vdh.virginia.gov/drinking-water/contact-us/>).

**Note: For each application to renew a permit covering the RWHO, include an updated service area description and map in the RWM plan to submit with the application for the RWHO. Do not reference an alternative source to provide this information.**

**D.1.b.** Inventory of storage. If the RWHO will have reclaimed water system and nonsystem storage facilities, submit a current inventory of storage. In the inventory, include (i) only system storage facilities that will be under common ownership or management with the RWHO, and (ii) nonsystem storage facilities that will be located within the RWHO service area (see item D.1.a) and will receive reclaimed water directly from the RWHO. If the RWHO will not have reclaimed water storage facilities, note this in the RWM plan.

The inventory of storage, if required, may include, but is not limited to, qualifying storage facilities at RWHO

locations identified in item C.5.a. For an existing inventory, include all amendments to the inventory to ensure that it is current.

For each storage facility contained in the inventory, provide or, as applicable, update the following information:

1. Name or identifier,
2. Location (including latitude and longitude at the center of the facility),
3. Function (i.e., system storage or non-system storage),
4. Type (i.e., covered tank, uncovered tank, lined pond, unlined pond, etc.),
5. Design capacity, and
6. Location (latitude and longitude) and distance of the nearest potable water supply well and spring, and public water supply intake, to each storage facility within 450 feet of that facility.

Facilities included in the storage inventory must comply with applicable design, construction and operation requirements specified in [9VAC25-740-110.C](#). Where a facility is unable to meet these requirements, a variance for the facility may be requested of and granted by DEQ in accordance with [9VAC25-740-55](#).

**D.1.c. Water balance.** Submit a water balance for the RWHO that accounts for all annual average and monthly average inputs and outputs (by volume) of reclaimed water by the RWHO. Inputs and outputs of the water balance are to include the following:

1. Reclaimed water to be received. This is the reclaimed water to be received by the RWHO from all systems identified in item B.1.
2. Reclaimed water to be stored. This is the reclaimed water to be stored in facilities that are included in the storage inventory (see item D.1.b) and are considered part of or under common ownership or management with the RWHO. This does not include storage for substandard reclaimed water in reject water storage facilities. Refer to [9VAC25-740-110.C](#) for design requirements of reclaimed water storage facilities. Precipitation data used to design uncovered reclaimed water system storage facilities should be based on the wettest growing season over the most recent 25-year interval.
3. Reclaimed water to be reused. This is the reclaimed water to be distributed by the RWHO directly to end users for reuse, and is to be based on projected reclaimed water demands for new end users and actual reclaimed water demands for existing end users.
4. Reclaimed water to be discharged or disposed. This is the reclaimed water to be discharged or disposed by the RWHO, and may be in lieu of or in addition to other management options (e.g., storage or retreatment). A discharge of reclaimed water may be, for example, to a sewage collection system from a permitted RWHO if allowed under local sewer use ordinances. An example of reclaimed water disposal may be via a land treatment system described in the Sewage Collection and Treatment Regulations ([9VAC25-790](#)). In any case, discharge or disposal of reclaimed water included in the water balance must be authorized by a DEQ permit. Discharges of reclaimed water to storm drains or leaks of reclaimed water in storage or distribution are not acceptable discharges or disposal, and are not to be included in the water balance.

**D.2 Additional information required for the RWM plan.** Where the RWHO will not be the exclusive end user of reclaimed water that it distributes for reuse, include in the RWM plan submitted with this application the information specified in items D.2.a through D.2.f that applies.

**D.2.a. Example service agreements or contracts.** Submit one or more current examples of service agreements or contracts to be established between the RWHO and end users regarding implementation of and compliance with the RWHO's RWM plan.

