

February 28, 2023

Mr. Steven VanderPloeg Via Email: steven.a.vanderploeg@usace.army.mil Environmental Scientist
US Army Corps of Engineers, Norfolk District
Western Virginia Regulatory Section
9100 Arboretum Parkway, Suite 235
Richmond, VA 23236

Reference: Green Ridge Recycling and Disposal Facility (NAO-2018-0995 (Muddy Creek))

Supplemental Information to the Preliminary Jurisdictional Determination

Request Submitted September 29, 2022

Project No: 2017-890

Dear Mr. VanderPloeg:

On behalf of Green Ridge Recycling and Disposal Facility, LLC, Koontz Bryant Johnson Williams (KBJW) is submitting the enclosed supplemental information and supporting documentation as an Appendix to the Preliminary Jurisdictional Determination (PJD) request that was submitted to the US Army Corps of Engineers (USACE), Western Virginia Regulatory Section Office, on September 29, 2022. On November 2, 2022 an onsite visit with the US Army Corps of Engineers (USACE), Virginia Department of Environmental Quality (DEQ), Environmental Protection Agency (EPA), TRC Companies, and other project team members occurred to review the jurisdictional features identified within the study area.

The onsite visit included reviewing and confirming the Waters of the US (WOUS) including Wetlands. Based on the onsite visit, additional field data collection was warranted, and the wetland delineation mapping was modified as shown in *Enclosure 1*. The study area was modified to include delineating Pine Grove Road (approximately 0.6 miles) starting from Anderson Highway. The USACE aquatic resources table, Appendix 2 - Preliminary Jurisdictional Determination Form, has been updated to reflect the most current changes (*Enclosure 2*). The USACE requested additional data from three areas within the study area. These areas are identified by sampling numbers DP-5.501W, DP-5.502U, DP-EW5.3U, DP-E01U, and DP-EM-A01U as shown in Enclosure 1. Supplemental data is also being submitted for areas associated with the following data point locations *DP-G01U*, *DP-G02U*, *DP-M01U*, *and DP-PG01U*. Associated field data forms and representative site photos are provided in Enclosures 3 and 4 representing these areas. Additionally, the coordinate locations of sample points *DP-4*, *DP-7*, *DP-24*, *DP-25*, *DP-26*, *and DP-25* have been updated and have been provided in *Enclosure 3*. To determine if the site is experiencing normal climatic conditions the Antecedent Precipitation Tool was analyzed (*Enclosure 5*).



During the onsite visit, an area identified as stream reach 4.2 was reviewed. Due to a lack of wetland and stream characteristics on this day, additional onsite information was warranted for this area. A report titled Supplemental Information to the Preliminary Jurisdictional Determination Request submitted September 29, 2022 (Evaluation of the Area Surrounding Stream Reach 4.2) is provided as *Enclosure 6* to document and describe the characteristics of this area.

The USACE has requested KBJW to submit the wetland delineation information using the ORM database. ORM information has been completed and will be submitted as an attachment via email as part of this submittal. An ORM index map has been provided as *Exhibit 7*, identifying each feature and feature location.

Should you have any questions or need any additional information regarding this letter, please do not hesitate to contact me at e-mail: dkwasniewski@kbjwgroup.com or phone: (804) 338-0138.

Sincerely yours,

Koontz Bryant Johnson Williams

David Kwasniewski, PWD

Team Leader - Natural Resources

Enclosure:

- 1. Revised Waters of the US including wetlands delineation map
- 2. USACE aquatic resources table, Appendix 2 Preliminary Jurisdictional Determination Form
- 3. Field Data points
- 4. Representative Site Photographs
- 5. Antecedent Precipitation Tool data
- 6. Report titled Supplemental Information to the Preliminary Jurisdictional Determination Request submitted September 29, 2022 (Evaluation of the Area Surrounding Stream Reach 4.2)
- 7. ORM Index Map

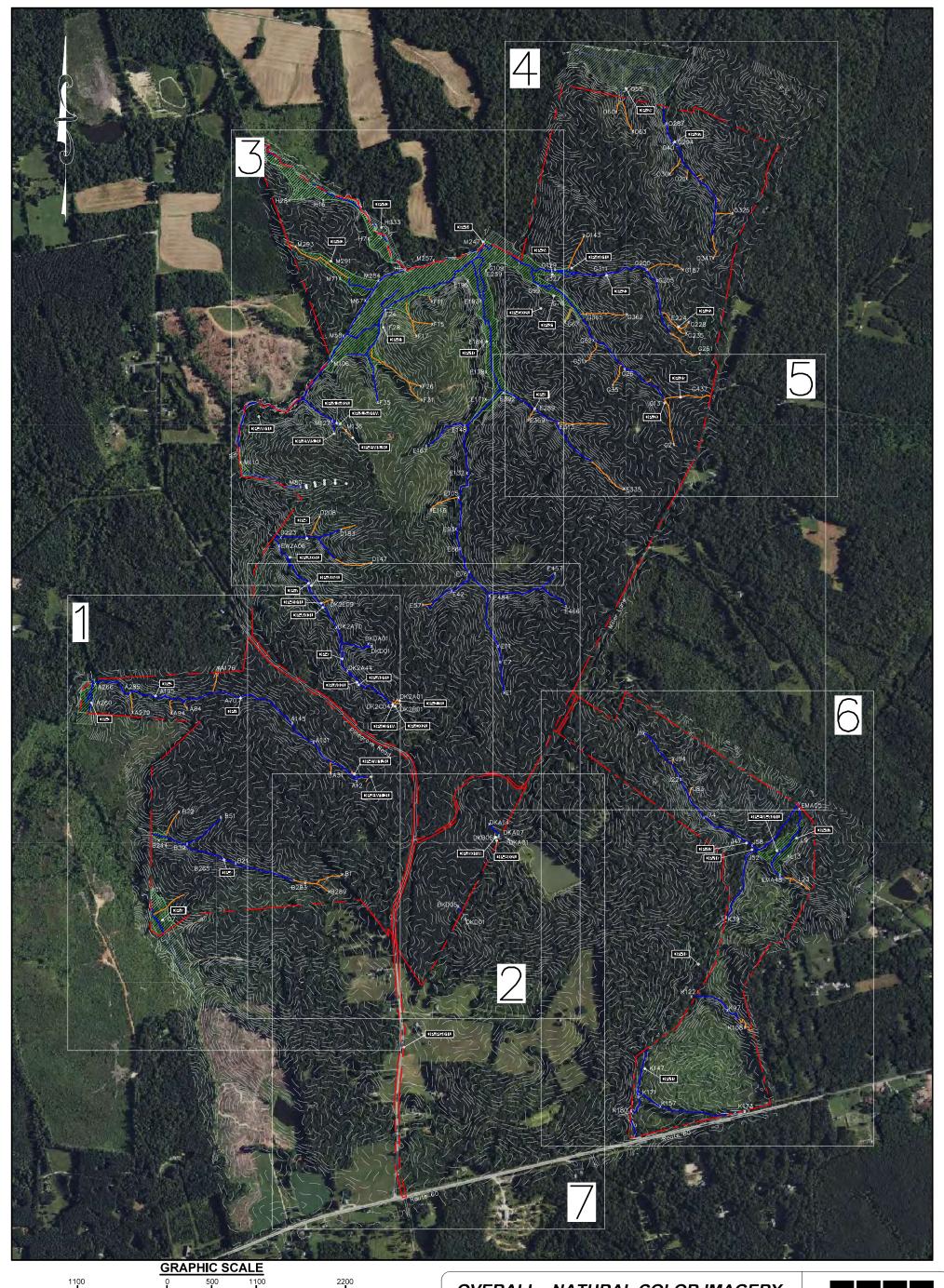


Enclosures



Enclosure 1

Revised Waters of the US including wetlands delineation map







Study Area (+/- 1,181 acres) Ex. Contours (5' Contour Interval) Field Data Point Location

⊕ DP-5

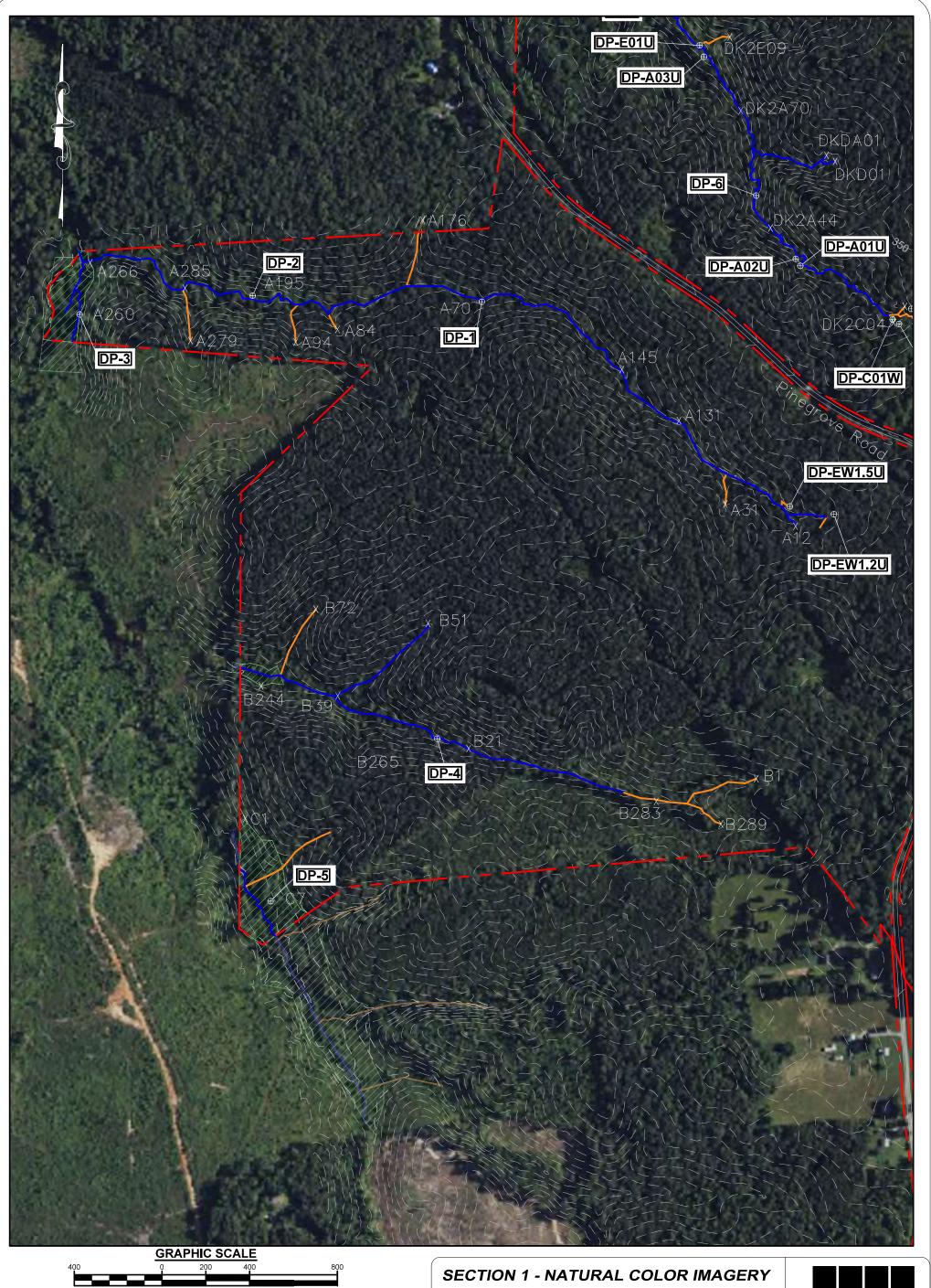
Palustrine Forested (PFO) Wetlands Perennial/Intermittent (R3/R4) Channel Ephemeral (R6) Channel

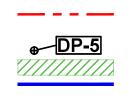
44.4 acres 49,786 LF 16,101 LF

OVERALL - NATURAL COLOR IMAGERY WETLAND DELINEATION MAP CUMBERLAND COUNTY, VIRGINIA HAMILTON DISTRICT

PROJECT: DATE: REVISED SCALE: 2017-890 Aug 22, 2018 Feb 23, 2023 1"=1100'







LEGEND
Study Area (+/- 1,181 acres)
Ex. Contours (5' Contour Interval)
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Perennial/Intermittent (R3/R4) Channel
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44.4 acres

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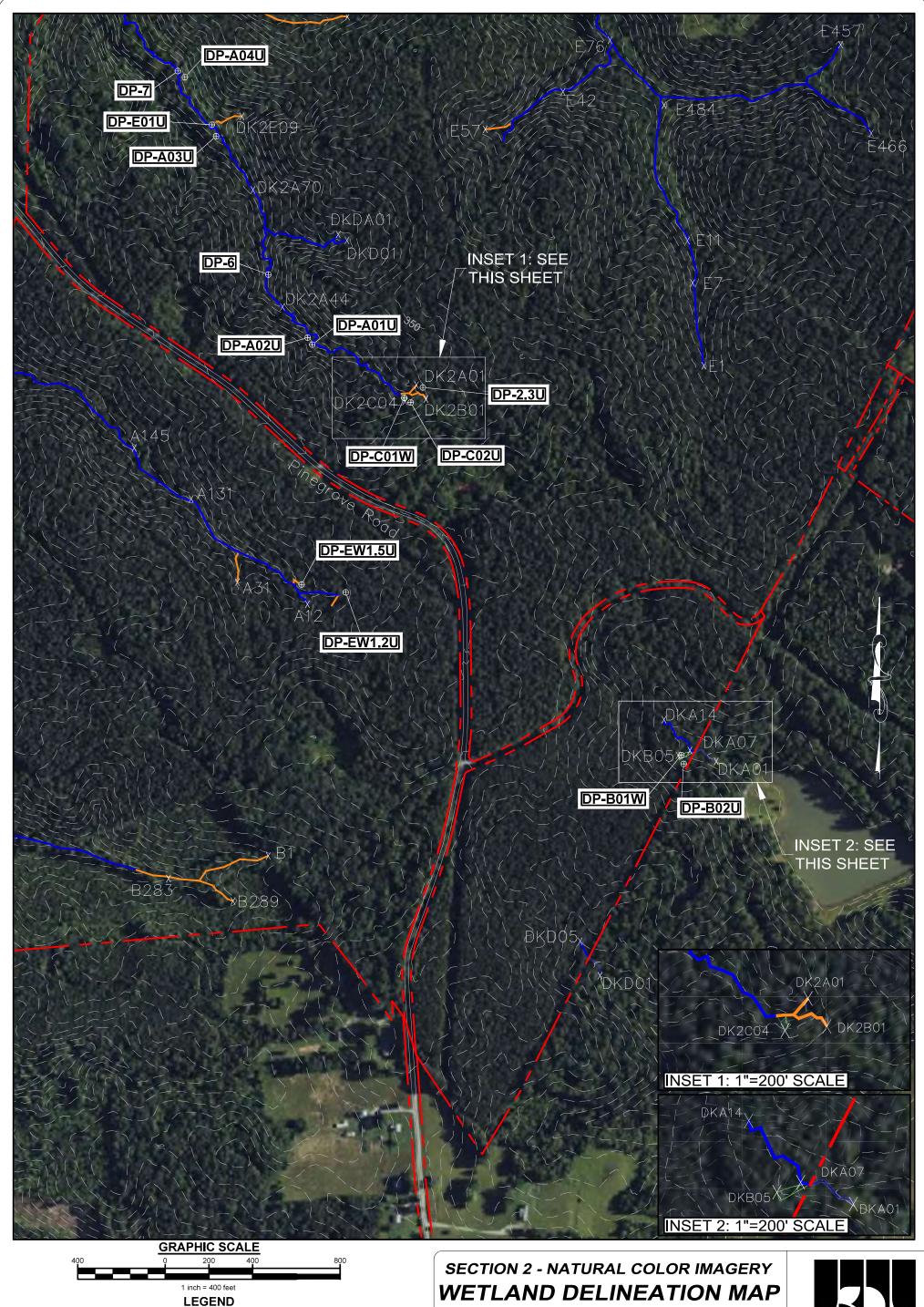
16,101 LF

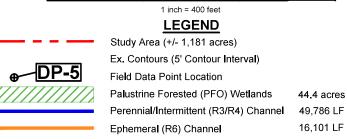
WETLAND DELINEATION MAP CUMBERLAND COUNTY, VIRGINIA HAMILTON DISTRICT

 PROJECT:
 DATE:
 REVISED
 SCALE:

 2017-890
 Aug 22, 2018
 Feb 23, 2023
 1" = 400"



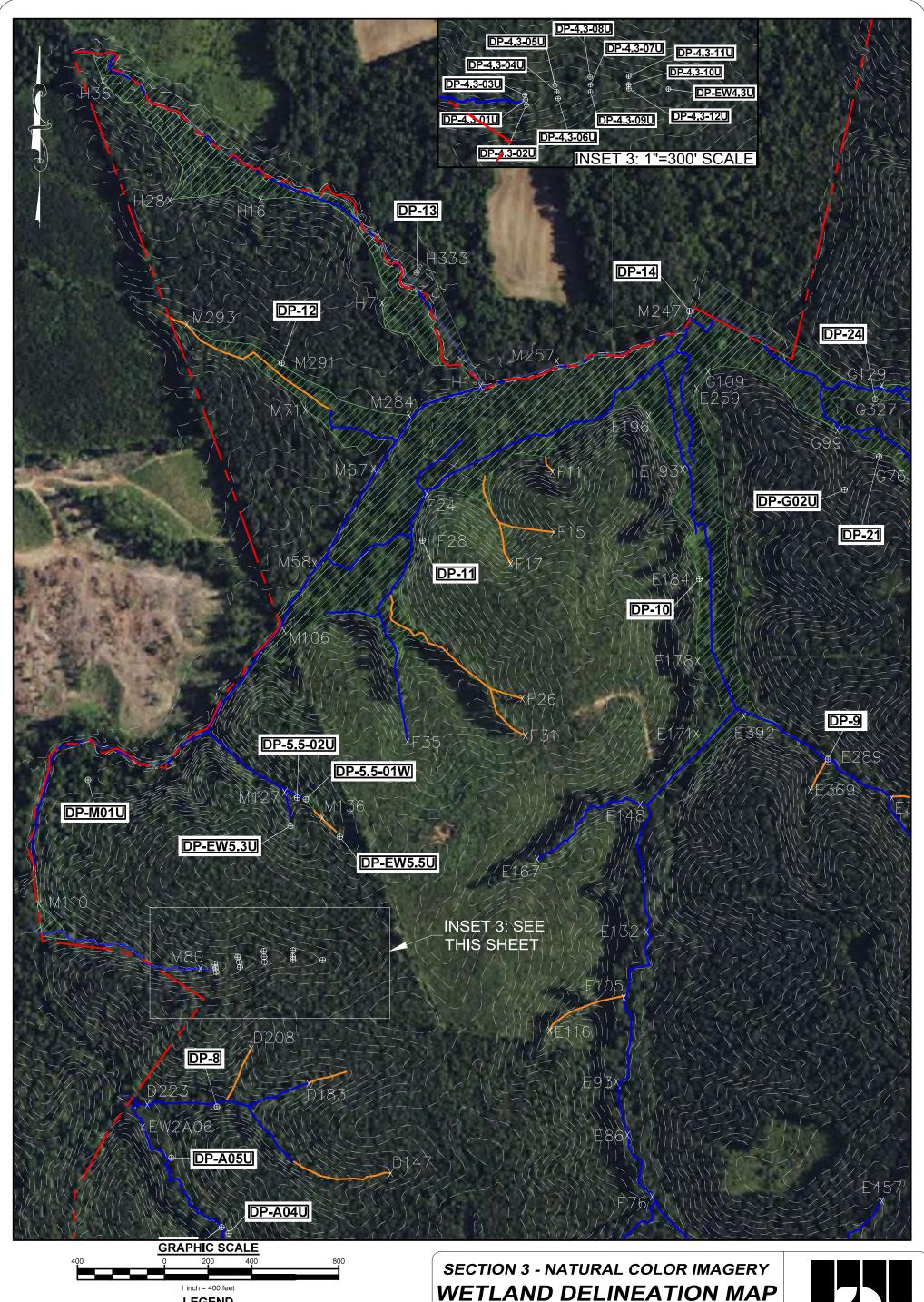


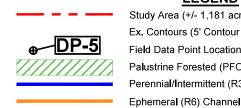


CUMBERLAND COUNTY, VIRGINIA HAMILTON DISTRICT

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LEGEND Study Area (+/- 1,181 acres) Ex. Contours (5' Contour Interval) Field Data Point Location Palustrine Forested (PFO) Wetlands Perennial/Intermittent (R3/R4) Channel

44.4 acres

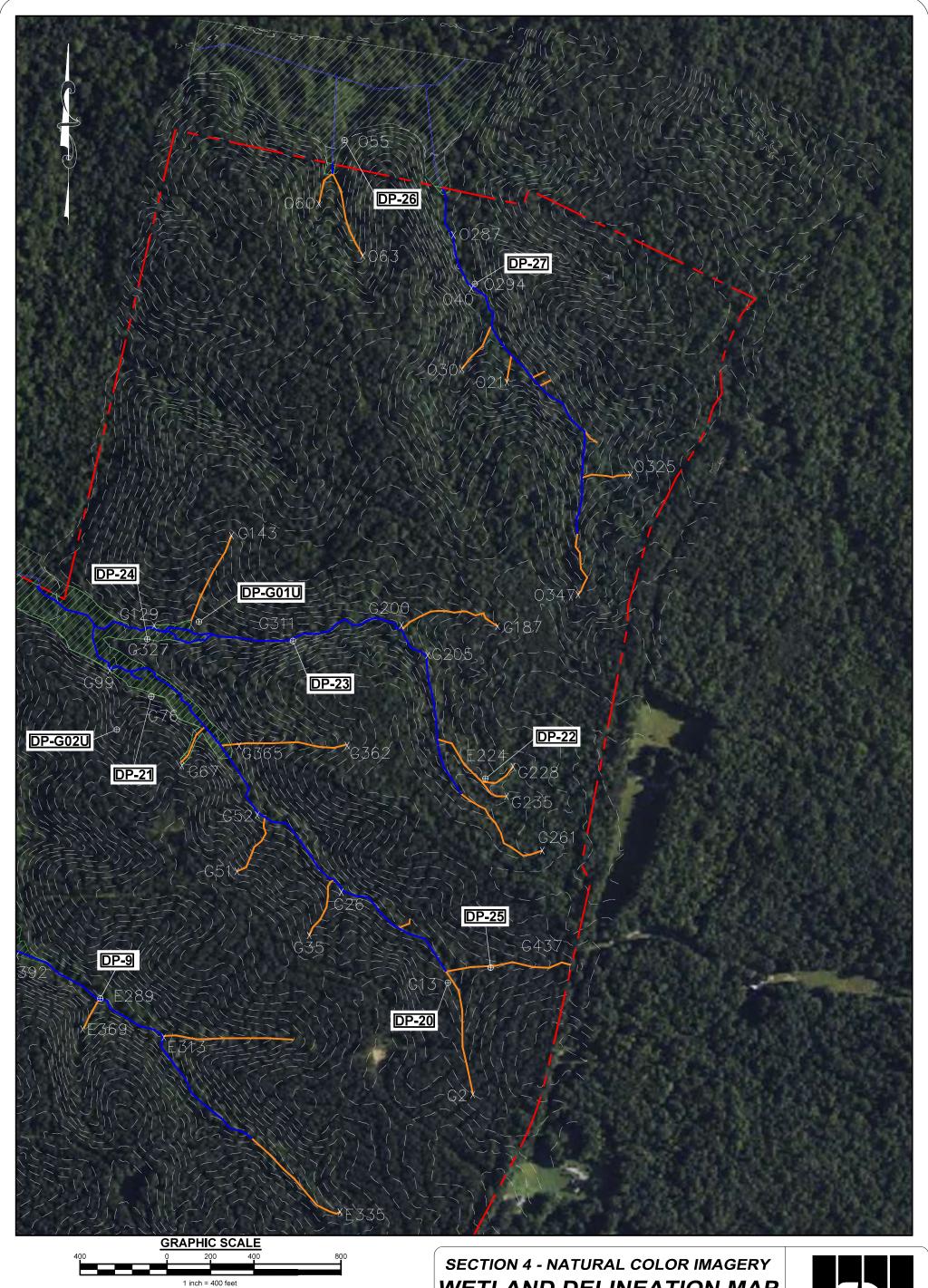
49,786 LF

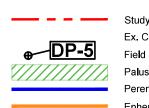
16,101 LF

CUMBERLAND COUNTY, VIRGINIA HAMILTON DISTRICT

PROJECT: DATE: REVISED SCALE: 2017-890 Aug 22, 2018 Feb 23, 2023 1'' = 400'







1 inch = 400 feet

LEGEND

Study Area (+/- 1,181 acres)

Ex. Contours (5' Contour Interval)

Field Data Point Location

Palustrine Forested (PFO) Wetlands

Perennial/Intermittent (R3/R4) Channel

49,786 LF

Ephemeral (R6) Channel

16,101 LF

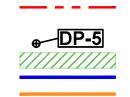
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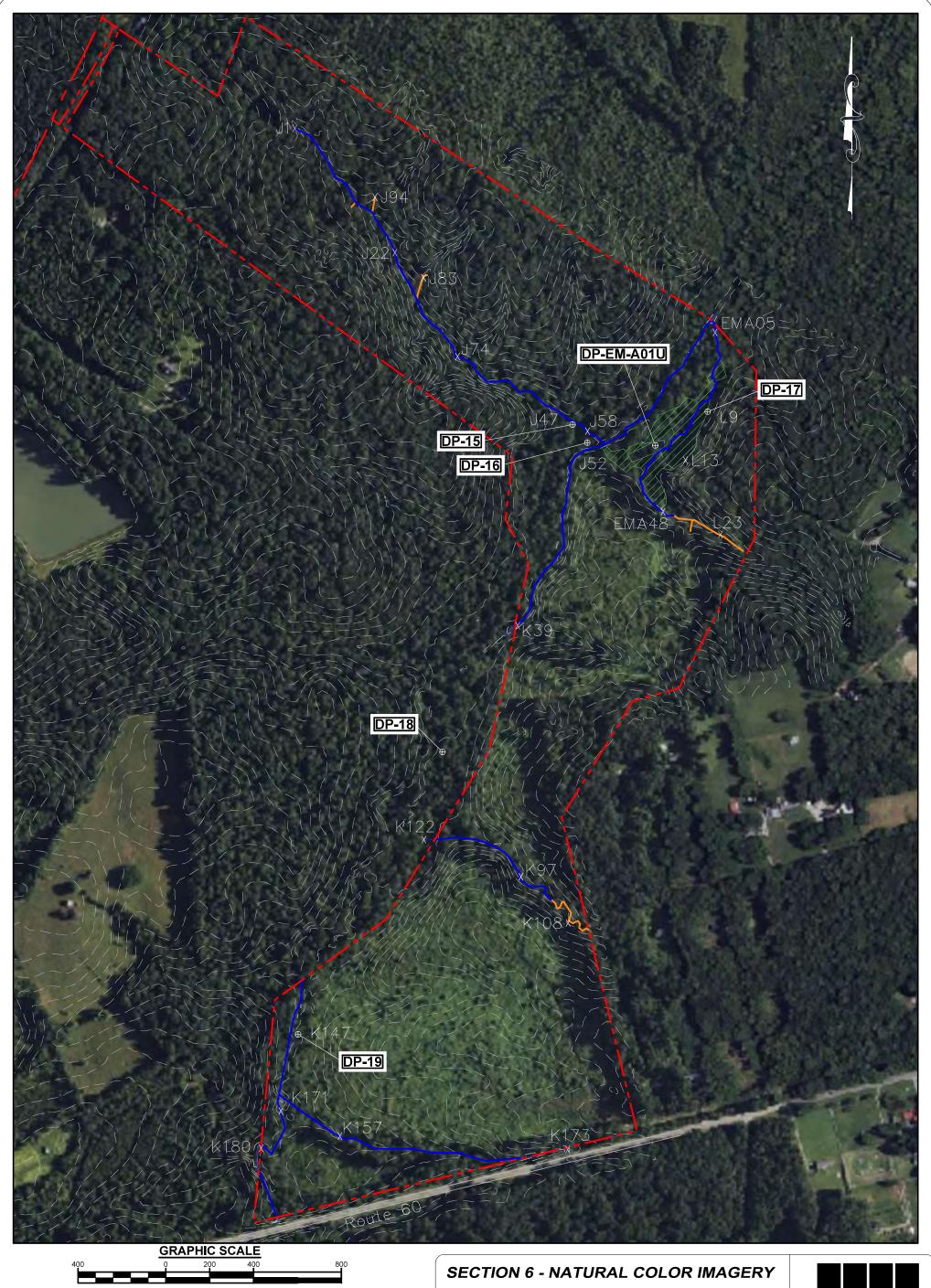
44.4 acres

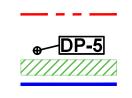
16,101 LF

WETLAND DELINEATION MAP CUMBERLAND COUNTY, VIRGINIA HAMILTON DISTRICT

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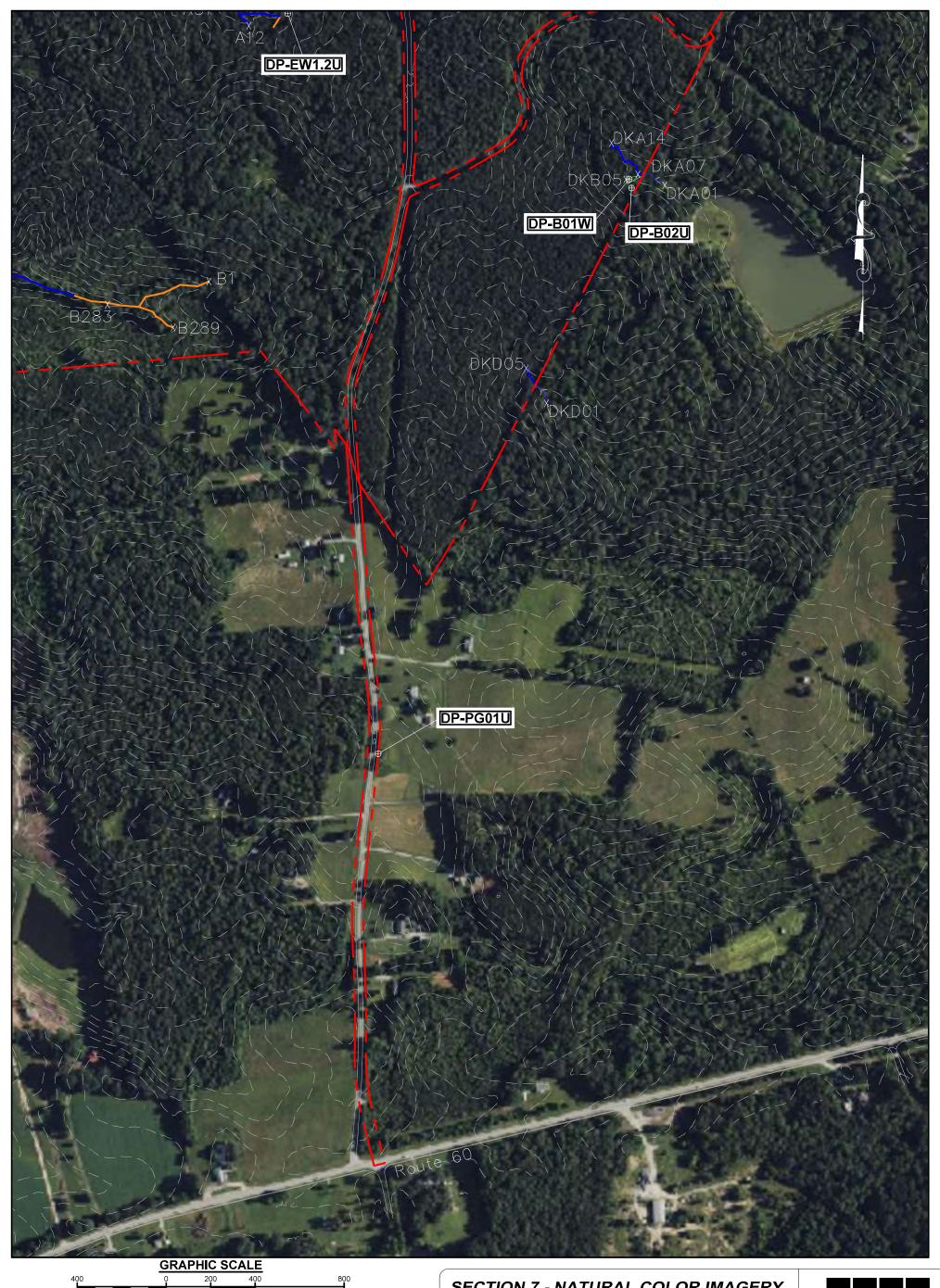
16,101 LF

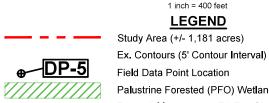
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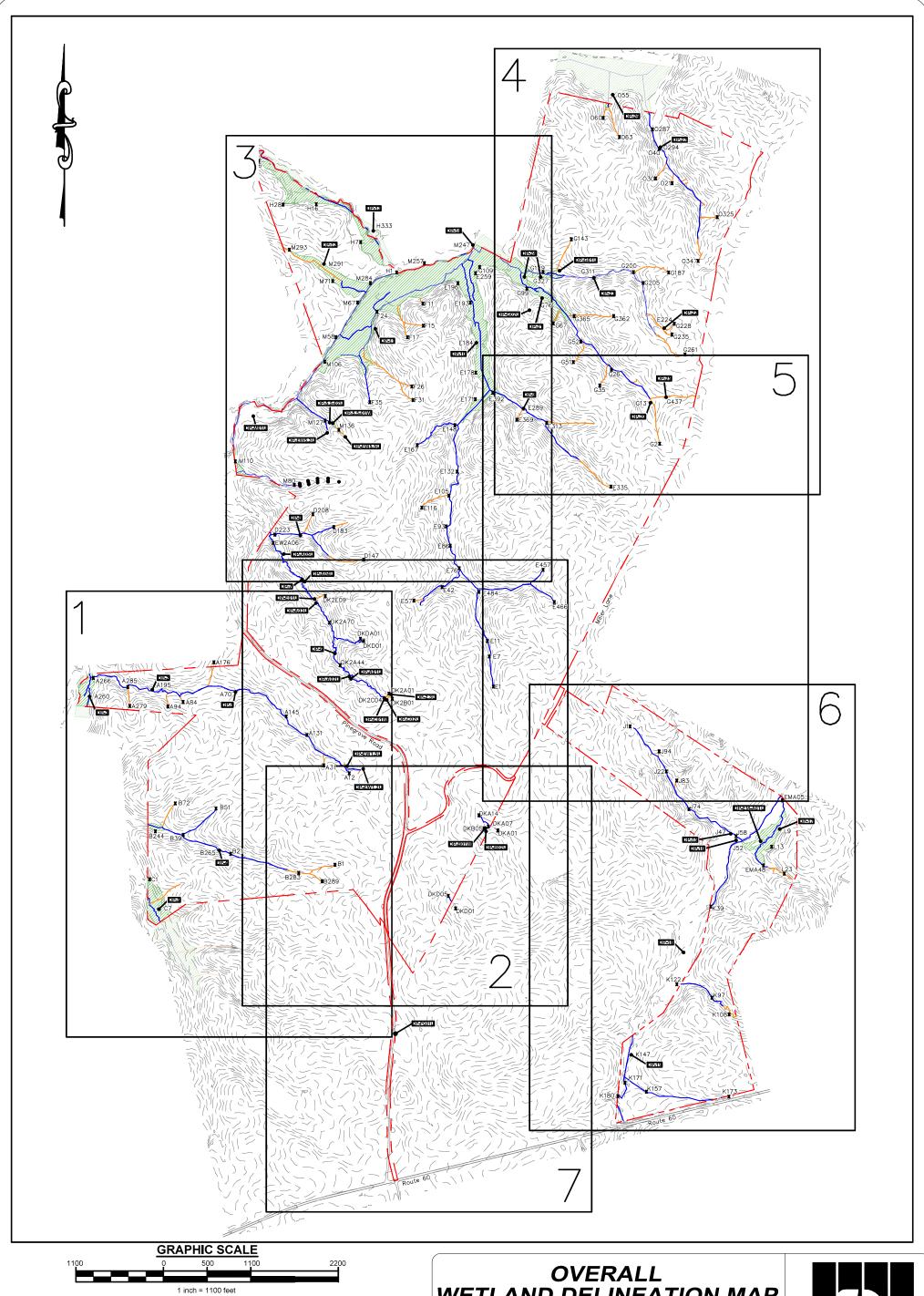
49,786 LF

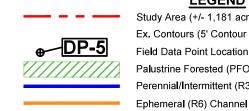
16,101 LF

SECTION 7 - NATURAL COLOR IMAGERY WETLAND DELINEATION MAP CUMBERLAND COUNTY, VIRGINIA HAMILTON DISTRICT

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LEGEND Study Area (+/- 1,181 acres) Ex. Contours (5' Contour Interval) Field Data Point Location Palustrine Forested (PFO) Wetlands Perennial/Intermittent (R3/R4) Channel

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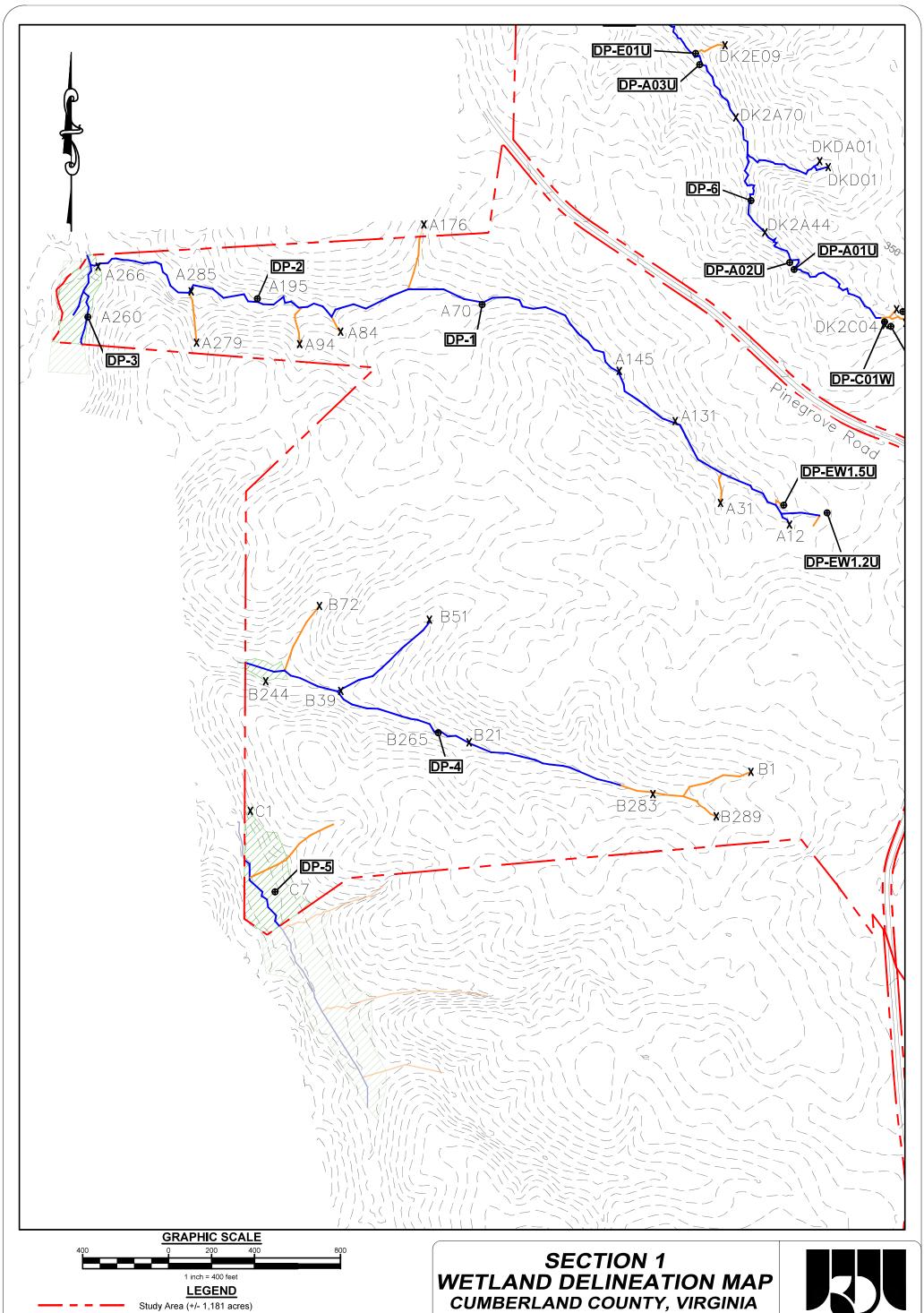
49,786 LF

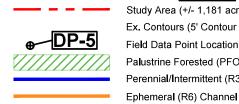
16,101 LF

WETLAND DELINEATION MAP CUMBERLAND COUNTY, VIRGINIA HAMILTON DISTRICT

PROJECT: DATE: REVISED SCALE: 2017-890 Aug 22, 2018 Feb 23, 2023 1"=1100'







