Fact Sheet Addendum (Reclamation and Reuse)

This document gives pertinent information concerning the administrative authorization of New Kent County's Parham Landing WWTP to reclaim wastewater for the purpose of reuse. This authorization is associated with the existing VPDES discharge permit number VA0088331. The authorization covers both the reclamation system and the distribution system used to deliver reclaimed water to the end users. The intended reuses of the reclaimed water are irrigation and dust control, both of which will require Level 1 treatment. This permit action proposes to establish reclaimed water standards, monitoring and reporting requirements, and special conditions for the intended reuses.

1. Facility Name and Address: Parham Landing WWTP (Reclamation System)
7800 Parham Landing Road
West Point, VA 23181

Parham Landing Distribution System
(Distribution Facility)
10600 Horseman's Trail
Providence Forge, VA 23140

2. Permit No. VA0088331 Expires: 5/1/2010

3. Owner Contact: Lawrence A. Dame

4. Application Addendum Complete Date: 07/23/09
Administrative Authorization Drafted By: Emilee Carpenter (PRO) Date: 7/29/09
Reviewed By: Curtis Linderman (PRO) Date: 8/14/09
Valerie Rourke (CO) Date: 8/07/09

5. Reuse Details:

Intended Reuse	Supplemental Bulk[a] Irrigation	Dust Suppression
Treatment	Level 1	Level 1
Proposed End Users	The Golf Club at Brickshire Colonial Downs Racetrack The Traditional Golf Club at Royal New Kent	Colonial Downs Racetrack
Reuse Category	Urban – Unrestricted Access	Construction[b]

Footnotes:

a. Bulk irrigation reuse means reuse of reclaimed water for irrigation of an area greater than five acres on one contiguous property.
b. Dust control is listed in 9VAC25-740-10 et seq. under the "Construction" reuse category, which is footnoted to require a minimum of Level 1 treatment when worker contact is likely. Use of reclaimed water for dust suppression at the Colonial Downs Racetrack might fit more appropriately under the "Urban-Unrestricted Access" category, which also requires Level 1 treatment.

Reclaimed water from Parham Landing is proposed as the sole source of reclaimed water to be distributed to the anticipated end users identified above. Draft End User contract agreements are included in Appendix C of the Reclaimed Water Management (RWM) plan. No finalized contracts have been signed at this time. Signed contract agreements will be required prior to distribution of reclaimed water.

6. See **Attachment A** for facility diagrams depicting the reclamation and distribution system. The existing Parham Landing WWTP is permitted to expand to 2.0 MGD. Upon expansion of the Parham Landing WWTP, the existing Chickahominy WWTP's (VA0088480) influent will be diverted to Parham Landing, and the Chickahominy WWTP facility will be transformed into the reclaimed water distribution facility. Parham Landing

WWTP will treat influent wastewater to meet the discharge effluent limitations and the reclaimed water standards (excluding TRC). Consequently, Parham Landing will jointly represent the WWTP and the majority of the Reclamation System, both of which have a design flow of 2.0 MGD. The system will be designed such that the full design flow can be diverted to reuse or discharged. After UV disinfection and post aeration at the Parham Landing Plant, treated wastewater will be sent to the effluent pump station (PS) where the operator will control routing of the treated water either for reuse or discharge. If routed for reuse, a chorine injection line will be used to dose the wastewater in order to prevent re-growth of bacteria in the 10.5 mile transmission line. The transmission line will end at the 300,000 gallon above-ground storage tank at the distribution facility. Reclaimed water will flow by gravity from the storage tank to the existing chlorine contact tank. An online turbidimeter will be installed and operated prior to the chlorine feed. All other sampling to demonstrate compliance with the reclaimed water standards will be performed at the point of compliance, which is at the end of the chlorine contact tank. If the reclaimed water fails to meet the standards outlined in the permit, it will be diverted to the Chickahominy raw wastewater PS, mixed with the Chickahominy influent and pumped back to Parham Landing for retreatment. There will be emergency storage for reject water in the existing aerated lagoon at the Chickahominy Plant. Reclaimed water that does meet the standards will be routed to the end users with metered flow in the distribution line.

7. Reclamation and Distribution Facility Location Description: See **Attachment B.**
The proposed upgraded Parham Landing WWTP will double as a reclamation facility. It will be located at the address noted above in Part 1. Two 10.5 mile transmission lines transporting raw influent wastewater and reclaimed water will connect the Reclamation System and Distribution System. Beginning at the Parham Landing facility, the reclaimed water transmission line will traverse southwest and then east under Route 33, essentially following the same route as the force main carrying raw wastewater into the Parham Landing WWTP. The line turns due west at the intersection of Route 33 and I-64, crosses under the interstate and continues parallel on the south side of 64 before it turns South to reach the Distribution Facility. The Distribution Facility, which will be the former Chickahominy WWTP, is in close proximity to the end users. There are two existing end users, Colonial Downs Racetrack and the Golf Club at Brickshire for which a pump station and transmission lines already exist. A connection to the line serving the Brickshire Golf Club is proposed for the Royal New Kent Golf Course, which is projected as a future end user. Colonial Downs is located due north of the Distribution Facility. Brickshire Golf Club is due east and Royal New Kent is primarily west of the Distribution Facility. The non-system storage ponds for each end user are identified on the map in **Attachment B**.

