April 15, 2022

Mr. Timmy Jennette Division of Water Resources Nashville Environmental Field Office 711 R. S. Gass Blvd. Nashville, TN 37216

Re: Request for Hydrologic Determination 2500 Buena Vista Pike Site Nashville, Davidson County, Tennessee

Dear Mr. Jennette:

I currently own property rights by purchase and sale agreement for the above-identified property located at 2500 Buena Vista Pike, Nashville, Davidson County, Tennessee. The property is located at the following coordinates N36.197384; W86.810551. The Subject Property is being considered for development. I grant permission for the Division of Water Resources personnel's access to the property for the purposes of completing a hydrologic determination.

My information is as follows:

Name:	Ryan McLaury, General Partner, Rhythm Development GP
Address:	96 Shields Ln, Madison TN 37115
Phone:	636-697-8716

Thank you for your time.

Sincerely,

Pm20



April 15, 2022

Mr. Ryan McLaury Rhythm Development LLC 500 Creative Way Madison, TN 37116

Dear Mr. McLaury:

Subject:	Hydrologic Determination
	2500 Buena Vista Pike Site
	Nashville, Davidson County, TN
	CEC Project 322-652

Civil & Environmental Consultants, Inc. (CEC) was contracted by Rhythm Development LLC to provide a Hydrologic Determination (HD) at the property located at 2500 Buena Vista Pike in Nashville, Davidson County, Tennessee. The site coordinates are N36.197384, W86.810551. CEC performed the site visit on April 4, 2022. The area of interest is depicted on the Nashville-West USGS 7.5 Minute Topographic Map (Figure 1) and is located in the Cumberland River-Browns Creek Watershed (HUC-12 – 051302020305).

The site is being evaluated for potential development. The site consists of a forested land. A Metro government wastewater services station is located along the western property boundary and residential homes are located along the eastern property boundary. The Cumberland River is located along the southern property boundary. A channelized conveyance is centrally located on the property boundary (Figure 2).

Hydrologic determinations at the proposed site included both a literature review and an on-site evaluation in accordance with the Tennessee Department of Environment and Conservation Division of Water Resource's "Hydrologic Determination Field Data Sheet" (see attached). Also included is a photographic summary depicting conditions observed during the site visit. Figure 3 depicts the location and direction of the photographs taken.

Prior to the site visit, a desktop review of the U.S. Fish and Wildlife Service National Wetland Inventory (NWI), the National Resources Conservation Service Web Soil Survey, and the Tennessee Department of Environment and Conservation GIS (TDEC-GIS) website was performed. As evident in Figure 1, there are no "blue line" features located within the proposed area of interest.

A review of the Tennessee Valley Authority (TVA) rain gauge data for J. Percy Priest Dam was obtained to determine if rain had fallen in the area within seven (7) days of the site visit. According to the website, total precipitation in the area from March 28, 2022 to April 3, 2022 was 1.09 inches

Mr. McLaury – Rhythm Development CEC Project 322-652 Page 2 April 15, 2022

(Table 2). A calculation of the 30-year average rainfall results in a sum value of 14, indicating normal weather conditions for the period prior in the greater Nashville area (Table 1, attached).

	Table 1									
	Calculation of Normal Weather Conditions									
		Lon	g-term raii records	nfall						
	Month	Minus One STD. Dev. (DRY)	Normal (Mean inches)	Plus One STD. Dev. (WET)	Actual Rainfall	Condition (dry, wet, normal)	Condition value	Month weight value	Product of previous two columns	
1 st prior month	March	2.84	4.51	6.18	3.8	NORMAL	2	x 3	6	
2 nd prior month	February	3.37	5.05	6.73	8.63	WET	3	x 2	6	
3 rd prior month	January	4.60	6.53	8.46	6.53	NORMAL	2	x 1	2	
								Sum =	14	
Note:]	[
If sum is:							Conditic	n value:		
6-9	then perio	d prior h	as been dr	ier than	normal			Dry =	1	
10-14	then perio	then period prior has been normal					Ν	lormal =	2	
15-18	then period prior has been wetter than normal			n			Wet =	3		
Conclusi	ons:	Period	orior has k	een nor	mal.					