Ex. Contours (5' Contour Interval) Field Data Point Location Palustrine Forested (PFO) Wetlands Perennial/Intermittent (R3/R4) Channel

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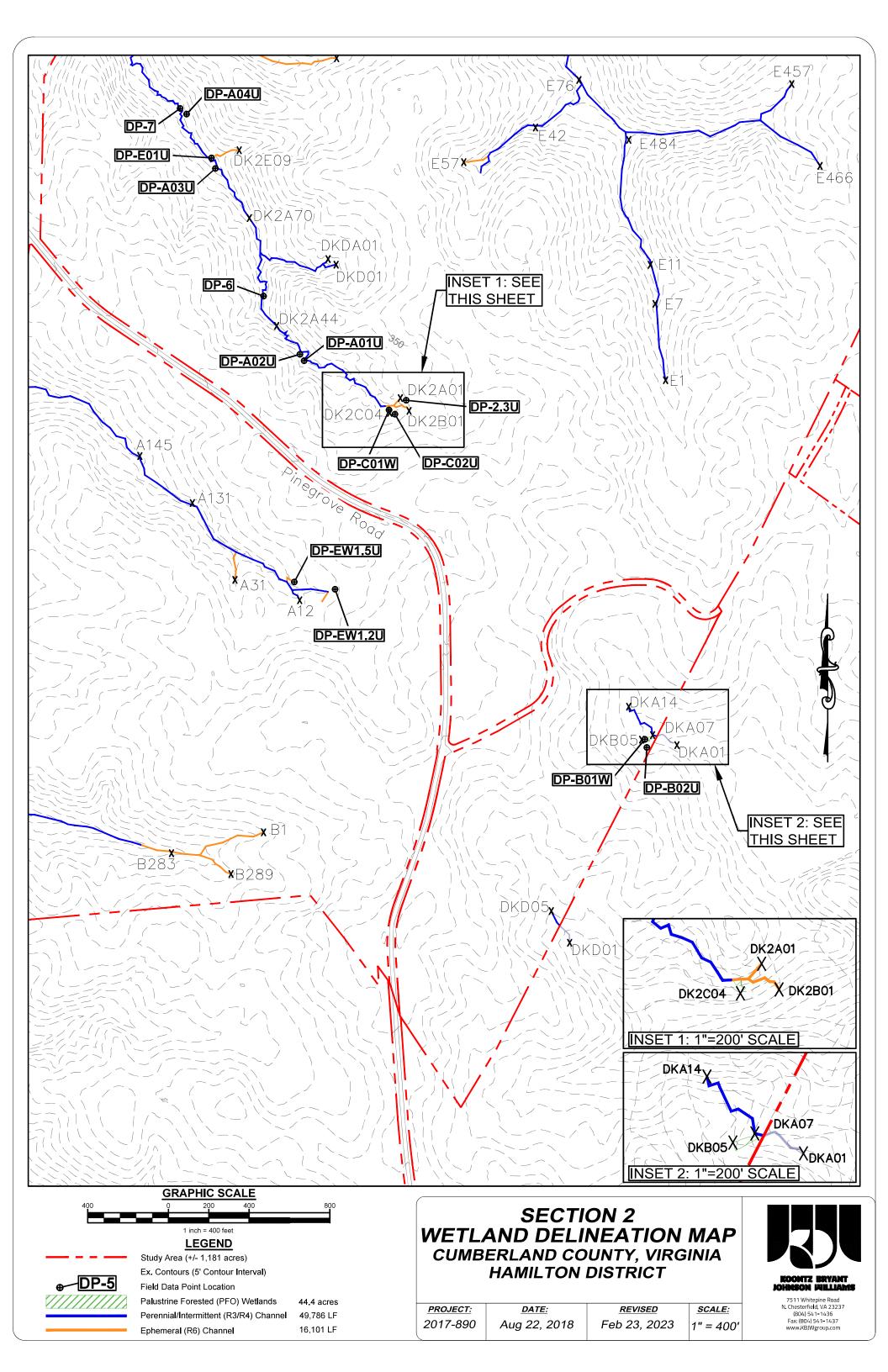
49,786 LF

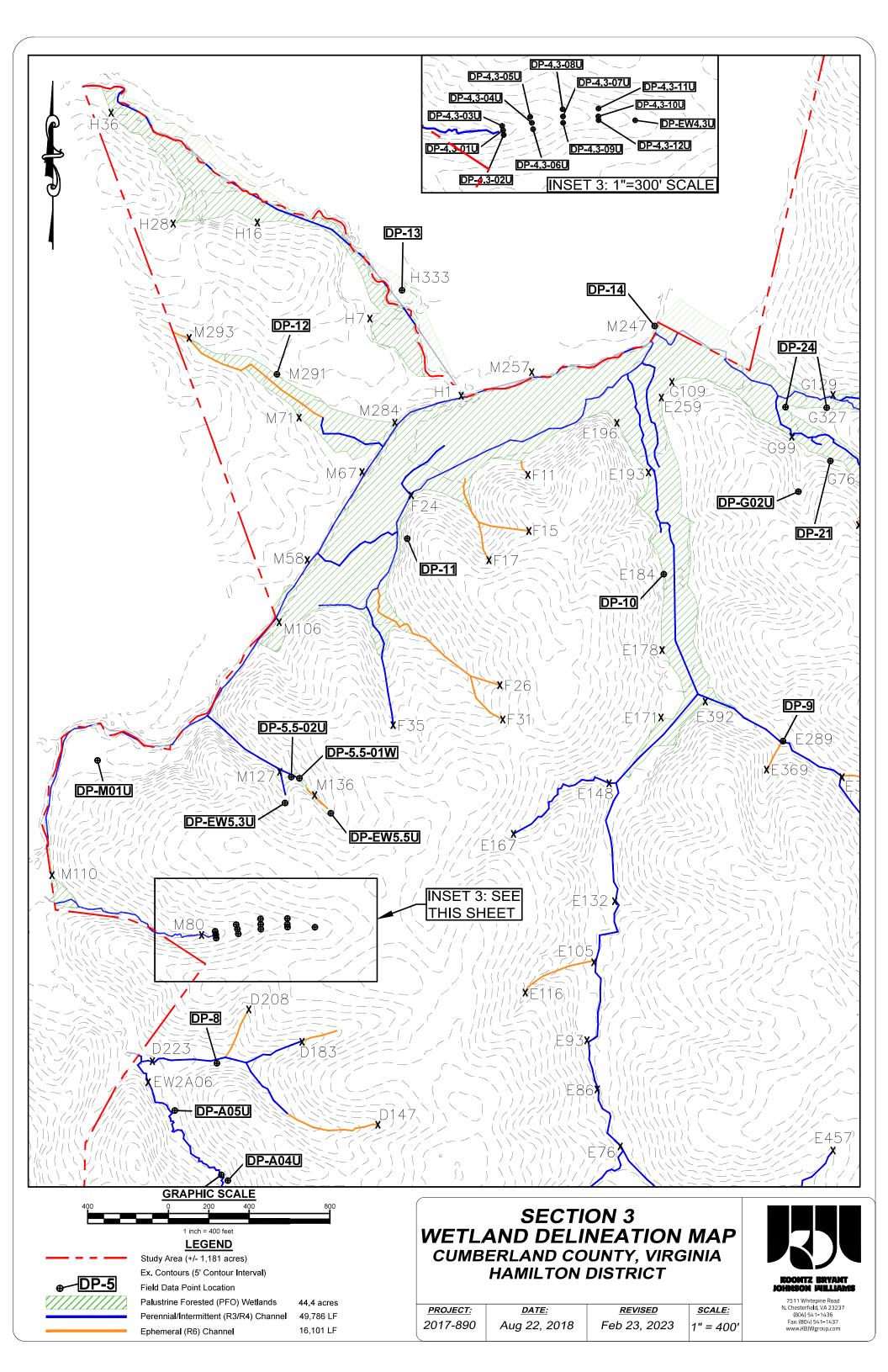
16,101 LF

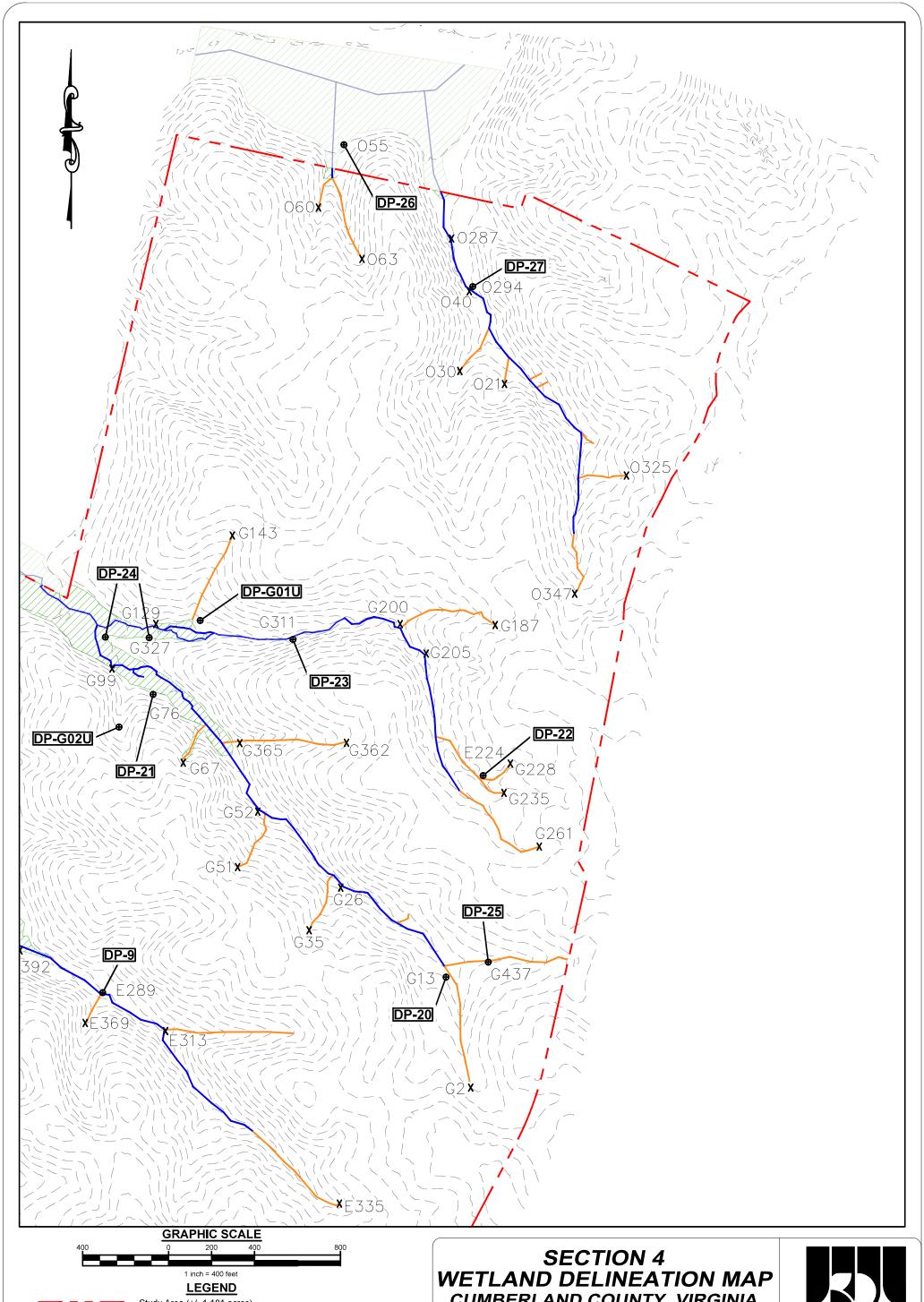
HAMILTON DISTRICT

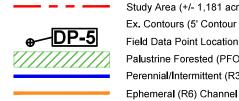
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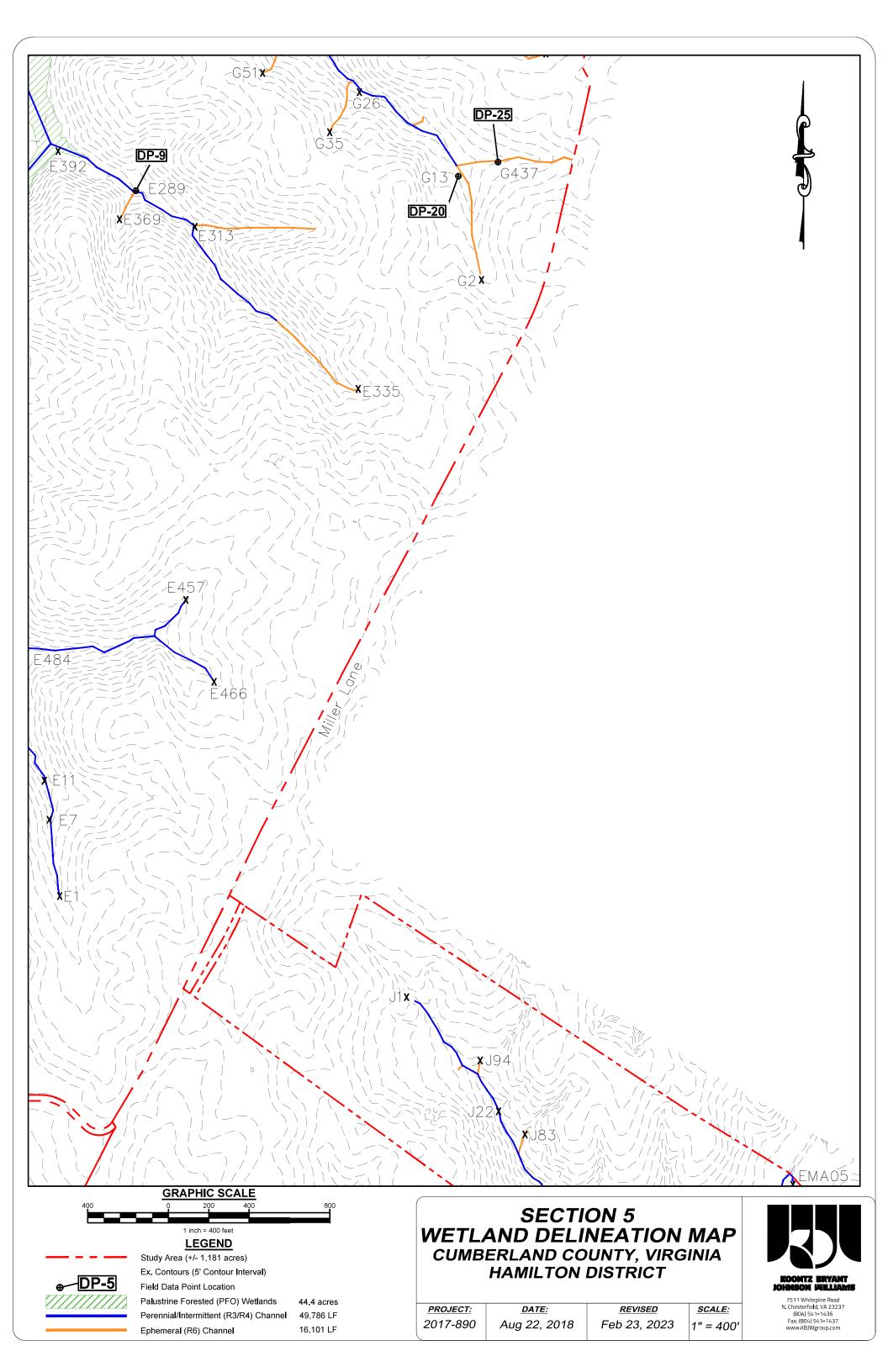
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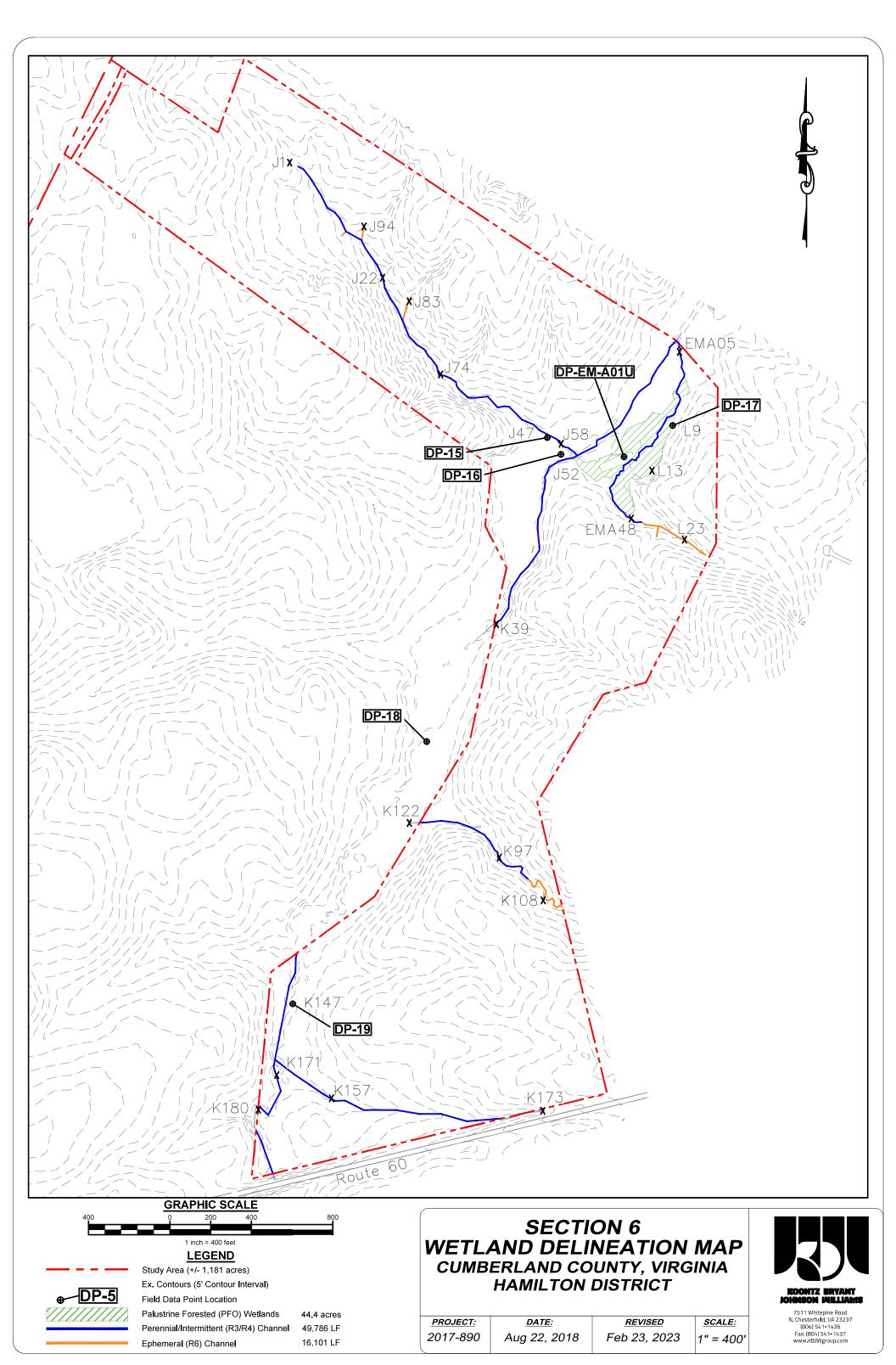
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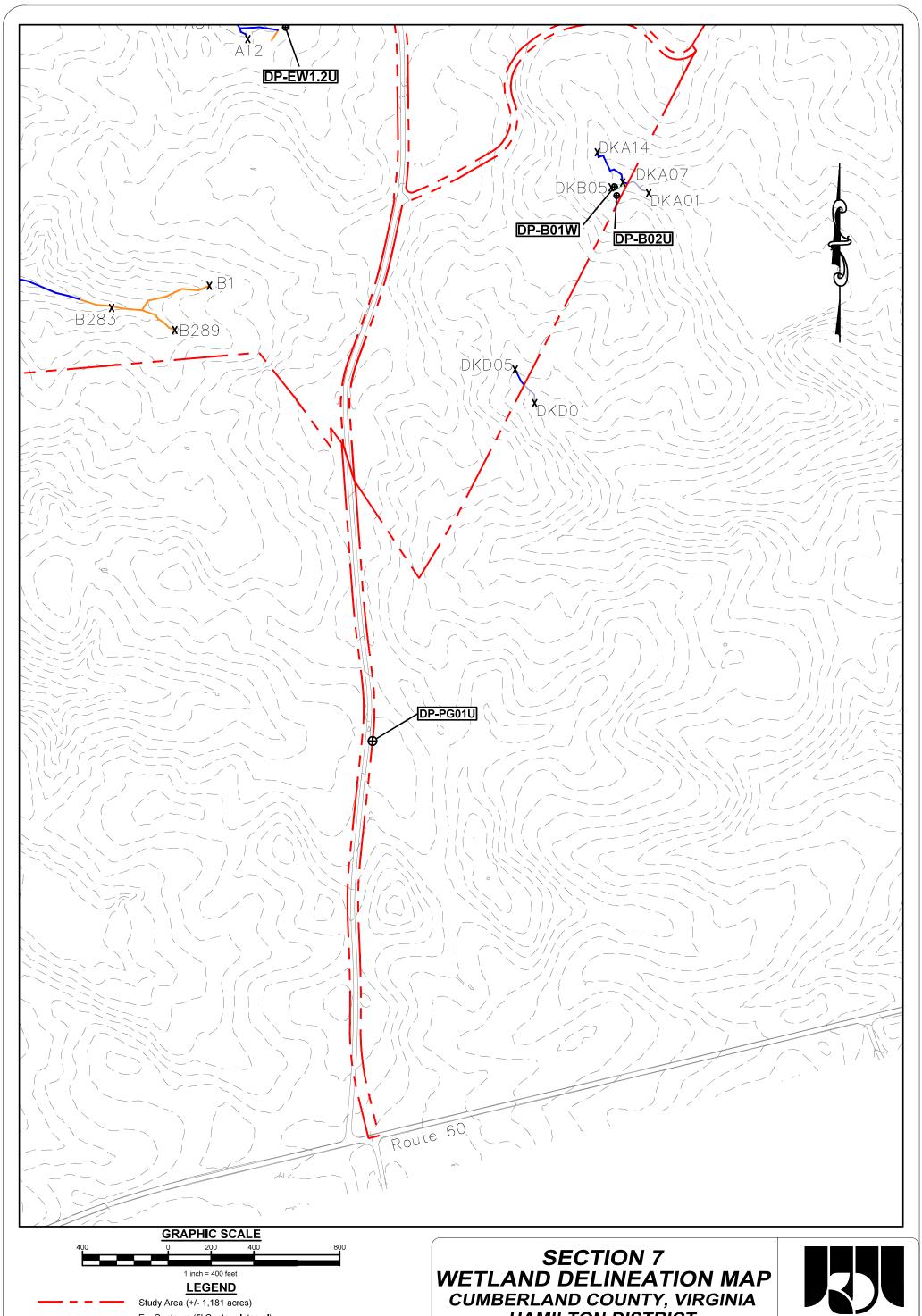
CUMBERLAND COUNTY, VIRGINIA HAMILTON DISTRICT

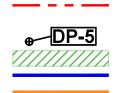
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Ex. Contours (5' Contour Interval)

Field Data Point Location Palustrine Forested (PFO) Wetlands Perennial/Intermittent (R3/R4) Channel Ephemeral (R6) Channel

44.4 acres 49,786 LF 16,101 LF

HAMILTON DISTRICT

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Enclosure 2

USACE Aquatic Resources Table

Appendix 2 - Preliminary Jurisdictional Determination Form

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATROY JURISDICTION

Site	Latitude	Longitude	Estimated amount of aquatic	Type of aquatic resource (i.e.,	Geographic authority to which the aquatic
		_	resource in review area (acreage		resource "may be" subject (i.e., Section
Number	(Decimal Degrees)	(Decimal Degrees)	and linear feet, if applicable)	wetland vs. non-wetland waters)	404 or Section 10/404)
64.4	27 5 601 7000	70 12070200		Nie - Marelle - d Marel	· · · · · · · · · · · · · · · · · · ·
SA.1	37.56017000	-78.13879200	304.52 lf	Non-Wetland Waters	Section 404
SA.2	37.56003300	-78.13282700	3972.96 lf	Non-Wetland Waters	Section 404
SA.3	37.56045600	-78.13348900	253.11 lf	Non-Wetland Waters	Section 404
SA.4	37.55739100	-78.12770200	47.52 lf	Non-Wetland Waters	Section 404
SA.5	37.55724600	-78.12733200	180.87 lf	Non-Wetland Waters	Section 404
SA.6	37.55714200	-78.12708000	58.93 lf	Non-Wetland Waters	Section 404
	37.55717000				
SA.7		-78.12757800	67.44 lf	Non-Wetland Waters	Section 404
SA.8	37.55756900	-78.12861500	142.7 lf	Non-Wetland Waters	Section 404
SA.9	37.55968100	-78.34791000	76.05 lf	Non-Wetland Waters	Section 404
SA.10	37.55967900	-78.13541500	187 lf	Non-Wetland Waters	Section 404
SA.11	37.55977400	-78.13706000	236.8 lf	Non-Wetland Waters	Section 404
SA.12	37.55977800	-78.13877900	264.68 lf	Non-Wetland Waters	Section 404
	37.13328100	-78.13328100			Section 404
SB.1			1884.61 lf	Non-Wetland Waters	
SB.2	37.55569000	-78.13540100	344.64 lf	Non-Wetland Waters	Section 404
SB.3	37.55535900	-78.13396700	550.42 lf	Non-Wetland Waters	Section 404
	37.55364500	-78.12944700	481.89 lf	Non-Wetland Waters	Section 404
SB.4					
SB.5	37.55384500	-78.12873400	353.61 lf	Non-Wetland Waters	Section 404
SC.1	37.55241100	-78.13600200	383.46 lf	Non-Wetland Waters	Section 404
SC.2	37.55293500	-78.13551200	471.77 lf	Non-Wetland Waters	Section 404
-					
SD.1	37.56247100	-78.12846400	3127.02 lf	Non-Wetland Waters	Section 404
SD.2	37.56535500	-78.12925300	865.27 lf	Non-Wetland Waters	Section 404
SD.3	37.56571700	-78.12923900	265.1 lf	Non-Wetland Waters	Section 404
SD.4	37.56546000	-78.12861700	299.28 lf	Non-Wetland Waters	Section 404
SD.5	37.56568300	-78.12784000	183.72 lf	Non-Wetland Waters	Section 404
SD.6	37.56439800	-78.12763000	474.43 lf	Non-Wetland Waters	Section 404
SD.7	37.56319600	-78.12873200	131.08 lf	Non-Wetland Waters	Section 404
SD.8	37.56167100	-78.12752400	438.02 lf	Non-Wetland Waters	Section 404
SD.9	37.56169200	-78.12704600	37.66 lf	Non-Wetland Waters	Section 404
				<u> </u>	
SD.10	37.55975400	-78.12587800	91.3 lf	Non-Wetland Waters	Section 404
SD.11	37.55973900	-78.12574000	94.88 lf	Non-Wetland Waters	Section 404
SDK-A	37.55539300	-78.12169300	245.82 lf	Non-Wetland Waters	Section 404
_					
SDK-D	37.55274800	-78.12317100	84.32 lf	Non-Wetland Waters	Section 404
SE.1	37.56733300	-78.12278900	5956.03 lf	Non-Wetland Waters	Section 404
SE.2	37.57414200	-78.12216400	595.66 lf	Non-Wetland Waters	Section 404
SE.3	37.56931400	-78.11925600	1497.57 lf	Non-Wetland Waters	Section 404
SE.4	37.56916000	-78.11787300	600.66 If	Non-Wetland Waters	Section 404
SE.5	37.56737200	-78.11682600	544.87 lf	Non-Wetland Waters	Section 404
SE.6	37.56947500	-78.12004100	150.04 lf	Non-Wetland Waters	Section 404
SE.7	37.56348100	-78.12020000	1072.65 lf	Non-Wetland Waters	Section 404
SE.8	37.56382300	-78.11932400	250.97 lf	Non-Wetland Waters	Section 404
SE.9	37.56354400	-78.12345800	650.3 lf	Non-Wetland Waters	Section 404
SE.10	37.56301900	-78.12432500	105.24 lf	Non-Wetland Waters	Section 404
SE.11	37.56307000	-78.12445900	127.24 lf	Non-Wetland Waters	Section 404
SE.12	37.56656000	-78.12376700	398.43 lf	Non-Wetland Waters	Section 404
SE.13	37.56895400	-78.12374700	670.55 lf	Non-Wetland Waters	Section 404
SE.14	37.57257200	-78.12197100	48.47 lf	Non-Wetland Waters	Section 404
SF.1	37.57359100	-78.12504200	3231.94 lf	Non-Wetland Waters	Section 404
SF.2	37.57339000	-78.12432400	79.32 lf	Non-Wetland Waters	Section 404
SF.3	37.57273500	-78.12514700	433.92 lf	Non-Wetland Waters	Section 404
SF.4	37.57260300	-78.12471400	253.98 lf	Non-Wetland Waters	Section 404
SF.5	37.57078800	-78.12557800	994.64 lf	Non-Wetland Waters	Section 404
SF.6	37.57050700	-78.12498100	152.93 lf	Non-Wetland Waters	Section 404
SF.7	37.56733300	-78.12278900	616.82 lf	Non-Wetland Waters	Section 404
		-78.11648200		Non-Wetland Waters	
SG.1	37.57425800		3145.82 lf		Section 404
SG.2	37.57495600	-78.11813700	434.53 lf	Non-Wetland Waters	Section 404
SG.3	37.57453100	-78.11432100	499.88 lf	Non-Wetland Waters	Section 404
SG.4	37.57225600	-78.11401100	438.67 lf	Non-Wetland Waters	Section 404
SG.5	37.57241100	-78.11000000	175.51 lf	Non-Wetland Waters	Section 404
SG.6	37.57177500	-78.11355600	508.62 lf	Non-Wetland Waters	Section 404
SG.7	37.57264400	-78.11779200	2482.76 lf	Non-Wetland Waters	Section 404
SG.8	37.57288500	-78.11696900	579.22 lf	Non-Wetland Waters	Section 404
SG.9	37.57057800	-78.11504500	77.1 lf	Non-Wetland Waters	Section 404
SG.10	37.57009100	-78.11328400	687.78 lf	Non-Wetland Waters	Section 404
SG.11	37.56923000	-78.11415200	589.13 lf	Non-Wetland Waters	Section 404
SG.12	37.57078600	-78.11631400	291.45 lf	Non-Wetland Waters	Section 404
SG.13	37.57158000	-78.11742900	307.63 lf	Non-Wetland Waters	Section 404
SG.14	37.57287200	-78.11841160	200.43 lf	Non-Wetland Waters	Section 404
SG.15	37.57371300	-78.11929500	71.29 lf	Non-Wetland Waters	Section 404
SH.1	37.57675400	-78.12796400	1202.45 lf	Non-Wetland Waters	Section 404
SJ.1	37.55580700	-78.11281000	1615.56 lf	Non-Wetland Waters	Section 404
SJ.2	37.55670600	-78.11336000	127.93 lf	Non-Wetland Waters	Section 404
SJ.3	37.55770800	-78.11407700	68.42 If	Non-Wetland Waters	Section 404
SJ.4	37.55814600	-78.11474100	539.31 lf	Non-Wetland Waters	Section 404

SK.1 37.55314600 -78.111207400 2910.06 lf Non-Wetland Waters Section 404 Sk.2 37.54960500 -78.11207400 681.7 lf Non-Wetland Waters Section 404 Sk.3 37.54881100 -78.11104300 32.56 lf Non-Wetland Waters Section 404 Sk.1 37.55489900 -78.119175000 1121.2 lf Non-Wetland Waters Section 404 Sl.1 37.55485800 -78.1091700 1181.2 lf Non-Wetland Waters Section 404 Sl.2 37.55368400 -78.10911700 53.81 lf Non-Wetland Waters Section 404 Sh.1 37.55368400 -78.10911700 53.81 lf Non-Wetland Waters Section 404 Sh.2 37.55953000 -78.12785700 3499.15 lf Non-Wetland Waters Section 404 Sh.3 37.569513000 -78.12786300 145.16 lf Non-Wetland Waters Section 404 Sh.5 37.57384000 -78.12786300 139.91 lf Non-Wetland Waters Section 404 Sh.6 37.574788000 -78.128900 90.66 lf <		27.5577.522	70.4440000		T	
SK2 37.54960500 -78.11207400 681.7 lf Non-Wetland Waters Section 404 SK3 37.5488100 -78.11104300 325.64 lf Non-Wetland Waters Section 404 SK4 37.5488100 -78.11375000 1212.47 lf Non-Wetland Waters Section 404 SL1 37.55485800 -78.10919700 1181.22 lf Non-Wetland Waters Section 404 SL2 37.55363400 -78.10911700 53.81 lf Non-Wetland Waters Section 404 SM.1 37.553636400 -78.10911700 53.81 lf Non-Wetland Waters Section 404 SM.1 37.559358300 -78.12905900 539.08 lf Non-Wetland Waters Section 404 SM.2 37.56957300 -78.1286300 145.16 lf Non-Wetland Waters Section 404 SM.4 37.56913500 -78.13104600 882.37 lf Non-Wetland Waters Section 404 SM.5 37.57384000 -78.1320400 882.37 lf Non-Wetland Waters Section 404 SM.6 37.57478400 -78.122900 900.61 lf Non-W	SJ.5	37.55771500	-78.11440900	29.6 lf	Non-Wetland Waters	Section 404
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SM.3 37.56891000 -78.12786300 145.16 lf Non-Wetland Waters Section 404 SM.4 37.56913500 -78.12845300 130.91 lf Non-Wetland Waters Section 404 SM.5 37.57384000 -78.1270100 396.24 lf Non-Wetland Waters Section 404 SM.6 37.57384000 -78.12895900 900.66 lf Non-Wetland Waters Section 404 SO.1 37.57768650 -78.1322700 1848.58 lf Non-Wetland Waters Section 404 SO.2 37.57751800 -78.11229500 65.82 lf Non-Wetland Waters Section 404 SO.3 37.57751800 -78.11279900 55.03 lf Non-Wetland Waters Section 404 SO.3 37.5761300 -78.11208400 78.3 lf Non-Wetland Waters Section 404 SO.5 37.5751200 -78.1124600 38.1 lf Non-Wetland Waters Section 404 SO.6 37.57751200 -78.11224600 308.14 lf Non-Wetland Waters Section 404 SO.7 37.5751300 -78.11336800 125 lf Non-Wetla	SM.1	37.57235800	-78.12775700	3499.15 lf	Non-Wetland Waters	Section 404
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SM.5 37.56735200 -78.13104600 882.37 lf Non-Wetland Waters Section 404 SM.6 37.57384000 -78.12730100 396.24 lf Non-Wetland Waters Section 404 SM.7 37.57478400 -78.12895900 900.66 lf Non-Wetland Waters Section 404 SO.1 37.5774800 -78.11290500 65.82 lf Non-Wetland Waters Section 404 SO.2 37.57741200 -78.11279900 58.03 lf Non-Wetland Waters Section 404 SO.4 37.57671300 -78.11228400 78.3 lf Non-Wetland Waters Section 404 SO.5 37.57621300 -78.1128400 228.76 lf Non-Wetland Waters Section 404 SO.6 37.5751200 -78.11224600 308.14 lf Non-Wetland Waters Section 404 SO.6 37.57784300 -78.11334400 228.76 lf Non-Wetland Waters Section 404 SO.8 37.57784300 -78.11615600 44.09 lf Non-Wetland Waters Section 404 SO.10 37.59599900 -78.11615600 40.65 lf Non	SM.3	37.56891000	-78.12786300	145.16 lf	Non-Wetland Waters	Section 404
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SO.4 37.57671300 -78.11208400 78.3 lf Non-Wetland Waters Section 404 SO.5 37.57623800 -78.11184000 228.76 lf Non-Wetland Waters Section 404 SO.6 37.57511200 -78.11224600 308.14 lf Non-Wetland Waters Section 404 SO.7 37.57759700 -78.11336800 125 lf Non-Wetland Waters Section 404 SO.8 37.57784300 -78.11384400 240.43 lf Non-Wetland Waters Section 404 SO.9 37.58013000 -78.11615600 44.09 lf Non-Wetland Waters Section 404 SO.10 37.57953900 -78.11596000 406.5 lf Non-Wetland Waters Section 404 SO.11 37.57990700 -78.11631300 156.25 lf Non-Wetland Waters Section 404 WA 37.55998400 -78.13901900 1.26 ac Wetland Section 404 WB 37.555258200 -78.13593000 0.30 ac Wetland Section 404 WD 37.55969200 -78.125000 0.01 ac Wetland Section 40	SO.2	37.57751800	-78.11290500	65.82 lf	Non-Wetland Waters	Section 404
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SO.6 37.57511200 -78.11224600 308.14 lf Non-Wetland Waters Section 404 SO.7 37.57759700 -78.11336800 125 lf Non-Wetland Waters Section 404 SO.8 37.57784300 -78.11384400 240.43 lf Non-Wetland Waters Section 404 SO.9 37.58013000 -78.11615600 44.09 lf Non-Wetland Waters Section 404 SO.10 37.57953900 -78.11596000 406.5 lf Non-Wetland Waters Section 404 SO.11 37.57990700 -78.11631300 156.25 lf Non-Wetland Waters Section 404 WA 37.55298400 -78.13991900 1.26 ac Wetland Section 404 WC 37.55258200 -78.13593000 0.30 ac Wetland Section 404 WD 37.55969200 -78.12597400 0.01 ac Wetland Section 404 WH 37.5517500 -78.12160200 0.02 ac Wetland Section 404 WL 37.5548300 -78.1299500 5.44 ac Wetland Section 404	SO.4	37.57671300	-78.11208400	78.3 lf	Non-Wetland Waters	Section 404
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SO.10 37.57953900 -78.11596000 406.5 lf Non-Wetland Waters Section 404 SO.11 37.57990700 -78.11631300 156.25 lf Non-Wetland Waters Section 404 WA 37.55998400 -78.13901900 1.26 ac Wetland Section 404 WB 37.55523100 -78.13593000 0.30 ac Wetland Section 404 WC 37.55258200 -78.13584700 2.38 ac Wetland Section 404 WD 37.55969200 -78.12597400 0.01 ac Wetland Section 404 WDK-A 37.55517500 -78.12160200 0.02 ac Wetland Section 404 WH 37.57711000 -78.12959500 5.44 ac Wetland Section 404 WM.1 37.57415100 -78.12469500 32.50 ac Wetland Section 404 WM.2 37.5663700 -78.12814100 0.04 ac Wetland Section 404 WM.3 37.56763700 -78.13227700 0.28 ac Wetland Section 404 WO.1 37.57985900 <td>SO.8</td> <td>37.57784300</td> <td>-78.11384400</td> <td>240.43 lf</td> <td>Non-Wetland Waters</td> <td>Section 404</td>	SO.8	37.57784300	-78.11384400	240.43 lf	Non-Wetland Waters	Section 404
SO.11 37.57990700 -78.11631300 156.25 lf Non-Wetland Waters Section 404 WA 37.55998400 -78.13901900 1.26 ac Wetland Section 404 WB 37.55523100 -78.13593000 0.30 ac Wetland Section 404 WC 37.55258200 -78.13584700 2.38 ac Wetland Section 404 WD 37.55969200 -78.12597400 0.01 ac Wetland Section 404 WDK-A 37.55517500 -78.12160200 0.02 ac Wetland Section 404 WH 37.57711000 -78.12959500 5.44 ac Wetland Section 404 WL 37.55458300 -78.10953200 2.08 ac Wetland Section 404 WM.1 37.57415100 -78.12469500 32.50 ac Wetland Section 404 WM.2 37.56917600 -78.12814100 0.04 ac Wetland Section 404 WM.3 37.56763700 -78.13227700 0.28 ac Wetland Section 404 WO.1 37.57985900 <td< td=""><td>SO.9</td><td>37.58013000</td><td>-78.11615600</td><td>44.09 lf</td><td>Non-Wetland Waters</td><td>Section 404</td></td<>	SO.9	37.58013000	-78.11615600	44.09 lf	Non-Wetland Waters	Section 404
WA 37.55998400 -78.13901900 1.26 ac Wetland Section 404 WB 37.55523100 -78.13593000 0.30 ac Wetland Section 404 WC 37.55258200 -78.13584700 2.38 ac Wetland Section 404 WD 37.55969200 -78.12597400 0.01 ac Wetland Section 404 WDK-A 37.55517500 -78.12160200 0.02 ac Wetland Section 404 WH 37.57711000 -78.12959500 5.44 ac Wetland Section 404 WL 37.55458300 -78.10953200 2.08 ac Wetland Section 404 WM.1 37.57415100 -78.12469500 32.50 ac Wetland Section 404 WM.2 37.56917600 -78.12814100 0.04 ac Wetland Section 404 WM.3 37.56763700 -78.13227700 0.28 ac Wetland Section 404 WO.1 37.57985900 -78.11440100 0.03 ac Wetland Section 404	SO.10	37.57953900	-78.11596000	406.5 lf	Non-Wetland Waters	Section 404
WB 37.55523100 -78.13593000 0.30 ac Wetland Section 404 WC 37.55258200 -78.13584700 2.38 ac Wetland Section 404 WD 37.55969200 -78.12597400 0.01 ac Wetland Section 404 WDK-A 37.55517500 -78.12160200 0.02 ac Wetland Section 404 WH 37.57711000 -78.12959500 5.44 ac Wetland Section 404 WL 37.55458300 -78.10953200 2.08 ac Wetland Section 404 WM.1 37.57415100 -78.12469500 32.50 ac Wetland Section 404 WM.2 37.56917600 -78.12814100 0.04 ac Wetland Section 404 WM.3 37.56763700 -78.13227700 0.28 ac Wetland Section 404 WO.1 37.57985900 -78.11440100 0.03 ac Wetland Section 404	SO.11	37.57990700	-78.11631300	156.25 lf	Non-Wetland Waters	Section 404
WC 37.55258200 -78.13584700 2.38 ac Wetland Section 404 WD 37.55969200 -78.12597400 0.01 ac Wetland Section 404 WDK-A 37.55517500 -78.12160200 0.02 ac Wetland Section 404 WH 37.57711000 -78.12959500 5.44 ac Wetland Section 404 WL 37.55458300 -78.10953200 2.08 ac Wetland Section 404 WM.1 37.57415100 -78.12469500 32.50 ac Wetland Section 404 WM.2 37.56917600 -78.12814100 0.04 ac Wetland Section 404 WM.3 37.56763700 -78.13227700 0.28 ac Wetland Section 404 WO.1 37.57985900 -78.11440100 0.03 ac Wetland Section 404	WA	37.55998400	-78.13901900	1.26 ac	Wetland	Section 404
WD 37.55969200 -78.12597400 0.01 ac Wetland Section 404 WDK-A 37.55517500 -78.12160200 0.02 ac Wetland Section 404 WH 37.57711000 -78.12959500 5.44 ac Wetland Section 404 WL 37.55458300 -78.10953200 2.08 ac Wetland Section 404 WM.1 37.57415100 -78.12469500 32.50 ac Wetland Section 404 WM.2 37.56917600 -78.12814100 0.04 ac Wetland Section 404 WM.3 37.56763700 -78.13227700 0.28 ac Wetland Section 404 WO.1 37.57985900 -78.11440100 0.03 ac Wetland Section 404	WB	37.55523100	-78.13593000	0.30 ac	Wetland	Section 404
WDK-A 37.55517500 -78.12160200 0.02 ac Wetland Section 404 WH 37.57711000 -78.12959500 5.44 ac Wetland Section 404 WL 37.55458300 -78.10953200 2.08 ac Wetland Section 404 WM.1 37.57415100 -78.12469500 32.50 ac Wetland Section 404 WM.2 37.56917600 -78.12814100 0.04 ac Wetland Section 404 WM.3 37.56763700 -78.13227700 0.28 ac Wetland Section 404 WO.1 37.57985900 -78.11440100 0.03 ac Wetland Section 404	WC	37.55258200	-78.13584700	2.38 ac	Wetland	Section 404
WH 37.57711000 -78.12959500 5.44 ac Wetland Section 404 WL 37.55458300 -78.10953200 2.08 ac Wetland Section 404 WM.1 37.57415100 -78.12469500 32.50 ac Wetland Section 404 WM.2 37.56917600 -78.12814100 0.04 ac Wetland Section 404 WM.3 37.56763700 -78.13227700 0.28 ac Wetland Section 404 WO.1 37.57985900 -78.11440100 0.03 ac Wetland Section 404	WD	37.55969200	-78.12597400	0.01 ac	Wetland	Section 404
WL 37.55458300 -78.10953200 2.08 ac Wetland Section 404 WM.1 37.57415100 -78.12469500 32.50 ac Wetland Section 404 WM.2 37.56917600 -78.12814100 0.04 ac Wetland Section 404 WM.3 37.56763700 -78.13227700 0.28 ac Wetland Section 404 WO.1 37.57985900 -78.11440100 0.03 ac Wetland Section 404	WDK-A	37.55517500	-78.12160200	0.02 ac	Wetland	Section 404
WM.1 37.57415100 -78.12469500 32.50 ac Wetland Section 404 WM.2 37.56917600 -78.12814100 0.04 ac Wetland Section 404 WM.3 37.56763700 -78.13227700 0.28 ac Wetland Section 404 WO.1 37.57985900 -78.11440100 0.03 ac Wetland Section 404	WH	37.57711000	-78.12959500	5.44 ac	Wetland	Section 404
WM.2 37.56917600 -78.12814100 0.04 ac Wetland Section 404 WM.3 37.56763700 -78.13227700 0.28 ac Wetland Section 404 WO.1 37.57985900 -78.11440100 0.03 ac Wetland Section 404	WL	37.55458300	-78.10953200	2.08 ac	Wetland	Section 404
WM.3 37.56763700 -78.13227700 0.28 ac Wetland Section 404 WO.1 37.57985900 -78.11440100 0.03 ac Wetland Section 404	WM.1	37.57415100	-78.12469500	32.50 ac	Wetland	Section 404
WO.1 37.57985900 -78.11440100 0.03 ac Wetland Section 404	WM.2	37.56917600	-78.12814100	0.04 ac	Wetland	Section 404
	WM.3	37.56763700	-78.13227700	0.28 ac	Wetland	Section 404
	WO.1	37.57985900	-78.11440100	0.03 ac	Wetland	Section 404
WO.2 37.58017100 -78.11621300 0.05 ac Wetland Section 404	WO.2	37.58017100	-78.11621300	0.05 ac	Wetland	Section 404