8. Storage Facility Inventory:

<u>System Storage:</u>
9VAC25-740-10 defines “System storage” as storage on or off the site and considered part of a reclamation system, satellite reclamation system, or reclaimed water distribution system that is used to store *<u>reclaimed</u>* water produced by the reclamation system or satellite reclamation system and to equalize flow to or within a reclaimed water distribution system. Treated wastewater is only qualified as reclaimed water after it demonstrates compliance with the reclaimed water standards as provided in this authorization. Because the Point of Compliance (POC) is directly prior to the distribution system, there is no “system storage” proposed at this facility.

<u>Reject Storage:</u>
Per the RWM Plan all reject water will be routed back to the Parham Landing WWTP for retreatment via the Chickahominy raw wastewater pump station. A synthetically lined

existing aerated lagoon is proposed for emergency storage (i.e. when the pumps are down or the transmission line is compromised). This lagoon was constructed in 1996 according to approved design standards. No evidence of GW contamination has been documented nor has a GW Monitoring Plan been required or established. Because it is an existing lagoon that has not been modified or expanded and was constructed prior to October 1, 2008 it is grandfathered under the regulation and ground water monitoring will not be required. The lagoon volume is approximately 1.5 million gallons.

Non-system Storage:

- Golf Club at Brickshire: One pond with a capacity of 20.6 MG of storage is currently used to store irrigation water. This same pond is proposed as the nonsystem storage for this facility. It is located at 37º 28' 40" N, -76º 59' 47" W. The pond has a surface area of 3.7 acres and a 20 mm synthetic liner. It is designed and operated (3 ft freeboard) to prevent a discharge in a design storm event (24 hour, 25 year). The pond is setback 70 feet from the nearest property line and 2900 feet from the nearest potable well.
- Colonial Downs Racetrack: Two existing storage ponds are proposed for nonsystem storage. The ponds are labeled "Pond #1" and "Pond #2"are located at 37º 29' 12" N, -77º 00' 14" W and 37º 29' 10" N, -77º 00' 21" W, respectively. They have clay liners and a combined volume of 20 million gallon, and surface area of 3.8 acres. The ponds are designed and operated (5ft freeboard) to prevent a discharge during high intensity storms. As specified in the RWM Plan, verification that the ponds are designed to prevent a discharge in design storm conditions (24 hour, 25 year) will be required prior to distribution of reclaimed water to this end user. The ponds are setback at least 1100 feet from the nearest property boundary and 2000 feet from the nearest potable well.
- Royal New Kent: A single clay lined pond with a volume of 35 million gallons is proposed as the non-system storage. The storage pond is located at 37º 28' 29" N, -77º 00' 46" W and has a surface area of approximately 7.7 acres. The pond is designed and operated (3 ft freeboard) to prevent a discharge during high intensity storm events. As specified in the RWM Plan, verification that the ponds are designed to prevent a discharge in design storm conditions (24 hour, 25 year) will be required prior to distribution of reclaimed water to this end user. The pond is setback 200 feet from the nearest property boundary and 2100 feet from the nearest potable well.

9. A Site Inspection will be conducted once the facility is built.

10. Standards and Monitoring Rationale:

Parameters	Standard	Parameter/Standard Basis	Frequency	Sample Type	Frequency/Sample Type Basis
Reclamation System Flow (MGD)	Monthly average: NL	BPJ	Continuous	TIRE	VPDES Permit Manual MN-2 pg.2 (2/16/07)
	Monthly maximum: NL	BPJ	Continuous	TIRE	VPDES Permit Manual MN-2 pg.2 (2/16/07)
pH (Standard Units)	6.0 – 9.0	9VAC25-740-70.A.1.d	Daily	Grab	9VAC25-740-80.A.5
Total Phosphorus	NL	BPJ (monitoring to ensure BNR is achieved.	1/Week	24 HC	Per 9VAC25-790-960
Total Nitrogen	NL		1/Week	24 HC	Per 9VAC25-790-960

Parameters	Standard	Parameter/Standard Basis	Frequency	Sample Type	Frequency/Sample Type Basis
Enterococci (N/100 ml)	Monthly Geometric mean: ≤ 11	9VAC25-740-70.A.1.b.(3)	Daily	Grab	Per 9VAC25-740-80.A.4.a
	CAT: 24	9VAC25-740-70.A.1.b.(3)	Daily	Grab	NA
Total Residual Chlorine (TRC) (mg/L)	NL	NA	Continuous	Recorded	9VAC25-740-80.A.2.a
	CAT: < 1.0	9VAC25-740-70.A.1.c	Continuous	Recorded	9VAC25-740-80.A.2.a
$cBOD_5$ (mg/L)	Monthly average: ≤ 8	9VAC25-740-70.A.1.e	5 days/Week	24 HC	Per 9VAC25-740-80.A.3
Influent Flow (MGD)	Monthly average: NL	BPJ	Continuous	TIRE	VPDES Permit Manual MN-2 pg.2 (2/16/07)
	Monthly maximum: NL	BPJ	Continuous	TIRE	VPDES Permit Manual MN-2 pg.2 (2/16/07)
Turbidity (NTU)	Daily average: ≤ 2	9VAC25-740-70.A.1.f	Continuous	Recorded	9VAC25-740-80.A.1
	CAT: > 5	9VAC25-740-70.A.1.f	Continuous	Recorded	9VAC25-740-80.A.1