DEQ Water Guidance Memorandum No.10-2001, Revision 1 (GM 10-2001, Revision 1) contains the minimum water reclamation and reuse conditions for service agreements or contracts. This includes general conditions and conditions specific to reuse categories. General conditions to include in all service agreements or contracts are



the following:

1. A condition that specifies the type(s) of reclaimed water to be provided by the RWHO to the end user, and the intended reuses of the reclaimed water type(s) by the end user. Reclaimed water types and reuses contained in this condition must be among those listed in items C.2 and C.3, respectively.
2. A condition that requires the end user to notify and receive authorization from the RWHO for new reuses or changes to existing reuses of reclaimed water provided by the RWHO, prior to the end user initiating these reuses. Authorization of new or changed reuses may require the addition of new conditions or the modification of existing conditions contained the service agreement or contract.
3. A condition stating that the RWHO shall reserve the right to perform routine or periodic inspections of the end user's reclaimed water reuses and, as applicable, storage facilities; and to terminate the agreement or contract with and withdraw service to the end user for any failure by the end user to comply with the terms and conditions of the agreement or contract if corrective action for such failure is not taken by the end user.
4. A condition requiring end users that are property owners to report all potable and non-potable water supply wells on their property to the RWHO.
5. A condition that prohibits the following by end users:
  - a. Direct potable reuse of reclaimed water;
  - b. The reuse of reclaimed water for food preparation or incorporation as an ingredient into food or beverage for human consumption; and
  - c. Overspray of surface waters, including wetlands, from irrigation or other reuses of reclaimed water.
6. A condition stating that there shall be no nuisance conditions (e.g., ponded water that attracts mosquitoes or other vectors, strong odors that are the subject of frequent and wide spread complaints from the surrounding community, and any condition determined by a court of law to be a nuisance condition) resulting from the distribution, storage or use of reclaimed water.

Additional general conditions contained in GM 10-2001, Revision 1 may apply.

Conditions specific to reuse categories are to follow general conditions in a service agreement or contract. Reuse categories include urban unrestricted access, irrigation-unrestricted access, irrigation-restricted access, landscape impoundments, construction, industrial, and others established on a case-by-case basis; and conditions of a reuse category contained in GM 10-2001, Revision 1 will apply when the end user's reuses (see item C.3) are included in that category. Refer to Appendix A of this application for reuse categories and associated reuses, excluding the category for other reuses not listed in the table. Where the reuses identified in item C.3 will be associated with more than one reuse category, it is recommended that the example service agreement or contract include general conditions and divide all other conditions into modules according to reuse categories. The modules may then be included in or removed from an actual service agreement or contract determined by the applicability of conditions in each module to the particular reuses of the end user.

For reuses of reclaimed water that are not associated with any of the reuse categories shown in Appendix A, DEQ may require the inclusion of additional or modified conditions in an actual service agreement or contract between the RWHO and end user(s).

**D.2.b.** Monitoring of reclaimed water consumption. Provide a description of how the RWHO will monitor the volume of reclaimed water consumed by each end user.

**D.2.c.** Education and Notification (E&N) program. Submit an E&N program if in item C.3 any "Level 1 reuses" are checked, or "Other reuses" are entered that will be in areas accessible to the public or are likely to have human contact.

The E&N program must include an education component and a notification component. The education component must provide information to end users regarding origin, nature and characteristics of the reclaimed water; the manner in which the reclaimed water can be used safely; and uses for which the reclaimed water is

limited or prohibited. The education component must also specify when individual end users are to be provided this information, which shall, at a minimum, be (i) at the time a service agreement or contract is established between the RWHO and end user, and (ii) annually thereafter where the reclaimed water delivered to the end user will be non-BNR (see item D.3.b) and will be reused for irrigation.

The notification component of the E&N program must describe procedures to notify end users of (i) substandard reclaimed water delivered by the RWHO that can adversely impact human health, and (ii) loss of reclaimed water service. The source or cause of substandard reclaimed water delivered by the RWHO may be a system identified in item B.1, or degradation resulting from facilities, equipment or handling practices of the RWHO. In either case, the notification component must describe procedures that will be immediately implemented by the RWHO to notify and advise end users of precautions to be taken to protect public health when using the reclaimed water in areas accessible to the public or where human contact with the reclaimed water is likely. The notification component must also describe procedures that will be implemented by the RWHO to give (i) advance notice to end users for planned loss of service, including anticipated date and duration; and (ii) notice to end users for unplanned loss of service if service cannot or will not be restored within eight hours of notice by the system providing reclaimed water to the RWHO or discovery by the RWHO. Loss of service may be planned due to causes such as scheduled maintenance or repairs, or unplanned due to unanticipated circumstances or conditions that interrupt reclaimed water supply to the RWHO or the ability of the RWHO to deliver reclaimed water to end users.