Enclosure 3

Field Data Points

WETLAND DETERMINATION DATA FORM – Eastern Mountain and Piedmont Region

Project Site: Green Ridge Recycling and Disposal Facility,LLC City/County: Cu	imberland Sampling Date: 12/8/2022				
Applicant/Owner: Green Ridge Recycling and Disposal Facility, LLC	State: VA Sampling Point: DP-5.5-01W				
Investigator(s): KBJW - D. Kwasniewski, E. Williams Section, Township, Ra	 nge: Tax Map #44-A-19				
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave,	convex, none): Concave Slope (%): 5-10%				
Subregion (LRR or MLRA): MLRA 136, LRR P Lat: 37.569187 Li	ong: -78.128166 Datum: NAD83				
Soil Map Unit Name: 42D—Wateree sandy loam, 15 to 25 percent slopes	NWI classification: PFO				
Are climatic / hydrologic conditions on site typical for this time of year? Yes X	No If no, explain in Remarks.)				
	e "Normal Circumstances" present? Yes X No				
Are Vegetation , Soil , or Hydrology naturally problematic? (If	needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS-Attach site map showing sampling	point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes X No					
Hydric Soil Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	within a wettand?				
Remarks: This data point represents a palustrine forested wetland (PFO).					
According to the US Army Corps of Engineers Antecedent Precipitation tool, the site is expedrought.	riencinig normal precipitation conditions; however, the area was in a mild				
HYDROLOGY Westernd Mindred on Indicators					
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)				
Surface Water (A1) True Aquatic Plants (B14)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2) Hydrogen Sulfide Odor (C1)	X Drainage Patterns (B10)				
X Saturation (A3) Oxidized Rhizospheres along Living Roots (C3)	Moss Trim Lines (B16)				
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)				
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6)	Crayfish Borrows				
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)	X Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)				
X Water-Stained Leaves (B9)	Microtopographic Relief (D4)				
Aquatic Fauna (B13)	X FAC-Neutral Test (D5)				
	(1) (C. 1) (C. 3)				
Field Observations:					
Surface water Present? Yes No X Depth (inches)					
Water Table Present? Yes No X Depth (inches)					
Saturation Present? Yes X No Depth (inches) 8	Wetland Hydrology Present? Yes X No				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks:					
Wetland hydrology was observed in the vicinity including soil saturation at 8 inches.					

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-5.5-01W <u>Absolute</u> Dominant <u>Indicator</u> Dominance Test worksheet: Tree Stratum (Plot size: 30ft radius) % Cover Species? **Status** Number of Dominant Species 1. Platanus occidentalis 20 Υ **FACW FACW** That Are OBL, FACW, or FAC: 2. Ulmus americana 15 3. Liriodendron tulipifera 10 FACU 4. Total Number of Dominant 5. Species Across All Strata: (B) 6. Percent of Dominant Species 8. That Are OBL, FACW, or FAC: 83% (A/B) = Total Cover Prevalence Index worksheet: 20% of total cover: 50% of total cove 22.5 Multiply by: Total % Cover of: Sapling/Shrub Stratum (Plot size: 30ft radius) OBL species X 1 = 0 1. Carpinus caroliniana X 2 = 0 30 FAC **FACW** species 2. Liquidambar styraciflua 10 FAC FAC species X3 =0 0 X4 =FACU species X 5 = 0 **UPL** species 0 (B) Column Totals: (A) Prevalence Index = B/A= 16 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 40 = Total Cover X 2 - Dominance Test is >50% 20 20% of total cover: 3 - Prevalence Index is ≤ 3.00 50% of total cove Problematic Hydrophytic Vegetation¹ (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1. Smilax rotundifolia FAC **Definitions of Four Vegetation Strata:** 2. Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less 6. than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless 8. 9 of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 5 = Total Cover 20% of total cover: 50% of total cover: 2.5 Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover Yes X 20% of total cover: 50% of total cove Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was observed to be dominant in the vicinity.

Soll Sampling Point <u>DP-5.5-01W</u>

Profile Desc	ription: (Describe to	the depth neede	d to document the ind	icator or	confirm the ab	sence of indi	cators.)	
Depth	Matrix			R	Redox Features	S		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 3/3	100					SiL	No redox concentrations
3-8	10YR 4/3	100					FSL	No redox concentrations
8-16	10YR 4/2	98	5YR 4/6	2	С	M	FSL	Prominent redox concentrations
16-20	10YR 4/1	95	7.5YR 4/6	5	С	M	FSL	Prominent redox concentrations
¹ Type: C=co	oncentration, D=Dep	letion, RM=Reduc	ed Matrix, MS=Masked	Sand Gra	ains.		² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil I	Indicators: (Applicat	ole to all LRRs, ur	less otherwise noted.))				for Problematic Hydric Soils ³ :
Histoso	ol (A1)		Dark Surface (S	7)			2 cm Muck (A	A10) (MLRA 147)
Histic E	Epipedon (A2)		Polyvalue Belov	w Surface	(S8) (MLRA 14	47, 148)	Coastal Prair	ie Redox (A16)
Black H	Histic (A3)		Thin Dark Surfa	ce (S9) (N	1LRA 147, 148	3)	(MLRA 147,	148)
Hydrog	jen Sulfide (A4)		Loamy Gleyed N	Matrix (F2	!)		Piedmont Flo	oodplain Soils (F19)
Stratifi	ed Layers (A5)	X	Depleted Matrix	k (F3)			(MLRA 136,	147)
2 cm M	luck (A10) (LRR N)		Redox Dark Sur	face (F6)			Very Shallow	Dark Surface (TF12)
Deplete	ed Below Dark Surfa	ice (A11)	Depleted Dark S	Surface (F	7)		Other (Expla	in in Remarks)
Thick D	Dark Surface (A12)		Redox Depressi	ons (F8)				
Sandy l	Mucky Mineral (S1) ((LRR N,	Iron-Manganese	e Masses	(F12) (LRR N,		³ Indicators o	f hydrophytic vegetation an
MLRA:	147, 148)		MLRA 136)				wetland hy	drology must be present,
Sandy	Gleyed Matrix (S4)		Umbric Surface	(F13) (MI	LRA 136, 122)		unless dist	urbed or problematic.
Sandy I	Redox (S5)		Piedmont Flood	Iplain Soi	ls (F19) (MLR<i>A</i>	A 148)		
Strippe	ed Matrix (S6)		Red Parent Mat	erial (TF2) (MLRA 127,	147)		
Restrictive I	Layer (if observed):							
Type:								
	(inches):					Hvd	ric Soil Present?	Yes X No
	(,-					,-		
Remarks:	were observed in th	nis location						
Tiyunc sons	were observed in ti	iis tocation.						

WETLAND DETERMINATION DATA FORM – Eastern Mountain and Piedmont Region

Project Site: Green Ridge Recycling a	and Disposal Facility,LL	.C City/County:	Cumberlar	nd	Sampling Date	te: 12/8/2022		
Applicant/Owner: Green Ridge Rec	cycling and Disposal Fa	cility, LLC		State: VA	Sampling Poi	int: DP-5.5-02U		
Investigator(s): KBJW - D. Kwasniews	ski, E. Williams	Section, Township	, Range:	Tax Map #44-	-A-19	' <u> </u>		
Landform (hillslope, terrace, etc.): Hills	slope	Local relief (conca	ve, convex,	none): Conca	ave	Slope (%): 5	-10%	
Subregion (LRR or MLRA): MLRA 1	36, LRR P Lat:	37.569206	Long: -78	3.128303		Datum: NAD83		
Soil Map Unit Name: 42D—Wateree sai	ndy loam, 15 to 25 perc	ent slopes		1	NWI classificati	on: UPL		
Are climatic / hydrologic conditions on	site typical for this time	e of year? Yes X	No		If no, explain	in Remarks.)		
Are Vegetation , Soil , or Hyd	drology	significantly disturbed?	Are "Norm	— al Circumstances"	' present?	Yes X N	lo	
Are Vegetation , Soil , or Hyd	drology	naturally problematic?	(If needed	, explain any ansv	vers in Remarks	5.)		
SUMMARY OF FINDING	SS-Attach site ma	p showing samplir	ng point	locations, tra	nsects, imp	ortant featur	es, etc.	
Hydrophytic Vegetation Present?	Yes	No X	T					
Hydric Soil Present?	Yes	No X	1	Sampled Area	Yes	No X		
Wetland Hydrology Present?	Yes	No X	With	in a Wetland?				
Remarks: This data point represents an	unland location (LIPL)	<u></u>						
According to the US Army Corps of Eng drought.	ineers Antecedent Prec	ipitation tool, the site is e	xperiencini <u>c</u>	g normal precipita	ition conditions	; however, the are	a was in a mild	
HYDROLOGY Wetland Hydrology Indicators:				Casandamila	di (ii		٦)	
Primary Indicators (minimum of one is r	required: check all that	annly)		<u> </u>	Soil Cracks (B6)	<u>um of two required</u> \	1)	
Surface Water (A1)	True Aquatic Plant			Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide (, ,			e Patterns (B10			
Saturation (A3)		eres along Living Roots (731	Moss Trim Lines (B16)				
Water Marks (B1)	Presence of Reduc		-3)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)		tion in Tilled Soils (C6)		Crayfish Borrows				
Drift Deposits (B3)	Thin Muck Surface	` '				erial Imageny (C9)		
Algal Mat or Crust (B4)	Other (Explain in R			Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)				
Iron Deposits (B5)	— Other (Explain III I	terrants)		Geomorphic Position (D2)				
Inundation Visible on Aerial Image	erv (R7)				Aquitard (D3)	<i>32)</i>		
Water-Stained Leaves (B9)	, (3.7)				pographic Relie	of (D4)		
Aquatic Fauna (B13)					utral Test (D5)	(5 1)		
()				1710 1101	atiat rest (D3)			
Field Observations:								
Surface water Present? Yes	No X Dep	th (inches)						
Water Table Present? Yes		th (inches)	-					
Saturation Present? Yes		th (inches)	– Wetla	and Hydrology Pre	esent?	Yes N	lo X	
(includes capillary fringe)	 ·	,	-	, 3,				
Describe Recorded Data (stream gauge,	, monitoring well, aeria	l photos, previous inspect	ions), if avai	lable:				
Remarks:								
No primary or secondary indicators of h	ıydrology were observe	d on this day.						

VEGETATION (Four Strata) - Use scientific names of plants. Sampling Point: DP-5.5-02U <u>Absolute</u> Dominant <u>Indicator</u> Dominance Test worksheet: Tree Stratum (Plot size: 30ft radius) % Cover Species? **Status** Number of Dominant Species 1. Acer rubrum 25 Υ FAC 10 FACU That Are OBL, FACW, or FAC: 2. Juniperus virginiana 3. Liquidambar styraciflua 10 FAC 4. Total Number of Dominant 5. Species Across All Strata: (B) 6. Percent of Dominant Species 8. That Are OBL, FACW, or FAC: 57% (A/B)= Total Cover Prevalence Index worksheet: 20% of total cover: 50% of total cove 22.5 Multiply by: Total % Cover of: Sapling/Shrub Stratum (Plot size: 30ft radius) OBL species X 1 = 0 1. Carpinus caroliniana X 2 = 0 30 FAC **FACW** species 2. Acer rubrum 15 FAC FAC species X3 =0 0 X4 =FACU species X 5 = 0 **UPL** species 0 (B) Column Totals: (A) Prevalence Index = B/A= 16 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 45 = Total Cover X 2 - Dominance Test is >50% 50% of total cove 22.5 20% of total cover: 3 - Prevalence Index is ≤ 3.00 Problematic Hydrophytic Vegetation¹ (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1. Lonicera japonica FACU 2. Polystichum acrostichoides FACU **Definitions of Four Vegetation Strata:** Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less 6. than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless 8. 9 of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 10 = Total Cover 20% of total cover: 50% of total cover: 5 Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover Yes X 20% of total cover: 50% of total cove Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was not observed to be dominant in the vicinity.

SOIL Sampling Point <u>DP-5.5-02U</u>

Profile Desc	ription: (Describe to	the depth need	led to document the ind	icator or o	confirm the at	sence of indic	ators.)	
Depth Matrix Redox Features					S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-1	10YR 3/3	100					Loam	No redox concentrations
1-10	10YR 4/4	100					Loam	No redox concentrations
10-20	7.5YR 4/3	98	5YR 4/4	2	С	М	Loam	Prominent redox concentrations
¹ Type: C=co	oncentration, D=Dep	letion, RM=Redu	iced Matrix, MS=Masked	Sand Gra	ains.		² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applicab	le to all LRRs <u>, u</u>	nless otherwise noted.)				Indicators	for Problematic Hydric Soils ³ :
— Histoso	. ,	_	Dark Surface (S7	•				(10) (MLRA 147)
_	Epipedon (A2)		Polyvalue Belov					ie Redox (A16)
_	Histic (A3)		Thin Dark Surfa			3)	(MLRA 147, 1	•
_	gen Sulfide (A4)	_	Loamy Gleyed N	•)			oodplain Soils (F19)
	ed Layers (A5)	_	Depleted Matrix				(MLRA 136,	•
	fuck (A10) (LRR N)	(444)	Redox Dark Sur		7)			Dark Surface (TF12)
	ed Below Dark Surfa	ce (A11)	Depleted Dark S		/)		Other (Explai	n in Remarks)
	Dark Surface (A12)		Redox Depressi		(E13) /I BB N		3Indicates -	f hydrophytic vegetation an
	Mucky Mineral (S1) (147, 148)		Iron-Manganese MLRA 136)	: Masses ((F12) (LKK N,			drology must be present,
1	Gleyed Matrix (S4)		Umbric Surface	(F13) (MI	RΔ 136 122)			urbed or problematic.
	Redox (S5)	_	Piedmont Flood				unicss uisti	arbed or problematic.
	ed Matrix (S6)	_	Red Parent Mate					
-	(30)	_			, (,	- · · ,		
Destrict 1						+		
	Layer (if observed):							
Type:								
Depth	(inches):					Hydi	ic Soil Present?	Yes No _X
Remarks:								
Hydric soils	were not observed	in this location.	Clay content was observ	ed to inc	rease with de	ptn.		

WETLAND DETERMINATION DATA FORM – Eastern Mountain and Piedmont Region

Project Site: Green Ridge Recycling and Disposal Facility,LLC	City/County: Cu	ımberland	Sampling Date: 1/6/2023
Applicant/Owner: Green Ridge Recycling and Disposal Facility,	LLC	State: VA	Sampling Point: DP-E01U
Investigator(s): KBJW - D. Kwasniewski, E. Williams	Section, Township, Rai	nge: Tax Map #	
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, o	convex, none): No	ne Slope (%): 2-5%
Subregion (LRR or MLRA): MLRA 136, LRR P Lat: 37.56	3121 Lo	ong: -78.128993	Datum: NAD83
Soil Map Unit Name: 2C—Appling-Helena complex, 7 to 15 percent	slopes		NWI classification: UPL
Are climatic / hydrologic conditions on site typical for this time of ye	ear? Yes	No X	If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology signif	icantly disturbed? Are	e "Normal Circumstanc	es" present? Yes X No
Are Vegetation , Soil , or Hydrology natur	ally problematic? (If	needed, explain any ar	nswers in Remarks.)
SUMMARY OF FINDINGS-Attach site map sh	owing sampling p	point locations, t	ransects, important features, etc.
Hydrophytic Vegetation Present? Yes No) <u>X</u>	Is the Sampled Area	
Hydric Soil Present? Yes No) <u>X</u>	within a Wetland?	Yes NoX
Wetland Hydrology Present? Yes No) <u>X</u>		
HYDROLOGY			
Wetland Hydrology Indicators:		<u>Secondary</u>	Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply))	Surfa	ce Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14	1)	Spars	sely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drain	age Patterns (B10)
Saturation (A3) Oxidized Rhizospheres a			Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iro	• •		season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction ir	n Tilled Soils (C6)	<u> </u>	ish Borrows
Drift Deposits (B3) Thin Muck Surface (C7)			ation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remark	ks)		ed or Stressed Plants (D1)
Iron Deposits (B5)			norphic Position (D2)
Inundation Visible on Aerial Imagery (B7)			ow Aquitard (D3)
Water-Stained Leaves (B9) Aquatic Fauna (B13)			otopographic Relief (D4)
Aquatic Fauria (B13)		FAC-I	Neutral Test (D5)
Field Observations:			
Surface water Present? Yes No X Depth (inc	ches)		
Water Table Present? Yes No X Depth (inc			
Saturation Present? Yes X No Depth (inc	·	Wetland Hydrology I	Present? Yes No X
(includes capillary fringe)	,] , ,	
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if available:	
Remarks:			
Wetland hydrology was not observed in the vicinity.			

VEGETATION (Four Strata) - Use scientific names of plants. Sampling Point: DP-E01U <u>Absolute</u> Dominant <u>Indicator</u> Dominance Test worksheet: Tree Stratum (Plot size: 30ft radius) % Cover Species? **Status** Number of Dominant Species 1. Liriodendron tulipifera 50 Υ FACU 5 That Are OBL, FACW, or FAC: 2. Fagus grandifolia Ν FACU Total Number of Dominant Species Across All Strata: (B) 6. Percent of Dominant Species 8. That Are OBL, FACW, or FAC: 50% (A/B) = Total Cover Prevalence Index worksheet: 20% of total cover: 50% of total cove 27.5 Multiply by: Total % Cover of: Sapling/Shrub Stratum (Plot size: 30ft radius) OBL species X 1 = 0 1. Carpinus caroliniana X 2 = 0 FAC **FACW** species 2. Ilex opaca FACU FAC species X3 =0 0 X4 =FACU species X 5 = 0 **UPL** species 0 (B) Column Totals: (A) Prevalence Index = B/A= 16 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 25 = Total Cover 2 - Dominance Test is >50% 50% of total cove 12.5 20% of total cover: 3 - Prevalence Index is ≤ 3.00 Problematic Hydrophytic Vegetation¹ (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1. Smilax rotundifolia FAC 2. Polystichum acrostichoides FACU **Definitions of Four Vegetation Strata:** Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less 6. than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless 8. 9 of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 10 = Total Cover 20% of total cover: 50% of total cover: 5 Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover No X 20% of total cover: 50% of total cove Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was not observed to be dominant in the vicinity.

Sampling Point <u>DP-E01U</u>

Profile Desc	ription: (Describe to	the depth nee	ded to document the indi	icator or o	onfirm the al	sence of indic	ators.)		
Depth Matrix Redox Features					S				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-1	10YR 2/2	100					FSL	No redox concentrations	
1-4	10YR 3/4	100					FSL	No redox concentrations	
4-13	10YR 4/4	100					FSL	No redox concentrations	
13-19	10YR 4/3	99	7.5YR 4/6	1	С	M	FSL	Prominent redox concentrations	
19-20	2.5Y 4/3	98	7.5YR 4/4	2	C	M	FSL	Prominent redox concentrations	
¹ Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=									
Hydric Soil I	ndicators: (Applicat	ole to all LRRs <u>,</u>	unless otherwise noted.)				Indicators	for Problematic Hydric Soils ³ :	
Histoso	ol (A1)	_	Dark Surface (S7	')			2 cm Muck (/	410) (MLRA 147)	
Histic E	pipedon (A2)	_	Polyvalue Below	/ Surface	(S8) (MLRA 1	47, 148)	Coastal Prair	ie Redox (A16)	
Black H	listic (A3)	_	Thin Dark Surface	e (S9) (M	ILRA 147, 148	3)	(MLRA 147,	148)	
Hydrog	en Sulfide (A4)	_	Loamy Gleyed M	1atrix (F2))		Piedmont Flo	oodplain Soils (F19)	
_	ed Layers (A5)	_	Depleted Matrix				(MLRA 136,	•	
	uck (A10) (LRR N)	_	Redox Dark Surf	. ,				Dark Surface (TF12)	
_	ed Below Dark Surfa	ece (A11)	Depleted Dark S		7)		Other (Expla	in in Remarks)	
	Park Surface (A12)		Redox Depression				3		
	Mucky Mineral (S1)	(LRR N,	Iron-Manganese	Masses ((F12) (LRR N,			f hydrophytic vegetation an	
l	147, 148)		MLRA 136)	/E47\ /\ 41	DA 474 422		-	/drology must be present,	
	Gleyed Matrix (S4)	_	Umbric Surface				unless dist	curbed or problematic.	
	Redox (S5)	_	Piedmont Flood						
— Strippe	d Matrix (S6)	_	Red Parent Mate	enat (172)	(MLKA 127,	14/)			
Restrictive L	ayer (if observed):								
Type:									
Depth ((inches):					Hydi	ric Soil Present?	Yes No _X	
Remarks:						<u> </u>			
Hydric soils	were not observed	in this location.	Soil was observed to be	moist fro	m 0-13 inche	s and saturate	d below 13 inch	nes.	

WETLAND DETERMINATION DATA FORM – Eastern Mountain and Piedmont Region

Project Site: Green Ridge Recycling a	and Disposal Facility,LL	.C City/County:	Cumberland		Sampling Date	e: 1/6/2023			
Applicant/Owner: Green Ridge Rec	ycling and Disposal Fa	cility, LLC		State: VA	Sampling Poir	nt: DP-EM-A01U			
Investigator(s): KBJW - D. Kwasniews	ski, E. Williams	Section, Townshi	p, Range:	Tax Map #45-:	- 1-41				
Landform (hillslope, terrace, etc.): Hills	lope	Local relief (conc	ave, convex, no	one): None		Slope (%):	2-5%		
Subregion (LRR or MLRA): MLRA 1	36, LRR P Lat:	37.55469	Long: -78.1	0968		Datum: NAD83			
Soil Map Unit Name: 8A - Chewacla and	d Monacan soils, 0 to 2	percent slopes, frequent	tly flooded	N		n: UPL			
Are climatic / hydrologic conditions on	site typical for this tim	e of year? Yes	No X		If no, explain i	n Remarks.)			
	Irology	significantly disturbed?	Are "Normal	Circumstances"	•	·	No		
Are Vegetation , Soil , or Hyd		naturally problematic?	(If needed, e	xplain any answ	rers in Remarks.				
SUMMARY OF FINDING							res, etc.		
Hydrophytic Vegetation Present?	Yes X	No	la tha C						
Hydric Soil Present?	Yes	No X		Is the Sampled Area within a Wetland? Yes NoX					
Wetland Hydrology Present?	Yes	No X	Within	a Wettanu:					
Remarks: This data point represents an complex. According to the US Army Corps of Engi							and wetland		
HYDROLOGY Wetland Hydrology Indicators:				Secondary Ind	icators (minimu	m of two require	ed)		
Primary Indicators (minimum of one is r	equired: check all that	annly)		· ·	Soil Cracks (B6)	ili or two require	<u>=u/</u>		
Surface Water (A1)	True Aquatic Plant	,		Sparsely Vegetated Concave Surface (B8)					
High Water Table (A2)	Hydrogen Sulfide	, ,		Drainage Patterns (B10)					
Saturation (A3)		eres along Living Roots	(C3)	Moss Trim Lines (B16)					
Water Marks (B1)	Presence of Reduc		(03)	Dry-Season Water Table (C2)					
Sediment Deposits (B2)		tion in Tilled Soils (C6)		Crayfish Borrows					
Drift Deposits (B3)	Thin Muck Surface	, ,				rial Imagery (C9)		
Algal Mat or Crust (B4)	Other (Explain in F			Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)					
Iron Deposits (B5)		,		Geomorphic Position (D2)					
Inundation Visible on Aerial Image	rv (B7)				Aquitard (D3)	_,			
Water-Stained Leaves (B9)	., (= ·)				ographic Relief	(D4)			
Aquatic Fauna (B13)					itral Test (D5)	(5.)			
, ,				. , , , , , ,					
Field Observations:									
Surface water Present? Yes	No X Dep	th (inches)							
Water Table Present? Yes	No X Dep	th (inches)	_						
Saturation Present? Yes	No X Dep	th (inches)	Wetland	d Hydrology Pres	sent?	Yes	No X		
(includes capillary fringe)									
Describe Recorded Data (stream gauge,	monitoring well, aeria	l photos, previous inspec	tions), if availa	ble:					
Remarks:									
No primary or secondary indicators of h	ydrology were observe	d on this day.							

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-EM-A01U <u>Absolute</u> Dominant <u>Indicator</u> Dominance Test worksheet: Tree Stratum (Plot size: 30ft radius) % Cover Species? **Status** Number of Dominant Species 1. Acer rubrum Υ FAC 35 15 FACW That Are OBL, FACW, or FAC: 2. Ulmus americana 3. Liriodendron tulipifera 10 FACU 4. Fagus grandifolia 5 FACU Total Number of Dominant 5. Species Across All Strata: 11 (B) 6. Percent of Dominant Species 8. That Are OBL, FACW, or FAC: 64% (A/B) = Total Cover Prevalence Index worksheet: 20% of total cover: 50% of total cove 32.5 Multiply by: Total % Cover of: Sapling/Shrub Stratum (Plot size: 30ft radius) OBL species X 1 = 0 1. Lindera benzoin X 2 = 0 FAC **FACW** species 2. Ilex opaca FACU FAC species X3 =0 FACU 0 3. Liriodendron tulipifera X4 =**FACU** species FAC X 5 = 0 Liquidambar styraciflua **UPL** species 0 (B) Column Totals: (A) Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 25 = Total Cover X 2 - Dominance Test is >50% 50% of total cove 12.5 20% of total cover: 3 - Prevalence Index is ≤ 3.00 Problematic Hydrophytic Vegetation¹ (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1. Lonicera japonica 10 FACU 2. Polystichum acrostichoides FACU Definitions of Four Vegetation Strata: FAC Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or Smilax rotundifolia more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less 6. than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless 8. 9 of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 20 = Total Cover 50% of total cover: 10 20% of total cover: Woody Vine Stratum (Plot size: 30ft radius) 1. Toxicodendron radicans FAC 2. Vitis rotundifolia 3. Hydrophytic Vegetation Present? 10 = Total Cover Yes X 20% of total cover: 50% of total cove Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was observed to be dominant in the vicinity.

SOIL Sampling Point <u>DP-EM-A01U</u>

Profile Desc	ription: (Describe to	the depth need	ed to document the ind				ators.)	
Depth Matrix					Redox Features			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-7	10YR 3/4	100	-				Loam	No redox concentrations
7-14	10YR 4/3	95	7.5YR 3/4	_5	С	M	Loam	Prominent redox concentrations
14-20	2.5Y 4/3	80	2.5Y 4/3	20	С	М	CL	Prominent redox concentrations
			<u> </u>					
¹ Type: C=co	ncentration, D=Depl		: PL=Pore Lining, M=Matrix.					
		le to all LRRs <u>, u</u>	nless otherwise noted.)					for Problematic Hydric Soils ³ :
— Histoso		_	Dark Surface (S7	•				A10) (MLRA 147)
_	pipedon (A2)	_	Polyvalue Belov					ie Redox (A16)
_	listic (A3)	_	Thin Dark Surface			3)	(MLRA 147, 1	·
_	en Sulfide (A4)	_	Loamy Gleyed N		2)			podplain Soils (F19)
_	ed Layers (A5)	_	Depleted Matrix				(MLRA 136,	
	uck (A10) (LRR N)		Redox Dark Surf		-7\			Dark Surface (TF12)
<u> </u>	ed Below Dark Surfac Park Surface (A12)	re (A11)	Depleted Dark S Redox Depression		7)		Otner (Explai	in in Remarks)
	Mucky Mineral (S1) (1		Iron-Manganese		/E12\ /I DD N		³ Indicators of	f hydrophytic vegetation an
	Mucky Millerat (31) (1 147, 148)		MLRA 136)	Masses	(F12) (LKK N,			drology must be present,
ı	Gleyed Matrix (S4)		Umbric Surface	(F13) (M L	LRA 136, 122)		-	urbed or problematic.
_	Redox (S5)	_	Piedmont Flood				unicos uisc	arbed or problematic.
	d Matrix (S6)	_	Red Parent Mate					
					,	,		
Destrict of						T		
	.ayer (if observed):							
Type:								
Depth ((inches):					Hydi	ric Soil Present?	Yes No <u>X</u>
Remarks:						•		
Hydric soils	were not observed i	n this location.	Soil was observed to be	moist th	roughout.			

WETLAND DETERMINATION DATA FORM – Eastern Mountain and Piedmont Region

Project Site: Green Ridge Recyclin	ng and Disposal Facility,LL	C City/County:	Cumberland	Sampling D	ate: 1/30/2023			
Applicant/Owner: Green Ridge I	Recycling and Disposal Fac	ility, LLC	State:		pint: DP-G01U			
	ewski, E. Williams, E.Myers	Section, Townshi	ip, Range: Tax	Map #38-A-7				
Landform (hillslope, terrace, etc.): H			cave, convex, none):	Convex	Slope (%): 5-10%			
Subregion (LRR or MLRA): MLRA	A 136, LRR P Lat:	37.574417	Long: -78.118305		Datum: NAD83			
Soil Map Unit Name: 32D—Poindext			_	NWI classificat	tion: UPL			
Are climatic / hydrologic conditions	on site typical for this time	e of year? Yes X	No	If no, explair	n in Remarks.)			
• •		significantly disturbed?	Are "Normal Circun	•	Yes X No			
		naturally problematic?	(If needed, explain	any answers in Remark	(S.)			
		np showing sampli	ng point locatio	ns, transects, im	portant features, etc.			
Hydrophytic Vegetation Present?	Yes	No X	la the Samulas	4 Aven				
Hydric Soil Present?	Yes	No X	Is the Sampled within a Wetl	Yes	NoX			
Wetland Hydrology Present?	Yes	No X	within a wett					
Remarks: This data point represents	. , ,							
According to the US Army Corps of E	ngineers Antecedent Preci	pitation tool, the site is e	experiencinig normal p	recipitation conditions.				
HYDROLOGY								
Wetland Hydrology Indicators:			Seco	ondary Indicators (minin	num of two required)			
Primary Indicators (minimum of one	is required; check all that a	apply)		Surface Soil Cracks (B6)				
Surface Water (A1)	True Aquatic Plants	s (B14)		Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide C	Odor (C1)		Drainage Patterns (B10)				
Saturation (A3)	Oxidized Rhizosph	eres along Living Roots (C3)	Moss Trim Lines (B16)				
Water Marks (B1)	Presence of Reduce	ed Iron (C4)		Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduct	ion in Tilled Soils (C6)		Crayfish Borrows				
Drift Deposits (B3)	Thin Muck Surface	(C7)		Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in R	emarks)		Stunted or Stressed Plants (D1)				
Iron Deposits (B5)				Geomorphic Position (D2)				
Inundation Visible on Aerial Ima	agery (B7)			Shallow Aquitard (D3)				
Water-Stained Leaves (B9)				Microtopographic Relief (D4)				
Aquatic Fauna (B13)				FAC-Neutral Test (D5)				
Field Observations:								
Surface water Present? Yes	No X Dep	oth (inches)						
Water Table Present? Yes		oth (inches)	_					
Saturation Present? Yes	No X Dep	oth (inches)	Wetland Hydro	ology Present?	Yes No X			
(includes capillary fringe)			_					
Describe Recorded Data (stream gau	ge, monitoring well, aerial	photos, previous inspect	ions), if available:					
Domarks								
Remarks: Wetland hydrology was not observed	d in the vicinity							
wettand hydrotogy was not observed	in the vicinity.							

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-G01U <u>Absolute</u> Dominant <u>Indicator</u> Dominance Test worksheet: Tree Stratum (Plot size: 30ft radius) % Cover Species? **Status** Number of Dominant Species 1. Pinus taeda 40 Υ FAC 2. Liriodendron tulipifera 20 That Are OBL, FACW, or FAC: FACU Total Number of Dominant Species Across All Strata: (B) 6. Percent of Dominant Species (A/B) That Are OBL, FACW, or FAC: 29% 8. = Total Cover Prevalence Index worksheet: 20% of total cover: 30 50% of total cove Multiply by: Total % Cover of: Sapling/Shrub Stratum (Plot size: 30ft radius) OBL species X 1 = 1. Juniperus virginiana X2 =0 10 FACU **FACW** species 2. Liriodendron tulipifera 10 FACU FAC species X3 =0 3. Carpinus caroliniana FAC X 4 = 0 10 FACU species FACU X 5 = 0 Quercus alba 5 **UPL** species FACU 5 Ν 0 Cornus florida Column Totals: (A) Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 40 = Total Cover 2 - Dominance Test is >50% 20 20% of total cover: 3 - Prevalence Index is ≤ 3.00 50% of total cove Problematic Hydrophytic Vegetation¹ (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1. Polystichum acrostichoides 10 **FACU** 2. Lonicera japonica FACU Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less 6. than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 8. 9 of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 15 = Total Cover 20% of total cover: 50% of total cover: 7.5 Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover No X 50% of total cove 20% of total cover: Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was not observed to be dominant in the vicinity.

Sampling Point: <u>DP-G01U</u>

Profile Desc	ription: (Describe to	the depth need	ed to document the indi				tors.)	· •
Depth	Matrix			Re	edox Features			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	10YR 3/3	100					FSL	No redox concentrations
7-11	7.5YR 5/6	75					FSCL	No redox concentrations
	10YR 3/3	25						Mixed Matrix
11-20	10YR 4/2	75					FSC	No redox concentrations
	7.5YR 4/6	25						Mixed Matrix
¹ Type: C=co	ncentration, D=Depl	etion, RM=Redu	ced Matrix, MS=Masked	Sand Grai	ns.		² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applicab	le to all LRRs <u>, u</u>	nless otherwise noted.)				Indicators	for Problematic Hydric Soils ³ :
Histoso	ol (A1)		Dark Surface (S7)			2 cm Muck (A	A10) (MLRA 147)
Histic E	Epipedon (A2)		Polyvalue Below	Surface (S	58) (MLRA 14)	7, 148)	Coastal Prair	ie Redox (A16)
Black H	listic (A3)		Thin Dark Surfac	e (S9) (ML	.RA 147, 148)		(MLRA 147,	148)
Hydrog	en Sulfide (A4)		Loamy Gleyed M	atrix (F2)			Piedmont Flo	oodplain Soils (F19)
Stratifie	ed Layers (A5)	_	Depleted Matrix				(MLRA 136,	•
2 cm M	luck (A10) (LRR N)		Redox Dark Surf	ace (F6)			Very Shallow	Dark Surface (TF12)
	ed Below Dark Surfa	ce (A11)	Depleted Dark S)		Other (Explai	in in Remarks)
Thick D	Oark Surface (A12)		Redox Depression				_	
Sandy I	Mucky Mineral (S1) (LRR N,	Iron-Manganese	Masses (F	12) (LRR N,			f hydrophytic vegetation an
	147, 148)		MLRA 136)				-	drology must be present,
	Gleyed Matrix (S4)		Umbric Surface (unless dist	urbed or problematic.
	Redox (S5)		Piedmont Flood					
Strippe	d Matrix (S6)		Red Parent Mate	rial (TF2)	(MLRA 127, 1	47)		
Restrictive L	ayer (if observed):							
Type:								
Depth ((inches):					Hydr	ic Soil Present?	Yes No <u>X</u>
Remarks: Hydric soils	were not observed i	n this location.						
i								

WETLAND DETERMINATION DATA FORM – Eastern Mountain and Piedmont Region

Project Site: Green Ridge Recycli	ng and Disposal Facility,LLC City/County:	Cumberland Sampling Date: 1/30/2023				
Applicant/Owner: Green Ridge	Recycling and Disposal Facility, LLC	State: VA Sampling Point: DP-G02U				
Investigator(s): KBJW - D. Kwasni	ewski, E. Williams, E.Myers Section, Townshi	p, Range: Tax Map #44-A-1				
Landform (hillslope, terrace, etc.): H	Hillslope Local relief (conc	ave, convex, none): Concave Slope (%): 10-15%				
Subregion (LRR or MLRA): MLR	A 136, LRR P Lat: 37.573061	Long: -78.119615 Datum: NAD83				
Soil Map Unit Name: 32C-Poindex	ter-Wedowee complex, 7 to 15 percent slopes	NWI classification: UPL				
Are climatic / hydrologic conditions	on site typical for this time of year? Yes X	No If no, explain in Remarks.)				
• •	Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes X No				
	Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)				
		ng point locations, transects, important features, etc.				
Hydrophytic Vegetation Present?	Yes No X	Late Constant Anna				
Hydric Soil Present?	Yes No X	Is the Sampled Area within a Wetland? Yes NoX				
Wetland Hydrology Present?	Yes No X	within a wettand:				
HYDROLOGY	Engineers Antecedent Precipitation tool, the site is e					
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one	is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)				
Saturation (A3)	Oxidized Rhizospheres along Living Roots (C	Moss Trim Lines (B16)				
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Borrows				
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)		Geomorphic Position (D2)				
Inundation Visible on Aerial Im	agery (B7)	Shallow Aquitard (D3)				
Water-Stained Leaves (B9)		Microtopographic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral Test (D5)				
Field Observations:						
Surface water Present? Yes	No X Depth (inches)	_				
Water Table Present? Yes X	No Depth (inches) 16	_				
Saturation Present? Yes X	No Depth (inches) 16	Wetland Hydrology Present? Yes NoX				
(includes capillary fringe)						
Describe Recorded Data (stream gau	ige, monitoring well, aerial photos, previous inspecti	ons), if available:				
Remarks:						
No primary or secondary indicators	of hydrology were observed on this day.					