11. Special Conditions

B.1. Probibitions
Basis: 9VAC25-740-50.B.

B.2. Nuisance Conditions
Basis: 9VAC25-740-170.D.

B.3. Reopener
Basis: For a VPDES permit, the basis of this condition is best profession judgment (BPJ).

B.4. Monitoring Requirement
Basis: 9VAC25-740-80.C state that "A reclamation system that produces reclaimed water intermittently or seasonally shall monitor only when the reclamation system discharges to a reclaimed water distribution system, a non-system storage facility, or directly to a reuse." This also applies to reclamation systems that "produce" reclaimed water throughout the year but discharge only intermittently or seasonally to a reclaimed water distribution system, a non-system storage facility, or directly to a reuse. System storage as defined by 9VAC25-740-10 is "storage on or off the site and considered part of a reclamation system, satellite reclamation system, or reclaimed water distribution system that is used to store reclaimed water produced by the reclamation system or satellite reclamation system." Therefore, requirements of 9VAC25-740-80.C also apply to system storage of reclaimed water produced by the reclamation system.

B.5. TRC and Turbidity CAT
Basis: 9VAC25-740-70.C.1.

B.6. Enterococci CAT
Basis: 9VAC25-740-70.C.2.

B.7. CAT Noncompliance requirements
Basis: 9VAC25-740-70.C.3.

B.8 Turbidity Meter and Disinfection Monitoring Equipment Repair
Basis: 9VAC25-740-80.A.1 and 9VAC 25-740-80.A.2.a.

B.9 Operator Requirements
Basis: 9VAC25-740-130.A.

B.10. O&M Manual
Basis: 9VAC25-740-140 and 9VAC25-740-120.B.3.e require submittal and maintenance of an O&M Manual for both the reclamation and reclaimed water distribution systems.

B.11. BNR Reopener
Basis: For VPDES and VPA permits, the basis of this condition is best profession judgment (BPJ). For irrigation reuse with non-BNR reclaimed water, the permit shall contain requirements to manage nutrients in the reclaimed water. In contrast, irrigation reuse with BNR reclaimed water shall not have requirements to manage nutrients in the permit. This condition, although not specifically stated in law or regulation, is intended to address those situations where the permittee's reclamation system or satellite reclamation system is unable to produce BNR reclaimed water as indicated in their permit application, and the additional nutrients in the non-BNR reclaimed water are consequently unmanaged for irrigation reuses. The permittee has the option to correct treatment of the reclaimed water to achieve BNR or in the absence of any action, face possible enforcement action that may ultimately result in a staff initiated modification of the permit to add nutrient management requirements for irrigation reuse of the non-BNR reclaimed water.

B.12. Storage Design Requirements
Basis: 9VAC25-740-110 C.14.

B.13. Storage Freeboard Requirements
Basis: 9VAC25-31-190.L.5 through 7; 9VAC25-740-110.C.6.a establishes freeboard requirements; however, in the case of grandfathered facilities the requirements of 9VAC25-740-110.C.6 do not apply. Consequently, freeboard requirements are included in this permit based on Best Engineering Judgment (BEJ).

B.14 SIU Program Requirements
Basis: 9VAC25-740-150.A.

B.15. Tank Truck Distribution Requirements
Basis: 9VAC25-740-110.B.7.

B.16. Distribution System Requirements
Basis: 9VAC25-740-110.B.9, 9VAC25-740-100.C.1.h., and 9VAC 25-740-110.B.2.d.

B.17. Storage Inventory Requirements
Basis: 9VAC25-740-110 C.15.

B.18. PER
Basis: 9VAC25-740-120.A.

B.19. CTC/CTO
Basis: 9VAC25-740-120.B.1.

B.20. Public Access to Storage Controls
Basis: 9VAC25-740-160.A.

B.21. Reuse Area Advisory Signs
Basis: 9VAC25-740-160.B and D.

B.22. Distribution System Advisory Signs
Basis: 9VAC25-740-110-B.8 and 9VAC 25-740-110.B.5.b.

B.23. Non-system Storage Advisory Signs
Basis: 9VAC25-740-160.E.

B.24. Supplemental Irrigation
Basis: 9VAC25-740-10, 9VAC25-740-100.C.2., and the 7/14/09 draft version of the implementation guidance (pages 10-11).

B.25. Irrigation Requirements
Basis: 9VAC25-740-170.E.