Lastly the E&N program must describe all modes of communication that will be used by the RWHO to provide the information specified in the education and notification components. Modes of communication may include but are not limited to meetings, written materials, the news media (via newspapers, radio, television, the Internet, etc.) and advisory signs.

**D.2.d.** Cross-Connection Prevention (CCP) program. Submit a CCP program if any location of the RWHO identified in items A.1.a or A.2 will have facilities to store or transfer reclaimed water, and potable water or another non-potable water not meeting reclaimed water standards specified in 9VAC25-740. The purpose of the CCP program is to prevent unauthorized cross-connection between the facilities for reclaimed water and the facilities for other types of water at the same location that would degrade the safety and quality of the reclaimed water or, if applicable, potable water due to a cross-connection with the reclaimed water.

In the CCP program, describe options to prevent cross-connection that may include, but are not limited to, the dedication of separate facilities (e.g., storage and associated piping, transfer and dispensing equipment, etc.) to each water type (e.g., reclaimed water, potable water, or non-potable water other than reclaimed water); the use of different labeling and color coding to clearly distinguish the facilities of each water type; routine inspections of facilities where there exists the potential for cross-connection; and training of personnel responsible for the operation and maintenance of the RWHO facilities.

**Note #1: The use of potable water to supplement reclaimed water may be authorized where performed in accordance with 9VAC25-740-110.B. The use of reclaimed water to supplement potable water is prohibited.**

**Note #2: Storage tanks, piping, mechanical appurtenances and valve boxes for reclaimed water must be labeled or color-coded in accordance with 9VAC25-740-110.B and C.**

**D.2.e.** Reclaimed water quality maintenance and contingency measures for substandard reclaimed water. Provide a description of (i) how the RWHO will maintain the quality of each reclaimed water type specified in item C.2 to meet the minimum standards, excluding corrective action threshold standards, for intended reuse of that water identified in item C.3; and (ii) contingency measures to eliminate or minimize the potential for the RWHO to deliver substandard reclaimed water to end users. Practices and measures to maintain reclaimed water quality may include, but are not limited to, retention of reclaimed water by the RWHO for less than 24 hours from time of receipt to time of distribution to end users or directly to reuses, supplemental disinfection dosing in transport tanks or storage facilities, the use of covered storage facilities, routine inspections and cleaning of the RWHO facilities and equipment identified in item C.5.a, and reclaimed water monitoring. Where reclaimed water monitoring will be implemented by the RWHO, include in the description the number and location of all reclaimed water monitoring points at each location of the RWHO identified in items A.1.a

and A.2.

Contingency measures are short-term actions to be implemented by the RWHO to eliminate or minimize the potential to deliver substandard reclaimed water to end users. They are not intended to replace routine maintenance of facilities and equipment. Contingency measures may include but are not limited to, emergency repairs, supplemental treatment or retreatment (e.g., additional disinfection, etc.) at those RWHO locations where degradation of the reclaimed water is occurring, distribution of substandard reclaimed water to only reuses for which Level 2 reclaimed water is authorized and the substandard reclaimed water meets a minimum of Level 2 standards (e.g., applicable where the RWHO is authorized to distribute Level 1 reclaimed water under non-contingency circumstances), and disposal of the substandard reclaimed water at a VPDES or VPA permitted WWTF. The discharge of substandard reclaimed water from the RWHO to a sanitary sewer may be another acceptable contingency measure where allowed under local sewer use ordinances and authorized by DEQ. A discharge of substandard reclaimed water from the RWHO to a storm drain is not an acceptable contingency measure.

Where the RWHO will be authorized to provide reclaimed water to reuses that (i) require Level 1 reclaimed water, (ii) will be in areas accessible to the public, or (iii) are likely to have human contact, include in the description of contingency measures the procedures to coordinate these measures with the E&N program (see item D.2.c) for the notification of end users who received or may receive substandard reclaimed from the RWHO.