VEGETATION (Four Strata) - Use scientific names of plants. Sampling Point: DP-G02U <u>Absolute</u> Dominant <u>Indicator</u> Dominance Test worksheet: Tree Stratum (Plot size: 30ft radius) % Cover Species? **Status** Number of Dominant Species 1. Pinus taeda 40 Υ FAC That Are OBL, FACW, or FAC: 2. Total Number of Dominant Species Across All Strata: (B) 6 Percent of Dominant Species (A/B) That Are OBL, FACW, or FAC: 50% 8. = Total Cover Prevalence Index worksheet: 20% of total cover: 20 50% of total cove Multiply by: Total % Cover of: Sapling/Shrub Stratum (Plot size: 30ft radius) OBL species X 1 = 1. Liriodendron tulipifera X2 =0 10 FACU **FACW** species 2. Acer rubrum 10 FAC FAC species X3 =0 FAC X 4 = 0 3. Carpinus caroliniana 10 FACU species FAC X 5 = 0 Liquidambar styraciflua 5 **UPL** species 5 Ν FACU 0 Cornus florida Column Totals: (A) Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 40 = Total Cover 2 - Dominance Test is >50% 20 20% of total cover: 3 - Prevalence Index is ≤ 3.00 50% of total cove Problematic Hydrophytic Vegetation¹ (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1. Lonicera japonica 10 **FACU** 2. Polystichum acrostichoides 10 FACU Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less 6 than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 8. 9 of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 20 = Total Cover 50% of total cover: 10 20% of total cover: Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover No X 50% of total cove 20% of total cover: Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was not observed to be dominant in the vicinity.

SOIL Sampling Point: <u>DP-G02U</u>

Depth	Profile Desc	ription: (Describe to	the depth needed	to document the indi	cator or co	onfirm the abs	sence of indica	ators.)	
10-7	Depth	Matrix					5		
7-11	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
11-16 10YR 5/3 95 10YR 4/4 5 C M FSL Distinct redox concentrations 16-20 2.5Y 5/3 95 10YR 3/4 5 C M FSL Distinct redox concentrations 1 Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1 Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1 Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1 Location: PL=Pore Lining, M=Matrix. 1 Indicators for Problematic Hydric Soils 1: 2 cm Muck (A10) (MLRA 147) 4 Histic Epipedon (A2) Polyvalue Below Surface (S9) (MLRA 147, 148) 4 Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) 5 Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) 6 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) 6 Stratified Layers (A5) Depleted Matrix (F2) Piedmont Floodplain Soils (F19) 7 Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Very Shallow Dark Surface (TF12) 7 Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) 8 Sandy Mucky Mineral (S1) (LRR N, MLRA 136) MLRA 136) 8 Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) unless disturbed or problematic. 1 Prom-Manganese Masses (F12) (MLRA 148) Wetland Hydrology must be present, unless disturbed or problematic. 1 Prom-Manganese Masses (F19) (MLRA 148) Red Parent Material (TF2) (MLRA 127, 147) 1 Restrictive Layer (if observed): 1 Type: 1 Depth (inches): Hydric Soil Present? Yes No X	0-7	10YR 4/3	90	10YR 3/4	10	С	М	FSL	Faint redox concentrations
16-20 2.5Y 5/3 95 10YR 3/4 5 C M FSL Distinct redox concentrations 1 Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1 C M FSL Distinct redox concentrations 1 C M FSL Distinct redox concentrations 1 Distinct redox concentrations 1 C M FSL Distinct redox concentrations 1 Distinct redox concentrations 1 Distinct redox concentrations 1 C M FSL Distinct redox concentrations 1 Distinct redox concentrations 2 Location: PL=Pore Lining, M=Matrix. 1 Indicators for Problematic Hydric Soils 1: 2 cm Muck (A10) (MLRA 147) 2 cm Muck (A10) (MLRA 147) 3 Depleted Matrix (F3) 4 Depleted Matrix (F3) 5 Depleted Matrix (F3) 5 Depleted Matrix (F3) 6 Depleted Matrix (F3) 7 Depleted Below Dark Surface (F19) 7 Depleted Below Dark Surface (A11) 7 Depleted Dark Surface (F1) 7 Depleted Below Dark Surface (A12) 7 Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Walta 136, 122) 7 Sandy Redox (S5) 7 Diedmont Floodplain Soils (F19) (MLRA 148) 7 Stripped Matrix (S4) 7 Umbric Surface (F13) (MLRA 136, 122) 7 Sandy Redox (S5) 7 Piedmont Floodplain Soils (F19) (MLRA 148) 7 Stripped Matrix (S6) 7 Piedmont Floodplain Soils (F19) (MLRA 148) 7 Stripped Matrix (S6) 7 Piedmont Floodplain Soils (F19) (MLRA 148) 7 Stripped Matrix (S6) 7 Piedmont Floodplain Soils (F19) (MLRA 148) 7 Stripped Matrix (S6) 8 Piedmont Floodplain Soils (F19) (MLRA 148) 8 Stripped Matrix (S6) 8 Piedmont Floodplain Soils (F19) (MLRA 148) 8 Stripped Matrix (S6) 8 Piedmont Floodplain Soils (F19) (MLRA 148) 8 Stripped Matrix (S6) 8 Piedmont Floodplain Soils (F19) (MLRA 148) 8 Piedmont Floodplain Soils (F19) 8 Unbric Surface (F13) (MLRA 148) 8 Piedmont Floodplain Soils (F19) 8 Unbric Surface (F13) (MLRA 148) 8 Unbric Surface (F13) (MLRA 148) 8 Unbric Soil Present? Yes No X	7-11	2.5Y 5/3	98	7.5YR 4/6	2	С	М	FSL	Prominent redox concentrations
¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Addictors: (Applicable to all LRRs, unless otherwise noted.)	11-16	10YR 5/3	95	10YR 4/4	5	С	М	FSL	Faint redox concentrations
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulffide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F7) Thick Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 147, 148) Sandy Redox (S5) Deidmont Floodplain Soils (F19) MLRA 136, 147) Other (Explain in Remarks) MLRA 136, 147) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	16-20	2.5Y 5/3	95	10YR 3/4	5	С	М	FSL	Distinct redox concentrations
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulffide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F7) Thick Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 147, 148) Sandy Redox (S5) Deidmont Floodplain Soils (F19) MLRA 136, 147) Other (Explain in Remarks) MLRA 136, 147) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X								- 	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulffide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F7) Thick Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 147, 148) Sandy Redox (S5) Deidmont Floodplain Soils (F19) MLRA 136, 147) Other (Explain in Remarks) MLRA 136, 147) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulffide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F7) Thick Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 147, 148) Sandy Redox (S5) Deidmont Floodplain Soils (F19) MLRA 136, 147) Other (Explain in Remarks) MLRA 136, 147) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X								- 	
Histosol (A1) Dark Surface (S7) Dark Surface (S8) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coastal Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Dimbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Umbric Surface (F13) (MLRA 136, 122) Umbric Surface (F13) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	¹ Type: C=co	ncentration, D=Depl	etion, RM=Reduced	d Matrix, MS=Masked	Sand Grain	ns.		² Location	: PL=Pore Lining, M=Matrix.
Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation an wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Hydric Soil I	ndicators: (Applicab	le to all LRRs <u>,</u> unle	ss otherwise noted.)				Indicators	for Problematic Hydric Soils ³ :
Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (F12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Wetland hydrology must be present, Umbric Surface (F13) (MLRA 136, 122) unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:	Histoso	ol (A1)		`	•			2 cm Muck (A	A10) (MLRA 147)
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Matrix (F3) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Very Shallow Dark Surface (TF12) Other (Explain in Remarks) **Indicators of hydrophytic vegetation an wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:	Histic E	pipedon (A2)						Coastal Prair	ie Redox (A16)
Stratified Layers (A5) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Depleted Matrix (F3) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) In Remarks: Ned Namaraks Surface (F12) (LRR N, Wetland hydrology must be present, unless disturbed or problematic. Numbers Soil Present? Yes No X No X No X						RA 147, 148))	•	•
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Redox Depressions (F8) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Numeral (Sp) Other (Explain in Remarks) Numeral (S1) (LRR N, MLRA 136) Wetland hydrology must be present, unless disturbed or problematic. In the present of the pr									
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Depleted Dark Surface (F7) Other (Explain in Remarks) All (Indicators of hydrophytic vegetation an wetland hydrology must be present, Umbric Surface (F13) (MLRA 136, 122) Unless disturbed or problematic. Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:								 `	·
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Wetland hydrology must be present, Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, Wetland hydrology must be present, unless disturbed or problematic. Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (TF2) (MLRA 127, 147) Hydric Soil Present? Yes No X Remarks:									
Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136) wetland hydrology must be present, Umbric Surface (F13) (MLRA 136, 122) unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:	·		ce (A11))		Other (Expla	in in Remarks)
MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X MLRA 136) wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No X						43) # BB N		3	61 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:			LRR N,		Masses (F	12) (LRR N,			
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:				•	'E17\ /MI D	A 176 177\			
Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:	_						1/2)	uniess aist	urbed of problematic.
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:									
Type: Depth (inches): Hydric Soil Present? Yes No _X Remarks:		a Matrix (50)		Kea raient Plate	at (11 2)	(I-IERR 127, 1	,		
Type: Depth (inches): Hydric Soil Present? Yes No _X Remarks:									
Depth (inches): Hydric Soil Present? Yes No _X Remarks:		_ayer (if observed):							
Remarks:	Type:								
	Depth ((inches):					Hydi	ric Soil Present?	Yes No _X
		were not observed i	n this location.						

WETLAND DETERMINATION DATA FORM – Eastern Mountain and Piedmont Region

Project Site: Green Ridge Recycl	ing and Disposal Facility,LLC City/County:	Cumberland Sampling Date: 2/2/2023				
Applicant/Owner: Green Ridge	Recycling and Disposal Facility, LLC	State: VA Sampling Point: DP-M01U				
Investigator(s): KBJW - D. Kwasr	niewski, E. Williams, E.Myers Section, Townshi	ip, Range: Tax Map #44-A-19				
Landform (hillslope, terrace, etc.):	Floodplain Local relief (conc	cave, convex, none): None Slope (%): 0-2%				
Subregion (LRR or MLRA): MLF	RA 136, LRR P Lat: 37.569442	Long: -78.131615 Datum: NAD83				
Soil Map Unit Name: 8A - Chewacl	a and Monacan soils, 0 to 2 percent slopes, frequentl	Ly flooded NWI classification: UPL				
Are climatic / hydrologic conditions	s on site typical for this time of year? Yes X	No If no, explain in Remarks.)				
Are Vegetation , Soil , o	r Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes X No				
	r Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)				
		ng point locations, transects, important features, etc.				
Hydrophytic Vegetation Present?	Yes No X	T				
Hydric Soil Present?	Yes No X	Is the Sampled Area within a Wetland? Yes NoX				
Wetland Hydrology Present?	Yes No X	within a wettand:				
According to the US Army Corps of HYDROLOGY	Engineers Antecedent Precipitation tool, the site is e	xperiencinig normal precipitation conditions.				
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one	e is required: check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)				
Saturation (A3)	Oxidized Rhizospheres along Living Roots (C	Moss Trim Lines (B16)				
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Borrows				
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)		Geomorphic Position (D2)				
Inundation Visible on Aerial In	nagery (B7)	Shallow Aquitard (D3)				
Water-Stained Leaves (B9)		Microtopographic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral Test (D5)				
Field Observations:						
Surface water Present? Yes	No X Depth (inches)	_				
Water Table Present? Yes X	No Depth (inches) 17	_				
Saturation Present? Yes X	No Depth (inches) 17	Wetland Hydrology Present? Yes No _X				
(includes capillary fringe)						
Describe Recorded Data (stream ga	uge, monitoring well, aerial photos, previous inspecti	ions), if available:				
Remarks:						
No primary or secondary indicators	of hydrology were observed on this day.					

VEGETATION (Four Strata) - Use scientific names of plants. Sampling Point: DP-M01U <u>Absolute</u> Dominant <u>Indicator</u> Dominance Test worksheet: Tree Stratum (Plot size: 30ft radius) % Cover Species? **Status** Number of Dominant Species 1. Acer rubrum 15 Υ FAC 2. Liriodendron tulipifera 15 That Are OBL, FACW, or FAC: FACU 3. Betula nigra 15 **FACW** 4. Prunus serotina 10 FACU Total Number of Dominant Species Across All Strata: (B) 6. Percent of Dominant Species (A/B) 8. That Are OBL, FACW, or FAC: 43% = Total Cover Prevalence Index worksheet: 20% of total cover: 50% of total cove 27.5 Multiply by: Total % Cover of: Sapling/Shrub Stratum (Plot size: 30ft radius) OBL species X 1 = 0 1. Carpinus caroliniana X 2 = 0 FAC FACW species 2. Platanus occidentalis FACW FAC species X 3 = 0 X 4 = 0 FACU species X 5 = 0 **UPL** species 0 Column Totals: (A) Prevalence Index = B/A= 6 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 55 = Total Cover 2 - Dominance Test is >50% 50% of total cove 27.5 20% of total cover: 3 - Prevalence Index is ≤ 3.00 11 Problematic Hydrophytic Vegetation¹ (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1. Allium canadense 10 **FACU** 2. Lonicera japonica FACU **Definitions of Four Vegetation Strata:** Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less 6. than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 8. 9 of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 15 = Total Cover 50% of total cover: 7.5 20% of total cover: Woody Vine Stratum (Plot size: 30ft radius) 1. Vitus rotundifolia Hydrophytic Vegetation Present? 10 = Total Cover No X 50% of total cove 20% of total cover: Remarks: (If observed, list morphological adaptations below).

Hydrophytic vegetation was not observed to be dominant in the vicinity.

Sampling Point: <u>DP-M01U</u>

Profile Desc	ription: (Describe to	the depth needed	to document the indi				tors.)	
Depth	Matrix		-		edox Features			
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-7	10YR 5/6	100					FSL	No redox concentrations
7-12	10YR 5/3	100					FSL	No redox concentrations
12-20	10YR 5/4	95	7.5YR 4/4	5	С	М	FSCL	Faint redox concentrations
¹ Type: C=co	ncentration, D=Deple	etion, RM=Reduce	ed Matrix, MS=Masked	Sand Grain	ns.			PL=Pore Lining, M=Matrix.
		e to all LRRs <u>, unl</u>	ess otherwise noted.)					for Problematic Hydric Soils ³ :
Histoso			Dark Surface (S7	•				10) (MLRA 147)
_	pipedon (A2)		Polyvalue Below					e Redox (A16)
	listic (A3)		Thin Dark Surface		RA 147, 148)		(MLRA 147, 1	•
_	en Sulfide (A4)		Loamy Gleyed M					odplain Soils (F19)
_	ed Layers (A5)		Depleted Matrix				(MLRA 136,	
	luck (A10) (LRR N)		Redox Dark Surf					Dark Surface (TF12)
_	ed Below Dark Surface	.e (A11)	Depleted Dark S		1		Otner (Explai	n in Remarks)
	Park Surface (A12) Mucky Mineral (S1) (L		Redox Depression		12) /I DD N		3Indicators of	hydrophytic vegetation an
	Mucky Millerat (31) (1 147, 148)		Iron-Manganese MLRA 136)	Masses (F	12) (LKK N,			drology must be present,
	Gleyed Matrix (S4)		Umbric Surface	(F13) (MI R	Δ 136 122)			urbed or problematic.
_	Redox (S5)		Piedmont Flood			148)	antess asta	arbed of problematic.
	d Matrix (S6)		Red Parent Mate					
-	a : iaa : x (50)				(, .	,		
	_ayer (if observed):							
Type:								
Depth ((inches):					Hydr	ric Soil Present?	Yes No <u>X</u>
Remarks:						•		
Hydric soils	were not observed in	n this location.						

WETLAND DETERMINATION DATA FORM – Eastern Mountain and Piedmont Region

Project Site: Green Ridge Recycling and Disposal Facility,LLC City/County:	Cumberland Sampling Date: 2/23/2023				
Applicant/Owner: Green Ridge Recycling and Disposal Facility, LLC	State: VA Sampling Point: DP-PG01U				
Investigator(s): KBJW - D. Kwasniewski, E. Williams Section, Township,	Range:				
Landform (hillslope, terrace, etc.): hillslope Local relief (concav	re, convex, none):concave Slope (%): 0-2%				
Subregion (LRR or MLRA): MLRA 136, LRR P Lat: 37.5481	Long: -78.12555 Datum: NAD83				
Soil Map Unit Name: 21B—Helena sandy loam, 2 to 7 percent slopes	NWI classification: UPL				
Are climatic / hydrologic conditions on site typical for this time of year? Yes X	No If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes X No				
Are Vegetation , Soil , or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS-Attach site map showing sampling	point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present? Yes No X	within a Wetland?				
Wetland Hydrology Present? Yes X No					
Remarks: This data point represents an upland location (UPL). This data point location is positioned upslope of a single culvert pipe inlet going under Pin According to the US Army Corps of Engineers Antecedent Precipitation tool, the site is exp drought.					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)				
X High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)				
X Saturation (A3) Oxidized Rhizospheres along Living Roots (C3)	·				
Water Marks (B1) Presence of Reduced Iron (C4) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)				
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) This Mark Serface (C7)	Crayfish Borrows				
Drift Deposits (B3) Thin Muck Surface (C7) Other (Fundainia Remarks)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4) Iron Deposits (B5) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)				
Inundation Visible on Aerial Imagery (B7)	Geomorphic Position (D2)				
Water-Stained Leaves (B9)	Shallow Aquitard (D3) Microtopographic Relief (D4)				
Aquatic Fauna (B13)	FAC-Neutral Test (D5)				
riquate radia (525)	The Neutral Test (DS)				
Field Observations:					
Surface water Present? Yes No X Depth (inches)					
Water Table Present? Yes X No Depth (inches) 8					
Saturation Present? Yes X No Depth (inches) 0	Wetland Hydrology Present? Yes X No				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	ns), if available:				
Remarks:					

VEGETATION (Four Strata) - Use scientific names of plants. Sampling Point: DP-PG01U <u>Absolute</u> Dominant <u>Indicator</u> **Dominance Test worksheet:** Tree Stratum (Plot size: 30ft radius) % Cover Species? **Status** Number of Dominant Species 1. Acer negundo 20 Υ FAC That Are OBL, FACW, or FAC: 2. Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species (A/B) 8. That Are OBL, FACW, or FAC: 57% = Total Cover Prevalence Index worksheet: 20% of total cover: 10 50% of total cove Multiply by: Total % Cover of: Sapling/Shrub Stratum (Plot size: 30ft radius) OBL species X 1 = 1. Acer negundo X 2 = 0 FAC FACW species 15 2. Gleditsia triacanthos 15 FAC FAC species X3 =0 FACU X 4 = 0 Juniperus virginiana 10 FACU species X 5 = 0 **UPL** species 0 Column Totals: (A) Prevalence Index = B/A= 6 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 40 = Total Cover X 2 - Dominance Test is >50% 20 20% of total cover: 3 - Prevalence Index is ≤ 3.00 50% of total cove Problematic Hydrophytic Vegetation¹ (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1. Microstegium vimineum 20 FAC 2. Lonicera japonica 15 FACU Definitions of Four Vegetation Strata: FACU Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or 3. Rubus allegheniensis 15 FACU more in diameter at breast height (DBH), regardless of Allium canadense 10 height. Sapling/Shrub - Woody plants, excluding vines, less 6. than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 8. 9 of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 60 = Total Cover 20% of total cover: 50% of total cover: 30 Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover Х 50% of total cove 20% of total cover: Remarks: (If observed, list morphological adaptations below).

Sampling Point: <u>DP-PG01U</u>

Profile Desc	ription: (Describe to	the depth neede	d to document the indi	cator or co	onfirm the ab	sence of indica	tors.)	· •
Depth	Matrix			R	edox Features	5		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	7.5YR 4/4	100					CL	no redox concentrations
2-19	10YR 4/3	95	7.5YR 4/4	5	С	M	CL	faint redox concentrations
19-20	2.5Y 4/3	98	7.5YR 4/4	2		M	FSCL	distinct redox concentrations
						-		-
								
¹ Type: C=co	ncentration, D=Depl	etion, RM=Reduc	ed Matrix, MS=Masked	Sand Grai	ns.		² Location:	: PL=Pore Lining, M=Matrix.
			less otherwise noted.)					for Problematic Hydric Soils ³ :
Histoso	ol (A1)	<u></u>	Dark Surface (S7)				A10) (MLRA 147)
—— Histic E	pipedon (A2)		Polyvalue Below	· / Surface (S8) (MLRA 14	7, 148)	Coastal Prair	ie Redox (A16)
—— Black ⊢	listic (A3)		Thin Dark Surfac	e (S9) (MI	RA 147, 148		 (MLRA 147, 1	148)
—— Hydrog	en Sulfide (A4)		Loamy Gleyed M	latrix (F2)			Piedmont Flo	podplain Soils (F19)
Stratifie	ed Layers (A5)		Depleted Matrix	(F3)			(MLRA 136,	147)
2 cm M	uck (A10) (LRR N)		Redox Dark Surf	ace (F6)			Very Shallow	Dark Surface (TF12)
Deplete	ed Below Dark Surfa	ce (A11)	Depleted Dark S	urface (F7)		Other (Expla	in in Remarks)
Thick D	ark Surface (A12)		Redox Depression	ons (F8)				
Sandy I	Mucky Mineral (S1) (LRR N,	Iron-Manganese	Masses (F	12) (LRR N,		³ Indicators o	f hydrophytic vegetation an
MLRA 1	l47, 148)		MLRA 136)				wetland hy	drology must be present,
Sandy (Gleyed Matrix (S4)		Umbric Surface	(F13) (MLF	RA 136, 122)		unless dist	urbed or problematic.
Sandy I	Redox (S5)		Piedmont Flood	plain Soils	(F19) (MLRA	148)		
Strippe	d Matrix (S6)		Red Parent Mate	erial (TF2)	(MLRA 127, 1	.47)		
Restrictive L	ayer (if observed):							
Type:								
	(inches):					Hydr	ic Soil Present?	Yes No X
Верин	menes).					riyui	ic soit r resent:	No <u>X</u>
Remarks: Hydric soils	were not observed i	n this location.						
,								



Enclosure 4

Representative Site Photographs



DP-5.5-01W Soils (PFO)



DP-5.5-01W Surrounding Area Looking Downslope



DP-5.5-01W Surrounding Area Looking Upslope





DP-5.5-02U Soils (UPL)



DP-5.5-02U Surrounding Area Looking Downslope



DP-5.5-02U Surrounding Area Looking Upslope



Project Name: Green Ridge Recycling and Disposal Location: Cumberland, VA



DP-2-E01U Soils (UPL)



DP-2-E01U Surrounding Area Looking Downslope



DP-2-E01U Surrounding Area Looking Upslope





DP-EM-A01U Soils (UPL)



DP-2-E01U Surrounding Area Looking Northeast



DP-2-E01U Surrounding Area Looking Southwest





DP-G01U Soils (UPL)



DP-G01U Surrounding Area Looking Downslope



DP-G01U Surrounding Area Looking Upslope





DP-G02U Soils (UPL)



DP-G02U Surrounding Area Looking Downslope



DP-G02U Surrounding Area Looking Upslope



Project Name: Green Ridge Recycling and Disposal Location: Cumberland, VA

Project Number: 2017-890



DP-M01U Soils (UPL)



DP-M01U Surrounding Area Looking Northeast



DP-M01U Surrounding Area Looking Southwest





DP-PG01U Soils (UPL)



DP-PG01U Surrounding Area Looking South along the east side of Pine Grove Road



DP-PG01U Surrounding Area Looking North along the east side of Pine Grove Road





Enclosure 5 Antecedent Precipitation Tool data

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network - Daily Total - 30-Day Rolling Total - 30-Year Normal Range 2022-12-08

Oct 2022 Nov 2022

Sep 2022

Coordinates	37.56705, -78.12965
Observation Date	2022-12-08
Elevation (ft)	292.22
Drought Index (PDSI)	Mild drought (2022-11)
WebWIMP H ₂ O Balance	Wet Season

Jun 2022 Jul 2022 Aug 2022

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-12-08	1.666929	4.332677	4.307087	Normal	2	3	6
2022-11-08	2.046457	5.144882	1.448819	Dry	1	2	2
2022-10-09	2.071654	4.8	2.07874	Normal	2	1	2
Result							Normal Conditions - 10

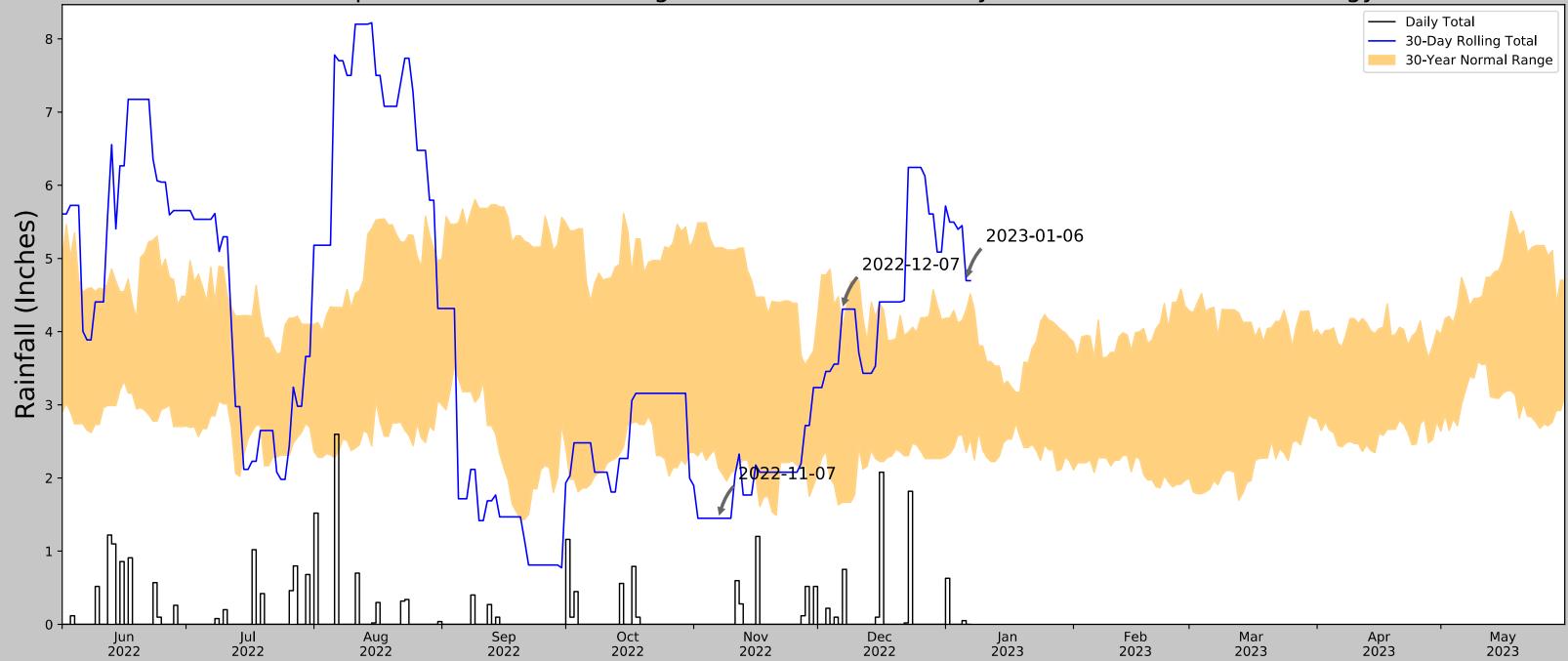
Jan 2023 Feb 2023 Mar 2023 Apr 2023

Dec 2022



May 2022

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
CROZ I ER	37.6664, -77.8769	279.856	15.442	12.364	7.14	10873	90
COLUMBIA 17.2 SSE	37.5308, -78.0233	312.008	6.341	19.788	2.979	60	0
CUMBERLAND 0.4 NE	37.5014, -78.2401	445.866	7.563	153.646	4.565	5	0
POWHATAN 5.0 NW	37.6102, -77.9495	285.105	10.304	7.115	4.71	2	0
NEW CANTON 2.6 SE	37.6794, -78.2631	308.071	10.658	15.851	4.965	4	0
CUMBERLAND	37.5, -78.25	459.974	8.059	167.754	4.978	10	0
POWHATAN 3.2 SW	37.5048, -77.9548	336.942	10.501	44.722	5.195	1	0
BREMO BLUFF	37.7092, -78.2886	225.066	13.119	67.154	6.784	298	0
POWHATAN	37.5144, -77.8858	399.934	13.846	107.714	7.722	87	0
RICE 7.3 NE	37.3685, -78.2274	377.953	14.729	85.733	7.891	2	0
AMELIA COURTHOUSE	37.345, -77.9781	345.144	17.449	52.924	8.776	11	0

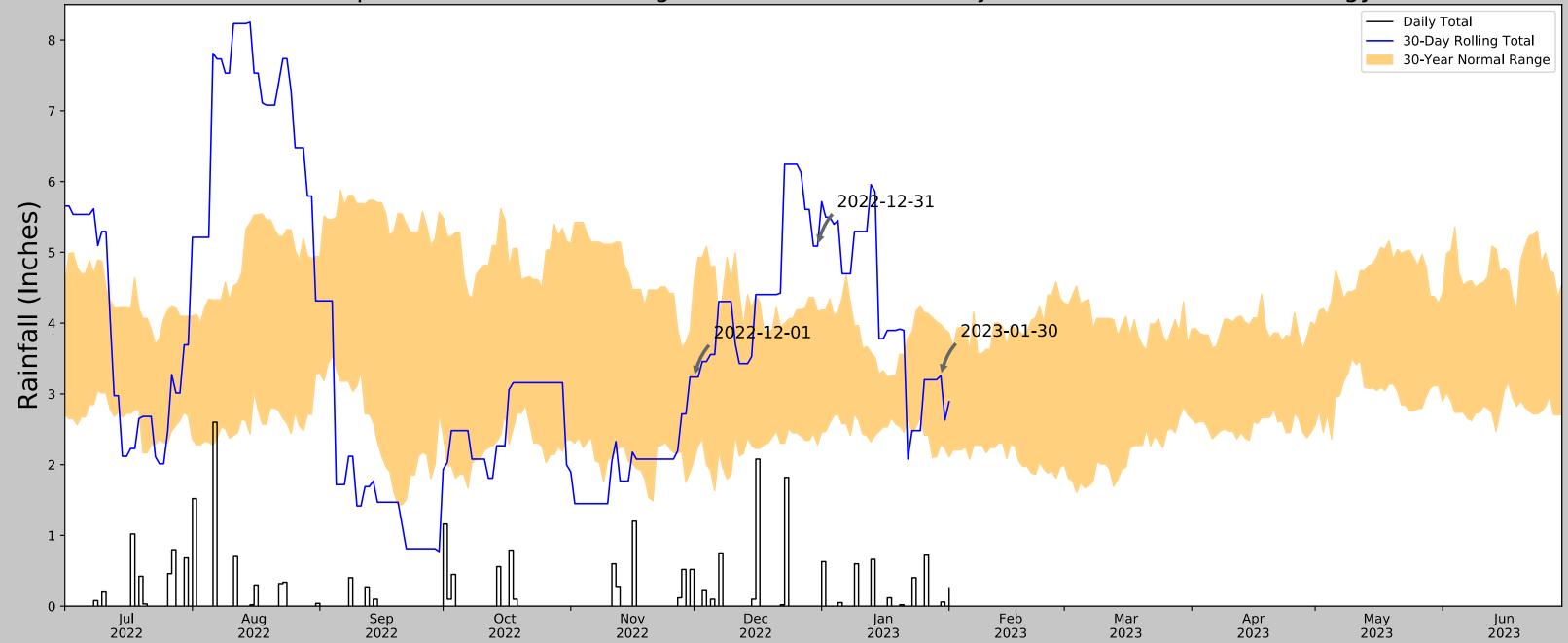


Coordinates	37.56667, -78.12222
Observation Date	2023-01-06
Elevation (ft)	292.25
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-01-06	2.351575	4.292914	4.696851	Wet	3	3	9
2022-12-07	1.666929	4.059843	4.307087	Wet	3	2	6
2022-11-07	2.137402	5.144882	1.448819	Dry	1	1	1
Result							Wetter than Normal - 16

SICORPS OF ENGL	Figure and tables made by the Antecedent Precipitation Tool
	Version 1.0
TORY PROS	Written by Jason Deters U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
CROZIER	37.6664, -77.8769	279.856	15.091	12.394	6.978	10873	89
COLUMBIA 17.2 SSE	37.5308, -78.0233	312.008	5.959	19.758	2.799	60	0
POWHATAN 5.0 NW	37.6102, -77.9495	285.105	9.923	7.145	4.536	2	0
CUMBERLAND 0.4 NE	37.5014, -78.2401	445.866	7.877	153.616	4.755	5	0
POWHATAN 3.2 SW	37.5048, -77.9548	336.942	10.12	44.692	5.006	5	1
CUMBERLAND	37.5, -78.25	459.974	8.381	167.724	5.177	10	0
BREMO BLUFF	37.7092, -78.2886	225.066	13.411	67.184	6.936	298	0
POWHATAN	37.5144, -77.8858	399.934	13.447	107.684	7.499	87	0
RICE 7.3 NE	37.3685, -78.2274	377.953	14.858	85.703	7.959	2	0
AMELIA COURTHOUSE	37.345, -77.9781	345.144	17.235	52.894	8.668	11	0

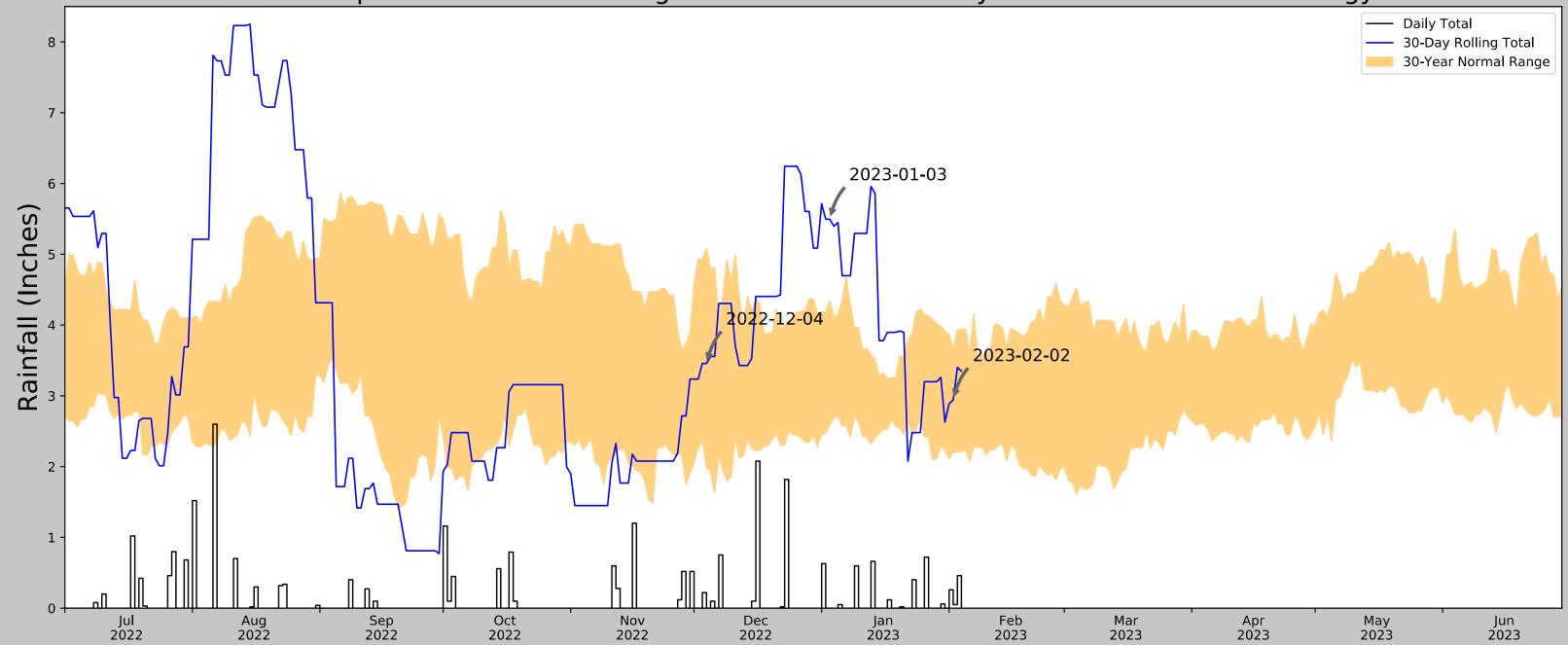


Coordinates	37.569442, -78.131615
Observation Date	2023-01-30
Elevation (ft)	251.62
Drought Index (PDSI)	Not available
WebWIMP H₂O Balance	Wet Season

ST CORPS OF ENGR	Figure and tables made by the Antecedent Precipitation Tool
	Version 1.0
	Written by Jason Deters
ATORY PROS	U.S. Army Corps of Engineers

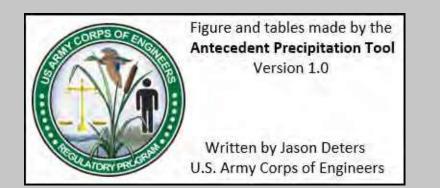
30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-01-30	2.288189	3.979134	3.259843	Normal	2	3	6
2022-12-31	2.281102	4.164173	5.086614	Wet	3	2	6
2022-12-01	2.067323	4.592126	3.236221	Normal	2	1	2
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CROZIER	37.6664, -77.8769	279.856	15.466	28.236	7.396	10873	89
POWHATAN 5.0 NW	37.6102, -77.9495	285.105	5.555	5.249	2.529	2	0
POWHATAN 7.8 NE	37.5877, -77.7872	259.843	7.325	20.013	3.443	2	1
ROCKVILLE 5.1 W	37.7211, -77.7705	375.984	6.937	96.128	3.788	4	0
MANAKIN-SABOT 1.6 SW	37.6341, -77.7422	211.942	7.699	67.914	3.987	3	0
COLUMBIA 11.6 ENE	37.8165, -77.9685	318.898	11.515	39.042	5.631	26	0
COLUMBIA 17.2 SSE	37.5308, -78.0233	312.008	12.329	32.152	5.944	41	0
POWHATAN	37.5144, -77.8858	399.934	10.513	120.078	5.993	345	0
POWHATAN 6.6 SE	37.4883, -77.8212	341.864	12.678	62.008	6.491	9	0
MIDLOTHIAN 2.8 NW	37.5336, -77.6865	253.937	13.886	25.919	6.609	4	0
GLEN ALLEN 6.8 WNW	37.6838, -77.6058	275.919	14.874	3.937	6.752	2	0
GLEN ALLEN 4.6 W	37.6554, -77.5687	272.966	16.875	6.89	7.71	38	0
ASHLAND	37.7553, -77.485	220.144	22.285	59.712	11.359	4	0