Table 2. Rainfall Data – TVA Rain Gauge

Data	03/28	03/29	03/30	03/31	04/01	04/02	04/03
Date:	Tue	Wed	Thur	Fri	Sat	Sun	Mon
JPHT1 – J. Percy Priest Dam	0.00	0.00	1.08	0.01	0.00	0.00	0.00

WWC-1/EPH-1 is a wet weather conveyance/ephemeral stream located in a forested area and is approximately 274 feet in length bisects the central portion of the site (Figure 2). The channel

Mr. McLaury – Rhythm Development CEC Project 322-652 Page 3 April 15, 2022

exhibited a defined bed and bank, with some sinuosity. The substrate consisted primarily of soil with gravel and rocks. Some sorting and recent alluvial deposits were noted in the channel. Leaf litter in the channel was predominately present in areas. Fibrous roots and rooted plants were observed along the reach. No flow, fish or benthic macroinvertebrates were observed in the channel. Dominant vegetation along the channel is *Ligustrum sp*, *Celtis occidentalis*, and *Lonicera japonica*. This feature originates from a culvert located on the adjacent property to the west. The feature receives stormwater runoff form Elm Hill Pike. The feature scored a 16.75 on the Hydrologic Determination Form (attached).

WWC-2/EPH-2 is a wet weather conveyance/ephemeral stream located on the bluff at the southern end of the site near the Cumberland River and is approximately 237 feet in length (Figure 2). The channel exhibited a defined incised bed and bank and the lower reach exhibited some sinuosity. The upper reach of the channel was less incised. The substrate consisted primarily of soil with some gravel and rocks. Some substrate sorting and recent alluvial deposits were noted in the channel. Fibrous roots and rooted plants were observed along the reach. No flow, fish or benthic macroinvertebrates were observed in the channel. The feature scored a 12.25 on the Hydrologic Determination Form (attached).

PND-1 a man-made detention pond was observed in-line with the WWC-1/EPH-1. The feature was dry during the site visit and no hydric soils or hydric vegetation were observed. Dominate vegetation in the pond was common hackberry (*Celtis occidentalis*) and bush honeysuckle (*Diervilla sp.*) and privet (*Ligustrum sp.*).

Based on the geomorphological, hydrological, and biological characteristics, the features are classified as a wet weather conveyance/ephemeral streams.

CEC appreciates the opportunity to assist you with this project. If you have any questions or need any additional information, please feel free to contact us at (615) 333-7797.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