**D.2.f.** Information for new end users or new reuses. Where the RWHO has a RWM plan previously approved by DEQ and proposes to distribute reclaimed water to new end users or new reuses that have not been approved by DEQ as of the submittal date of this application, submit the following information to update the RWM plan:

1. All proposed new end users. Provide the number and identity of all proposed new end users with which the RWHO will establish a service agreement or contract (see item D.2.a). Where there will be two or more new end users in proximity of each other and receiving reclaimed water from the same RWHO for similar reuses (e.g., individual end users within a residential development, etc.), the new end users may be grouped together rather than individually identified. If identifying end users by a group, indicate the number of end users in each group. Also, include the number of all proposed new end users in the projected number of end users included in the description and map of the RWM plan (see item D.1.a);
2. Proposed new reuses. Identify all proposed new reuses and ensure that these reuses are also identified in item C.3 (see instructions for item C.3);
3. All proposed new reclaimed water types. Identify all proposed new reclaimed water types (e.g., Level 1, Level 2 or other) to be distributed by the RWHO to new end users or new reuses identified in 1 or 2 above, respectively. Also, ensure that (i) new reclaimed water types identified in the RWM plan are identified in item C.2 or for RWHOs that will bend reclaimed water, in the Application Addendum (see instructions for item C.2); and (ii) systems to provide new reclaimed water types to the RWHO are identified in item B.1. Where changes to the RWHO will be necessary to enable it to distribute new reclaimed water types to new end users or new reuses, describe these changes in the RWM plan. Where a PER is attached to the addendum per item B.3 and describes these changes, the RWM plan may reference the PER;
4. Maximum monthly and maximum annual reclaimed water demands (in units of million gallons) for all new end users, new reuses, or both, as applicable. If the RWHO will distribute more than one reclaimed water type to new end users or new reuses, provide this information separately for each reclaimed water type; and
5. Maximum monthly and maximum annual reclaimed water capacities of the RWHO (in units of million gallons). Report these capacities as totals for all locations of the RWHO identified in items A.1.a and A.2. Where expansion of the RWHO is proposed, provide the RWHO's current and future available reclaimed water capacities, and ensure that this information is consistent with the PER, if required and submitted per item B.3. If more than one reclaimed water type will be distributed to new end users or new reuses by the RWHO, provide this information separately for each reclaimed water type.

**Note: Information for new end users or new reuses must be included in the RWM plan of this application. Do not reference an alternative source to provide this information.**

**D.3 Irrigation reuse information required for the RWM plan.** Where the RWHO will distribute reclaimed water for irrigation reuse to end users, including but not limited to, an end user that is the RWHO, provide for the information specified items D.3.a through D.3.f that applies.

**D.3.a.** Type(s) of irrigation reuse. Check the box or boxes that represent the type(s) of irrigation reuse by end users receiving reclaimed water from the RWHO. Nonbulk irrigation reuse is the reuse of reclaimed water for irrigation of a total area less than or equal to five acres on one contiguous property. Bulk irrigation reuse is the reuse of reclaimed water for irrigation of a total area greater than five acres on one contiguous property. **Note: Land treatment of wastewater as described in the Sewage Collection and Treatment Regulations (9VAC25-790-880) is not considered irrigation reuse of reclaimed water, and is specifically excluded from the requirements of the Water Reclamation and Reuse Regulation. Do not include irrigation associated with land treatment as irrigation reuse when identifying types of irrigation reuse in item D.3.a.**

**D.3.b.** Nutrient content of reclaimed water. Check the box or boxes that represent the nutrient content of reclaimed water to be distributed by the RWHO for irrigation reuse. Nutrient content relates to the concentrations of total nitrogen (N) and total phosphorus (P) in the reclaimed water, and for the purposes of this application, is expressed in terms of Biological Nutrient Removal (or BNR). BNR is defined as treatment that achieves annual average concentrations less than or equal to 8.0 mg/l total N and 1.0 mg/l total P. Non-BNR is treatment that achieves annual average concentrations greater than 8.0 mg/l total N or 1.0 mg/l total P. Annual average concentrations of total N and total P in the reclaimed water may be obtained from the following:

1. Reclaimed water monitoring that may be required by systems identified in item B.1 for these parameters;
2. Reclaimed water monitoring conducted by the RWHO for these parameters over the most recent calendar year prior to submittal of this application (e.g., monitoring of monthly average total N and total P concentrations for 12 months to calculate annual average concentrations); or
3. Estimates of these parameters based on known concentrations of total N and total P in reclaimed water produced by existing systems that are similar with regard to the character of source water reclaimed and unit reclamation treatment processes, to systems identified in items B.1 that will produce the reclaimed water they will provide to the RWHO for irrigation reuse. This may apply, for example, where the system identified in item B.1 will not be constructed or in operation as of the submittal date of this application. When estimating annual average total N and total P concentrations of the reclaimed water, include assumptions and calculations used to derive these estimates in the RWM plan.