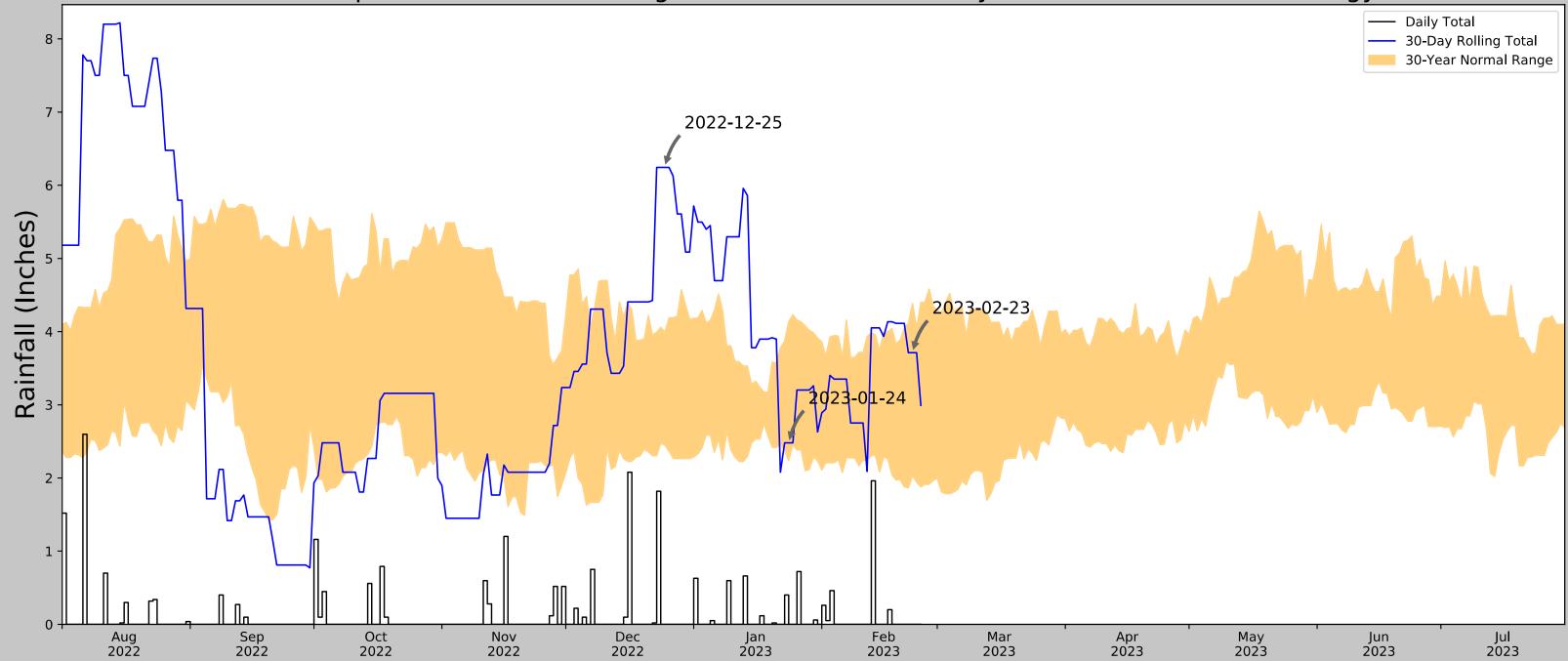


Coordinates	37.569442, -78.131615
Observation Date	2023-02-02
Elevation (ft)	251.62
Lievation (it)	231.02
Drought Index (PDSI)	Not available
Drought maex (FD31)	I NOL avallable
WebWIMP H ₂ O Balance	Wet Season
Webwim H2O balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-02-02	2.208268	3.661417	2.940945	Normal	2	3	6
2023-01-03	2.59252	4.343307	5.496063	Wet	3	2	6
2022-12-04	1.99685	5.084252	3.456693	Normal	2	1	2
Result							Normal Conditions - 14



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CROZIER	37.6664, -77.8769	279.856	15.466	28.236	7.396	10873	89
POWHATAN 5.0 NW	37.6102, -77.9495	285.105	5.555	5.249	2.529	2	0
POWHATAN 7.8 NE	37.5877, -77.7872	259.843	7.325	20.013	3.443	2	1
ROCKVILLE 5.1 W	37.7211, -77.7705	375.984	6.937	96.128	3.788	4	0
MANAKIN-SABOT 1.6 SW	37.6341, -77.7422	211.942	7.699	67.914	3.987	3	0
COLUMBIA 11.6 ENE	37.8165, -77.9685	318.898	11.515	39.042	5.631	26	0
COLUMBIA 17.2 SSE	37.5308, -78.0233	312.008	12.329	32.152	5.944	41	0
POWHATAN	37.5144, -77.8858	399.934	10.513	120.078	5.993	345	0
POWHATAN 6.6 SE	37.4883, -77.8212	341.864	12.678	62.008	6.491	9	0
MIDLOTHIAN 2.8 NW	37.5336, -77.6865	253.937	13.886	25.919	6.609	4	0
GLEN ALLEN 6.8 WNW	37.6838, -77.6058	275.919	14.874	3.937	6.752	2	0
GLEN ALLEN 4.6 W	37.6554, -77.5687	272.966	16.875	6.89	7.71	38	0
ASHLAND	37.7553, -77.485	220.144	22.285	59.712	11.359	4	0



Coordinates	37.56667, -78.12222
Observation Date	2023-02-23
Elevation (ft)	292.25
Drought Index (PDSI)	Mild drought (2023-01)
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-02-23	2.034252	4.383858	3.712599	Normal	2	3	6
2023-01-24	2.238583	4.133858	2.480315	Normal	2	2	4
2022-12-25	2.448032	3.993307	6.244095	Wet	3	1	3
Result							Normal Conditions - 13

CORPS OF ENGL	Figure and tables made by the Antecedent Precipitation Tool
	Version 1.0
ATOMY PROS	Written by Jason Deters U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
CROZIER	37.6664, -77.8769	279.856	15.091	12.394	6.978	10873	90
COLUMBIA 17.2 SSE	37.5308, -78.0233	312.008	5.959	19.758	2.799	60	0
POWHATAN 5.0 NW	37.6102, -77.9495	285.105	9.923	7.145	4.536	2	0
CUMBERLAND 0.4 NE	37.5014, -78.2401	445.866	7.877	153.616	4.755	5	0
POWHATAN 3.2 SW	37.5048, -77.9548	336.942	10.12	44.692	5.006	5	0
CUMBERLAND	37.5, -78.25	459.974	8.381	167.724	5.177	10	0
BREMO BLUFF	37.7092, -78.2886	225.066	13.411	67.184	6.936	298	0
POWHATAN	37.5144, -77.8858	399.934	13.447	107.684	7.499	87	0
RICE 7.3 NE	37.3685, -78.2274	377.953	14.858	85.703	7.959	2	0
AMELIA COURTHOUSE	37.345, -77.9781	345.144	17.235	52.894	8.668	11	0



Enclosure 6

Report titled Supplemental Information to the Preliminary Jurisdictional Determination Request submitted September 29, 2022 (Evaluation of the Area Surrounding Stream Reach 4.2)



Green Ridge Recycling and Disposal Facility (NAO-2018-0995 (Muddy Creek))

Supplemental Information to the Preliminary Jurisdictional Determination Request submitted September 29, 2022 (Evaluation of the Area Surrounding Stream Reach 4.2)

Cumberland County, Virginia



February 8, 2023



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Exhibit 3	USGS Topographic and FEMA Map
Exhibit 4	Natural Resources Inventory Map
Exhibit 5	Historical Google Aerial Imagery
Exhibit 6	USGS Light Detection and Ranging (Lidar) Imagery
Exhibit 7	Antecedent Precipitation Tool Data
Exhibit 8	Weather Station Precipitation Data
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Exhibit 11	Field Data Points
Exhibit 12	Representative Site Photographs



INTRODUCTION

On behalf of Green Ridge Recycling and Disposal Facility, LLC, Koontz Bryant Johnson Williams (KBJW) is submitting the enclosed supplemental information and supporting documentation as an appendix to the information that was submitted to the US Army Corps of Engineers (USACE), Western Virginia Regulatory Section Office on September 29, 2022, as part of a Preliminary Jurisdictional Determination (PJD) request. On December 8, 2022, KBJW conducted an onsite evaluation of stream Reach 4.2. Newly identified information for the area is provided herein. This evaluation occurred following a November 2, 2022, onsite visit with the USACE, Virginia Department of Environmental Quality (DEQ), Environmental Protection Agency (EPA), TRC Companies, and other project team members.

The purpose of the onsite visit with regulatory agencies was to review and confirm the Waters of the US (WOUS) including Wetlands as shown on the mapping provided in the PJD request. During the onsite visit, the area identified as stream reach 4.2 was reviewed. Due to a lack of wetland and stream characteristics on this day, additional onsite information was warranted.

The limits of waters of the U.S. described in this submittal is based on an examination of field conditions at the time of this evaluation and may differ from future observations by others. The jurisdictional nature of WOUS. or lack thereof described in this submittal, is subject to concurrence from the USACE. This supplement does not constitute a jurisdictional determination as such determinations must be verified by the USACE to decide if areas in the evaluation area meet the current regulatory requirements.

SITE DESCRIPTION AND LOCAL RELIEF

The Green Ridge Recycling and Disposal Facility is located north of U.S. Route 60 (Anderson Highway), and loosely bounded by Route 654 (Pinegrove Road) and Route 685 (Miller Lane) in Clinton, Cumberland County, Virginia. Route 654 is located approximately one (1) mile west of the Cumberland County/Powhatan County line. The evaluation area is in the northwestern portion of the overall study area as shown on *Exhibit 1*. Cumberland County has recorded the evaluation area as being on parcel #44-A-19. The approximate centroid of the evaluation area can be found at Latitude: 37.56705; Longitude: -78.12965. The PJD request submitted on September 29, 2022 identified the evaluation area as **Reach 4.2**; an intermittent stream.

Cumberland County land features are typical of a moderately high plateau dissected by numerous streams and rivers. The elevation in the evaluation area ranges from approximately 292 feet to 312 feet above mean sea level with a supporting watershed of approximately 0.01-square miles/6.4-acres as shown on *Exhibit 2*. Based on USGS lidar 2-elevation contours, the evaluation area is sloped west toward Muddy Creek at approximately 3.9%. Generally, the side slopes are moderately sloping toward stream Reach 4.2 with a drainage divide to the east and a named stream, Muddy Creek, and its associated 100-year floodplain to the west.

METHODOLOGY

On December 8, 2022, an evaluation of stream Reach 4.2 included the collection of best available online information and site-specific information to include vegetation, hydrology, subsurface soils, slope breaks, and stream characteristics.

In-office Review

Prior to conducting an on-site evaluation, relevant site-specific background information was reviewed to assess whether evidence indicative of wetlands or other Waters of the U.S. occur within the evaluation area. Site-specific information reviewed included the U.S. Geological Survey (USGS) topographic quadrangle map, Whiteville, Virginia quadrangle (*Exhibit 3*), Natural Resources Conservation Service (NRCS) soils map data (*Exhibit 4*), U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory



(NWI) data (*Exhibit 4*), historical natural color aerial imagery (*Exhibit 5*), and USGS Light Detection and Ranging (Lidar) imagery (*Exhibit 6*).

Precipitation Data

Precipitation data analyzed a variety of online tools to determine the amount of precipitation the localized area is receiving. Rainfall data were collected in inches by date (if available). To analyze if the site is experiencing normal climatic conditions, the Antecedent Precipitation Tool (APT) was downloaded from the USACE Norfolk District website. The APT is used to compare recent rainfall to the range of normal rainfall conditions that has occurred over the last 30-years. The centroid of the evaluation area was used to calculate site-specific precipitation conditions collected in the APT analysis. To determine if the site is exhibiting normal climatic conditions at the time of the on-site delineation the APT was queried for December 8, 2022, as shown in *Exhibit 7*.

The nearest reliable precipitation data were obtained from the Farmville Regional Airport, weather station KFVX, located 23-miles southwest of the evaluation area (as a crow flies). Precipitation data from this station can be found in *Exhibit 8*. The nearest weather station to the evaluation area (KVAPOWHA28) is in Powhatan approximately 3-miles to the south/southwest.

The use of aerial imagery was analyzed to determine the current and past land use of the area. Land cover, soil signatures, drainage patterns or other evidence of a seasonal high-water table on the ground surface is usually visible when present. The best available aerial imagery was obtained from google earth historical imagery as shown in *Exhibit 5*.

On-site Field Data Collection

On December 8th, 2022, KBJW scientists conducted further evaluation of the Waters of the U.S. (including wetlands) within stream Reach 4.2 by ground-truthing the evaluation area. The evaluation area, including data point locations, is shown on *Exhibit 9-10*. Waters of the U.S. (including wetlands) were evaluated pursuant to the USACE Wetland Delineation Manual, Technical Report Y-87-1 (1987 Manual), the USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0) (USACE, April 2012), and subsequent regulatory guidance. Samples of hydrology, vegetation, and soils were evaluated and can be found in *Exhibit 11*. Additionally, the area was evaluated for the observance of an Ordinary High-Water Mark (OHWM) using the USACE National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams: Interim Version.

The OHWM occurs at transition points found on the landscape between stream features and terrestrial features. The three initial characteristics to look for when assessing an OHWM are transitional points, slope breaks, changes in sediment characteristics, and a transition in vegetation type and density.

A total of twelve (12) field data point locations were taken approximately every 100-feet starting at the headcut which is located approximately fifteen feet down gradient of flag DP-4.3-01U, and extending upslope/gradient approximately 513-feet to data point DP- EW 4.3 U. Field data point DP-EW4.3U was initially included as part of the PJD request, and is included in the evaluation area as supporting documentation. This evaluation was conducted to determine the presence or absence of jurisdictional features and/or an OHWM that may exist within the evaluation area. The start of a stream channel is located downslope/gradient of the evaluation area and is labeled as Reach 4.1. This channel start is evident due to a 3-4-foot high vertical headcut/slope break.

A total of four (4) cross-sectional transects were collected, each consisting of three (3) data point locations. The three (3) data point locations include a centroid location within the local relief with two (2) locations at the toe of slope to the north and south of the centroid location. The average transect is 43-feet wide horizontally relative to the landscape. The area landward of the toe of slope was not evaluated due to the unlikelihood of finding jurisdictional features. Therefore, the lowest topographic relief was only evaluated.



Each field data point location consists of a 30-foot radius from the data point center. The center of each field data point location was surveyed using a sub-meter capable GPS unit; Trimble TDC650 GPS. Wetland determination data forms were recorded to describe hydrology indicators, plant communities, and soil characteristics of the area. Wetlands and streams were classified according to the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al., 1979).

Soil colors were determined from moist, undisturbed peds using a Munsell Soil-Color Chart. NRCS digital soils data and mapping were obtained from the NRCS website (Web Soil Survey) and were compared for consistency to the current conditions encountered during the field investigation.

A three (3)-inch diameter auger bit was used to bore a pit subsurface to 20-inches below the soil surface. The soil profile was used to examine soil hue, value, and chroma describing the soil characteristics to determine presence of hydric conditions in the upper part. Ground surface elevations were not field surveyed; however, if needed, it can be determined using topographic mapping.

Representative site photographs were taken during the onsite field visit. Photos of the field data point locations include soil profile (0-20") and the surrounding area looking upslope and downslope to best document the field conditions at the time of the site visit as shown in *Exhibit 12*.

FINDINGS AND CONCLUSION

In-Office Review

The USGS topographic quadrangle map depicts the topographic relief as being sloped west toward Muddy Creek with moderate topographic relief. Streams are not depicted on the quadrangle mapping as being within the evaluation area. Based on the most recent google earth aerial photography (12/2022), it appears that the majority of the evaluation area is forested, which is consistent with current onsite field characteristics.

Google Earth historic aerial imagery depicts the evaluation area as being disturbed. It is assumed that the disturbance occurred during timber harvesting. Stream features or saturation are not evident on aerial imagery. A timbering operation occurred prior to December 2001 which harvested most of the trees in the area as shown on *Exhibit 7*. A treed buffer was not identified/preserved in the evaluation area. Typically, a treed buffer would have possibly been maintained if a stream feature was in the area.

The NRCS soil survey for Cumberland County, Virginia (VA049) is a desktop tool used to determine the potential presence of soil units with hydric components known to occur within the evaluation area. The identification of hydric soil is one criterion of determining if an area meets the wetland criteria. Soil map units overlaid on the evaluation area are depicted in *Exhibit 4*. The soil unit in stream Reach 4.2 has been mapped as Appling-Helena complex, 7 to 15 percent slopes (2C) which has a hydric rating of 3. Appling-Helena complex soils is a moderately well drained to well-drained soil complex that is found on 7-15 percent hillslopes. This soil is developed from granite and gneiss residuum parent material that can be seasonally moist-wet.

In general, the soil map unit does not meet the definition of hydric soils because it does not have one of the hydric soil indicators as indicated by the NRCS Soil Survey of Cumberland County, Virginia. The evaluation area is not dominated by at least one approved hydric soil indicator identified by NRCS. Therefore, it may be considered a non-hydric soil. Typical soil textures describe the soil map units within the upper twenty inches of the soil surface include sandy loam, sandy clay loam, clay.

A review of the USFWS NWI mapper did not reveal any mapped wetland or riverine types within the evaluation area as shown on *Exhibit 4*. The nearest NWI mapped wetland or riverine type is located west of the evaluation area and is associated with Muddy Creek.



A 1-meter LiDAR dataset was utilized to detect the presence of a depressed area that could support stream flow and for the identification of stream banks. This mapping technology is capable of measuring landscape topography. Based on the USGS Lidar mapping, stream channels are not shown within the evaluation area. However, a well-defined feature is shown downslope of the evaluation area starting at a headcut. For the purposes of this submittal, jurisdictional features are not shown on the mapping should they exist outside of the evaluation area. Please refer to the latest Wetland Delineation mapping dated as revised on 1/9/2023.

Precipitation Data

The APT suggests the site was experiencing normal rainfall conditions at the time of the evaluation; however, the area is experiencing a mild drought. Therefore, evidence of hydrological characteristics should more than likely be present at the time of the on-site visit.

Rainfall data were gathered from two weather stations, the Farmville Airport weather station (KFVX) and Powhatan (KVAPOWHA28), as shown below in *Table* 1. This table presents precipitation events for the month November and leading up to the site visit on December 8, 2022. According to these data, between 10-12 rain events occurred between November and December. Weather station KFVX recorded 0.63-inches of rainfall the day prior to the site visit while a total of 0.75-inches of rain occurred at weather station KVAPOWHA28 between December 6-7. Both weather stations indicate rainfall produced greater than 0.5-inches of rain, therefore, evidence of hydrological characteristics on the surface and subsurface should be readily found.

Table 1: 2022 Precipitation Data

	Weather Station				
Month/Day	KFVX	KVAPOWHA28			
_	Precipitation (in)	Precipitation (in)			
November/4	0.01	0.00			
November/11	0.44	1.34			
November/12	0.45	0.00			
November/13	0.02	0.00			
November/15	0.00	1.22			
November/16	1.37	0.01			
November/25	0.00	0.03			
November/27	0.03	1.03			
November/28	0.79	0.00			
November/30	0.33	0.65			
December/1	0.27	0.00			
December/3	0.14	0.42			
December/4	0.26	0.01			
December/6	0.00	0.64			
December/7	0.63	0.11			
Total Precipitation	3.44	4.28			
Nov (entire month)	3.44	7.20			
Total Precipitation Dec 1-7	1.3	1.18			

The shaded row represents the rainfall the day before the onsite visit

On-site Field Review

Field data points were placed in the best position to describe the site conditions and to provide sufficient evidence of wetland hydrology. Of the thirteen (13) data points, three (3) data points met the criteria for wetland hydrology. Field data point 4.3-08U met a primary wetland hydrology indicator for saturation occurring at ten (10)-inches below ground surface. Saturation was observed at six (6) other field data points, including 4.3-01U, 4.3-02U, 4.3-03U, 4.3-07U, 4.3-09U, and 4.3-12U; however, these data points



did not meet the primary indicator of hydrology as saturation was observed at 14-21 inches from the soil surface. The primary wetland hydrology indicator of a high-water table was not met at any field data points in the evaluation area. A high-water table was observed within the range of 14-18 inches of the soil surface at field data points 4.3-03U, 4.3-07U, and 4.3-08U. Surface hydrology indicators were not observed in the evaluation area, except for drainage patterns at field data points 4.3-01U and EW-4.3U. Oxidized rhizospheres were observed at field data point 4.3-04U. The FAC-Neutral test was not met at any field data points within the evaluation area.

The hydrophytic vegetative community was assessed to determine if the species located within the area are indicative of being found in wetland communities including OBL, FACW, and FAC. The only facultative wet (FACW) species observed to the dominant within the evaluation area was *Ulmus americana*. The facultative upland (FACU) vegetative community dominating the area includes *Quercus alba*, *Liriodendron tulipifera*, *Prunus serotina*, *Juniperus virginiana*, *Polystichum acrostichoides*, and *Lonicera japonica*. Generally, the vegetative community was consistent throughout the evaluation area with no significant change in vegetative species.

An examination of the soil profile provides evidence that hydric soil is not found in the evaluation area. The common soil hue of this area is 10YR or 2.5Y with a chroma and value of 4/3. The soil texture in the upper part of the profile is a fine sandy loam. Iron manganese masses were observed in data points 4.3-01U, 4.3-04U, and 4.3-12U. These masses were observed from 11-20 inches below the soil surface. They were not observed entirely within the upper 12-inches of the soil surface therefore, indicator F12 was not met.

Geomorphic refers to that part of the landscape shaped by stream processes and, therefore, shaped by range of flows. The OHWM can be located along breaks in slope on stream banks, which can occur at various elevations. These breaks in slope occur because different physical and chemical processes working on the land surface that leave behind changes in topography. An OHWM is distinguished from the bed of the channel by a break in slope and change in lateral gradient, from the flatter bed to the steeper bank.

Data collected at the four (4) cross-sectional transects did not indicate any bank sloughing or removal of vegetation by streamflow, which would indicate fluvial action. *Exhibits 9-10* do not show an observed change in the spacing of contour lines, which indicates the slope has not changed significantly.

Residual and alluvial soils are two general characteristics of soils identified adjacent to stream channels. Residual soils are dominated by decomposed rock - augmented by organic matter - left by weathering of the underlying rock over an extended period. These soils tend to be older and often lie beyond the reach of erosive or depositional flows. Alluvial soils occur in floodplains, terraces, alluvial fans, and deltas and represent pedogenesis on surfaces deposited by water at some time in the recent or distant geologic past. These soils may be vertically stratified by the deposition of coarse sediment during floods followed by finer sediment. Alluvium may also show spatial patterns, such as coarse deposits near the edge of the stream bank and fine sediment further away from the channel, where water velocities slow down.

The data collected show no evidence of an OHWM because there were no clear differences between alluvial and residual soils in sediment grain sizes between the data collected. The area of stream Reach 4.2 was dry when data were collected, through careful observation there were not any notable differences in sediment types between the lowest elevation and horizontal (toe of slope) surface material. No transitions between smooth and rougher sediment were identified through the data collected. Soil texture within the upper 20-inches of the soil profile is shown in *Exhibit 11*.

Changes in particle size distribution may sometimes be more obvious in dry channels and assist with an initial location to identify other indicators the OHWM. Based on data collected at the four (4) cross-sectional transects, in the upper 12-inches of the soil profile, the soils were classified as fine sandy loam,



fine sandy clay loam, loam, and sandy loam. At all four (4) cross-sectional transects, the lowest elevation and horizontal (toe of slope) surface material did not vary. Furthermore, leaf packs were not observed on the ground surface throughout the evaluation area. Soil was not exposed, drainage patterns, wrack lines, or sediment were not identified which would indicate surface flow had eroded the area either recently or historically. Typically, streams form by eroding soil leaving the substrate with a varying soil /sediment size relative to the surrounding area.

The vegetative community and dynamics along stream corridors are largely controlled by physical and biological factors, with the dominant physical factor being the disturbance created by fluvial (stream) processes. Transitions in vegetation species, density, and age along stream boundaries all provide evidence for determining the location of the OHWM. Most woody shrubs and trees generally establish in areas in which their roots will not be constantly inundated by flows or have extended exposure to waterlogged conditions. Total tree stem density was consistent throughout each cross-sectional transect. This indicates that there would not be sufficiently high flows which would have eliminated longer-lived woody vegetation and does not provide a good indication of the elevation of the OHWM.

No organic litter was found to have accumulated at the base of the woody vegetation which would indicate that these species are not inundated by high-flow events. Most of the woody vegetation at the site is younger vegetation, meaning the plants have shallower roots and are likely to be in waterlogged sediment longer than older woody plants. The location of woody vegetation at this site does not provide an indicator that identifies the elevation of flow.

Based on this new information Reach 4.2 is not identified as having jurisdictional features to include positive indicators indicative of wetlands. Characteristics of an OHWM were not observed on this day. Therefore, this area should not be considered jurisdictional and is considered uplands.



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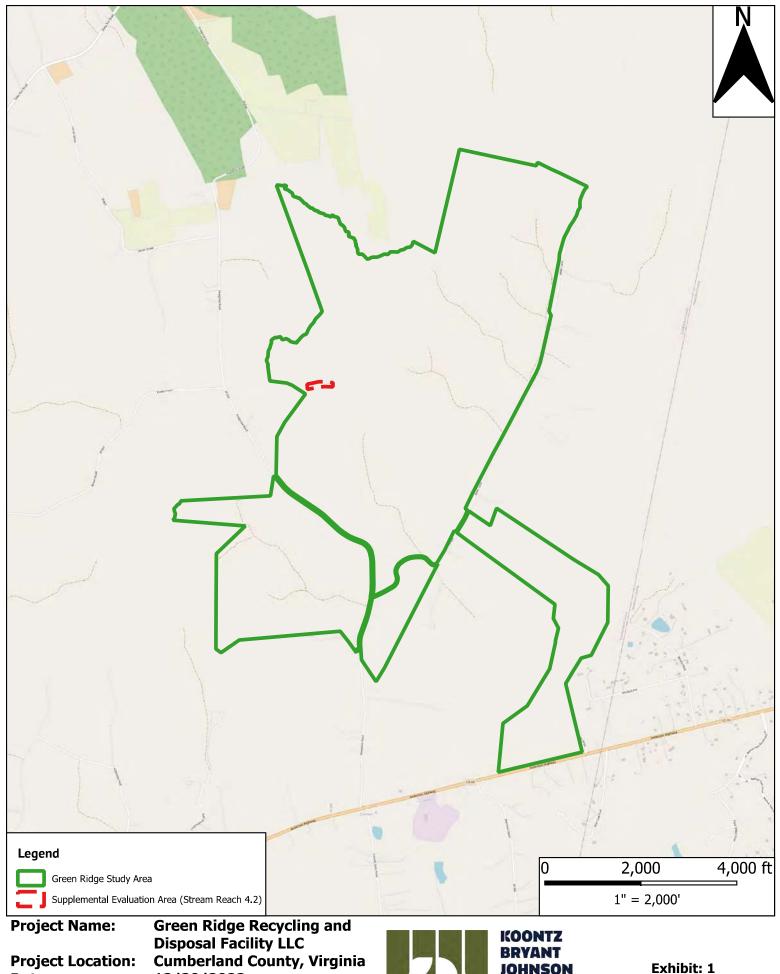
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Location Map



Project Location: 12/20/2022 Date: Source:

OSM



Exhibit: 1 **Location Map**



Drainage Area Map

12/20/22, 8:52 AM StreamStats

StreamStats Report

Region ID: VA

Workspace ID: VA20221220135057225000

Clicked Point (Latitude, Longitude): 37.56698, -78.12958

Time: 2022-12-20 08:51:19 -0500



Collapse All

> Basin Characteristics				
Parameter Code	Parameter Description	Value	Unit	
DRNAREA	Area that drains to a point on a stream	0.0149	square miles	

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

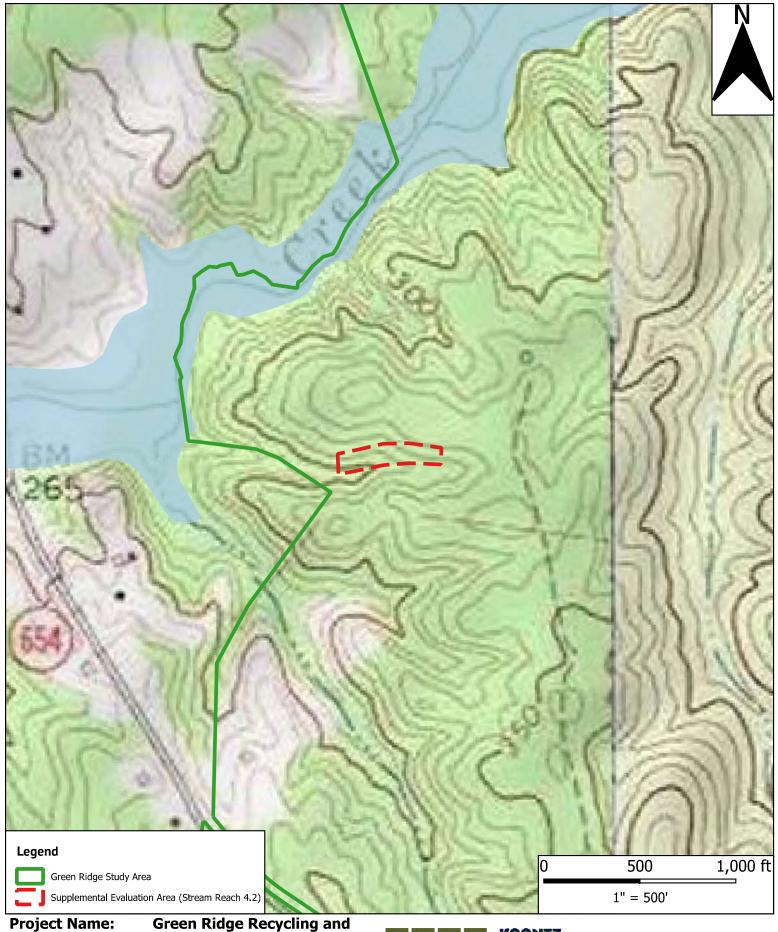
USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.11.1 StreamStats Services Version: 1.2.22 NSS Services Version: 2.2.1



USGS Topographic and FEMA Map



Project Location:

Date: Source: Green Ridge Recycling and Disposal Facility LLC Cumberland County, Virginia

12/20/2022

USGS (Whiteville, Virginia)

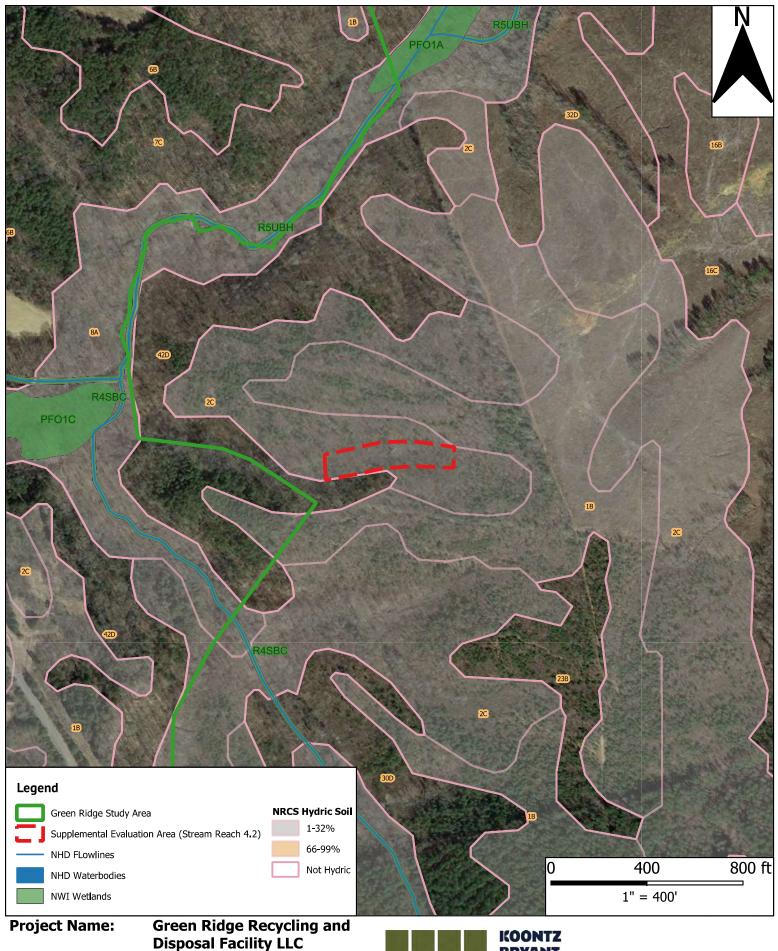
Quad., FEMA

Exhibit: 3 **USGS**

Topographic and FEMA Map



Natural Resources Inventory Map



Project Location:

Date: 12/ Source: NHI

Cumberland County, Virginia 12/20/2022

NHD, NRCS, NWI, Google

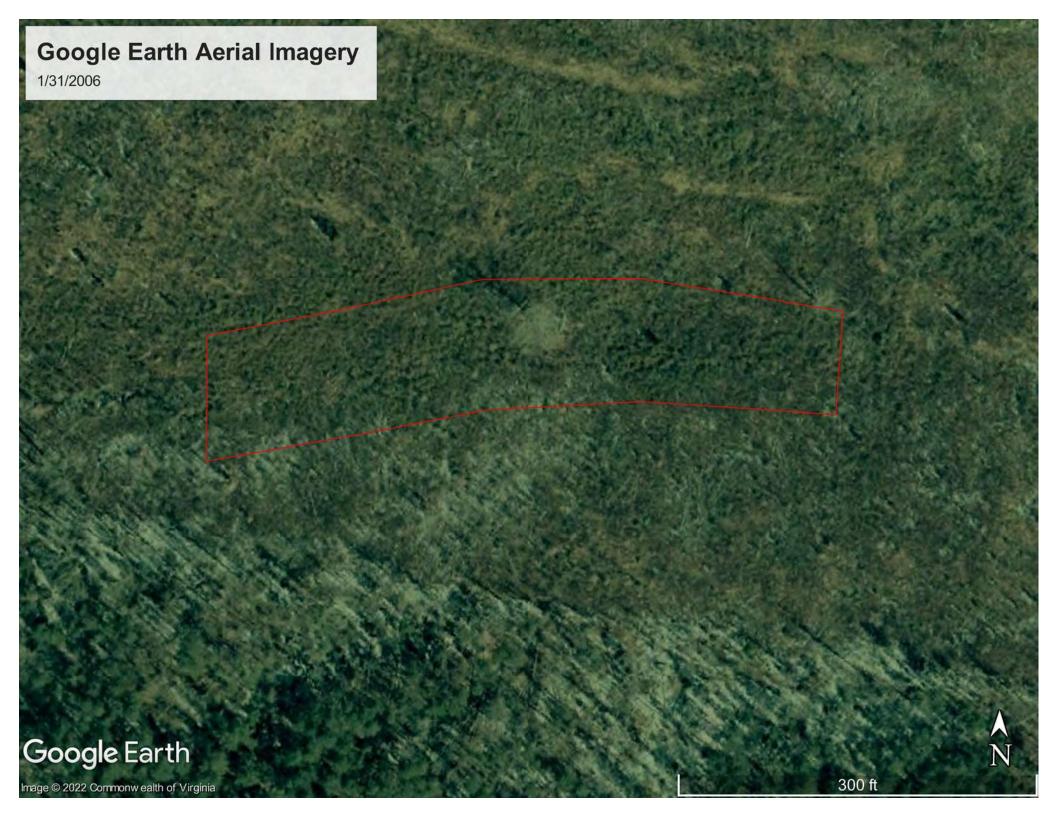
Aerial Imagery

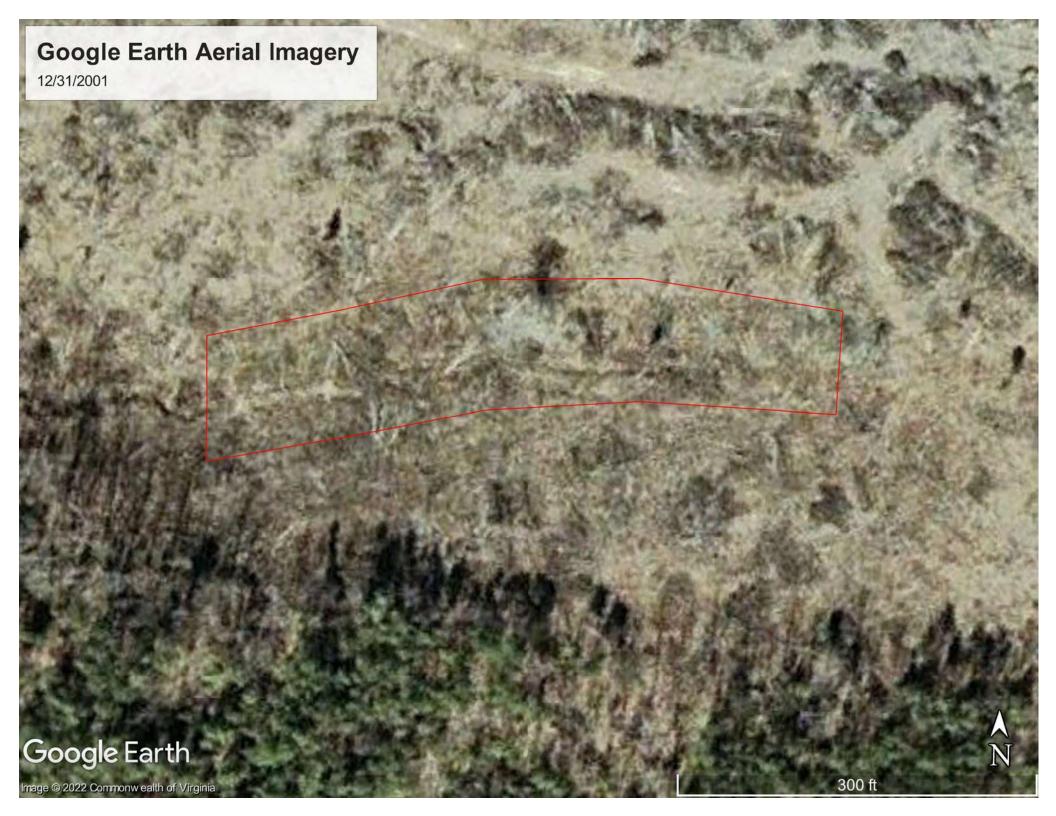


Exhibit: 4 Natural Resources Inventory Map

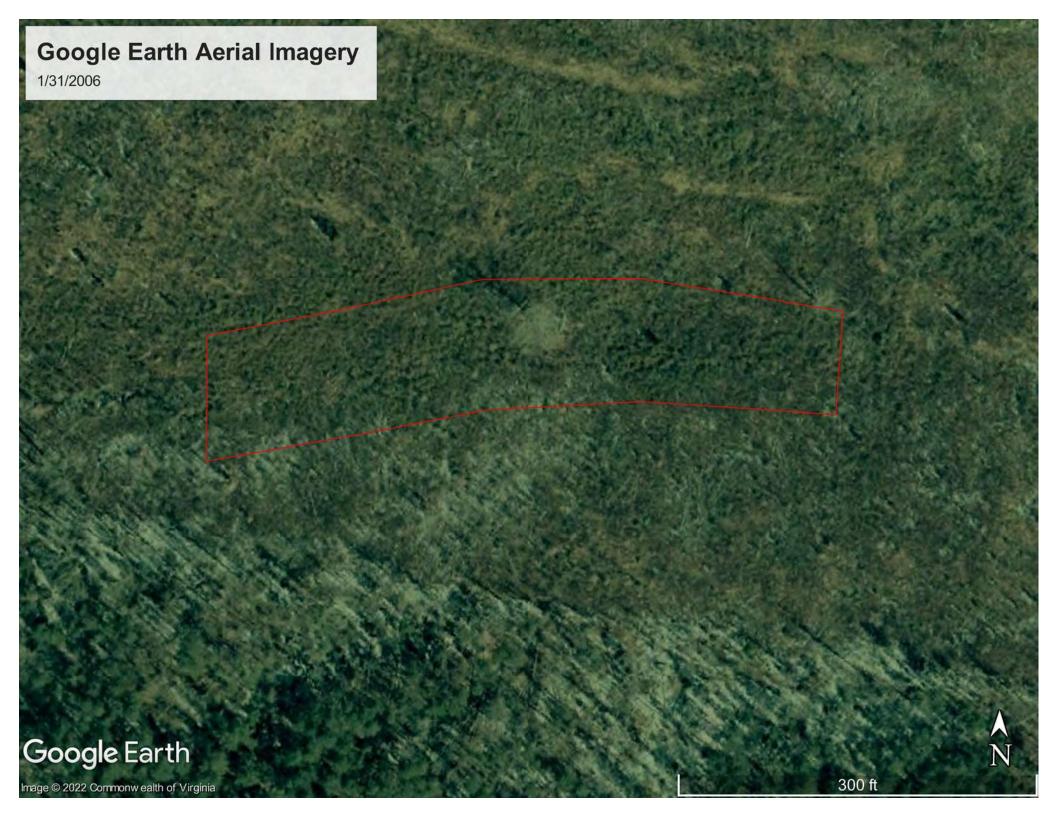


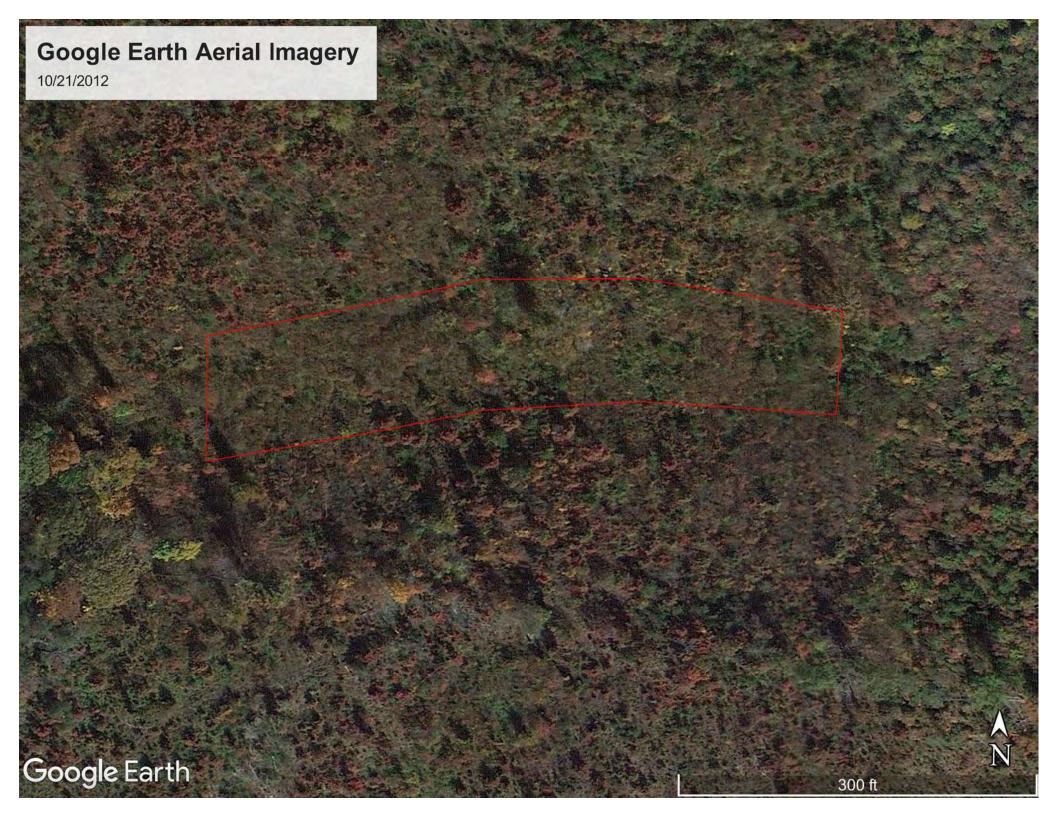
Historical Google Aerial Imagery

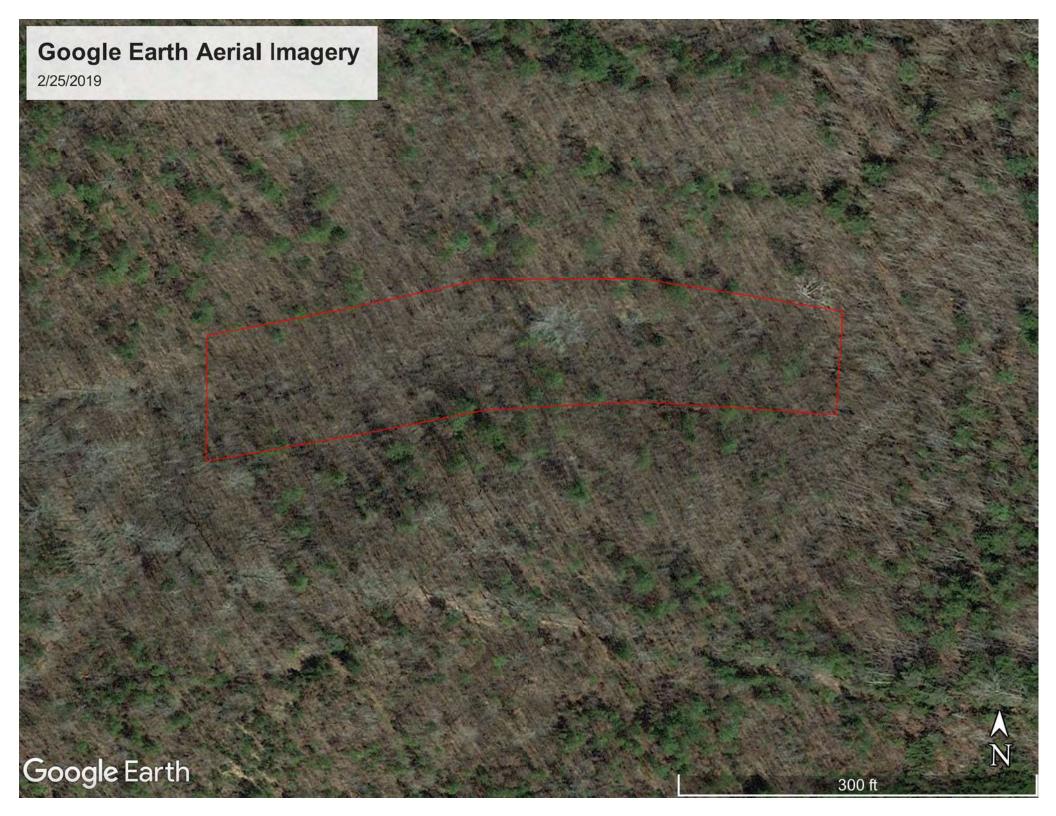




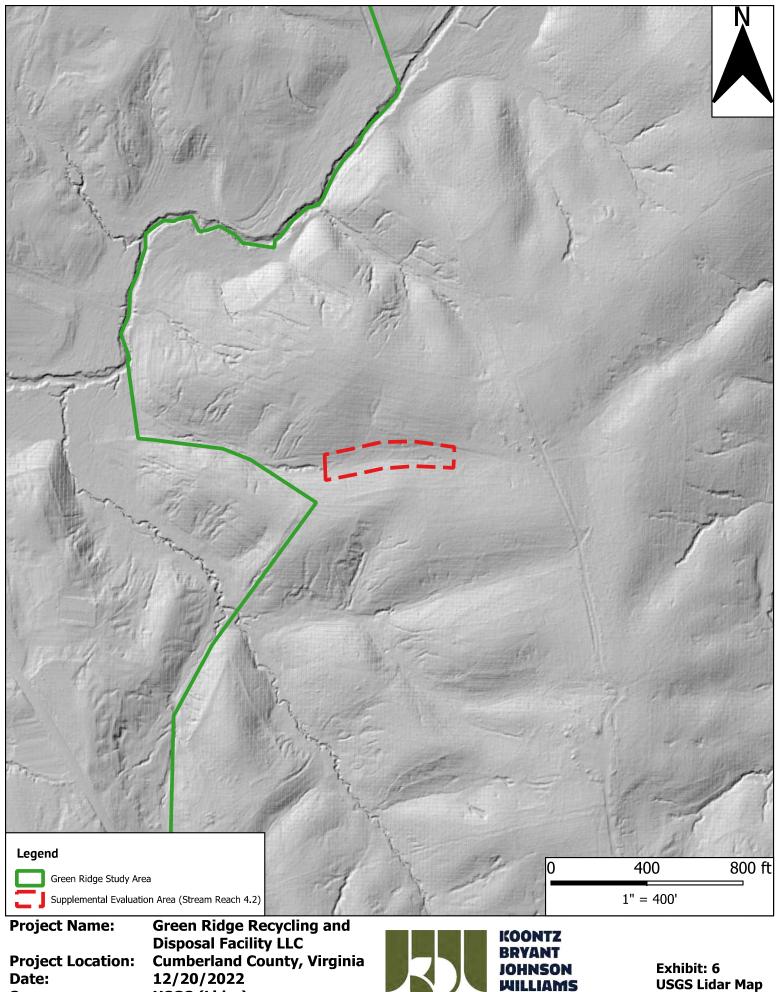












Project Name:

Project Location:

Date: **USGS (Lidar)** Source:



Exhibit: 6 **USGS Lidar Map**



Exhibit 7 Antecedent Precipitation Tool Data

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network - Daily Total - 30-Day Rolling Total - 30-Pear Normal Range 2022-12-08

Oct 2022 Nov 2022

Sep 2022

Coordinates	37.56705, -78.12965
Observation Date	2022-12-08
Elevation (ft)	292.22
Drought Index (PDSI)	Mild drought (2022-11)
WebWIMP H ₂ O Balance	Wet Season

Jun 2022 Jul 2022 Aug 2022

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-12-08	1.666929	4.332677	4.307087	Normal	2	3	6
2022-11-08	2.046457	5.144882	1.448819	Dry	1	2	2
2022-10-09	2.071654	4.8	2.07874	Normal	2	1	2
Result							Normal Conditions - 10

Jan 2023 Feb 2023 Mar 2023 Apr 2023

Dec 2022



May 2022

	Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
	CROZ I ER	37 6664, -77 8769	279.856	15.442	12.364	7.14	10873	90
	COLUMBIA 17.2 SSE	37.5308, -78.0233	312.008	6.341	19.788	2.979	60	0
Г	CUMBERLAND 0.4 NE	37.5014, -78.2401	445.866	7.563	153.646	4.565	5	0
Г	POWHATAN 5.0 NW	37 6102, -77 9495	285.105	10.304	7.115	4.71	2	0
Г	NEW CANTON 2.6 SE	37.6794, -78.2631	308.071	10.658	15.851	4.965	4	0
Г	CUMBERLAND	37.5, -78.25	459.974	8.059	167.754	4.978	10	0
	POWHATAN 3.2 SW	37.5048, -77.9548	336.942	10.501	44.722	5.195	1	0
Г	BREMO BLUFF	37.7092, -78.2886	225.066	13.119	67.154	6.784	298	0
Г	POWHATAN	37.5144, -77.8858	399.934	13.846	107.714	7.722	87	0
Г	RICE 7.3 NE	37.3685, -78.2274	377.953	14.729	85.733	7.891	2	0
	AMELIA COURTHOUSE	37 345, -77 9781	345.144	17.449	52.924	8.776	11	0



Weather Station Precipitation Data

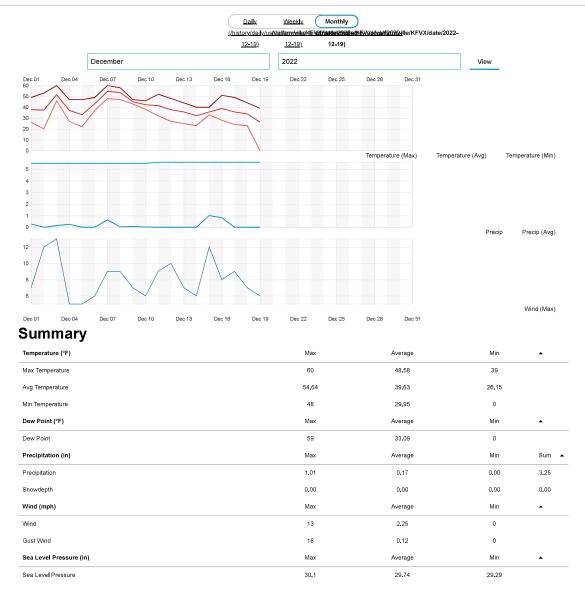
37.3 °N, 78.39 °W

Farmville, VA Weather History 🛨 🏚

🌞 40° FARMVILLE RGNL STATION (/DASHBOARD/PWS/KVAFARMV21?CM_VEN=LOCALWX_PWSDASH) | CHANGE 🗸

HISTORY (/HISTORY/DAILY/US/VA/FARMVILLE/KFVX)

- TODAY (/WEATHER/US/VA/FARMVILLE/KFVX)
- HOURLY (/HOURLY/US/VA/FARMVILLE/KFVX)
- 10-DAY (/FORECAST/US/VA/FARMVILLE/KFVX)
- CALENDAR (/CALENDAR/US/VA/FARMVILLE/KFVX)
- HISTORY (/HISTORY/DAILY/US/VA/FARMVILLE/KFVX)
- WUNDERMAP (WUNDERMAP?LAT=37.302&LON=-78.392)



Daily Observations

Time	Time Temperature (°F)			Dew Point (°F)			Humidity (%)		Win	Wind Speed (mph)			Pressure (in)		Precipitation (in)	
Dec	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	49	37.8	26	27	19.3	13	92	50,6	26	7	2.0	0	30.0	29.9	29.7	0.27
2	53	37.4	20	38	24.3	19	99	65.2	28	12	2.8	0	30.1	30.0	29.9	0.00
3	60	51.6	46	55	48.7	38	100	90.3	65	13	5.7	0	29.9	29.8	29.7	0.14
4	47	37.1	27	38	29.9	27	99	77.3	46	5	0.6	0	29.9	29.8	29.7	0.26
5	47	33.0	22	33	27.9	21	99	83.6	43	5	0.5	0	29.8	29.8	29.7	0.00
6	49	43.3	37	49	42.5	33	100	97.1	84	6	1.1	0	29.8	29.8	29.8	0.00
7	60	54.6	48	59	54.3	48	100	98.8	94	9	3.8	0	29.8	29.7	29.7	0.63
8	58	53.6	47	57	49.8	44	100	87.3	68	9	2.6	0	29.8	29.8	29.7	0.04
9	47	45.1	43	46	39.8	33	98	83.1	62	7	2.4	0	29.8	29.8	29.8	0.06
10	46	42.3	38	38	34.4	32	97	74.7	58	6	1.8	0	29.9	29.8	29.8	0.02
11	52	41.5	32	41	36.3	32	100	83.3	58	9	1.1	0	29.8	29.7	29.6	0.00
12	48	37.7	27	38	30.4	27	100	77.7	52	10	3,6	0	29.8	29.7	29.6	0.00
13	44	35.7	25	30	27.5	24	99	73.6	53	7	1.8	0	29.9	29.8	29.8	0.00
14	40	32.3	23	36	29.5	22	99	90.2	72	6	0.9	0	29.8	29.7	29.7	0.00
15	40	35.6	33	40	35.3	33	100	98.8	95	12	5.6	0	29.7	29.5	29.3	1.01
16	51	38.8	28	38	33.1	27	100	82.7	52	8	2.3	0	29.4	29.4	29.3	0.82
17	49	35,6	24	32	26.7	23	99	74.1	38	9	1.8	0	29.5	29.4	29.4	0.00
18	44	33.9	23	27	20.9	16	97	62.2	40	7	1.8	0	29.8	29,6	29.5	0.00
19	39	26.1	0	21	17.9	0	89	69.7	0	6	0.8	0	29.9	29.9	29.8	0.00

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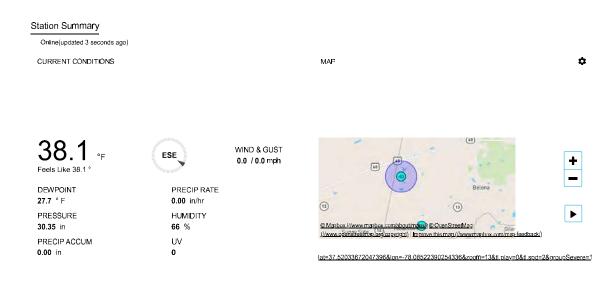
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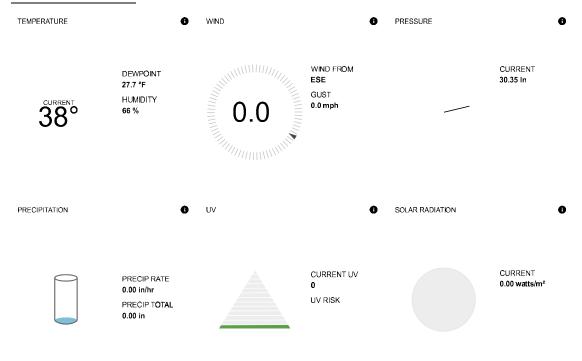
Elev 315 ft, 37.53 °N, 78.10 °W

Weatherstation - KVAPOWHA28 •

FORECAST FOR POWHATAN, VA. (/WEATHER/US/VA/POWHATAN/KVAPOWHA28)



PWS CURRENT CONDITIONS



Weather History for KVAPOWHA28



	High	Low	Average
Dew Point	60.6 °F	17.6 °F	34.0 °F
Humidity	99 %	30 %	84 %
Precipitation	3.55 in	-	-
	High	Low	Avanana
		LOW	Average
Wind Speed	7.6 mph	0.0 mph	0.2 mph
Wind Speed Wind Gust	-		_
	7.6 mph	0.0 mph	0.2 mph

Graph Table

December 1, 2022 - December 31, 2022

	Temperatu	ıre		Dew Point			Humidif	у		Speed			Pressure		Precip. Accum.
Date	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Low	Sum
12/1/2022	49.8 °F	37.3 °F	26.2 °F	33.1 °F	24.4 °F	18.5 °F	97 %	63 %	30 %	4.3 mph	0.3 mph	0.0 mph	30.45 in	30.07 in	0.00 in
12/2/2022	55.0 °F	37.6 °F	21.2 °F	41.4 °F	28.0 °F	20.7 °F	99 %	73 %	32 %	3.8 mph	0.2 mph	0.0 mph	30.52 in	30.33 in	0.00 in
12/3/2022	60.1 °F	52.4 °F	43.3 °F	57.7 °F	51.1 °F	41.2 °F	99 %	96 %	77 %	7.6 mph	0.6 mph	0.0 mph	30.35 in	30.06 in	0.42 in
12/4/2022	49.6 °F	36.8 °F	26.8 °F	43.0 °F	33.2 °F	26.4 °F	99 %	89 %	51 %	2.7 mph	0.1 mph	0.0 mph	30.25 in	30.13 in	0.01 in
12/5/2022	50.2 °F	33.1 °F	22.6 °F	37.2 °F	29.2 °F	22.3 °F	99 %	88 %	45 %	3.4 mph	0.1 mph	0.0 mph	30.25 in	30.14 in	0.00 in
12/6/2022	49.8 °F	43.1 °F	33.3 °F	49.5 °F	42.6 °F	32.7 °F	99 %	98 %	96 %	1.1 mph	0.0 mph	0.0 mph	30.22 in	30.15 in	0.64 in
12/7/2022	61.0 °F	55.5 °F	49.6 °F	60.6 °F	55.1 °F	49.3 °F	99 %	99 %	99 %	2.9 mph	0.3 mph	0.0 mph	30.19 in	30.09 in	0.11 in
12/8/2022	59.2 °F	54.4 °F	48.6 °F	57.9 °F	51.2 °F	46.8 °F	99 %	90 %	70 %	3.6 mph	0.1 mph	0.0 mph	30.24 in	30.11 in	0.02 in
12/9/2022	50.7 °F	46.3 °F	43.5 °F	48.0 °F	40.7 °F	36.3 °F	99 %	82 %	61 %	3.1 mph	0.1 mph	0.0 mph	30.25 in	30.16 in	0.02 in
12/10/2022	46.9 °F	43.1 °F	39.9 °F	39.6 °F	35.4 °F	32.2 °F	96 %	75 %	58 %	2.2 mph	0.1 mph	0.0 mph	30.28 in	30.19 in	0.00 in
12/11/2022	52.9 °F	42.0 °F	31.1 °F	44.6 °F	38.6 °F	30.7 °F	99 %	88 %	69 %	2.7 mph	0.2 mph	0.0 mph	30.24 in	30.01 in	0.01 in
12/12/2022	46.0 °F	36.4 °F	25.9 °F	38.8 °F	31.3 °F	25.5 °F	99 %	83 %	63 %	3.6 mph	0.1 mph	0.0 mph	30.25 in	30.04 in	0.00 in
12/13/2022	47.1 °F	36.6 °F	25.0 °F	33.1 °F	29.6 °F	24.3 °F	97 %	77 %	54 %	3.8 mph	0.2 mph	0.0 mph	30.31 in	30.18 in	0.00 in
12/14/2022	42.6 °F	33.0 °F	23.0 °F	37.8 °F	30.6 °F	22.6 °F	99 %	91 %	74 %	2.0 mph	0.0 mph	0.0 mph	30.19 in	30.09 in	0.20 in
12/15/2022	40.5 °F	36.3 °F	33.6 °F	40.1 °F	35.9 °F	33.3 °F	99 %	99 %	99 %	4.0 mph	0.3 mph	0.0 mph	30.11 in	29.67 in	2.12 in
12/16/2022	53.6 °F	39.1 °F	28.0 °F	43.5 °F	35.3 °F	27.7 °F	99 %	88 %	51 %	5.8 mph	0.4 mph	0.0 mph	29.79 in	29.69 in	0.00 in
12/17/2022	50.2 °F	34.2 °F	24.8 °F	36.7 °F	29.0 °F	24.4 °F	99 %	84 %	45 %	5.1 mph	0.4 mph	0.0 mph	29.89 in	29.76 in	0.00 in
12/18/2022	46.0 °F	33.0 °F	24.1 °F	35.1 °F	24.8 °F	19.2 °F	99 %	75 %	45 %	5.1 mph	0.5 mph	0.0 mph	30.23 in	29.83 in	0.00 in
12/19/2022	45.9 °F	30.2 °F	19.6 °F	28.0 °F	22.5 °F	18.5 °F	97 %	76 %	40 %	4.7 mph	0.3 mph	0.0 mph	30.39 in	30.21 in	0.00 in
12/20/2022	42.8 °F	28.4 °F	18.5 °F	27.9 °F	22.6 °F	18.0 °F	98 %	81 %	50 %	3.8 mph	0.1 mph	0.0 mph	30.49 in	30.36 in	0.00 in
12/21/2022	47.7 °F	30.5 °F	18.1 °F	30.7 °F	24.0 °F	17.8 °F	99 %	80 %	47 %	3.1 mph	0.1 mph	0.0 mph	30.47 in	30.34 in	0.00 in

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We recognize our responsibility to use data and technology for good. Take control of your data

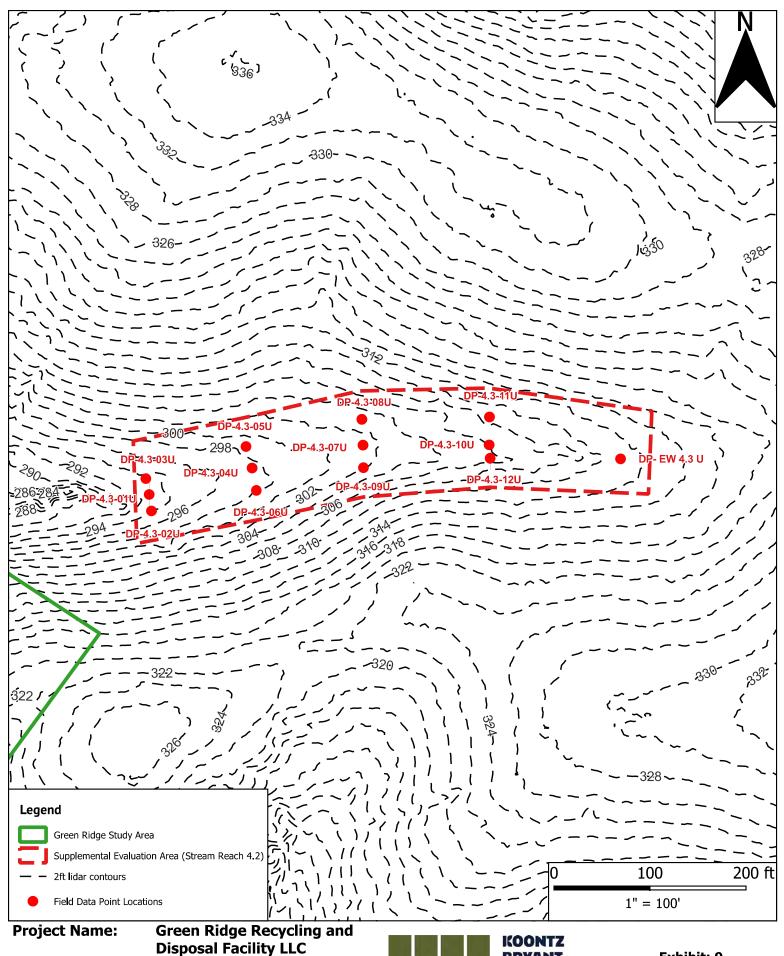
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Evaluation Area Map (Topographic)



Project Location: Cumberland County, Virginia

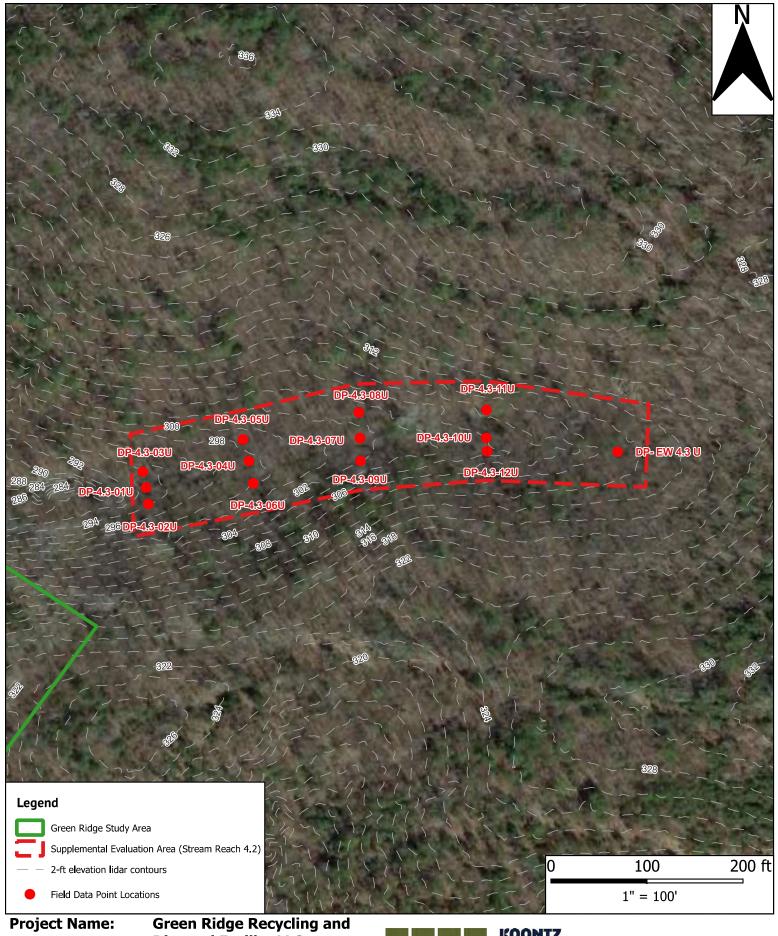
Date: 12/20/2022 Source: USGS (Lidar)



Exhibit: 9 USGS Topographic and FEMA Map



Evaluation Area Map (Color Aerial Imagery)



Project Location:

Date: Source: Disposal Facility LLC Cumberland County, Virginia

12/20/2022 USGS, Google Aerial Imagery



Exhibit: 10
Field Data Point
Location Map
(Natural Aerial
Imagery)



Field Data Points

WETLAND DETERMINATION DATA FORM – Eastern Mountain and Piedmont Region

Project Site: Green Ridge Recyclin	ng and Disposal Facility,LLC	City/County:	Cumberland	Sampling Da	te: 12/8/2022				
	Recycling and Disposal Facilit		State: VA		int: DP-4.3-01U				
Investigator(s): KBJW - D. Kwasni	ewski, E. Williams	Section, Township	, Range: Tax Map #4						
Landform (hillslope, terrace, etc.):	hillslope	Local relief (conca	ve, convex, none): Nor	ne	Slope (%): 2-5%				
Subregion (LRR or MLRA): MLR	A 136, LRR P Lat: 37	7.567065	Long: -78.129605		Datum: NAD83				
Soil Map Unit Name: 2C—Appling-F	Helena complex, 7 to 15 perce	nt slopes		NWI classificati	ion: UPL				
Are climatic / hydrologic conditions	on site typical for this time of	year? Yes X	No	If no, explain	in Remarks.)				
Are Vegetation, Soil, or	Hydrologysiç	gnificantly disturbed?	Are "Normal Circumstance	es" present?	Yes X No				
Are Vegetation , Soil , or	Hydrology na	turally problematic?	(If needed, explain any an	swers in Remarks	<u> </u>				
SUMMARY OF FINDING	S-Attach site map sho	owing sampling p	oint locations, trans	ects, import	ant features, etc.				
Hydrophytic Vegetation Present?	Yes	No X	Is the Sampled Area						
Hydric Soil Present?	Yes	No X	within a Wetland?	Yes	NoX				
Wetland Hydrology Present?	Yes X	No							
Remarks: This data point represents			•						
According to the US Army Corps of E	ingineers Antecedent Precipita	ation tool, the site is ex	periencinig normal precipit	ation conditions;	however, the area was in				
a mild drought.									
Westland Under Lagran Indicators					5				
Wetland Hydrology Indicators:	is required; shock all that ann	dvA	•	•	um of two required)				
Primary Indicators (minimum of one				ce Soil Cracks (B6)					
Surface Water (A1)	True Aquatic Plants (E	•	·		ncave Surface (B8)				
High Water Table (A2) Saturation (A3)	Hydrogen Sulfide Odd	or (C1) es along Living Roots ((X Drainage Patterns (B10) Moss Trim Lines (B16)					
Water Marks (B1)	Presence of Reduced			Geason Water Tabl	a (C2)				
Sediment Deposits (B2)	Recent Iron Reduction			ish Borrows	.e (C2)				
Drift Deposits (B3)	Thin Muck Surface (C	` '	 ′		orial Imagen, (CO)				
Algal Mat or Crust (B4)	Other (Explain in Rem			Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)					
Iron Deposits (B5)	——— Other (Explain in Ken	iai k3)		norphic Position ([
Inundation Visible on Aerial Image	agery (R7)				J2)				
	agery (b)			ow Aquitard (D3)	of (D4)				
Water-Stained Leaves (B9) Aquatic Fauna (B13)				topographic Relie Neutral Test (D5)	er (D4)				
riquatie rauna (B13)			FAC-I	veditat Test (D3)					
Field Observations:									
Surface water Present? Yes	No X Depth	(inches)	_						
Water Table Present? Yes	No X Depth	(inches)	_						
Saturation Present? Yes X	No Depth	(inches) 20in	Wetland Hydrology P	resent?	Yes X No				
(includes capillary fringe)									
Describe Recorded Data (stream gau	ge, monitoring well, aerial ph	otos, previous inspecti	ons), if available:						
Remarks:									
Wetland hydrology was observed in	the vicinity								
Wettand flydrology was observed in	the vicinity.								

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-4.3-01U Dominance Test worksheet: **Absolute** Dominant Indicator Tree Stratum (Plot size: 30ft radius) % Cover Species? Status 1. Acer rubrum 40 FAC Number of Dominant Species 2. Liriodendron tulipifera 30 FACU That Are OBL, FACW, or FAC: (A) Ulmus americana 10 **FACW** 3. Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B) 40% = Total Cover Prevalence Index worksheet: 50% of total covε 40 20% of total cover: Total % Cover of: Multiply by: X 1 = Sapling/Shrub Stratum (Plot size: 30ft radius) 0 OBL species 1. Carpinus caroliniana X2 =0 30 FAC FACW species Acer rubrum 10 FAC X 3 = 0 FAC species 10 FACU X 4 = 0 Quercus alba FACU species X5 =0 **UPL** species 0 Column Totals: Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 50 = Total Cover 2 - Dominance Test is >50% 25 20% of total cover: 3 - Prevalence Index is ≤ 3.00 50% of total cov€ Problematic Hydrophytic Vegetation (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must 1. Polystichum acrostichoides FACU be present, unless disturbed or problematic. 2. Lonicera japonica FACU **Definitions of Four Vegetation Strata:** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 8 of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 10 = Total Cover 20% of total cover: 50% of total cover: 5 Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover No X 20% of total cover: 50% of total cov€ Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was not observed to be dominant in the vicinity.

Sampling Point <u>DP-4.3-01U</u>

	ription: (Describe to Matrix	•	led to document the indicator or confirm the absence of indicators.) Redox Features								
Depth	Color (moist)	<u> </u>	Color (moist)	%		Loc ²	Texture				
(inches)	2.5Y 4/4	98	7.5YR 4/6		Type ¹	M Loc ²	FSL	Remarks			
0-6								Prominent redox concentratio			
6-14	10YR 5/4	98	7.5YR 4/4	2	C	M	FSL FSL	Faint redox concentrations			
14-18	10YR 4/2	95	7.5YR 4/6	5	C	M	FSL FSL	Prominent redox concentration			
18-20	2.5Y 5/3	90	7.5YR 3/4	10	<u>C</u>	М	FSL	Prominent redox concentration			
				_							
		-						-			
¹ Type: C=co	ncentration D-Denl	etion PM-Pedu	ced Matrix, MS=Masked	Sand Gr			² Location	PL=Pore Lining, M=Matrix.			
- ' '	•		nless otherwise noted.)		airis.			for Problematic Hydric Soils ³ :			
Histoso		te to att LKKs, ui	Dark Surface (S					(10) (MLRA 147)			
	Epipedon (A2)		Polyvalue Belo	•	- (S8) (MI RA 1.	 47 148)		ie Redox (A16)			
	listic (A3)		Thin Dark Surfa				(MLRA 147,	` ,			
	en Sulfide (A4)	_	Loamy Gleyed I			-,	-	oodplain Soils (F19)			
	ed Layers (A5)		Depleted Matri		-,		(MLRA 136,				
	uck (A10) (LRR N)		Redox Dark Sur					Dark Surface (TF12)			
	ed Below Dark Surfa	ce (A11)	Depleted Dark					n in Remarks)			
_	Park Surface (A12)		Redox Depress		,			······································			
	Mucky Mineral (S1) (LRR N,	Iron-Manganes		(F12) (LRR N,		³ Indicators o	f hydrophytic vegetation an			
	L47, 148)		MLRA 136)		, , ,			drology must be present,			
Sandy (Gleyed Matrix (S4)		Umbric Surface	(F13) (M	ILRA 136, 122))	unless disturbed or problematic.				
Sandy F	Redox (S5)		Piedmont Floor								
Strippe	d Matrix (S6)		Red Parent Material (TF2) (MLRA 127, 147)								
Restrictive L	ayer (if observed):										
Type:											
Depth ((inches):					Hyd	ric Soil Present?	Yes No X			
İ											

WETLAND DETERMINATION DATA FORM – Eastern Mountain and Piedmont Region

Project Site: Green Ridge Recyclin	ng and Disposal Facility,LLC Cit	ty/County: Cum	berland	Sampling Date:	12/8/2022			
Applicant/Owner: Green Ridge	Recycling and Disposal Facility, LLC		State: VA	Sampling Point	:: DP-4.3-02U			
Investigator(s): KBJW - D. Kwasni	ewski, E. Williams Se	ection, Township, Range	e: Tax Map #44-	A-19				
Landform (hillslope, terrace, etc.):	Hillslope Lo	ocal relief (concave, cor	nvex, none): None		Slope (%): 5-10%			
Subregion (LRR or MLRA): MLR	A 136, LRR P Lat: 37.56701		g: -78.129597		tum: NAD83			
	Helena complex, 7 to 15 percent slope		·		: UPL			
Are climatic / hydrologic conditions	on site typical for this time of year?	Yes X N	lo	If no, explain in				
Are Vegetation, Soil, or	Hydrologysignifican	ntly disturbed? Are "	"Normal Circumstances"	present?	Yes X No			
Are Vegetation , Soil , or	Hydrology naturally	problematic? (If ne	eeded, explain any answ	ers in Remarks.)				
SUMMARY OF FINDING	S-Attach site map showing	sampling point	locations, transec	cts, importan	t features, etc.			
Hydrophytic Vegetation Present?	Yes No <u>X</u>		Is the Sampled Area					
Hydric Soil Present?	Yes No X		Is the Sampled Area within a Wetland?	Yes	No X			
Wetland Hydrology Present?	Yes No X		***************************************					
Remarks: This data point represents	an upland location (UPL).							
According to the US Army Corps of E	ngineers Antecedent Precipitation to	ool, the site is experien	ncinig normal precipitati	on conditions; ho	wever, the area was in			
a mild drought.								
HYDROLOGY								
Wetland Hydrology Indicators:			Secondary Ind	licators (minimum	of two required)			
Primary Indicators (minimum of one	is required; check all that apply)		•	Soil Cracks (B6)				
Surface Water (A1)	True Aquatic Plants (B14)		Sparsely	Vegetated Conca	ave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide Odor (C1)		Drainage	e Patterns (B10)				
Saturation (A3)	Oxidized Rhizospheres along	g Living Roots (C3)	Moss Tri	im Lines (B16)				
Water Marks (B1)	Presence of Reduced Iron (C4	4)	Dry-Seas	son Water Table (C2)			
Sediment Deposits (B2)	Recent Iron Reduction in Till	led Soils (C6)	Crayfish Borrows					
Drift Deposits (B3)	Thin Muck Surface (C7)		Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Crust (B4)	Other (Explain in Remarks)		Stunted	or Stressed Plant	s (D1)			
Iron Deposits (B5)			Geomorphic Position (D2)					
Inundation Visible on Aerial Im-	agery (B7)		Shallow	Aquitard (D3)				
Water-Stained Leaves (B9)			Microtop	oographic Relief (D4)			
Aquatic Fauna (B13)			FAC-Neu	utral Test (D5)				
Field Observations:	V							
Surface water Present? Yes	No X Depth (inches	· 						
Water Table Present? Yes	No X Depth (inches							
Saturation Present? Yes X	No Depth (inches	;) <u>20</u>	Wetland Hydrology Pres	sent?	Yes No X			
(includes capillary fringe)		i i i i one) if						
Describe Recorded Data (stream gau	ige, monitoring well, aerial photos, pi	revious inspections), ir	available:					
Dulia-								
Remarks: Wetland hydrology was not observed	d in the vicinity							
wettand flydrology was not observed	and the vicinity.							

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-4.3-02U Dominance Test worksheet: **Absolute** Dominant Indicator Tree Stratum (Plot size: 30ft radius) % Cover Species? **Status** 1. Liriodendron tulipifera 20 Υ FACU Number of Dominant Species 2. Prunus serotina 10 Ν FACU That Are OBL, FACW, or FAC: (A) 3. Ulmus americana 10 **FACW** Ν 10 4. Acer rubrum FAC Total Number of Dominant Species Across All Strata: (B) 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B) = Total Cover Prevalence Index worksheet: 50% of total cov€ 25 20% of total cover: Total % Cover of: Multiply by: X 1 = Sapling/Shrub Stratum (Plot size: 30ft radius) 0 OBL species 1. Carpinus caroliniana X2 =0 FAC FACW species Juniperus virginiana **FACU** X 3 = 0 FAC species FAC X 4 = 0 3. Acer rubrum FACU species X5 =0 **UPL** species 0 Column Totals: Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 45 = Total Cover 2 - Dominance Test is >50% 50% of total cov€ 22.5 20% of total cover: 3 - Prevalence Index is ≤ 3.00 Problematic Hydrophytic Vegetation (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must 1. Polystichum acrostichoides **FACU** be present, unless disturbed or problematic. **Definitions of Four Vegetation Strata: Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 8 of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 5 = Total Cover 50% of total cover: 2.5 20% of total cover: Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover No X 20% of total cover: 50% of total cov€ Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was not observed to be dominant in the vicinity.