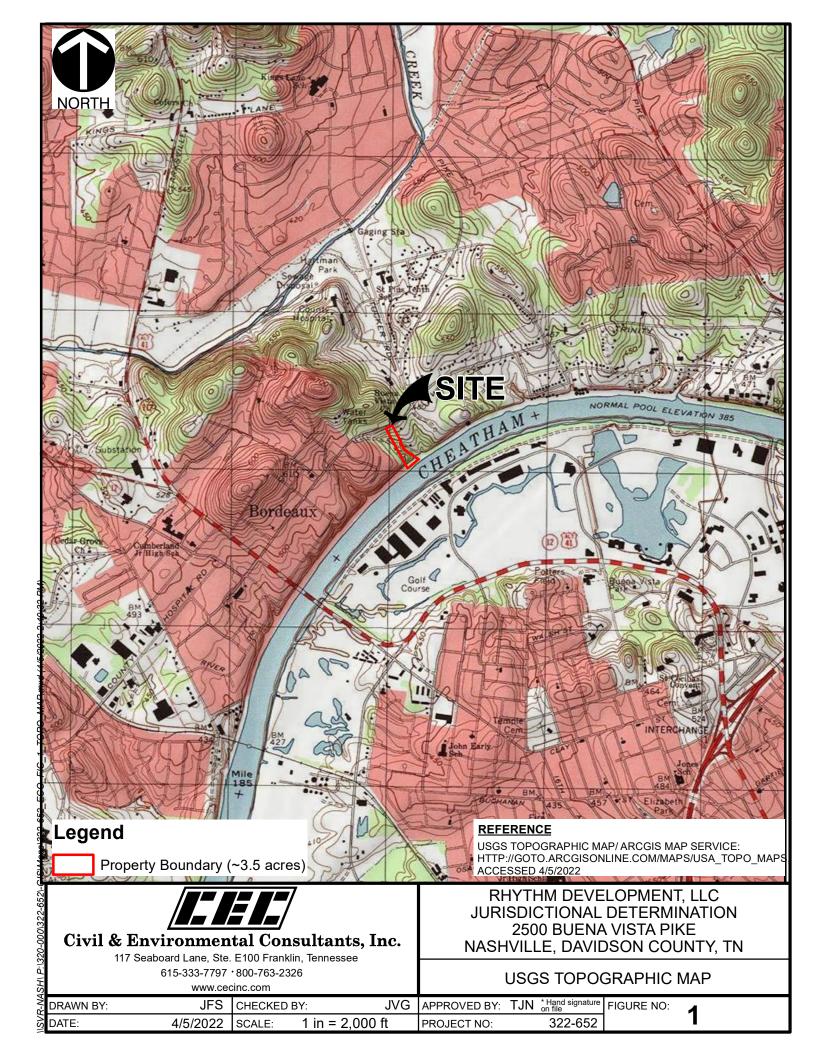
TOPLOG

Jose Garcia, QHP Project Manager

Attachments

T-N

Tim Nehus Principal



WWC/EPH-1 (~226 feet) Begin: 36.200252; -86.821709 End: 36.19997; -86.821029

36.200074; -86.82132

PND-1 (~0.08 acres)

WWC/EPH-2 (~237 feet) Begin: 36.199086; -86.820912 End: 36.199531; -86.820324

Legend

NORTH

Wet Weather Conveyance/Ephemeral Stream

Property Boundary (~3.5 acres)

Pond



Civil & Environmental Consultants, Inc.