B.26. Bulk Irrigation Requirements
Basis: 9VAC25-740-170.F.

B.27. Overspray Prohibition
Basis: 9VAC25-740-170.G.

B.28. Setback Distances
Basis: 9VAC25-740-170.H.1 and 2.

B.29. Setback Requirements, cont.
Basis: 9VAC25-740-170.H.5.

B.30. Horizontal Measurement of Setbacks
Basis: 9VAC25-740-170.H.6.

B.31. Treatment Failure Notifications
Basis: 9VAC25-740-100.C.1.f, 9VAC25-740-170.A.2 and 9VAC25-740-200.B.

B.32. Addition of End Users Notification
Basis: 9VAC25-740-100.C.8.

B.33. Reporting Interruption/Loss of Reclaimed Water
Basis: 9VAC25-740-200.B. Although 9VAC25-740-200.B requires the interruption or loss of reclaimed water supply to be reported, specific information to be reported for such an occurrence is based on best professional judgment.

B.34. Records Retention
Basis: 9VAC25-740-190.A and B.

B.35. Annual Report
Basis: 9VAC25-740-200 and 9VAC25-740-170.A.2.

B.36. Reclaimed Water Management Plan
Basis: 9VAC25-740-100.C.

Conditions not included in this authorization and the basis for the omission:

- Conditions applicable to Level 2 treatment are not included because the subject facility is specifically designed to achieve Level 1 treatment.
- Conditions applicable to facilities with significant industrial users are not applicable to this authorization because Parham Landing does not have significant industrial users as verified in the SIU survey initiated in May of 2006 and completed in August of 2008. Furthermore, all influent currently directed to the Chickahominy WWTP, which will eventually be diverted to Parham Landing, is sanitary wastewater as confirmed by email dated August 18, 2009. However, as a precautionary measure to ensure that future SIU's are handled appropriately, a customized SIU condition is included.
- Conditions that are already adequately addressed in the existing VPDES permit:
  - Operator requirements
  - The O&M Manual condition in this authorization is designed to supplement the O&M Manual condition in the existing VPDES permit rather than repeat the existing conditions. The requirements associated with UV disinfection were omitted. Although wastewater at the Parham Landing WWTP is disinfected by UV light, the reclamation system relies on chlorine disinfection performed thereafter to meet the reclaimed water standards. Sludge or residuals management is not addressed in the authorization because it is adequately addressed in the existing VPDES permit. Requirements for systems with bulk irrigation sites under common ownership with the system do not apply in this case because the county does not own any of the end users.
  - 95% design capacity condition is not included in the authorization because the reclamation system design capacity is equal to the design capacity of the WWTP. Consequently, the condition in the existing permit is sufficient.
- Reliability classification is not addressed because Class I reliability is not required for Level 1 reclamation systems or satellite reclamation systems if there is a permitted discharge system available which has sufficient capacity to handle any reclaimed water flows which do not meet the reclaimed water standards. Parham Landing WWTP is permitted to discharge its full design flow and still meet annual nutrient load allocations assigned in 9VAC25-720-120.
- Distribution system requirements associated with
  - Reclamation systems that are not under common ownership because the County owns both the reclamation and distribution system.
  - Blended reclaimed water requirements are omitted because the end users have not proposed blending of reclaimed water of different treatment levels or nutrient content from more than one reclamation system, satellite reclamation system or reclaimed water distribution system for subsequent distribution to end users not under common ownership or management with the blending end user. At present, Parham Landing WWTP is the only proposed local provider of reclaimed water, and the end users have not expressed any intention to seek reclaimed water from another provider.
- Storage facility monitoring requirements are not included in this authorization because the point of compliance for reclaimed water is directly before the reclaimed water is either routed in a closed pipe distribution system to the end user or routed to reject storage, depending on whether the water meets reclamation standards. Reject water is then pumped back to the Parham WWTP for re-treatment, so monitoring of the reject water is irrelevant to the protection of public health or the environment.
- The RWM Plan proposes bulk irrigation of BNR reclaimed water. Consequently, conditions applicable to non-bulk irrigation and non-BNR reclaimed water are not relevant to this facility. BNR reclaimed water proposed for bulk irrigation does not typically require a NMP. A NMP is required for bulk irrigation of BNR reclaimed water only when the irrigation reuse site and permitted system are under common ownership and there is no option to discharge the wastewater through a VPDES permitted discharge, or the VPDES permit does not allow discharge of the full

nutrient load under design flow conditions. Because neither of the aforementioned exceptions apply to Parham Landing, a NMP is not required, and any conditions associated with NMPs are irrelevant to this authorization. Furthermore, the County does not own any of the irrigation sites, so conditions associated with common ownership are not relevant to this authorization.

- Irrigation of food crops with reclaimed water is not proposed in the RWM Plan; therefore, conditions associated with food crop irrigation are not included in this authorization.