Sampling Point <u>DP-4.3-02U</u>

	ription: (Describe to Matrix	•	d to document the indi		confirm the ab		ators.)	
Depth	Color (moist)	<u></u> %	Color (moist)	%			Texture	
(inches)	10YR 3/3		Cotol (Illoist)	/ 0	Type ¹	Loc ²	FSL	Remarks
0-3		100				· 		No redox observed
3-4	10YR 3/3	50					FSL	No redox observed
	10YR 4/4	50						Mixed Matrix
4/10	10YR 5/4	90	7.5YR 4/4	2	С	<u> </u>	FSL	Faint redox concentrations
	10YR 4/4	8						Mixed Matrix
10-20	10YR 5/3	90	7.5YR 3/4		С	. <u>M</u>	FSL —	Distinct redox concentrations
¹ Type: C=co	ncentration, D=Depl	etion, RM=Reduc	ed Matrix, MS=Masked	Sand Gra	ins.		² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applicab	le to all LRRs, un	less otherwise noted.)				Indicators	for Problematic Hydric Soils ³ :
Histoso	l (A1)		Dark Surface (S	7)			2 cm Muck (A	A10) (MLRA 147)
Histic E	pipedon (A2)		Polyvalue Belov	w Surface	(S8) (MLRA 1	47, 148)	Coastal Prair	ie Redox (A16)
Black H	listic (A3)		Thin Dark Surfa	ice (S9) (N	ULRA 147, 14	8)	(MLRA 147,	148)
Hydrog	en Sulfide (A4)		Loamy Gleyed I	Matrix (F2	2)		Piedmont Flo	oodplain Soils (F19)
Stratifie	ed Layers (A5)		Depleted Matri	x (F3)			(MLRA 136,	147)
2 cm M	uck (A10) (LRR N)		Redox Dark Sur	face (F6)			Very Shallow	Dark Surface (TF12)
Deplete	ed Below Dark Surfa	ce (A11)	Depleted Dark	Surface (F	7)		Other (Expla	in in Remarks)
Thick D	ark Surface (A12)		Redox Depressi	ions (F8)				
Sandy N	Mucky Mineral (S1) (LRR N,	Iron-Manganes	e Masses	(F12) (LRR N,		³ Indicators o	f hydrophytic vegetation an
MLRA 1	L47, 148)		MLRA 136)				wetland hy	drology must be present,
Sandy (Gleyed Matrix (S4)		Umbric Surface	(F13) (M	LRA 136, 122))	unless dist	urbed or problematic.
Sandy F	Redox (S5)		Piedmont Floor	dplain Soi	ls (F19) (MLR	A 148)		
Strippe	d Matrix (S6)		Red Parent Mat	erial (TF2	2) (MLRA 127,	147)		
Restrictive L	.ayer (if observed):							
Type:								
	inches):					Uhral	via Cail Duanaut?	Vee Ne V
осри (menes).					пуи	ric Soil Present?	Yes No X
ı								

Project Site: Green Ridge Recycli	ng and Disposal Facility,LLC	City/County:	Cumberland	Sam	pling Date: 12/8/	2022
Applicant/Owner: Green Ridge	Recycling and Disposal Facility, l	LLC	State	:: VA Sam	pling Point: DP-4.	3-03U
Investigator(s): KBJW - D. Kwasni	iewski, E. Williams	Section, Township,	Range: Tax	Map #44-A-19		
Landform (hillslope, terrace, etc.):	Hillslope	Local relief (concav	re, convex, none):	None	Slop	e (%): <u>5-10%</u>
Subregion (LRR or MLRA): MLR	A 136, LRR P Lat: 37.56	5711	Long: -78.129617	,	Datum: N	AD83
Soil Map Unit Name: 2C-Appling-	Helena complex, 7 to 15 percent s	slopes		NWI cla	assification: UPL	
Are climatic / hydrologic conditions	on site typical for this time of ye	ar? Yes X	No	 If no,	explain in Remar	ks.)
Are Vegetation, Soil, or	Hydrology signif	ficantly disturbed?	Are "Normal Circu	mstances" preser	nt? Yes	X No
Are Vegetation , Soil , or	Hydrology natur	ally problematic?	(If needed, explain	any answers in	Remarks.)	
SUMMARY OF FINDING	S-Attach site map show	ing sampling po	oint locations,	transects, ir	mportant feat	tures, etc.
Hydrophytic Vegetation Present?	Yes No	э <u>Х</u>	Is the Sample	d Area		
Hydric Soil Present?	Yes No	<u> X</u>	within a Wet		Yes No	<u>x</u>
Wetland Hydrology Present?	Yes No	<u> X</u>				
According to the US Army Corps of E a mild drought.	Engineers Antecedent Precipitatic	on tool, the site is exp	periencinig normal	precipitation con	ditions; however,	the area was in
HYDROLOGY Wetland Hydrology Indicators:			Sos	andam Indicators	/minimum of ture	raquirad)
Primary Indicators (minimum of one	is required: check all that apply)		Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)			
Surface Water (A1)	True Aquatic Plants (B14	1)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide Odor (•	Drainage Patterns (B10)			
Saturation (A3)	Oxidized Rhizospheres a	•	3)	Moss Trim Line		
Water Marks (B1)	Presence of Reduced Iro			Dry-Season Wa		
Sediment Deposits (B2)	Recent Iron Reduction in	• •		Crayfish Borrov		
Drift Deposits (B3)	Thin Muck Surface (C7)	,		- '	ble on Aerial Imag	iery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remark	ks)		_	essed Plants (D1)	, - , (- · ,
Iron Deposits (B5)			Geomorphic Position (D2)			
Inundation Visible on Aerial Im	agery (B7)		Shallow Aquitard (D3)			
Water-Stained Leaves (B9)			Microtopographic Relief (D4)			
Aquatic Fauna (B13)				FAC-Neutral Te		
Field Observations:						
Surface water Present? Yes	No X Depth (inc	ches)	_			
Water Table Present? Yes \overline{X}	No Depth (inc	ches) 14in				
Saturation Present? Yes X	No Depth (inc	ches) 14in	Wetland Hydi	ology Present?	Yes	No _X
(includes capillary fringe)						
Describe Recorded Data (stream gau	uge, monitoring well, aerial photo	os, previous inspectio	ns), if available:			
Remarks:						
Wetland hydrology was not observe	d in the vicinity.					

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-4.3-03U Dominance Test worksheet: **Absolute** Dominant Indicator Tree Stratum (Plot size: 30ft radius) % Cover Species? Status 1. Liriodendron tulipifera 15 FACU Number of Dominant Species 2. Ulmus americana 10 FACW That Are OBL, FACW, or FAC: (A) 3. Acer rubrum 10 FAC Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B) 50% = Total Cover Prevalence Index worksheet: 50% of total cov€ 17.5 20% of total cover: Total % Cover of: Multiply by: X 1 = Sapling/Shrub Stratum (Plot size: 30ft radius) 0 OBL species 1. Carpinus caroliniana X2 =0 FAC FACW species Quercus alba **FACU** X 3 = 0 2. FAC species FACW X 4 = 0 Platanus occidentalis FACU species X5 =0 **UPL** species 0 Column Totals: Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 40 = Total Cover 2 - Dominance Test is >50% 20 20% of total cover: 3 - Prevalence Index is ≤ 3.00 50% of total covε Problematic Hydrophytic Vegetation (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must 1. Polystichum acrostichoides FACU be present, unless disturbed or problematic. 2. Lonicera japonica FACU **Definitions of Four Vegetation Strata:** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 8 of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 10 = Total Cover 5 20% of total cover: 50% of total cover: Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover No X 20% of total cover: 50% of total cov€ Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was not observed to be dominant in the vicinity.

Sampling Point <u>DP-4.3-03U</u>

	ription: (Describe to Matrix	•	ed to document the indi		confirm the ab		ators.)	
Depth	Color (moist)	<u> </u>	Color (moist)	%		Loc ²	Texture	
(inches)	2.5Y 4/3	98	10YR 5/4	2 2	Type ¹	M Loc ²	FSL	Remarks
0-7								Faint redox concentrations
7-12	2.5Y 4/3	95	10YR 5/6	5	C	M	FSL FSL	Prominent redox concentration
12-18	10YR 5/4	90	7.5YR 3/4	10	<u>C</u>	<u>M</u>	FSL FSL	Prominent redox concentration
18-20	2.5Y 5/3	98	10YR 5/6	2	<u>C</u>	<u>M</u>	FSL	Prominent redox concentration
1								
	•		ced Matrix, MS=Masked	Sand Gra	ains.			: PL=Pore Lining, M=Matrix.
		le to all LRRs <u>, u</u>	nless otherwise noted.)	- .				for Problematic Hydric Soils ³ :
Histoso	• •	_	Dark Surface (S	•	(50) ## 51 4	—		A10) (MLRA 147)
	pipedon (A2)	_	Polyvalue Belov					ie Redox (A16)
	istic (A3)	_	Thin Dark Surfa			3)	(MLRA 147,	·
	en Sulfide (A4)	_	Loamy Gleyed I		2)			oodplain Soils (F19)
	ed Layers (A5)	_	Depleted Matrix				(MLRA 136,	· ·
	uck (A10) (LRR N)		Redox Dark Sur					Dark Surface (TF12)
	ed Below Dark Surfa	ce (A11)	Depleted Dark		F7)		Other (Expla	in in Remarks)
	ark Surface (A12)	-	Redox Depressi				3.	
	Mucky Mineral (S1) (LRR N,	Iron-Manganes	e Masses	(F12) (LRR N,			f hydrophytic vegetation an
	.47, 148)		MLRA 136)	<i>(</i> =4.7), <i>0</i> .4				drology must be present,
	Gleyed Matrix (S4)	_	Umbric Surface				unless dist	urbed or problematic.
	Redox (S5)	_	Piedmont Floor					
Strippe	d Matrix (S6)	_	Red Parent Mat	erial (TF.	2) (MLRA 127,	14/)		
Do atui ationa I	('£ ahaamad')							
	ayer (if observed):							
Type:								
Depth (inches):					Hyd	ric Soil Present?	Yes No X
	were not observed i							

Project Site: Green Ridge Recycli	nn and Disposal	Facility,LLC City/County:	Cumberland Sampling Date: 12/8/2022			
· — ·		risposal Facility, LLC	State: VA Sampling Point: DP-4.3-04U			
Investigator(s): KBJW - D. Kwasni		<u> </u>				
Landform (hillslope, terrace, etc.):			oncave, convex, none): None Slope (%): 2-5%			
· · · · · · · · · · · · · · · · · · ·	A 136, LRR P	Lat: 37.567139	Long: -78.129235 Datum: NAD83			
Soil Map Unit Name: 2C—Appling-F	•		NWI classification: UPL			
Are climatic / hydrologic conditions		· · · · · · · · · · · · · · · · · · ·	No If no, explain in Remarks.)			
Are Vegetation , Soil , or		significantly disturbed				
Are Vegetation , Soil , or		naturally problematic	· · · · · · · · · · · · · · · · · · ·			
SUMMAKY UF FIND	NGS-Attacr	i site map showing samp	oling point locations, transects, important features, etc.			
Hydrophytic Vegetation Present?		Yes <u>X</u> No	Is the Sampled Area			
Hydric Soil Present?	•	Yes No X	within a Wetland? Yes NoX			
Wetland Hydrology Present?		Yes <u>X</u> No				
Remarks: This data point represents	•	` '				
	ingineers Antece	edent Precipitation tool, the site is	s experiencinig normal precipitation conditions; however, the area was in a mild			
drought.						
HYDROLOGY Wetland Hydrology Indicators:			Communication (astronomy defining and astronomy)			
Primary Indicators (minimum of one	is required; the	ck all that apply)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)			
Surface Water (A1)		uatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)		en Sulfide Odor (C1)	Drainage Patterns (B10)			
 -		d Rhizospheres along Living Root				
Water Marks (B1)		e of Reduced Iron (C4)	Dry-Season Water Table (C2)			
Sediment Deposits (B2)		Iron Reduction in Tilled Soils (C6)	Crayfish Borrows			
Drift Deposits (B3)		uck Surface (C7)	Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		Explain in Remarks)	Stunted or Stressed Plants (D1)			
Iron Deposits (B5)		.xptain in nemarks)				
Inundation Visible on Aerial Im	200ry (R7)		Geomorphic Position (D2)			
	agery (b/)		Shallow Aquitard (D3)			
Water-Stained Leaves (B9) Aguatic Fauna (B13)			Microtopographic Relief (D4)			
Aquatic Fauna (013)			FAC-Neutral Test (D5)			
Field Observations:						
Surface water Present? Yes	No X	Depth (inches)				
Water Table Present? Yes	No X	Depth (inches)	_			
Saturation Present? Yes	No X	Depth (inches)	Wetland Hydrology Present? Yes X No			
(includes capillary fringe)			_			
Describe Recorded Data (stream gau	ge, monitoring	well, aerial photos, previous inspe	ections), if available:			
Remarks:						
Wetland hydrology was observed in	the vicinity incl	uding oxidized rhizospheres in the	e 0-3in soil layer.			
1			· · · · · · · · · · · · · · · · · · ·			

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-4.3-04U **Dominance Test worksheet: Absolute** Dominant Indicator Tree Stratum (Plot size: 30ft radius) % Cover Species? Status 1. Ulmus americana 20 **FACW** Number of Dominant Species 2. Acer rubrum 20 FAC That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B) = Total Cover Prevalence Index worksheet: 50% of total covε 20 20% of total cover: Total % Cover of: Multiply by: X 1 = Sapling/Shrub Stratum (Plot size: 30ft radius) 0 OBL species 1. Carpinus caroliniana FAC X2 =FACW species Prunus serotina FACU X 3 = 0 FAC species X 4 = 0 FACU species X5 =0 **UPL** species 0 Column Totals: Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 45 = Total Cover X 2 - Dominance Test is >50% 20% of total cover: 50% of total cov€ 22.5 3 - Prevalence Index is ≤ 3.00 Problematic Hydrophytic Vegetation¹ (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must 1. Polystichum acrostichoides FACU be present, unless disturbed or problematic. 2. Lonicera japonica FACU Definitions of Four Vegetation Strata: FAC Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or Smilax rotundifolia more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. 8. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 15 = Total Cover 50% of total cover: 7.5 20% of total cover: Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover Yes X No 20% of total cover: 50% of total cov€ Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was observed to be dominant in the vicinity.

Sampling Point: <u>DP-4.3-04U</u>

Depth Mattrix Redox (Features Redox Reduction Redox			the depth neede	d to document the indi				itors.)	
10	(inches)	Matrix							
4-11		Color (moist)	<u></u> %	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
10YR 4/2 38	0-4	10YR 4/3	98	7.5YR 3/4		С	M	FSL	Faint redox concentrations
11-14	4-11	2.5Y 4/3	60	7.5YR 4/6	2	С	M	FSL	Prominent redox concentrations
14-16		10YR 4/2	38					_	Mixed Matrix
16-20 2.5Y 5/2 90 7.5YR 3/4 10 C M FSL Prominent redox concentrations 1 Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2 Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils 1: Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coastal Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:	11-14	10YR 4/1	100					FSL	No redox observed
1-Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1-Type: C=concentration, D=Depletion, RM=Ratrix, MS=Masked Sand Grains. 1-Type: C=concentration, D=Depletion, RM=Ratrix, MS=Masked Sand Grains. 1-Type: C=concentration, D=Depletion, RM=Ratrix, MS=Masked Sand Grains. 1-Type: C=concentration, D=Depletion of Problematic Mydrology must be present, unless disturbed or problematic. 1-Type: C=concentration, M=Ratrial, MS=Masked Sand Grains. 1-Type: C=concentration, MS=	14-16	2.5Y 5/3	98	10YR 5/4	2	С	M	FSL	Faint redox concentrations
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulffide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Dark Surface (F6) Polyvalue Below Surface (F7) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) Wetland 147, 148) Mark 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MIRA 136, 147) Wetland hydrology must be present, unless disturbed or problematic. Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	16-20	2.5Y 5/2	90	7.5YR 3/4	10	С	M	FSL	Prominent redox concentrations
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulffide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Dark Surface (F6) Polyvalue Below Surface (F7) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) Wetland 147, 148) Mark 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MIRA 136, 147) Wetland hydrology must be present, unless disturbed or problematic. Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X									
Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coastal Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 122) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	¹ Type: C=co	oncentration, D=Depl	etion, RM=Reduc	ed Matrix, MS=Masked	Sand Grai	ns.		² Location	: PL=Pore Lining, M=Matrix.
Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coastal Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Hydric Soil	Indicators: (Applicabl	e to all LRRs <u>, un</u>	less otherwise noted.)				Indicators	for Problematic Hydric Soils ³ :
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (F3) MLRA 136, 147) Other (Explain in Remarks) MLRA 147, 148) MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:					-			2 cm Muck (A10) (MLRA 147)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Redox Depressions (F12) (LRR N, MIRA 136, 122) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) MLRA 148) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:									·
Stratified Layers (A5) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, Wetland hydrology must be present, unless disturbed or problematic. Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X							3)	•	·
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Umbric Surface (F13) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X									. , ,
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Other (Explain in Remarks) Other (Explain in Remarks) All of (Explain in Remarks) Other (Explain in Remarks) All of (Explain in Remarks) Other (Explain in Remarks) All of (Explain in Remarks) Other (Explain in Remarks) In our other (Explain in Remarks) No A In other (Explain in Remarks) Hydrochies (In other (Explain in Remarks) Other (Explain in Remarks) No A In other (_		. ,				·
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Iron-Manganese Masses (F12) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:		. , . ,							
Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136) wetland hydrology must be present, Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:			e (A11)			7)		Other (Expla	in in Remarks)
MLRA 147, 148) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Umbric Surface (F13) (MLRA 148) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:						542) (I DD N		31	Charles had a secondaria a secondaria
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:					e Masses (F12) (LRR N,			
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:				•	/E17\ /MI	DA 176 1221		· ·	•
Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:								untess dist	urbed or problematic.
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:					•		•		
Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:		Lu Matrix (50)			criat (11 Z)	(I'ILIX 127,	±-17)		
Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:	Do odvi odi vo	l (:£ .b					1		
Depth (inches): Hydric Soil Present? Yes No _X Remarks:	Restrictive	Layer (ii observed):							
Remarks:	I -								
	· · ·								
	Depth	(inches):					Hyd	ric Soil Present?	Yes No _X

Project Site: Green Ridge Recycli	ng and Disposal Facility,LLC City/County:	Cumberland Sampling Date: 12/8/2022				
· — · · · ·	Recycling and Disposal Facility, LLC	State: VA Sampling Point: DP-4.3-05U				
Investigator(s): KBJW - D. Kwasni	ewski, E. Williams Section, Township	p, Range: Tax Map #44-A-19				
Landform (hillslope, terrace, etc.):	Hillslope Local relief (conc	ave, convex, none): None Slope (%): 5-10%				
Subregion (LRR or MLRA): MLR	A 136, LRR P Lat: 37.567201	Long: -78.129257 Datum: NAD83				
	Helena complex, 7 to 15 percent slopes	NWI classification: UPL				
Are climatic / hydrologic conditions		No If no, explain in Remarks.)				
Are Vegetation , Soil , or		Are "Normal Circumstances" present? Yes X No				
Are Vegetation , Soil , or		(If needed, explain any answers in Remarks.)				
		ng point locations, transects, important features, etc.				
Hydrophytic Vegetation Present?	Yes X No					
Hydric Soil Present?	Yes No X	Is the Sampled Area Ves No X				
Wetland Hydrology Present?	Yes No X	within a Wetland?				
Remarks: This data point represents						
· '	. , ,	experiencinia permal precipitation conditions; however, the area was in a mild				
' '	ingineers Antecedent Precipitation toot, the site is e	experiencinig normal precipitation conditions; however, the area was in a mild				
drought.						
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one	is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)				
Saturation (A3)	Oxidized Rhizospheres along Living Roots (Moss Trim Lines (B16)				
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Borrows				
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)		Geomorphic Position (D2)				
Inundation Visible on Aerial Im	agery (B7)	Shallow Aquitard (D3)				
Water-Stained Leaves (B9)		Microtopographic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral Test (D5)				
Field Observations:						
Surface water Present? Yes	No X Depth (inches)	_				
Water Table Present? Yes	No X Depth (inches)					
Saturation Present? Yes	No X Depth (inches)	Wetland Hydrology Present? Yes No X				
(includes capillary fringe)						
Describe Recorded Data (stream gau	ge, monitoring well, aerial photos, previous inspect	ions), if available:				
Remarks:						
Wetland hydrology was not observed	d in the vicinity.					

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-4.3-05U **Dominance Test worksheet: Absolute** Dominant Indicator Tree Stratum (Plot size: 30ft radius) % Cover Species? Status 1. Ulmus americana 15 **FACW** Number of Dominant Species 2. Acer rubrum 15 FAC That Are OBL, FACW, or FAC: (A) 3. Prunus serotina **FACU** Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B) = Total Cover Prevalence Index worksheet: 50% of total cov€ 17.5 20% of total cover: Total % Cover of: Multiply by: X 1 = Sapling/Shrub Stratum (Plot size: 30ft radius) 0 OBL species 1. Carpinus caroliniana X2 =30 FAC FACW species 2. Quercus alba 10 **FACU** X 3 = 0 FAC species FAC X 4 = 0 5 3. Acer rubrum **FACU** species **FACU** X5 =0 Juniperus virginiana **UPL** species 0 Column Totals: Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 50 = Total Cover X 2 - Dominance Test is >50% 25 20% of total cover: 3 - Prevalence Index is ≤ 3.00 50% of total cov€ Problematic Hydrophytic Vegetation (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must 1. Polystichum acrostichoides FACU be present, unless disturbed or problematic. FACU Definitions of Four Vegetation Strata: 2. Lonicera japonica FAC Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or Smilax rotundifolia more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. 8. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 15 = Total Cover 50% of total cover: 7.5 20% of total cover: Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover Yes X No 20% of total cover: 50% of total cov€ Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was observed to be dominant in the vicinity.

Sampling Point: <u>DP-4.3-05U</u>

Depth Matrix (inches) Color (moist)					sence of indica	itors.)			
(inches) Color (moist)				edox Feature					
	<u></u> %	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks		
0-7 10YR 4/3	100					FSCL	No redox observed		
7-15 2.5Y 6/4	98	7.5YR 4/6		С	M	FSL	Prominent redox concentrations		
15-20 2.5Y 6/4	78	10YR 5/6		С	M	FSCL	Prominent redox concentrations		
5YR 4/6	20						Mixed Matrix		
¹ Type: C=concentration, D=Depl			Sand Grai	ns.		² Location	: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators: (Applicab	le to all LRRs <u>, un</u>	less otherwise noted.)					for Problematic Hydric Soils ³ :		
Histosol (A1)		Dark Surface (S	•				A10) (MLRA 147)		
Histic Epipedon (A2)	_	Polyvalue Belov					ie Redox (A16)		
Black Histic (A3)	_	Thin Dark Surfa			3)	(MLRA 147,	•		
Hydrogen Sulfide (A4)	_	Loamy Gleyed N					oodplain Soils (F19)		
Stratified Layers (A5)	_	Depleted Matrix				(MLRA 136,	·		
2 cm Muck (A10) (LRR N)		Redox Dark Sur					/ Dark Surface (TF12)		
Depleted Below Dark Surface	:e (A11)	Depleted Dark S		/)		Other (Expla	in in Remarks)		
Thick Dark Surface (A12)	—	Redox Depressi		540) # 55 }		3			
Sandy Mucky Mineral (S1) (∟RR N,	Iron-Manganese	e Masses (F12) (LRR N,			f hydrophytic vegetation an		
MLRA 147, 148)		MLRA 136)	/E17\ /N 4I	DA 477 433		-	drology must be present,		
Sandy Gleyed Matrix (S4)	_	Umbric Surface				untess dist	urbed or problematic.		
Sandy Redox (S5)	_		Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (TF2) (MLRA 127, 147)						
Stripped Matrix (S6)		Red Paletti Mat	enat (172)	(MLKA 127,	147)				
Dantaintina anna /if alanana d\.					1				
Restrictive Layer (if observed):									
Type:									
Depth (inches):					Hydr	ric Soil Present?	Yes No <u>X</u>		
Hydric soils were not observed i	1 this location.								

Project Site: Green Ridge Recyclin	ng and Disposal Facility,LLC City/County:	Cumberland Sampling Date: 12/8/2022				
· — · · · ·	Recycling and Disposal Facility, LLC	State: VA Sampling Point: DP-4.3-06U				
Investigator(s): KBJW - D. Kwasnie		· · · ·				
Landform (hillslope, terrace, etc.): F		cave, convex, none): None Slope (%): 5-10%				
	A 136, LRR P Lat: 37.5677075	Long: -78.12922 Datum: NAD83				
	lelena complex, 7 to 15 percent slopes	NWI classification: UPL				
Are climatic / hydrologic conditions of		No If no, explain in Remarks.)				
Are Vegetation , Soil , or		_				
Are Vegetation , Soil , or		(If needed, explain any answers in Remarks.)				
		ing point locations, transects, important features, etc.				
Hydrophytic Vegetation Present?						
Hydric Soil Present?	Yes No No Yes	Is the Sampled Area Yes No X				
Wetland Hydrology Present?	Yes No X	within a Wetland?				
Remarks: This data point represents		experiencinig normal precipitation conditions; however, the area was in a mild				
drought.	ngineers Antecedent Precipitation toot, the site is t	experiencing normal precipitation conditions, nowever, the area was in a mitu				
arought.						
HYDROLOGY		-				
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one	is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)				
Saturation (A3)	Oxidized Rhizospheres along Living Roots	Moss Trim Lines (B16)				
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Borrows				
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)		Geomorphic Position (D2)				
Inundation Visible on Aerial Ima	agery (B7)	Shallow Aquitard (D3)				
Water-Stained Leaves (B9)		Microtopographic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral Test (D5)				
Field Observations:						
Surface water Present? Yes	No X Depth (inches)	_				
Water Table Present? Yes	No X Depth (inches)	_				
Saturation Present? Yes	No X Depth (inches)	Wetland Hydrology Present? Yes NoX				
(includes capillary fringe)						
Describe Recorded Data (stream gau	ge, monitoring well, aerial photos, previous inspec	tions), if available:				
Remarks:	lin she distribute.					
Wetland hydrology was not observed	in the vicinity.					

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-4.3-06U Dominance Test worksheet: **Absolute** Dominant Indicator Tree Stratum (Plot size: 30ft radius) % Cover Species? Status 1. Acer rubrum 20 FAC Number of Dominant Species 2. Ulmus americana 15 **FACW** That Are OBL, FACW, or FAC: (A) Quercus alba 10 FACU 3. 5 FACU 4. Liriodendron tulipifera Total Number of Dominant Species Across All Strata: 7 (B) 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 57% (A/B) = Total Cover Prevalence Index worksheet: 50% of total cov€ 25 20% of total cover: Total % Cover of: Multiply by: X 1 = Sapling/Shrub Stratum (Plot size: 30ft radius) 0 OBL species 1. Carpinus caroliniana FAC X2 =30 FACW species Quercus alba 10 **FACU** X 3 = 0 2. FAC species FACW X 4 = 0 10 Ulmus americana FACU species 10 FACU X5 =0 Prunus serotina **UPL** species 0 Column Totals: Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 60 = Total Cover X 2 - Dominance Test is >50% 50% of total cove 30 20% of total cover: 3 - Prevalence Index is ≤ 3.00 Problematic Hydrophytic Vegetation (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must 1. Polystichum acrostichoides FACU be present, unless disturbed or problematic. FACU **Definitions of Four Vegetation Strata:** 2. Lonicera japonica FAC Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or Smilax rotundifolia more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. 8. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 15 = Total Cover 50% of total cover: 7.5 20% of total cover: Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover Yes X No 20% of total cover: 50% of total cov€ Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was observed to be dominant in the vicinity.

Sampling Point: <u>DP-4.3-06U</u>

Profile Desc		the depth need	ed to document the indi				tors.)	
Depth	Matrix				Redox Feature			
(inches)	Color (moist)	<u></u> %	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-8	2.5Y 4/3	98	7.5YR 3/4	_2_	С	M	FSL	Distinct redox concentrations
8-15	2.5Y 6/3	95	7.5YR 3/4	5	С	M	FSL	Prominent redox concentrations
18-20	10YR 5/6	80	7.5YR 3/4	20	С	М	FSCL	Distinct redox concentrations
								_
¹ Type: C=co	ncentration, D=Deple	etion, RM=Redu	ced Matrix, MS=Masked	Sand Grai	ins.			PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applicabl	e to all LRRs <u>, u</u>	nless otherwise noted.)				Indicators	for Problematic Hydric Soils ³ :
Histoso	ol (A1)	_	Dark Surface (S7	7)			2 cm Muck (A	A10) (MLRA 147)
_	Epipedon (A2)	_	Polyvalue Belov			·	Coastal Prair	ie Redox (A16)
	listic (A3)	_	Thin Dark Surface			3)	(MLRA 147,	·
	en Sulfide (A4)	_	Loamy Gleyed N)			oodplain Soils (F19)
_	ed Layers (A5)	_	Depleted Matrix				(MLRA 136,	·
	luck (A10) (LRR N)		Redox Dark Surf				-	Dark Surface (TF12)
	ed Below Dark Surfac	ce (A11)	Depleted Dark S	•	/)		Other (Explai	in in Remarks)
	Oark Surface (A12)		Redox Depression		(E4.2) (LDD N		31	6 h dan ah din
	Mucky Mineral (S1) (I 147, 148)		Iron-Manganese MLRA 136)	e Masses ((F12) (LKK N,			f hydrophytic vegetation an
	Gleyed Matrix (S4)		Umbric Surface	(F13) (MI	RΔ 136 122)			drology must be present, urbed or problematic.
	Redox (S5)	_	Piedmont Flood				unicss disc	urbed of problematic.
	d Matrix (S6)	_	Red Parent Mate	-		•		
	1 1 1 1 1 1 X (50)	_			, (,	,		
Doctrictive I	_ayer (if observed):					1		
	Layer (II observeu).							
Type:								
Depth ((inches):					Hydi	ic Soil Present?	Yes No <u>X</u>
Remarks:						•		
Hydric soils	were not observed in	n this location.						

Project Site: Green Ridge Recyclir	ng and Disposal Facility,LLC City/County:	Cumberland Sampling Date: 12/8/2022				
· — · · · ·	Recycling and Disposal Facility, LLC	State: VA Sampling Point: DP-4.3-07U				
Investigator(s): KBJW - D. Kwasnie		Range: Tax Map #44-A-19				
Landform (hillslope, terrace, etc.): F	Hillslope Local relief (concave	e, convex, none): None Slope (%): 2-5%				
	<u> </u>	Long: -78.128836 Datum: NAD83				
	elena complex, 7 to 15 percent slopes	NWI classification: UPL				
Are climatic / hydrologic conditions of		No If no, explain in Remarks.)				
Are Vegetation , Soil , or		Are "Normal Circumstances" present? Yes X No				
Are Vegetation , Soil , or		(If needed, explain any answers in Remarks.)				
		point locations, transects, important features, etc.				
Hydrophytic Vegetation Present?	Yes X No					
Hydric Soil Present?	Yes No X	Is the Sampled Area Yes No X				
Wetland Hydrology Present?	Yes No X	within a Wetland?				
Remarks: This data point represents						
· · ·	. ,	periencinig normal precipitation conditions; however, the area was in a mild				
drought.	Igilieers Antecedent Frecipitation toot, the site is exp.	effecting florinal precipitation conditions, however, the area was in a finite				
arought.						
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one	s required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)				
Saturation (A3)	Oxidized Rhizospheres along Living Roots (C3					
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Borrows				
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)		Geomorphic Position (D2)				
Inundation Visible on Aerial Ima	ngerv (B7)	Shallow Aquitard (D3)				
Water-Stained Leaves (B9)	gery (b)	Microtopographic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral Test (D5)				
Addate Fadina (B13)		FAC-Neutral Test (D3)				
Field Observations:						
Surface water Present? Yes	No X Depth (inches)					
Water Table Present? Yes X	No Depth (inches) 18					
Saturation Present? Yes X	No Depth (inches) 14	Wetland Hydrology Present? Yes No X				
(includes capillary fringe)	<u> </u>					
	ge, monitoring well, aerial photos, previous inspection	ns), if available:				
Remarks:						
Wetland hydrology was not observed	in the vicinity.					

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-4.3-07U **Dominance Test worksheet: Absolute** Dominant Indicator Tree Stratum (Plot size: 30ft radius) % Cover Species? Status 1. Ulmus americana 25 **FACW** Number of Dominant Species 2. Acer rubrum 20 FAC That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B) = Total Cover Prevalence Index worksheet: 50% of total cov€ 22.5 20% of total cover: Total % Cover of: Multiply by: X 1 = Sapling/Shrub Stratum (Plot size: 30ft radius) 0 OBL species 1. Carpinus caroliniana X2 =FAC FACW species Liquidambar styraciflua FAC X 3 = 0 FAC species FACU X 4 = 0 Juniperus virginiana FACU species X5 =0 **UPL** species 0 Column Totals: Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 45 = Total Cover X 2 - Dominance Test is >50% 50% of total cov€ 22.5 20% of total cover: 3 - Prevalence Index is ≤ 3.00 Problematic Hydrophytic Vegetation¹ (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must 1. Lonicera japonica **FACU** be present, unless disturbed or problematic. **Definitions of Four Vegetation Strata:** Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. 8. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 5 = Total Cover 50% of total cover: 2.5 20% of total cover: Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover Yes X No 20% of total cover: 50% of total cov€ Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was observed to be dominant in the vicinity.

Sampling Point: <u>DP-4.3-07U</u>

Profile Desc		the depth need	led to document the indi				tors.)	
Depth	Matrix				Redox Feature			
(inches)	Color (moist)	<u></u> %	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-3	2.5Y 3/3	100					FSL	No redox concentrations
3-12	2.5Y 5/3	98	10YR 4/4	2	С	M	FSL	Distinct redox concentrations
12-20	2.5Y 4/3	98	7.5YR 3/4	2	С	M	FSL	Distinct redox concentrations
¹ Type: C=co	ncentration, D=Deple	etion, RM=Redu	iced Matrix, MS=Masked	Sand Gra	ins.			PL=Pore Lining, M=Matrix.
		le to all LRRs <u>, ι</u>	inless otherwise noted.)					for Problematic Hydric Soils ³ :
Histoso		_	Dark Surface (S7	•				A10) (MLRA 147)
_	pipedon (A2)	_	Polyvalue Belov			· —		ie Redox (A16)
	listic (A3)	_	Thin Dark Surfa			3)	(MLRA 147,	·
_ ` `	en Sulfide (A4)	_	Loamy Gleyed N)			podplain Soils (F19)
	ed Layers (A5)	_	Depleted Matrix				(MLRA 136,	·
	uck (A10) (LRR N)		Redox Dark Sur		7)			Dark Surface (TF12)
	ed Below Dark Surface	e (A11)	Depleted Dark S Redox Depressi		/)		Otner (Explai	in in Remarks)
	Park Surface (A12) Mucky Mineral (S1) (I	DD N	Iron-Manganese		/E12\ /I DD N		³ Indicators of	f hydrophytic vegetation an
	147, 148)		MLRA 136)	. 11103363	(1 12) (LIXIX IX,			drology must be present,
	Gleyed Matrix (S4)		Umbric Surface	(F13) (ML	_RA 136. 122)	1		urbed or problematic.
	Redox (S5)	_	Piedmont Flood				antess also	aroea or prooteinatier
	d Matrix (S6)	_	Red Parent Mate	-		•		
''	. ,	_			,	•		
Doctrictive I	arrow (if absorred).							
	ayer (if observed):							
Туре:								
Depth ((inches):					Hydi	ric Soil Present?	Yes No <u>X</u>
Remarks:								
Hydric soils	were not observed in	n this location.						

Project Site: Green Ridge Recycling a	and Disposal Facility,LLC City/County:	Cumberland Sampling Date: 12/8/2022			
Applicant/Owner: Green Ridge Rec	ycling and Disposal Facility, LLC	State: VA Sampling Point: DP-4.3-08U			
Investigator(s): KBJW - D. Kwasniews	ki, E. Williams Section, Township	p, Range: Tax Map #44-A-19			
Landform (hillslope, terrace, etc.): Hills	slope Local relief (conca	ave, convex, none): None Slope (%): 5-10%			
Subregion (LRR or MLRA): MLRA 1	36, LRR P Lat: 37.567277	Long: -78.12884 Datum: NAD83			
Soil Map Unit Name: 2C—Appling-Hele		NWI classification: UPL			
Are climatic / hydrologic conditions on s		No If no, explain in Remarks.)			
Are Vegetation , Soil , or Hyd		Are "Normal Circumstances" present? Yes X No			
Are Vegetation , Soil , or Hyd		(If needed, explain any answers in Remarks.)			
		ng point locations, transects, important features, etc.			
Hydrophytic Vegetation Present?	Yes No X	T			
Hydric Soil Present?	Yes No X	Is the Sampled Area Yes No X			
Wetland Hydrology Present?	Yes X No	within a Wetland?			
Remarks: This data point represents an					
According to the US Army Corps of Engi drought.	neers Antecedent Precipitation tool, the site is ex	xperiencinig normal precipitation conditions; however, the area was in a mild			
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is re	* * */	Surface Soil Cracks (B6)			
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)			
X Saturation (A3)	Oxidized Rhizospheres along Living Roots (Moss Trim Lines (B16)			
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)			
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Borrows			
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)			
Iron Deposits (B5)		Geomorphic Position (D2)			
Inundation Visible on Aerial Image	ry (B7)	Shallow Aquitard (D3)			
Water-Stained Leaves (B9)		Microtopographic Relief (D4)			
Aquatic Fauna (B13)		FAC-Neutral Test (D5)			
Field Observations:					
	No X Depth (inches)				
	No Depth (inches) 18	-			
	No Depth (inches) 10	— Wetland Hydrology Present? Yes X No			
(includes capillary fringe)		-			
	monitoring well, aerial photos, previous inspecti	ions), if available:			
Demonstrat					
Remarks: Wetland hydrology was observed in the	vicinity.				

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-4.3-08U **Dominance Test worksheet: Absolute** Dominant Indicator Tree Stratum (Plot size: 30ft radius) % Cover Species? Status 1. Ulmus americana 20 **FACW** Number of Dominant Species 2. Acer rubrum 10 FAC That Are OBL, FACW, or FAC: (A) Liriodendron tulipifera 10 FACU 3. Total Number of Dominant Species Across All Strata: 7 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 43% (A/B) = Total Cover Prevalence Index worksheet: 50% of total cov€ 20 20% of total cover: Total % Cover of: Multiply by: X 1 = Sapling/Shrub Stratum (Plot size: 30ft radius) 0 OBL species 1. Carpinus caroliniana X2 =FAC FACW species Juniperus virginiana FACU X 3 = 0 FAC species FACU X 4 = 0 Quercus alba FACU species X5 =0 **UPL** species 0 Column Totals: Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 50 = Total Cover 2 - Dominance Test is >50% 20% of total cover: 50% of total covε 25 3 - Prevalence Index is ≤ 3.00 Problematic Hydrophytic Vegetation¹ (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must 1. Lonicera japonica FACU be present, unless disturbed or problematic. 2. Polystichum acrostichoides FACU **Definitions of Four Vegetation Strata:** Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. 8. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 10 = Total Cover 50% of total cover: 5 20% of total cover: Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover No X 20% of total cover: 50% of total cov€ Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was not observed to be dominant in the vicinity.

Sampling Point: <u>DP-4.3-08U</u>

Profile Desc		the depth neede	d to document the indi				tors.)	
Depth	Matrix		<u> </u>		Redox Feature			
(inches)	Color (moist)	<u></u> %	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-4	2.5Y 4/3	100					FSL	No redox concentrations
4-10	2.5Y 4/3	98	7.5YR 4/3	2	C	M	FSL	Faint redox concentrations
10-16	2.5Y 5/3	100					FSL	
16-20	2.5Y 6/4	95	10YR 5/6	_5	С	M	FSL	Distinct redox concentrations
¹ Type: C=cc	oncentration, D=Depl	etion, RM=Reduc	ed Matrix, MS=Masked	Sand Grai	ins.			: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applicabl	e to all LRRs <u>, un</u>	less otherwise noted.)				Indicators	for Problematic Hydric Soils ³ :
Histoso	ol (A1)		Dark Surface (S	7)			2 cm Muck (/	A10) (MLRA 147)
Histic I	Epipedon (A2)		Polyvalue Belov				Coastal Prair	rie Redox (A16)
	Histic (A3)		Thin Dark Surfa			8)	(MLRA 147,	·
	gen Sulfide (A4)		Loamy Gleyed N)			oodplain Soils (F19)
	ied Layers (A5)		Depleted Matrix				(MLRA 136,	·
_	1uck (A10) (LRR N)		Redox Dark Sur					v Dark Surface (TF12)
	ed Below Dark Surface	ce (A11)	Depleted Dark S		7)		Other (Expla	in in Remarks)
_	Dark Surface (A12)		Redox Depressi		(543) (1 55)		3	
	Mucky Mineral (S1) (I		Iron-Manganes	e Masses ((F12) (LRR N,			f hydrophytic vegetation an
	147, 148)		MLRA 136)	(F17) (NAI	DA 477 433		-	ydrology must be present,
	Gleyed Matrix (S4)		Umbric Surface				untess dist	curbed or problematic.
_	Redox (S5) ed Matrix (S6)		Piedmont Flood Red Parent Mat	•		•		
Strippe	eu Matrix (30)		Red Falent Mat	.criat (11 Z) (MENA 127,	14/)		
	Layer (if observed):							
Type:								
Depth	(inches):					Hydr	ic Soil Present?	Yes No _X

Project Site: Green Ridge Recyclin	ng and Disposal Facility,LLC City/County:	Cumberland Sampling Date: 12/8/2022
, <u> </u>	Recycling and Disposal Facility, LLC	State: VA Sampling Point: DP-4.3-09U
Investigator(s): KBJW - D. Kwasni		p, Range: Tax Map #44-A-19
Landform (hillslope, terrace, etc.): H		cave, convex, none): None Slope (%): 5-10%
	A 136, LRR P Lat: 37.567139	Long: -78.128835 Datum: NAD83
	Helena complex, 7 to 15 percent slopes	NWI classification: UPL
Are climatic / hydrologic conditions		No If no, explain in Remarks.)
Are Vegetation , Soil , or		Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or		(If needed, explain any answers in Remarks.)
		ing point locations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes No X	
Hydric Soil Present?	Yes No X	Is the Sampled Area Yes No X
Wetland Hydrology Present?	Yes No X	within a Wetland?
Remarks: This data point represents		
•	. , ,	experiencinig normal precipitation conditions; however, the area was in a mild
drought.	, ,	,
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one	is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhizospheres along Living Roots ((C3) Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Borrows
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Ima	agery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral Test (D5)
Field Observations:	V	
Surface water Present? Yes	No X Depth (inches)	_
Water Table Present? Yes	No X Depth (inches)	_
Saturation Present? Yes X	No Depth (inches) 15	Wetland Hydrology Present? YesNo _X
(includes capillary fringe)	and the state of t	
Describe Recorded Data (stream gau	ge, monitoring well, aerial photos, previous inspect	lons), if available:
Demonstra		
Remarks: Wetland hydrology was not observed	d in the vicinity	
Wettand Hydrotogy was not observed	Thrule vicinity.	

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-4.3-09U **Dominance Test worksheet: Absolute** Dominant Indicator Tree Stratum (Plot size: 30ft radius) % Cover Species? Status 1. Ulmus americana 20 **FACW** Number of Dominant Species 2. Acer rubrum 20 FAC That Are OBL, FACW, or FAC: (A) Liriodendron tulipifera 15 FACU 3. Total Number of Dominant Species Across All Strata: 7 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 43% (A/B) = Total Cover Prevalence Index worksheet: 50% of total cov€ 27.5 20% of total cover: Total % Cover of: Multiply by: X 1 = Sapling/Shrub Stratum (Plot size: 30ft radius) 0 OBL species 1. Carpinus caroliniana FAC X2 =FACW species Liriodendron tulipifera FACU X 3 = 0 FAC species X 4 = 0 **FACU** species X5 =0 **UPL** species 0 Column Totals: Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 45 = Total Cover 2 - Dominance Test is >50% 50% of total cov€ 22.5 20% of total cover: 3 - Prevalence Index is ≤ 3.00 Problematic Hydrophytic Vegetation¹ (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must 1. Polystichum acrostichoides FACU be present, unless disturbed or problematic. 2. Lonicera japonica FACU **Definitions of Four Vegetation Strata:** Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. 8. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 15 = Total Cover 50% of total cover: 7.5 20% of total cover: Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover No X 20% of total cover: 50% of total cov€ Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was not observed to be dominant in the vicinity.