117 Seaboard Lane, Ste. E100 Franklin, Tennessee 615-333-7797 *800-763-2326

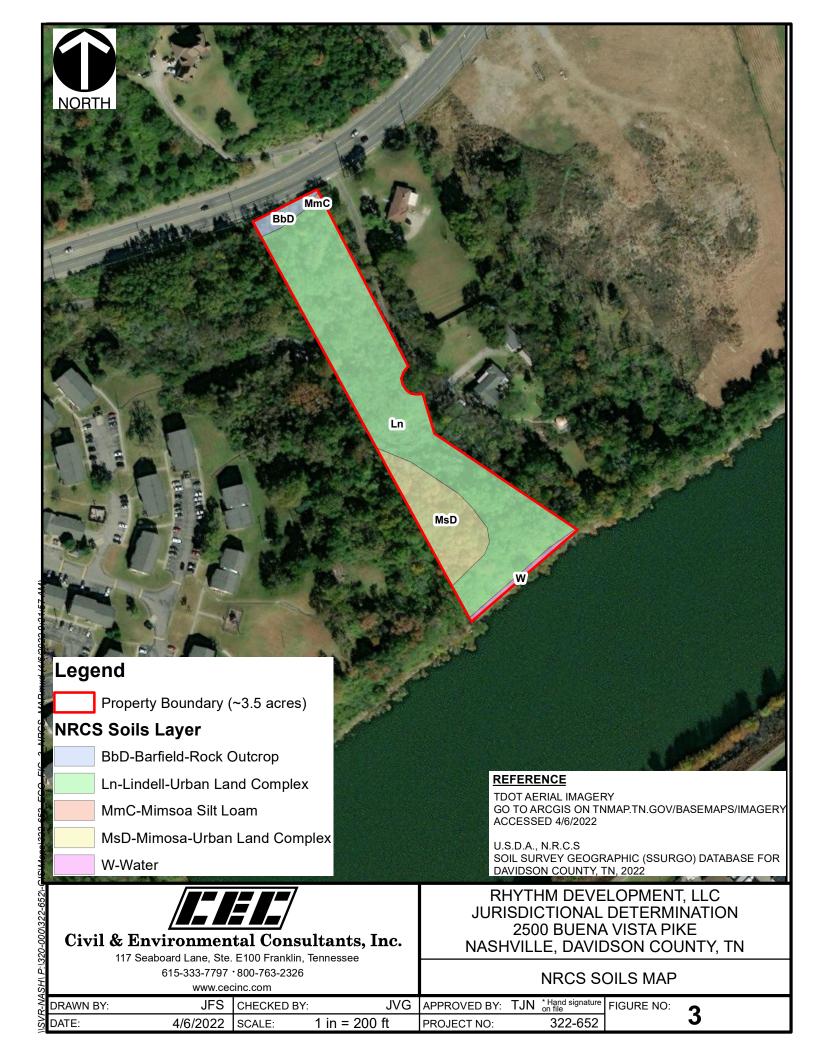
REFERENCE

TDOT AERIAL IMAGERY GO TO ARCGIS ON TNMAP.TN.GOV/BASEMAPS/IMAGERY ACCESSED 4/12/2022

RHYTHM DEVELOPMENT, LLC JURISDICTIONAL DETERMINATION 2500 BUENA VISTA PIKE NASHVILLE, DAVIDSON COUNTY, TN

HYDROLOGIC FEATURE LOCATION MAP

4S		www.cec	cinc.com					
R-NZ	DRAWN BY:	JFS	CHECKED BY:	JVG	APPROVED BY:	TJN * Hand signature on file	FIGURE NO:	