**D.3.c.** Supplemental irrigation with reclaimed water. In the space provided, describe how the RWHO will ensure that end users will achieve supplemental rates of irrigation with reclaimed water. Supplemental irrigation is defined in the Water Reclamation and Reuse Regulation (9VAC25-740) as irrigation, which in combination with rainfall, meets but does not exceed the water necessary to maximize production or optimize growth of the irrigated vegetation. Include in the description the following that apply based on the type(s) of irrigation reuse checked item D.3.a:

1. For nonbulk irrigation reuse, describe (i) educational materials and instructions to be provided by the RWHO to non-bulk irrigation end users, explaining how the end users are to perform supplemental irrigation in a manner protective of the environment and public health; and (ii) how this information will be distributed to end users. At a minimum, this information is to be provided to nonbulk irrigation end users at the time they enter into a reclaimed water service agreement or contract with the RWHO, and may be distributed with other information regarding nutrient management for nonbulk irrigation reuse (see item D.3.d).
2. For bulk irrigation reuse by end users, describe the methodology(s) that will be used to calculate supplemental irrigation. Supplemental irrigation is based largely on the water demands of the irrigated vegetation and is most often correlated with the evapotranspiration rate of the vegetation, minus inputs from rainfall. Refer to GM 10-2001, Revision 1 for several accepted methods to calculate the water

demand at irrigation reuse sites. Because factors affecting the water demand vary from day to day, the rate of supplemental irrigation must be calculated for every day that bulk irrigation reuse with reclaimed water occurs. Supplemental irrigation may be calculated manually or with use of automated weather-based irrigation controllers.

As defined in [9VAC25-740-10](#), supplemental irrigation may allow the application of water (reclaimed or other) in addition to that volume lost to evapotranspiration by the crop where the additional water will “maximizes production or optimizes growth of the irrigated vegetation”. This may be necessary to leach salts that have accumulated in the soil from reclaimed water or other sources when the concentrations of the salts adversely affect the productivity or growth of the irrigated vegetation. Where it is demonstrated by the RWHO or an end user other than the RWHO that (i) salts will accumulate or have accumulated to undesirable levels in the soil of an irrigation reuse site, and (ii) the application of reclaimed water will not contribute or has not contributed significantly to the salt problem, an additional volume of reclaimed water less than or equal to ten percent of the water lost to evapotranspiration by the irrigated vegetation may be used for leaching and is to be added to evapotranspiration losses to calculate supplemental irrigation. Given a similar scenario but where the application of reclaimed water will contribute or has contributed significantly to the salt problem, no volume of reclaimed water in addition to that lost to evapotranspiration by the irrigated vegetation may be used to leach salts from soils at the irrigation reuse site. In this case, any additional volume of water required for leaching must be provided from sources other than reclaimed water that are low in salts (e.g., rainwater, potable water, etc.), and included as an input in the calculation of supplemental irrigation.

**Note: Where the RWHO will distribute non-BNR reclaimed water (see item D.3.b) to a bulk irrigation reuse site, supplemental irrigation cannot cause nutrient loads from the application of non-BNR reclaimed water to exceed the nutrient recommendations contained in the nutrient management plan for the site (see item D.3.f).**

**D.3.d.** Nutrient management for nonbulk irrigation reuse. Where the RWHO will distribute non-BNR reclaimed water (see item D.3.b) to nonbulk irrigation reuse (see item D.3.a), describe in the space provided measures that will be implemented by the applicant or permittee to manage nutrient loads from nonbulk irrigation reuse within the service area of the RWM plan (see item D.1.a).

Measures to manage nutrient loads from nonbulk irrigation reuse of non-BNR reclaimed water must include, at a minimum, the following:

1. The inclusion of language in the example service agreement or contract between the RWHO and end users (see item D.2.a) explaining proper use of the reclaimed water by the end user for the purpose of managing nutrients.
2. Routine distribution of literature (annually or more often) to individual nonbulk irrigation end users describing the proper use of reclaimed water for irrigation in accordance with [9VAC25-740-170.A.1](#). This applies to only reuses that require Level 1 reclaimed water, will be in areas accessible to the public, or are likely to have human contact.
3. Monthly monitoring of nitrogen (N) and phosphorus (P) loads from nonbulk irrigation reuses to the service area of the RWM plan covering the system, based on the total monthly metered consumption of reclaimed water for nonbulk irrigation reuse within the service area and the monthly average concentrations of total N and total P in the reclaimed water.