Sampling Point: <u>DP-4.3-09U</u>

Color (moist)	Profile Desc		the depth neede	d to document the indi				tors.)	
0-3	Depth	Matrix		<u> </u>					
3-5 2.5Y 3/3 70 2.5Y 4/4 30 30 5-20 10YR 5/4 98 7.5YR 3/4 2 C M FSL Distinct redox concentrations **Indicators: (Applicable to all LRRs, unless otherwise noted.)** Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)** Histosol (A1) Dark Surface (S7) Carm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S9) (MLRA 147, 148) Coastal Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gieyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F2) Piedmont Floodplain Soils (F19) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) MIRA 147, 148) MLRA 156) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N) Redox Depressions (F8) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X		Color (moist)		Color (moist)	<u> </u>	Type ¹	Loc²	Texture	Remarks
2.5Y 4/4 30 10YR 5/4 98 7.5YR 3/4 2 C M FSL Distinct redox concentrations 1-Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1-Type: Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1-Type: Depth (inches):	0-3	2.5Y 3/3	100					FSL	No redox concentrations
1 Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1 Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1 Location: PL=Pore Lining, M=Matrix. 1 Indicators for Problematic Hydric Soils 1: 2 cm Muck (A10) (MLRA 147) 3 cm Muck (A10) (MLRA 147) 4 cm Muck (A10) (MLRA 147) 5 tratified Layers (A5) 5 cm Muck (A10) (MLRA 147, 148) 5 cm Muck (A10) (MLRA 147, 148) 6 peleted Matrix (F3) 7 cm Muck (A10) (MLRA 147, 148) 7 peleted Dark Surface (F6) 7 cm Muck (A10) (MLRA 147, 148) 8 peleted Below Dark Surface (A11) 9 cepleted Dark Surface (F6) 9 cepleted Below Dark Surface (A12) 9 cand Muck (MICRA 147, 148) MLRA 147, 148) Sandy Mucky Mineral (S1) (LRR N, Inon-Manganese Masses (F12) (LRR N, MLRA 147, 148) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 136, 122) Sandy Redox (S5) Fiedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Hydric Soil Present? Yes No X Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	3-5	2.5Y 3/3	70					FSL	No redox concentrations
¹Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1º Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (57) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F3) Thick Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X		2.5Y 4/4	30						Mixed Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Depleted Dark Surface (F6) Thick Dark Surface (A11) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Sandy Gleyed Matrix (S4) MLRA 147, 148) MLRA 147, 148) MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) Other (Explain in Remarks) All Depleted Surface (A12) Red Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	5-20	10YR 5/4	98	7.5YR 3/4	2	С	M	FSL	Distinct redox concentrations
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Depleted Below Dark Surface (F6) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 147, 148) MLRA 147, 148) MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) Type: Depth (inches): Hydric Soil Present? Yes No X Indicators for Problematic Hydric Soils*: 1 Indicators for Problematic Hydric Soils*: 2 cm Muck (A10) (MLRA 147) Coastal Prairie Redox (A16) (MLRA 147, 148) (MLRA 136, 147) Piedmont Floodplain Soils (F19) Well A136, 147) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Depleted Dark Surface (F6) Thick Dark Surface (A11) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Sandy Gleyed Matrix (S4) MLRA 147, 148) MLRA 147, 148) MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) Other (Explain in Remarks) All Depleted Surface (A12) Red Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (F6) Depleted Below Dark Surface (F7) Depleted Below Dark Surface (F7) Thick Dark Surface (A11) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Walta 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) Other (Explain in Remarks) Thick Dark Surface (A12) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X									
Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coastal Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:	¹ Type: C=co	ncentration, D=Depl	etion, RM=Reduc	ed Matrix, MS=Masked	Sand Gra	ins.			
Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coastal Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Unbric Surface (F13) (MLRA 136, 122) Unbric Surface (F13) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:	Hydric Soil I	Indicators: (Applicab	e to all LRRs <u>, un</u>	less otherwise noted.)				Indicators	for Problematic Hydric Soils ³ :
Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation an wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:	Histoso	ol (A1)		Dark Surface (S	7)			2 cm Muck (/	A10) (MLRA 147)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Redox Depressions (F12) (LRR N, MLRA 136, 122) Umbric Surface (F13) (MLRA 136, 122) Depleted Dark Surface (F13) (MLRA 148) Stripped Matrix (S6) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, Wetland hydrology must be present, unless disturbed or problematic. Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:	Histic E	Epipedon (A2)						Coastal Prair	ie Redox (A16)
Stratified Layers (A5) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, Wetland hydrology must be present, unless disturbed or problematic. Wetland 148) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:							8)	-	•
2 cm Muck (A10) (LRR N))			
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Depleted Dark Surface (F7) Other (Explain in Remarks) Other (Explain in Remarks) Indicators of hydrophytic vegetation an wetland properties of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic. Indicators of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic. Indicators of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic. Indicators of hydr								 -	·
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Iron-Ma	_								
Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136) wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:			ce (A11)			7)		Other (Expla	in in Remarks)
MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Remarks: MLRA 136) Wetland hydrology must be present, unless disturbed or problematic. Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (TF2) (MLRA 127, 147) Hydric Soil Present? Yes No X No X						/E40\		3	
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:	_				e Masses	(F12) (LRR N,			
Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:		•			/E17\ /\ 41	DA 477 433		-	•
Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:								untess dist	urbed or problematic.
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Remarks:	_				•		•		
Type: Depth (inches): Hydric Soil Present? Yes No _X Remarks:	запрре	tu Matrix (30)		Red Falent Mat	enat (11 Z) (IVILKA 127,	14/)		
Type: Depth (inches): Hydric Soil Present? Yes No _X Remarks:							1		
Depth (inches): Hydric Soil Present? Yes No _X Remarks:	Restrictive I	Layer (if observed):							
Remarks:	Type:								
	Depth	(inches):					Hydr	ic Soil Present?	Yes No _X
	Remarks: Hydric soils	were not observed i	n this location.						

Project Site: Green Ridge Recyclin	ng and Disposal Facility,LLC City/County:	Cumberland Sampling Date: 12/8/2022
· — · · · ·	Recycling and Disposal Facility, LLC	State: VA Sampling Point: DP-4.3-10U
Investigator(s): KBJW - D. Kwasnie		o, Range: Tax Map #44-A-19
Landform (hillslope, terrace, etc.): F		-
	A 136, LRR P Lat: 37.567203	Long: -78.128382 Datum: NAD83
	elena complex, 7 to 15 percent slopes	NWI classification: UPL
Are climatic / hydrologic conditions of		No If no, explain in Remarks.)
Are Vegetation , Soil , or		Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or		(If needed, explain any answers in Remarks.)
		ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes No X	T
Hydric Soil Present?	Yes No X	Is the Sampled Area Yes No X
Wetland Hydrology Present?	Yes No X	within a Wetland?
Remarks: This data point represents		
According to the US Army Corps of E drought.	ngineers Antecedent Precipitation tool, the site is ex	speriencinig normal precipitation conditions; however, the area was in a mild
HYDROLOGY Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one	is required; check all that apply)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhizospheres along Living Roots (C	
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Borrows
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	——————————————————————————————————————	Geomorphic Position (D2)
Inundation Visible on Aerial Ima	ngery (R7)	Shallow Aquitard (D3)
	igery (b7)	
Water-Stained Leaves (B9) Aguatic Fauna (B13)		Microtopographic Relief (D4)
Aquatic I aulia (D±3)		FAC-Neutral Test (D5)
Field Observations:		
Surface water Present? Yes	No X Depth (inches)	
Water Table Present? Yes	No X Depth (inches)	-
Saturation Present? Yes	No X Depth (inches)	Wetland Hydrology Present? Yes No X
(includes capillary fringe)		
Describe Recorded Data (stream gau	ge, monitoring well, aerial photos, previous inspection	ons), if available:
Remarks:		
Wetland hydrology was not observed	I in the vicinity.	
Wettand Hydrotogy was not observed	The die vicinity.	

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-4.3-10U Dominance Test worksheet: **Absolute** Dominant Indicator Tree Stratum (Plot size: 30ft radius) % Cover Species? Status 1. Juniperus virginiana 15 FACU Number of Dominant Species 15 FAC That Are OBL, FACW, or FAC: 2. Acer rubrum (A) 3. Liriodendron tulipifera 10 FACU Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B) = Total Cover Prevalence Index worksheet: 50% of total cov€ 20 20% of total cover: Total % Cover of: Multiply by: X 1 = Sapling/Shrub Stratum (Plot size: 30ft radius) 0 OBL species 1. Carpinus caroliniana X2 =25 FAC FACW species Prunus serotina FACU X 3 = 0 FAC species FACW X 4 = 0 Ulmus americana FACU species X5 =0 **UPL** species 0 Column Totals: Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 40 = Total Cover 2 - Dominance Test is >50% 20 20% of total cover: 3 - Prevalence Index is ≤ 3.00 50% of total cov€ Problematic Hydrophytic Vegetation¹ (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must 1. Smilax rotundifolia FAC be present, unless disturbed or problematic. **Definitions of Four Vegetation Strata:** Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. 8. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 5 = Total Cover 50% of total cover: 2.5 20% of total cover: Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover No X 20% of total cover: 50% of total cov€ Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was not observed to be dominant in the vicinity.

Sampling Point: <u>DP-4.3-10U</u>

Profile Desc	• •	•	d to document the indi				itors.)	
Depth	Matrix		<u> </u>		Redox Feature			
(inches)	Color (moist)	<u></u> %	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 3/3	100					FSL	No redox concentrations
5-12	2.5Y 4/3	94	7.4YR 4/4	_5_	С	M	FSL	Distinct redox concentrations
12-18	10YR 4/2	98	10YR 5/6	2	C	M	FSCL	Prominent redox concentrations
18-20	2.5Y 5/2	98	2.5Y 4/3	2	С	M	FSCL	Faint redox concentrations
¹ Type: C=co	oncentration, D=Depl	etion, RM=Reduc	ed Matrix, MS=Masked	Sand Grai	ins.		² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applicabl	le to all LRRs <u>, un</u>	less otherwise noted.)				Indicators	for Problematic Hydric Soils ³ :
Histoso	ol (A1)		Dark Surface (S	7)			2 cm Muck (A10) (MLRA 147)
Histic I	Epipedon (A2)		Polyvalue Belov				Coastal Prair	rie Redox (A16)
Black H	Histic (A3)		Thin Dark Surfa	ice (S9) (M	ILRA 147, 148	8)	(MLRA 147,	148)
	gen Sulfide (A4)		Loamy Gleyed N	Matrix (F2))		Piedmont Fl	oodplain Soils (F19)
Stratifi	ed Layers (A5)		Depleted Matrix	x (F3)			(MLRA 136,	·
	1uck (A10) (LRR N)		Redox Dark Sur				-	v Dark Surface (TF12)
	ed Below Dark Surfac	ce (A11)	Depleted Dark S		7)		Other (Expla	in in Remarks)
	Dark Surface (A12)		Redox Depressi				7	
	Mucky Mineral (S1) (I	LRR N,	Iron-Manganes	e Masses ((F12) (LRR N,			of hydrophytic vegetation an
	147, 148)		MLRA 136)	<i>(</i> =43) (44)			-	ydrology must be present,
	Gleyed Matrix (S4)		Umbric Surface				unless dist	turbed or problematic.
_	Redox (S5)		Piedmont Floor	•		•		
Strippe	ed Matrix (S6)		Red Parent Mat	erial (TF2)) (MLRA 127,	147)		
Restrictive l	Layer (if observed):							
Type:								
Depth	(inches):					Hydi	ric Soil Present?	Yes No X
Remarks: Hydric soils	were not observed in	n this location.						

Project Site: Green Ridge Recycli	ng and Disposal Facility,LLC City/County:	Cumberland Sampling Date: 12/8/2022
· — · · · ·	Recycling and Disposal Facility, LLC	State: VA Sampling Point: DP-4.3-11U
	ewski, E. Williams Section, Township	· · ·
Landform (hillslope, terrace, etc.):	<u> </u>	ave, convex, none): None Slope (%): 5-10%
	A 136, LRR P Lat: 37.567283	Long: -78.128381 Datum: NAD83
	Helena complex, 7 to 15 percent slopes	NWI classification: UPL
Are climatic / hydrologic conditions		No If no, explain in Remarks.)
Are Vegetation , Soil , or		Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or		(If needed, explain any answers in Remarks.)
	<u>—</u>	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes X No	<u> </u>
Hydric Soil Present?	Yes No X	Is the Sampled Area Western a Western 3 Yes No X
Wetland Hydrology Present?	Yes No X	within a Wetland?
Remarks: This data point represents		
· · ·	. ,	xperiencinig normal precipitation conditions; however, the area was in a mild
drought.	ingineers Antecedent Precipitation toot, the site is ex	(periencing normal precipitation conditions, nowever, the area was in a mito
arought.		
LHYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one	is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhizospheres along Living Roots (
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Borrows
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	(Geomorphic Position (D2)
Inundation Visible on Aerial Im	anery (R7)	Shallow Aguitard (D3)
Water-Stained Leaves (B9)	agery (o.,	Microtopographic Relief (D4)
Aguatic Fauna (B13)		FAC-Neutral Test (D5)
Aquatic Faulta (025)		FAC-inequiat rest (D3)
Field Observations:		
Surface water Present? Yes	No X Depth (inches)	
Water Table Present? Yes	No X Depth (inches)	-
Saturation Present? Yes	No X Depth (inches)	Wetland Hydrology Present? Yes No X
(includes capillary fringe)		-
Describe Recorded Data (stream gau	ge, monitoring well, aerial photos, previous inspecti	ons), if available:
Remarks:		
Wetland hydrology was not observed	d in the vicinity.	

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-4.3-11U Dominance Test worksheet: **Absolute** Dominant Indicator Tree Stratum (Plot size: 30ft radius) % Cover Species? Status 1. Pinus taeda 15 FAC Number of Dominant Species 2. Ulmus americana 10 **FACW** That Are OBL, FACW, or FAC: (A) Liriodendron tulipifera 10 FACU Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B) = Total Cover Prevalence Index worksheet: 50% of total covε 17.5 20% of total cover: Total % Cover of: Multiply by: X 1 = Sapling/Shrub Stratum (Plot size: 30ft radius) 0 OBL species 30 FAC X2 =1. Carpinus caroliniana FACW species Juniperus virginiana 10 **FACU** X 3 = 0 FAC species 10 FACW X 4 = 0 Ulmus americana FACU species Acer rubrum 5 Ν FAC X5 =0 **UPL** species Liquidambar styraciflua 5 Ν FAC 0 Column Totals: Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 60 = Total Cover X 2 - Dominance Test is >50% 30 20% of total cover: 3 - Prevalence Index is ≤ 3.00 50% of total covε Problematic Hydrophytic Vegetation (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must 1. Polystichum acrostichoides 10 **FACU** be present, unless disturbed or problematic. **Definitions of Four Vegetation Strata: Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 8 of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 10 = Total Cover 20% of total cover: 50% of total cover: 5 Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover Yes X No 20% of total cover: 50% of total cov€ Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was observed to be dominant in the vicinity.

Sampling Point: <u>DP-4.3-11U</u>

Depth (inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0-5 2.5Y 5/3 100 FSL No redox concentrations 5-12 2.5Y 4/3 50 FSL No redox concentrations 10YR 5/6 50 FSCL No redox concentrations 10YR 6/8 90 FSCL No redox concentrations 10YR 6/4 10 Mixed matrix 12 Location: PL=Pore Lining, M=Matrix. 13 Location: PL=Pore Lining, M=Matrix. 14 Listosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) 14 Histosol (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coastal Prairie Redox (A16) 15 Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) 16 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) 17 Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147)		n needed to document the indicator or confirm		tors.)	
0-5 2.5Y 5/3 100 FSL No redox concentrations 5-12 2.5Y 4/3 50 FSCL No redox concentrations 10YR 5/6 50 Mixed matrix 12-20 10YR 6/8 90 FSCL No redox concentrations 10YR 6/4 10 Mixed matrix Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 4 Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19)	· -	_			
5-12 2.5Y 4/3 50 FSCL No redox concentrations 10YR 5/6 50 Mixed matrix 12-20 10YR 6/8 90 FSCL No redox concentrations 10YR 6/4 10 Mixed matrix Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 10YR 6/4 10 Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19)	(inches) Color (moist) %	Color (moist) % T	Type ¹ Loc ²	Texture	Remarks
10YR 5/6 50 12-20 10YR 6/8 90 FSCL No redox concentrations Mixed matrix Mixed matrix Mixed matrix Mixed matrix Mixed matrix PSCL No redox concentrations Mixed matrix Mixed matrix Mixed matrix Mixed matrix Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19)	0-5 2.5Y 5/3 100			FSL	No redox concentrations
12-20 10YR 6/8 90 FSCL No redox concentrations 10YR 6/4 10 Mixed matrix Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 12 Location: PL=Pore Lining, M=Matrix. 13 Location: PL=Pore Lining, M=Matrix. 14 Location: PL=Pore Lining, M=Matrix. 15 Location: PL=Pore Lining, M=Matrix. 16 Location: PL=Pore Lining, M=Matrix. 17 Location: PL=Pore Lining, M=Matrix. 18 Location: PL=Pore Lining, M=Matrix. 18 Location: PL=Pore Lining, M=Matrix. 19 Location: PL=Pore Lining, M=Matrix. 10 Location: PL=Pore Lining, M=Matrix. 11 Location: PL=Pore Lining, M=Matrix. 12 Location: PL=Pore Lining, M=Matrix. 13 Location: PL=Pore Lining, M=Matrix. 14 Location: PL=Pore Lining, M=Matrix. 15 Location: PL=Pore Lining, M=Matrix. 16 Location: PL=Pore Lining, M=Matrix. 17 Location: PL=Pore Lining, M=Matrix. 18 Location: PL=Pore Lining, M=Matrix. 18 Location: PL=Pore Lining, M=Matrix. 18 Location: PL=Pore Lining, M=Matrix. 10 Location: P	5-12 2.5Y 4/3 50			FSCL	No redox concentrations
10YR 6/4 10 Mixed matrix Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Please of the state of the s	10YR 5/6 50	<u> </u>			Mixed matrix
Type: C=concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Pydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19)	12-20 10YR 6/8 90	<u> </u>		FSCL	No redox concentrations
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Indicators for Problematic Hydric Soils³: 2 cm Muck (A10) (MLRA 147) Coastal Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19)	10YR 6/4 10				Mixed matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Indicators for Problematic Hydric Soils³: 2 cm Muck (A10) (MLRA 147) Coastal Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19)					
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Indicators for Problematic Hydric Soils³: 2 cm Muck (A10) (MLRA 147) Coastal Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19)					
Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Coastal Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19)	¹ Type: C=concentration, D=Depletion, RM	Reduced Matrix, MS=Masked Sand Grains.			
Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coastal Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19)	Hydric Soil Indicators: (Applicable to all L	RRs <u>, unless ot</u> herwise noted.)		Indicators	for Problematic Hydric Soils ³ :
Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19)	Histosol (A1)	Dark Surface (S7)		2 cm Muck (A	A10) (MLRA 147)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19)	Histic Epipedon (A2)	Polyvalue Below Surface (S8)	(MLRA 147, 148)	Coastal Prair	ie Redox (A16)
	Black Histic (A3)	Thin Dark Surface (S9) (MLRA	147, 148)	(MLRA 147,	148)
Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147)	Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		Piedmont Flo	oodplain Soils (F19)
 · · · · · · · · · · · · · · · · · ·	Stratified Layers (A5)	Depleted Matrix (F3)		(MLRA 136,	147)
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12)	2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)		Very Shallow	/ Dark Surface (TF12)
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks)	Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		Other (Expla	in in Remarks)
Thick Dark Surface (A12) Redox Depressions (F8)	Thick Dark Surface (A12)	Redox Depressions (F8)			
Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR	Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12)	(LRR N,	³ Indicators o	f hydrophytic vegetation an
MLRA 147, 148) MLRA 136) wetland hydrology must be present,	MLRA 147, 148)	MLRA 136)		wetland hy	drology must be present,
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) unless disturbed or problematic.	Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 1	.36, 122)	unless dist	urbed or problematic.
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148)	Sandy Redox (S5)	Piedmont Floodplain Soils (F1	.9) (MLRA 148)		
Stripped Matrix (S6) Red Parent Material (TF2) (MLRA 127, 147)	Stripped Matrix (S6)	Red Parent Material (TF2) (ML	.RA 127, 147)		
Postrictive Laver (if observed):	Restrictive Layer (if observed):		<u> </u>		
Type:	• •				
Depth (inches): Hydric Soil Present? Yes No _X	Depth (inches):		Hydr	ric Soil Present?	Yes No <u>X</u>
Remarks: -lydric soils were not observed in this location.	Remarks: Hydric soils were not observed in this loca	tion.			

Project Site: Green Ridge Recyclir	ng and Disposal Facility,LLC City/County:	Cumberland Sampling Date: 12/8/2022
· — — — — — — — — — — — — — — — — — — —	Recycling and Disposal Facility, LLC	State: VA Sampling Point: DP-4.3-12U
Investigator(s): KBJW - D. Kwasnie	<u> </u>	Range: Tax Map #44-A-19
Landform (hillslope, terrace, etc.): H	Hillslope Local relief (concav	/e, convex, none): None Slope (%): 5-10%
	4 136, LRR P Lat: 37.567165	Long: -78.128379 Datum: NAD83
	elena complex, 7 to 15 percent slopes	NWI classification: UPL
Are climatic / hydrologic conditions	·	No If no, explain in Remarks.)
Are Vegetation , Soil , or		Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or		(If needed, explain any answers in Remarks.)
		g point locations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes X No	
Hydric Soil Present?	Yes No X	Is the Sampled Area Yes No X
Wetland Hydrology Present?	Yes No X	within a Wetland?
Remarks: This data point represents		
		periencinig normal precipitation conditions; however, the area was in a mild
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one	• • • • • • • • • • • • • • • • • • • •	Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhizospheres along Living Roots (C3	· · · · · · · · · · · · · · · · · · ·
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Borrows
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Ima	igery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral Test (D5)
Field Observations:		
Surface water Present? Yes	No X Depth (inches)	
Water Table Present? Yes	No X Depth (inches)	•
Saturation Present? Yes X	No Depth (inches) 21	- Wetland Hydrology Present? Yes No X
(includes capillary fringe)		·
Describe Recorded Data (stream gau	ge, monitoring well, aerial photos, previous inspection	ns), if available:
Remarks:		
Wetland hydrology was not observed	in the vicinity.	
-		

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-4.3-12U Dominance Test worksheet: **Absolute** Dominant Indicator Tree Stratum (Plot size: 30ft radius) % Cover Species? Status 1. Acer rubrum 20 FAC Number of Dominant Species 2. Juniperus virginiana 10 FACU That Are OBL, FACW, or FAC: (A) Liriodendron tulipifera **FACU** 3. Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B) = Total Cover Prevalence Index worksheet: 50% of total cov€ 17.5 20% of total cover: Total % Cover of: Multiply by: X 1 = Sapling/Shrub Stratum (Plot size: 30ft radius) 0 OBL species 1. Carpinus caroliniana FAC X2 =30 FACW species Ulmus americana 10 **FACW** X 3 = 0 FAC species 10 FACU X 4 = 0 Fagus grandifolia FACU species Prunus serotina 5 FACU X5 =0 **UPL** species 0 Column Totals: Prevalence Index = B/A= 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 55 = Total Cover X 2 - Dominance Test is >50% 20% of total cover: 50% of total cov€ 27.5 3 - Prevalence Index is ≤ 3.00 Problematic Hydrophytic Vegetation (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must 1. Smilax rotundifolia FAC be present, unless disturbed or problematic. 2. Polystichum acrostichoides FACU Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. 8. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 15 = Total Cover 50% of total cover: 7.5 20% of total cover: Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover Yes X No 20% of total cover: 50% of total cov€ Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was observed to be dominant in the vicinity.

Sampling Point: <u>DP-4.3-12U</u>

	ription: (Describe to Matrix	the depth nee	ded to document the i		onfirm the ab		tors.)	
Depth	Color (moist)	%	Color (moist)		Type ¹	Loc ²	Texture	Devente
(inches)					Туре			Remarks
0-3	2.5Y 4/3	100	40\/D.4//			. ———	Loam	No redox concentrations
3-11	2.5Y 4/3	98	10YR 4/6		C	. <u>M</u>	Loam	Prominent redox concentrations
11-16	2.5Y 5/4	95	7.5YR 4/4		C	. <u>M</u>	SL	Distinct redox concentrations
16-20	2.5Y 5/2	95	10YR 4/6	5	C	. <u> </u>	SL	Prominent redox concentrations
				- —				
			-	- —				
1							- 2 .	
			uced Matrix, MS=Mask		ins.			: PL=Pore Lining, M=Matrix.
		le to all LRRs, <u> </u>	unless otherwise note					for Problematic Hydric Soils ³ :
Histoso		_	Dark Surface		(50) ## = 1 4	—		A10) (MLRA 147)
	pipedon (A2)	-			(S8) (MLRA 1			rie Redox (A16)
	listic (A3)	-			1LRA 147, 14	8)	(MLRA 147,	·
	en Sulfide (A4)	-	Loamy Gleye	,)			oodplain Soils (F19)
	ed Layers (A5)	-	Depleted Ma	` '			(MLRA 136,	•
	uck (A10) (LRR N)	(444)	Redox Dark S		7)			v Dark Surface (TF12)
	ed Below Dark Surface	- (A11)	Depleted Dar Redox Depre		/)		Otner (Expla	in in Remarks)
	Park Surface (A12)				/E12\ /I DD N		3Indicators o	of hydrophytic vegetation an
	Mucky Mineral (S1) (I	LKK IN,		ese Masses	(F12) (LRR N,			
	147, 148) Gleyed Matrix (S4)		•	uco (E13\ /MI	RA 136, 122	\		ydrology must be present, turbed or problematic.
	Redox (S5)	-			ls (F19) (MLR		unitess unsi	turbed of problematic.
	d Matrix (S6)	-) (MLRA 127,			
	a Matrix (30)	-	KCU I alclit i	iatchat (11 2) (INEKA 127,	147)		
Destablished to								
	.ayer (if observed):							
Type:								
Depth ((inches):					Hydr	ic Soil Present?	Yes No _X
Remarks:								
Hydric soils	were not observed in	n this location.	Iron manganese mass	es were obs	erved in the 1	.6-20in soil lay	er.	

Project Site: Green Ridge Recyclin	ng and Disposal Facility,LL	.C City/County:	Cumberland		Sampling Dat	te: 8/16/202	.2
Applicant/Owner: Green Ridge	Recycling and Disposal Fac	cility, LLC	_	State: VA	Sampling Poi		
Investigator(s): KBJW - E. William	ıs, E. Beacham	Section, Townshi	ip, Range:	Tax Map #44-	-A- <u>1</u> 9		
Landform (hillslope, terrace, etc.):	hillslope	Local relief (conc	cave, convex, non	ne): Conca	ave	Slope (%	6): 5-10
Subregion (LRR or MLRA): MLR	RA 136, LRR P Lat:	37.340178	Long: <u>-78.07</u>	74048		Datum: NA <u>D8</u>	33
Soil Map Unit Name: 2C-Appling-F					NWI classification	on: UPL	
Are climatic / hydrologic conditions		•	No		If no, explain i		
Are Vegetation, Soil, or	· Hydrology	significantly disturbed?	Are "Normal (– Circumstances"	' present?	Yes X	No
Are Vegetation , Soil , or	Hydrology	naturally problematic?	(If needed, ex	kplain any ansv	vers in Remarks.	.)	
SUMMARY OF FINDINGS		· howing sampling _!	point locatio	ons, transec	cts, importa	nt feature	es, etc.
Hydrophytic Vegetation Present?	Yes X	No	la the Sa				
Hydric Soil Present?	Yes	No X		mpled Area a Wetland?	Yes	No>	<u> </u>
Wetland Hydrology Present?	Yes	No X	***************************************	I Welland.	-		_
Remarks: This data point represents							
According to the US Army Corps of E	Engineers Antecedent Preci	pitation tool the site is e	experiencinig nor	mal precipitati	on conditions.		
HYDROLOGY Wetland Hydrology Indicators:					·· · ·- /inimu	f true roo	• - 40
	is required; check all that :	- and A		•	dicators (minimu Soil Cracks (B6)		<u>auired)</u>
Primary Indicators (minimum of one	•						· /D0\
Surface Water (A1) High Water Table (A2)	True Aquatic Plant Hydrogen Sulfide (, ,			y Vegetated Con Je Patterns (B10)		(B8)
Saturation (A3)		Odor (C1) neres along Living Roots (<i>(C</i> 7)		je Patterns (B10) rim Lines (B16))	
Water Marks (B1)	Presence of Reduce		(Cs)		rım Lines (B16) Ison Water Table	- (C)	
Sediment Deposits (B2)		tion in Tilled Soils (C6)			ison water Table 1 Borrows	e (C2)	
Drift Deposits (B3)	Thin Muck Surface	` '			i Borrows ion Visible on Ae	: Imagery	(CO)
Algal Mat or Crust (B4)	Other (Explain in R				ion Visible on Ae I or Stressed Plai	,	(C9)
Iron Deposits (B5)	——————————————————————————————————————	Remarks)					
Inundation Visible on Aerial Im	220ru (R7)				rphic Position (D)2)	
<u> </u>	agery (b/)				v Aquitard (D3)	(/D /\)	
Water-Stained Leaves (B9) Aquatic Fauna (B13)					pographic Relief utral Test (D5)	Ť (D4)	
Aquatic Fauna (525)				FACTION	עניטן ופאן Utial ופטן)		
Field Observations:							
Surface water Present? Yes		oth (inches)	_				
Water Table Present? Yes		oth (inches)	_				
Saturation Present? Yes	No X Dep	oth (inches)	Wetland	Hydrology Pre	esent?	Yes	No _X
(includes capillary fringe)							
Describe Recorded Data (stream gau	ige, monitoring well, aerial	photos, previous inspect	tions), if available	e:			
Remarks:							
One secondary wetland hydrology in	ndicator was observed in th	ne vicinity					
One Secondary wedand hydrology in	IUICator was observed in the	e vicinity.					

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-EW4.3U Dominance Test worksheet: **Absolute** Dominant Indicator Tree Stratum (Plot size: 30ft radius) % Cover Species? Status 1. Pinus taeda 10 FAC Number of Dominant Species 2. Liriodendron tulipifera 5 FACU That Are OBL, FACW, or FAC: (A) 3. Acer rubrum FAC 4. Ulmus americana 5 **FACW** Total Number of Dominant 5. Prunus serotina FACU Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B) = Total Cover Prevalence Index worksheet: 50% of total cov€ 15 20% of total cover: Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 30ft radius) X1 =0 OBL species 1. Carpinus caroliniana X2 =10 FAC FACW species Acer rubrum FAC 85 X3 =255 FAC species FAC 60 15 X 4 = 3. Nyssa sylvatica **FACU** species X5 =0 **UPL** species 105 (A) 325 Column Totals: Prevalence Index = B/A= 3.10 6. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 55 = Total Cover X 2 - Dominance Test is >50% 20% of total cover: 50% of total cov€ 27.5 3 - Prevalence Index is ≤ 3.00 Problematic Hydrophytic Vegetation (Explain) Herb Stratum (Plot size: 30ft radius) ¹Indicators of hydric soil and wetland hydrology must 1. Smilax rotundifolia FAC be present, unless disturbed or problematic. 2. Polystichum acrostichoides FACU **Definitions of Four Vegetation Strata:** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless 8 of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. 11 12 20 = Total Cover 50% of total cover: 10 20% of total cover: Woody Vine Stratum (Plot size: 30ft radius) Hydrophytic Vegetation Present? = Total Cover Yes X No 20% of total cover: 50% of total cov€ Remarks: (If observed, list morphological adaptations below). Hydrophytic vegetation was observed to be dominant in the vicinity.

Soll Sampling Point <u>DP-EW4.3U</u>

Depth	Matrix			Redox Features			
(inches)	Color (moist)	%	Color (moist)	% Type ¹	Loc ²	Texture	Remarks
-2	10YR 3/2	100				SL	no redox observed
9	10YR 4/3	100				SL	no redox observed
21	10YR 4/4	100				SL	no redox observed
				_			no redux observed
						-	
						7.	
			d Matrix, MS=Masked Saness otherwise noted.)	d Grains.			PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol		ie to att EKKS, unit	Dark Surface (S7)				.10) (MLRA 147)
_	pipedon (A2)			rface (S8) (MLRA 14)	7 148)		e Redox (A16)
_	istic (A3)	-		59) (MLRA 147, 148)		(MLRA 147, 1	• •
_	en Sulfide (A4)	-	Loamy Gleyed Matr			-	odplain Soils (F19)
	ed Layers (A5)		Depleted Matrix (F3			(MLRA 136,	
_	uck (A10) (LRR N)		Redox Dark Surface	•		 '	Dark Surface (TF12)
	ed Below Dark Surfac	 re (A11)	Depleted Dark Surface	• •			n in Remarks)
_	ark Surface (A12)		Redox Depressions			Outer (Explai	ii iii Nciiiaik <i>s)</i>
_	Aucky Mineral (S1) (I		Iron-Manganese Ma			³ Indicators of	hydrophytic vegetation an
_	.47, 148)		MLRA 136)	13363 (1 12) (ERR 14)			drology must be present,
	Gleyed Matrix (S4)		Umbric Surface (F1)	3) (MI RA 136 122)		,	urbed or problematic.
_ ′	Redox (S5)			in Soils (F19) (MLRA	148)	diffess dist	arbed of problematic.
_	d Matrix (S6)			l (TF2) (MLRA 127, 1			
atulativa I :	ayer (if observed):						
estrictive L	., (0000						
Type:	ayo. (oosa. oay.						
					Hydr	ic Soil Present?	Yes No X
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Type: Depth (i emarks:	inches):	n this location.			Hydr	ic Soil Present?	Yes No X



Exhibit 12

Representative Site Photographs

Exhibit 12: Representative Site Photographs



DP-4.3-01U Soils (UPL)



DP-4.3-01U Surrounding Area Looking Downslope



DP-4.3-01U Surrounding Area Looking Upslope

Project Number: 2017-890 Date: 12-08-2022



Project Name: Green Ridge Recycling and Disposal Location: Cumberland, VA



DP-4.3-02U Soils (UPL)



DP-4.3-02U Surrounding Area Looking Downslope



DP-4.3-02U Surrounding Area Looking Upslope

Project Number: 2017-890 Date: 12-08-2022





DP-4.3-03U Soils (UPL)



DP-4.3-03U Surrounding Area Looking Downslope



DP-4.3-03U Surrounding Area Looking Upslope

Project Number: 2017-890 Date: 12-08-2022





DP-4.3-04U Soils (UPL)



DP-4.3-04U Surrounding Area Looking Downslope



DP-4.3-04U Surrounding Area Looking Upslope



Project Name: Green Ridge Recycling and Disposal Location: Cumberland, VA



DP-4.3-05U Soils (UPL)



DP-4.3-05U Surrounding Area Looking Downslope



DP-4.3-05U Surrounding Area Looking Upslope



Project Name: Green Ridge Recycling and Disposal Location: Cumberland, VA



DP-4.3-06U Soils (UPL)



DP-4.3-06U Surrounding Area Looking Downslope



DP-4.3-06U Surrounding Area Looking Upslope



Project Name: Green Ridge Recycling and Disposal Location: Cumberland, VA



DP-4.3-07U Soils (UPL)



DP-4.3-07U Surrounding Area Looking Downslope



DP-4.3-07U Surrounding Area Looking Upslope

Project Number: 2017-890 Date: 12-08-2022





DP-4.3-08U Soils (UPL)



DP-4.3-08U Surrounding Area Looking Downslope



DP-4.3-09U Surrounding Area Looking Upslope

Project Number: 2017-890 Date: 12-08-2022





DP-4.3-09U Soils (UPL)



DP-4.3-09U Surrounding Area Looking Downslope



DP-4.3-09U Surrounding Area Looking Upslope

Project Number: 2017-890 Date: 12-08-2022





DP-4.3-10U Soils (UPL)



DP-4.3-10U Surrounding Area Looking Downslope



DP-4.3-10U Surrounding Area Looking Upslope



Project Name: Green Ridge Recycling and Disposal Location: Cumberland, VA



DP-4.3-11U Soils (UPL)



DP-4.3-11U Surrounding Area Looking Downslope



DP-4.3-11U Surrounding Area Looking Upslope

Project Number: 2017-890 Date: 12-08-2022





DP-4.3-12U Soils (UPL)



DP-4.3-12U Surrounding Area Looking Downslope



DP-4.3-12U Surrounding Area Looking Upslope

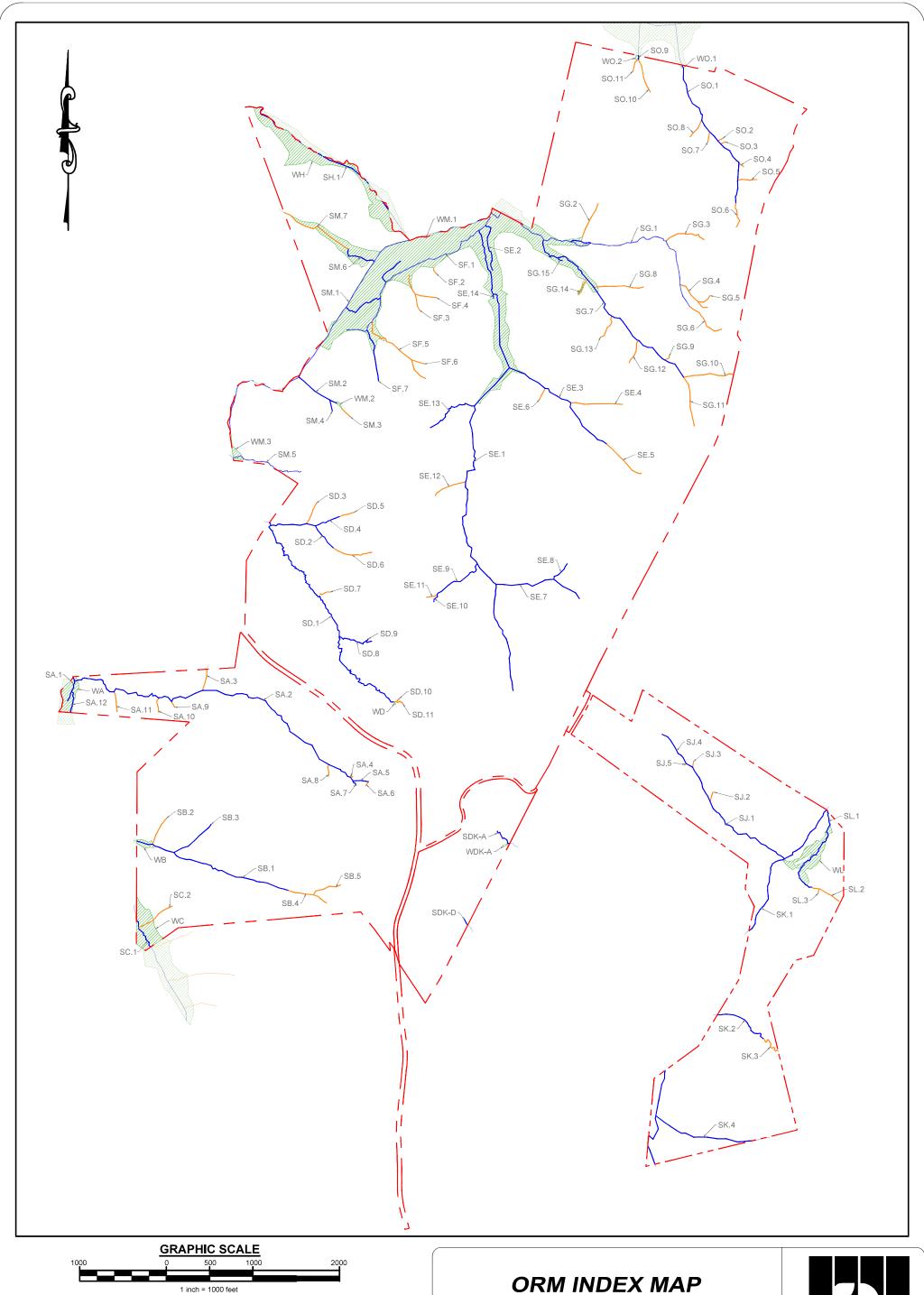
Project Number: 2017-890 Date: 12-08-2022

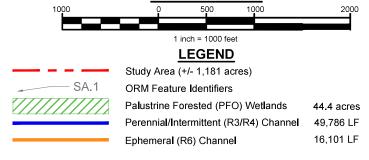




Enclosure 7

ORM Index Map





ORM INDEX MAP CUMBERLAND COUNTY, VIRGINIA HAMILTON DISTRICT

PROJECT:	DATE:	REVISED	SCALE:
2017-890	February 27, 2023		1"=1000'