	DATE:	4/12/2022	SCALE:	1 in = 150 ft	PROJECT NO:	322-652		



Legend

NORTH

Property Boundary (~3.5 acres)

NWI Layer

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

Other

Riverine



Civil & Environmental Consultants, Inc.

117 Seaboard Lane, Ste. E100 Franklin, Tennessee 615-333-7797 *800-763-2326

REFERENCE

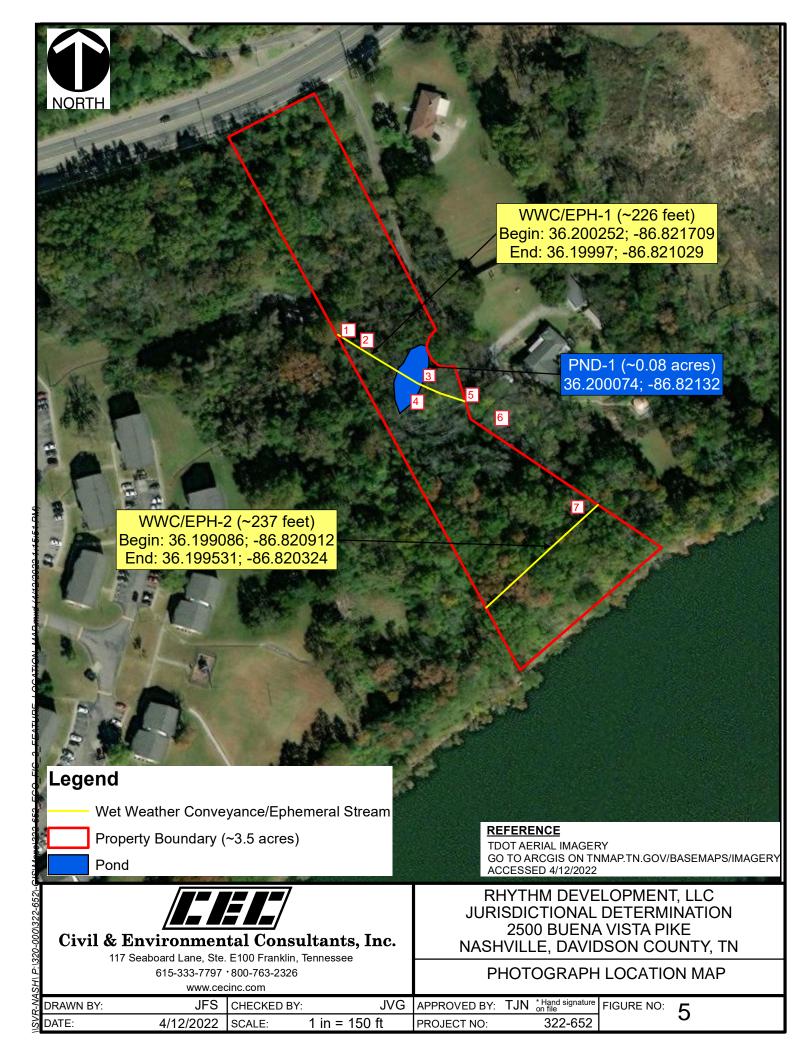
TDOT AERIAL IMAGERY GO TO ARCGIS ON TNMAP.TN.GOV/BASEMAPS/IMAGERY ACCESSED 4/6/2022