Although not required for nonbulk irrigation reuse of non-BNR reclaimed water, nutrient management plans prepared in accordance with [4VAC5-15](#) may be an appropriate measure to manage nutrients at specific nonbulk irrigation reuse sites.

**D.3.e.** Bulk irrigation reuse sites under common ownership or management. Where the RWHO will distribute reclaimed water to bulk irrigation reuse sites (see item D.3.a) under common ownership or management with that RWHO, provide the following for each of these sites:

1. The name or other identifier, net acreage, and location description of the bulk irrigation reuse site in the

table provided. Net acreage is the area of the site after setbacks required in accordance with [9VAC25-740-170](#).H are deducted from the gross acreage.

2. A map attached to this application as part of the RWM plan, displaying the location of the bulk irrigation reuse site. Where there are multiple irrigation reuse sites listed in item D.3.e that are within close proximity of each other, the map may display the location of more than one site.

**D.3.f.** Additional information for bulk irrigation reuse sites. For each bulk irrigation reuse site identified in item D.3.e, submit the following information:

1. A nutrient management plan (NMP) prepared by a nutrient management planner certified by the Department of Conservation and Recreation, Division of Soil and Water Conservation (DCR) in accordance with the Nutrient Management Training and Certification Regulations, [4VAC5-15](#), where:

(a) The nutrient content of reclaimed water that will be applied to the irrigation reuse site meets non-BNR (see item D.3.b); **or**

(b) Independent of the reclaimed water nutrient content and in addition to irrigation reuse, there is no option to discharge or dispose of the reclaimed water (e.g., discharge to a sewage collection system if allowed under local sewer use ordinances, disposal via a land treatment system authorized by DEQ, etc.).

**Note #1: NMPs are also required for bulk irrigation reuse sites that will receive non-BNR reclaimed water from the RWHO but will not be under common ownership or management with the RWHO (i.e., are not listed in item D.3.e). NMPs for these sites are not to be submitted to DEQ but must be submitted to the RWHO by the end user that owns or manages the site.**

**Note #2: Nutrient management plans for bulk irrigation reuse sites, when required, must be included in the RWM plan of this application. Do not reference an alternative source to provide these plans.**

2. A site plan and, if applicable, the area of proposed expansion to an existing bulk irrigation reuse site, displayed on the most current USGS topographic maps and showing the following:

(a) The boundaries of the irrigation site;

(b) The location of all of the following within 250 feet of the irrigation site:

- potable and non-potable water supply wells and springs
- public water supply intakes
- occupied dwellings
- property lines
- areas accessible to the public
- outdoor eating, drinking and bathing facilities
- surface waters, including wetlands
- limestone rock outcrops and sinkholes

(c) Setbacks areas around the irrigation site in accordance with [9VAC25-740-170](#).

## **E. Consent to Receive and Certify Receipt of Electronic Mail**

Section E must be completed by all applicants or permittees submitting this application.

The Department of Environmental Quality (DEQ) may deliver permits and certifications (i.e., permit issuances, reissuances, modifications, revocation and reissuances, terminations, denials, and administrative and emergency authorizations associated with permits), and plan approvals to recipients, including applicants or permittees, by electronically certified mail where the recipients notify DEQ of their consent to receive mail electronically (§ [10.1-1183](#)). Check only one of the boxes to either consent or decline to (i) receive by electronic mail the permit and any plan approvals associated with the permit that may be issued for the proposed pollutant management activity, and (ii) certify, as applicable, receipt of such electronic mail when requested by the DEQ.

## **F. Certification Statement**

Section F must be completed by all applicants or permittees submitting this application.

Provide the name, title and signature of the appropriate signatory authority or authorities specified in [9VAC25-31-110](#) of the VPDES Permit Regulation or [9VAC25-32-70](#) of the VPA Permit Regulation.