12. Staff Comments

- The State Water Control Board approved this project to be awarded federal stimulus money, contingent on permit coverage attained by September 1, 2009.
- VDH-ODW was sent a copy of the application addendum on August 4, 2009 in accordance with agency guidance recommending coordination. The VDH response dated August 19, 2009 stated no objection to the project. See Attachment C for the VDH response letter.
- Parham Landing WWTP is designed to achieve maximum annual average concentrations of 6.0 mg/L Total Nitrogen (TN) and 0.7 mg/L Total Phosphorus (TP). Effluent that is diverted to the reclamation system, therefore, is achieving BNR standards (8.0 mg/L TN and 1.0 mg/L TP). The Water Reclamation and Reuse regulation requires TN and TP monitoring where reuses of the reclaimed water include irrigation in order to determine compliance with BNR standards. This monitoring is included at Outfall 650.
- In accordance with agency guidance, carbonaceous BOD_5 was chosen as the reclaimed water standard because Parham Landing WWTP's effluent is limited for $cBOD_5$ rather than BOD_5.
- As authorized by existing VPA permits, The Golf Club at Brickshire uses Chickahominy WWTP effluent for irrigation and Colonial Downs uses Chickahominy WWTP effluent in combination with groundwater for irrigation and dust control. Royal New Kent Golf Course is not currently permitted and uses groundwater as the sole means of irrigation. New Kent County is in a groundwater management area; therefore, withdrawals of 0.30 MGD are permitted by the Department of Environmental Quality. Given the limited supply of groundwater, withdrawal will not be permitted in New Kent County for irrigation use as of January 1, 2012. Consequently, the County aims to replace the use of groundwater at the aforementioned facilities with reclaimed water from the Parham Landing Reclamation System.
- Once the reclamation facility receives a CTO and the Golf Club at Brickshire (VPA00571) and Colonial Downs (VPA00572) have secured end user contracts with Parham Landing, the existing VPA permits will no longer be necessary. The VPA permits will either be terminated or allowed to expire.
- The Chickahominy WWTP is currently operating under a consent order signed in 2004. Appendix A of the consent order required development and submittal of a Corrective Action Plan (CAP), which was received at the DEQ on October 13, 2004 and subsequently approved November 16, 2004. The CAP included a future plan to convert the Chickahominy WWTP into a pump station to send all influent to an expanded Parham Landing Plant. This plan is being implemented in conjunction with incorporation of reclamation and reuse.

  The Parham Landing WWTP does not have a history of significant noncompliance. In the last five years, only one Warning Letter (WL), dated March 30, 2009 was issued to the facility. The WL was written in response to noncompliance with effluent limitations caused by a plant upset. The upset was an isolated occurrence from which the plant recovered quickly. Parham Landing responded to the upset in a timely and complete manner.

A CTO for the expanded 2.0 MGD wastewater treatment plant/reclamation system will be required prior to distribution of reclaimed water. The expanded treatment facility will be designed to consistently meet the reclaimed water standards. Compliance concerns are not anticipated.

As noted above, two of the intended end users are currently permitted under the VPA program to land apply treated wastewater from the Chickahominy WWTP. Neither of these permits has a record of significant noncompliance. In the last 5 years, one Warning Letter (March 20, 2009) and Notice of Violation (June 17, 2009) were issued to Colonial Downs because of failure to submit an annual report. One Warning Letter (January 20, 2009) was issued to the Golf Club at Brickshire in response to an unauthorized discharge. Brickshire responded in a timely manner, discontinuing the discharge and outlining changes in operating procedure to prevent a future occurrence.

- Monitoring of system storage facilities at the Distribution Facility is not necessary. The point of compliance with reclaimed water standards is just prior to distribution to the transmission lines or alternatively to reject routing to retreatment. Therefore, directly after reclaimed water has demonstrated compliance with the standards, it enters the closed distribution system and is not vulnerable to exterior contamination. All reject water is returned to the Parham Landing treatment works via the raw wastewater transmission line such that contamination is of no consequence to the system, public health or the environment.
- Supplemental Irrigation is calculated in the RWM Plan using the Blaney-Criddle Method (using a percent of daylight hours per month and mean monthly temperatures). End users will record precipitation and the volume of irrigation water applied daily on electronic log sheets and submit them to the County on a monthly basis. This reporting will allow the County to determine whether the end users are complying with the supplemental irrigation constraints and to adjust the distribution of reclaimed water accordingly.
- *Enterococci* was selected as the bacteria parameter for the reclaimed water standards. Per the draft guidance, the bacteria parameter should correspond to the bacterial monitoring parameter for an effluent point source discharge to the nearest surface water. The intent of the guidance is to simplify sampling in cases where a facility has both discharge limitations and reclaimed water standards. Because the Parham Landing discharge permit contains an *enterococci* limitation, *enterococci* is the appropriate parameter to apply in the reclaimed water standards.