U.S. FISH & WILDLIFE SERVICE NATIONAL WETLANDS INVENTORY (NWI) MAP DAVIDSON COUNTY, TN 2022

RHYTHM DEVELOPMENT, LLC JURISDICTIONAL DETERMINATION 2500 BUENA VISTA PIKE NASHVILLE, DAVIDSON COUNTY, TN

NATIONAL WETLAND INVENTORY (NWI) MAP

SF		www.ceo	cinc.com				
R-NA	DRAWN BY:	JFS	CHECKED BY:	JVG	APPROVED BY:	TJN * Hand signature on file	FIGURE NO:
INSII	DATE:	4/6/2022	SCALE:	1 in = 500 ft	PROJECT NO:	322-652	4



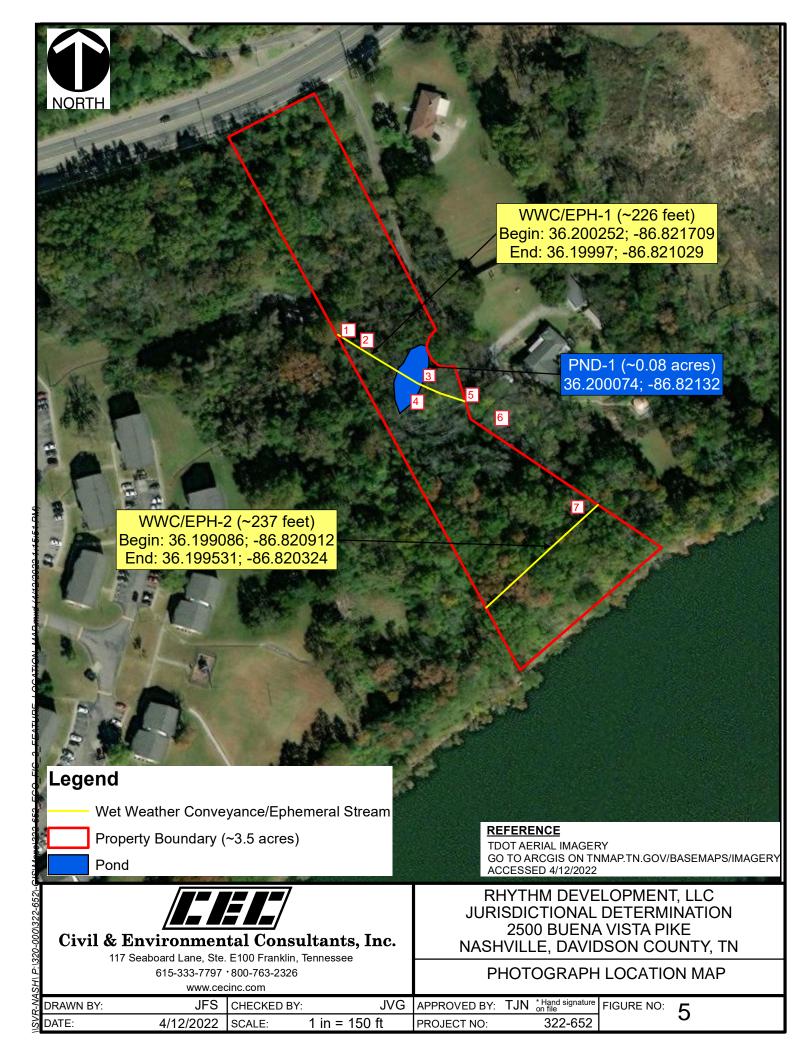




Photo 1: Up gradient view of WWC-1/EPH-1.



Photo 2: Down gradient view of WWC-1/EPH-1.





Photo 3: View of dry pond (PND-1).



Photo 4: Alternate view of dry pond (PND-1).





Photo 5: Down gradient view of WWC-1/EPH-1 below PND-1.



Photo 6: Up gradient view of WWC-1/EPH-1 below PND-1.





Photo 7: Up gradient view of WWC-2/ EPH-2.





Tennessee Department of Environment and Conservation - Division of Water Resources

312 Rosa L. Parks Ave. 11th Floor. Nashville, TN 37243

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Resources, Version 1.5 (Fillable Form)

Named Waterbody: NA		Date/Time: 4/4/22	
Assessors/Affiliation: J. Garcia, CEC, Inc.		Project ID :	
Site Name/Description: Buena Vista Site		WWC-1	
Site Location: Nashville, Davidson County, TN			
HUC (12 digit): 0513020305	Latitude: 36.200	366	
Previous Rainfall (7-days) : 1.09 inches	Longitude: -86.821793		
Precipitation this Season vs. Normal : Source of recent & seasonal precip. data : average TVA	rain gauge		
Watershed Size : ~ 15 acres	County: Davidson		
Soil Type(s) / Geology : Lindell Urban Land Complex	Source: USDA		
Surrounding Land Use : Residential, forested			
Degree of historical alteration to natural channel morphology & hvdrolog Slight	gy (select one & des	cribe fully in Notes) :	

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	\checkmark	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	✓	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	\checkmark	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	\checkmark	WWC
 Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase 	\checkmark	Stream
6. Presence of fish (except Gambusia)	\checkmark	Stream
7. Presence of naturally occurring ground water table connection	\checkmark	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	\checkmark	Stream
9. Evidence watercourse has been used as a supply of drinking water	\checkmark	Stream

NOTE: If any Primary Indicators 1-9 = "Yes", then no further investigation is necessary. However, assessors may choose to score secondary indicators as supporting evidence.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in TDEC-DWR Guidance For Making Hydrologic Determinations, Version 1.5

Overall Hydrologic Determination = WET WEATHER CONVEYANCE

Secondary Indicator Score (if applicable) = 16.75

Justification / Notes :

Surrounding area has been developed. The feature receives stormwater run off from Elm Hill Pike via a culvert.

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = ^{11.25}	Absent	Weak	Moderate	Strong	
1. Continuous bed and bank	0	1	2	3	2.5
2. Sinuous channel	0	1	2	3	1.5
3. In-channel structure: riffle-pool sequences	0	1	2	3	1.5
4. Sorting of soil textures or other substrate	0	1	2	3	1.5
5. Active/relic floodplain	0	0.5	1	1.5	0
6. Depositional bars or benches	0	1	2	3	1
7. Braided channel	0	1	2	3	0
8. Recent alluvial deposits	0	0.5	1	1.5	1
9. Natural levees	0	1	2	3	0
10. Headcuts	0	1	2	3	0.5
11. Grade controls	0	0.5	1	1.5	0.75
12. Natural valley or drainageway	0	0.5	1	1.5	1
13. At least second order channel on existing USGS or NRCS map	0	1	2	3	0