## Appendix A

Minimum Standard Requirements for Reuses of Reclaimed Water*		
Reuse Category	Reuse	Minimum Standard Requirements <sup>a</sup>
1. Urban – Unrestricted Access	All types of landscape irrigation in public access areas (i.e., golf courses, cemeteries, public parks, school yards and athletic fields) Toilet flushing <sup>b</sup> Firefighting or protection and fire suppression <sup>b</sup> Outdoor reuse (i.e., lawn watering and noncommercial car washing) <sup>b</sup> Commercial car washes Commercial air conditioning systems	Level 1
2. Irrigation – Unrestricted Access <sup>c</sup>	Irrigation for any food crops not commercially processed, including crops eaten raw	Level 1
3. Irrigation – Restricted Access <sup>c, d, e</sup>	Irrigation for any food crops commercially processed	Level 2
	Irrigation for nonfood crops and turf, including fodder, fiber and seed crops; pasture for foraging livestock; sod farms; ornamental nurseries; and silviculture	
4. Landscape Impoundments <sup>f</sup>	Potential for public access or contact	Level 1
	No potential for public access or contact	Level 2
5. Construction <sup>e</sup>	Soil compaction Dust control Washing aggregate Making concrete Irrigation to establish vegetative erosion control <sup>g</sup>	Level 2
6. Industrial <sup>e</sup>	Commercial laundries Ship ballast <sup>h</sup>	Level 1
	Livestock watering <sup>i</sup> Aquaculture <sup>j</sup> Stack scrubbing Street washing Boiler feed Once-through cooling <sup>k</sup> Recirculating cooling towers <sup>k</sup>	Level 2
<sup>a</sup> For reclaimed industrial wastewater, minimum standards required shall be determined on a case-by-case basis relative to the proposed reuse or reuses.		



<sup>b</sup> These reuses of reclaimed water are prohibited in accordance with [9VAC25-740-50](#).B.2 where they would involve the distribution of reclaimed water to a one-family or two-family dwelling in order to occur.

<sup>c</sup> Reclaimed water treated to Level 1 or 2 may be used for surface irrigation, including spray irrigation. Reclaimed water treated to Level 2 may be used for spray irrigation if the area to be irrigated restricts access to the public and has appropriate setbacks in accordance with [9VAC25-740-170](#). Reclaimed water treated to Level 1 or 2 may be used for irrigation of food crops eaten raw, excluding root crops, only when there will be no direct contact (or indirect contact via aerosol carry) between the reclaimed water and edible portions of the crop.

<sup>d</sup> For irrigation with reclaimed water treated to Level 2, the following shall be prohibited unless Level 1 disinfection is provided:

1. Grazing by milking animals on the irrigation reuse site for 15 days after irrigation with reclaimed water ceases, and
2. Harvesting, retail sale or allowing access by the general public to ornamental nursery stock or sod farms for 14 days after irrigation with reclaimed water ceases.

<sup>e</sup> Worker contact with reclaimed water treated to Level 2 shall be minimized. Level 1 disinfection shall be provided when worker contact with reclaimed water is likely.

<sup>f</sup> Landscape impoundments may also be used to store reclaimed water for other subsequent reuses of that reclaimed water, such as irrigation, if included in an inventory of reclaimed water storage facilities submitted to the board pursuant to [9VAC25-740-110](#).C.15.

<sup>g</sup> Irrigation with reclaimed water to establish vegetative cover at a construction site shall be subject to requirements for irrigation reuse specified in [9VAC25-740-100](#).C. Continued irrigation of the same site following construction completion shall be subject to the minimum standard requirements of reuse category 1, 2, or 3 contained in this table, determined by the intended reuse of the irrigated site.

<sup>h</sup> Reuse of reclaimed water for ship ballast shall also comply with applicable federal regulations and standards governing the use and discharge of ship ballast.

<sup>i</sup> Level 1 disinfection shall be provided when the reclaimed water is consumed by milking livestock.

<sup>j</sup> Level 1 disinfection shall be provided for aquaculture production of fish to be consumed raw, such as sushi.

<sup>k</sup> Windblown spray generated by once-through cooling or recirculating cooling towers using reclaimed water treated to Level 2, shall not reach areas accessible to workers or the public unless Level 1 disinfection is provided. See also setback requirements in [9VAC25-740-170](#) for open cooling towers.

\* [9VAC25-740-90](#).A of the Water Reclamation and Reuse Regulation