Attachment A

Facility Diagram for the Reclamation System and Distribution System

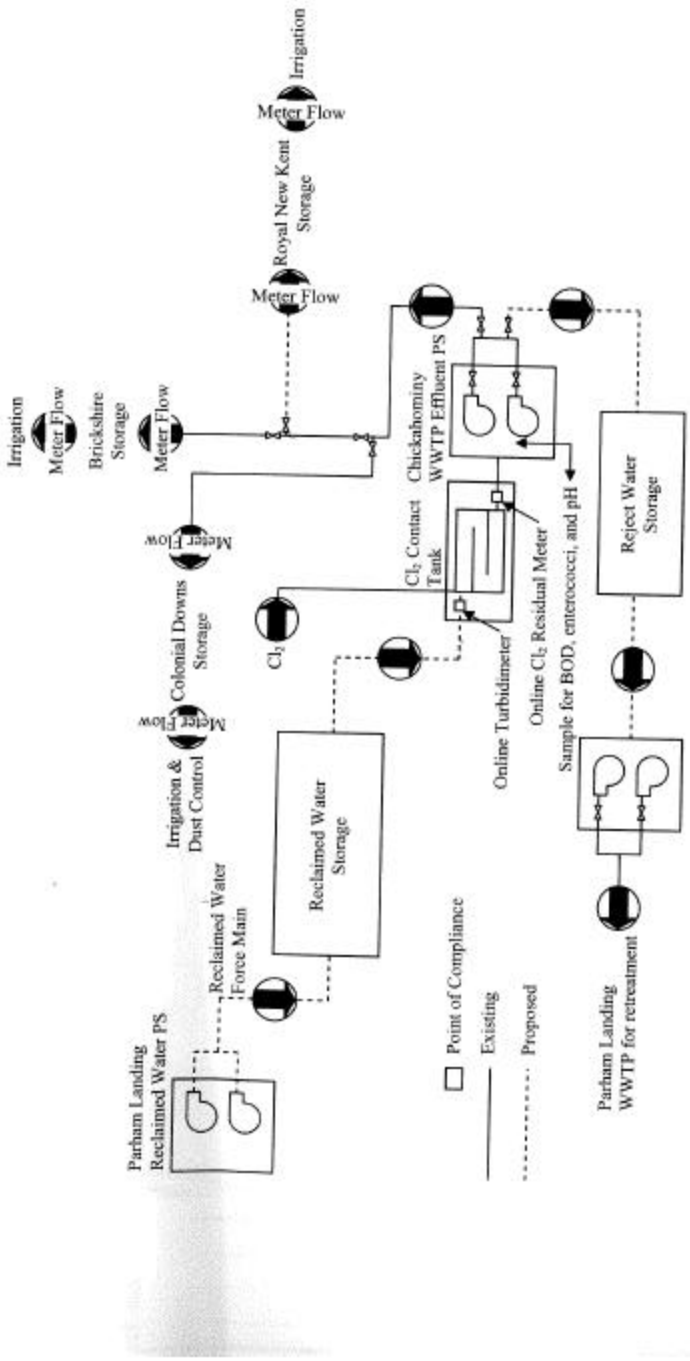

Figure 2-1: Reclaimed water flow in New Kent County

Attachment B

Reclamation and Distribution System Location Description

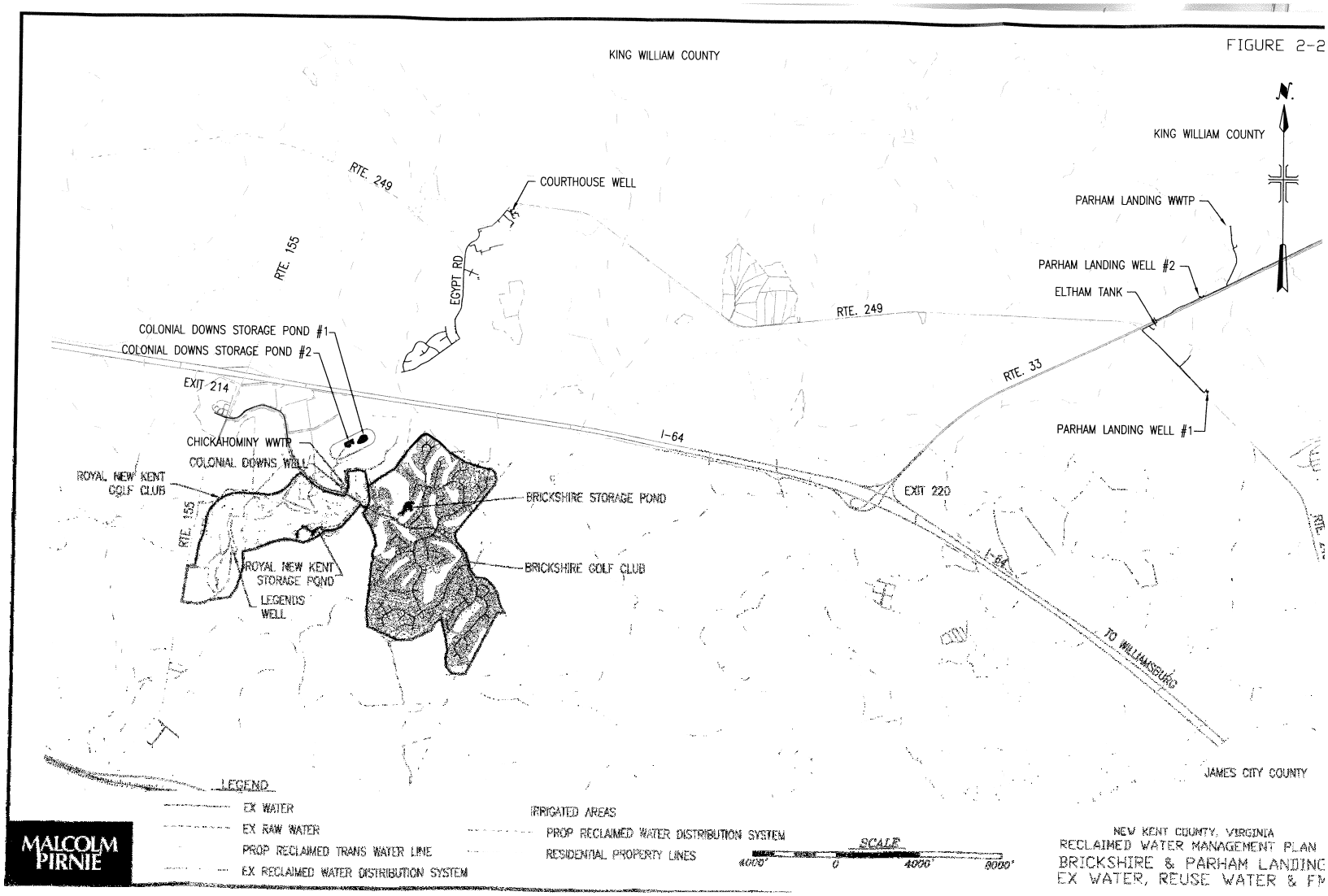
FIGURE 2-2
KING WILLIAM COUNTY
N.
KING WILLIAM COUNTY
RTE. 249
COURTHOUSE WELL
PARHAM LANDING WWTP
RTE. 155
EGYPT RD
PARHAM LANDING WELL #2
ELTHAM TANK
RTE. 249
COLONIAL DOWNS STORAGE POND #1
COLONIAL DOWNS STORAGE POND #2
EXIT 214
RTE. 33
I-64
PARHAM LANDING WELL #1
CHICKAHOMINY WWTP
COLONIAL DOWNS WELL
ROYAL NEW KENT GOLF CLUB
BRICKSHIRE STORAGE POND
EXIT 220
RTE. 155
ROYAL NEW KENT STORAGE POND
BRICKSHIRE GOLF CLUB
LEGENDS WELL
I-64
TO WILLIAMSBURG
JAMES CITY COUNTY
LEGEND
EX WATER
EX RAW WATER
PROP RECLAIMED TRANS WATER LINE
EX RECLAIMED WATER DISTRIBUTION SYSTEM
IRRIGATED AREAS
PROP RECLAIMED WATER DISTRIBUTION SYSTEM
RESIDENTIAL PROPERTY LINES
SCALE
4000' 0 4000' 8000'
MALCOLM PIRNIE
NEW KENT COUNTY, VIRGINIA
RECLAIMED WATER MANAGEMENT PLAN
BRICKSHIRE & PARHAM LANDING
EX WATER, REUSE WATER & FM

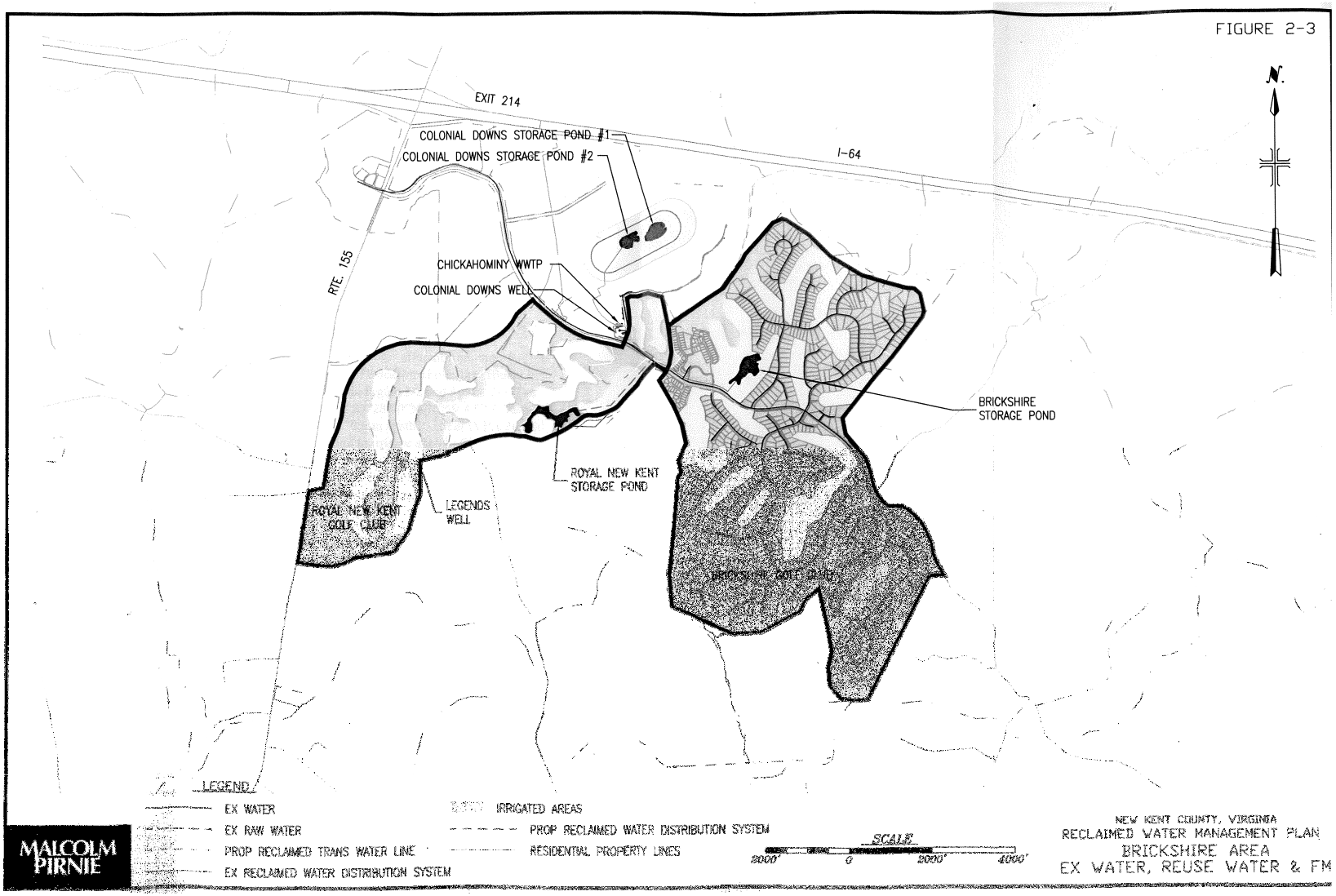
FIGURE 2-3
N.
EXIT 214
I-64
COLONIAL DOWNS STORAGE POND #1
COLONIAL DOWNS STORAGE POND #2
RTE. 155
CHICKAHOMINY WWTP
COLONIAL DOWNS WELL
BRICKSHIRE STORAGE POND
ROYAL NEW KENT STORAGE POND
ROYAL NEW KENT GOLF CLUB
LEGENDS WELL
BRICKSHIRE GOLF CLUB
LEGEND
EX WATER
EX RAW WATER
PROP RECLAIMED TRANS WATER LINE
EX RECLAIMED WATER DISTRIBUTION SYSTEM
IRRIGATED AREAS
PROP RECLAIMED WATER DISTRIBUTION SYSTEM
RESIDENTIAL PROPERTY LINES
SCALE
2000' 0 2000' 4000'
MALCOLM PIRNIE
NEW KENT COUNTY, VIRGINIA
RECLAIMED WATER MANAGEMENT PLAN
BRICKSHIRE AREA
EX WATER, REUSE WATER & FM

Attachment C

VDH Correspondence

COMMONWEALTH of VIRGINIA

KAREN REMLEY, MD., M.B.A, F.A.A.P
STATE HEALTH COMMISSIONER

J.WESLEY KLEENE, Ph. D., P.E.
DIRECTOR, Office of Drinking Water

DEPARTMENT OF HEALTH
OFFICE OF DRINKING WATER
East Central Field Office

300 Turner Road
Richmond, VA 23225
Phone: 804-674-2880
Fax: 804-674-2815

TO: Emilee Carpenter, Water Permit Writer
Department of Environmental Quality, Piedmont Regional Office

FROM: Mohsen Shahramfar, P.E., Deputy Field Director MS
Office of Drinking Water, East Central Field Office

DATE: August 19, 2009

SUBJECT: VPDES Application No. VA0088331 ■ Modification – Reclamation and Reuse

OWNER/APPLICANT: New Kent County

LOCATION OF DISCHARGE / ACTIVITY: near an unnamed tributary to Rumley Marsh, approximately 1.1 miles southeast of the intersection of I-64 and Route 155. The application involves reclamation and reuse of the treated wastewater from the Parham Landing STW at the infield irrigation ponds at the Colonial Downs racetracks and at the irrigation pond at the Brickshire Golf Course.

COMMENTS:

■ There are no public water supply intakes within 15 miles downstream of the discharge / activity.

□ The raw water intake for the _____ waterworks is located ___ miles downstream from the discharge. We recommend a minimum Reliability Class ___ for this facility [, which is] [the same as the existing Reliability Class] [more stringent than the existing Reliability Class].

□ The raw water intake for the _____ waterworks is located ___ miles downstream from the discharge.

□ Other comments: _____

cc: VDH – Central Office, ODW

Reviewer: Randall L. Morrissette