B. Hydrology (Subtotal = 2.50	Absent	Weak	Moderate	Strong		٦
D. Hydrology (Subiolai –	Absent	Wean	WIDUETALE	Strong		_
14. Subsurface flow/discharge into channel	0	1	2	3	0	
15. Water in channel and >48 hours since sig.	0	1	2	3	0	N/A
rain					Ũ	
16. Leaf litter in channel (January –	1.5	1	0.5	0	1	
September)					1	
17. Sediment on plants or on debris	0	0.5	1	1.5	0.5	
18. Organic debris lines or piles (wrack lines)	0	0.5	1	1.5	1	7
19. Hydric soils in channel bed or sides of	No :	= 0	Yes	= 1.5		
channel					0	

C. Biology (Subtotal = 3.00	Absent	Weak	Moderate	Strong	
20. Fibrous roots in channel bed ¹	3	2	1	0	1
21. Rooted plants in the thalweg ¹	3	2	1	0	2
22. Crayfish in stream (exclude in floodplain)	0	1	2	3	0
23. Bivalves/mussels	0	1	2	3	0
24. Amphibians	0	0.5	1	1.5	0
25. Macrobenthos (record type & abundance)	0	1	2	3	0
26. Filamentous algae; periphyton	0	1	2	3	0
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5	0
28. Wetland plants in channel bed ²	0	0.5	1	1.5	0
¹ Focus is on the presence of terrestrial plants. ² Focus is on the presence of aquatic or wetland plants.					ants.

rocus is on the presence of terrestilar

Total Points = 16.75

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes :



Tennessee Department of Environment and Conservation - Division of Water Resources

312 Rosa L. Parks Ave. 11th Floor. Nashville, TN 37243

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Resources, Version 1.5 (Fillable Form)

Named Waterbody: NA		Date/Time: 4/4/22	
Assessors/Affiliation: J. Garcia, CEC, Inc.		Project ID :	
Site Name/Description: Buena Vista site		WWC-2	
Site Location: Nashville, Davidson County, TN			
HUC (12 digit): 051302020305	Latitude: 36.199	086	
Previous Rainfall (7-days) : 1.09 inches	Longitude: -86.820912		
Precipitation this Season vs. Normal : Source of recent & seasonal precip. data : average TVA	rain gauge		
Watershed Size : ~ 5acres	County: Davidson		
Soil Type(s) / Geology : Lindell Urban Land Complex	Source: USDA		
Surrounding Land Use : Residential, forested			
Degree of historical alteration to natural channel morphology & hydrolog Absent	gy (select one & des	cribe fully in Notes) :	

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	\checkmark	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	✓	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	\checkmark	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	\checkmark	WWC
 Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase 	\checkmark	Stream
6. Presence of fish (except Gambusia)	\checkmark	Stream
7. Presence of naturally occurring ground water table connection	\checkmark	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	\checkmark	Stream
9. Evidence watercourse has been used as a supply of drinking water	\checkmark	Stream

NOTE: If any Primary Indicators 1-9 = "Yes", then no further investigation is necessary. However, assessors may choose to score secondary indicators as supporting evidence.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in TDEC-DWR Guidance For Making Hydrologic Determinations, Version 1.5

Overall Hydrologic Determination = WET WEATHER CONVEYANCE

Secondary Indicator Score (if applicable) = 12.25

Justification / Notes :

Surrounding area has been developed.

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = 6.75	Absent	Weak	Moderate	Strong	
1. Continuous bed and bank	0	1	2	3	1.5
2. Sinuous channel	0	1	2	3	0.5
3. In-channel structure: riffle-pool sequences	0	1	2	3	1
4. Sorting of soil textures or other substrate	0	1	2	3	0.5
5. Active/relic floodplain	0	0.5	1	1.5	0
6. Depositional bars or benches	0	1	2	3	0
7. Braided channel	0	1	2	3	0
8. Recent alluvial deposits	0	0.5	1	1.5	0.5
9. Natural levees	0	1	2	3	0
10. Headcuts	0	1	2	3	1.5
11. Grade controls	0	0.5	1	1.5	1
12. Natural valley or drainageway	0	0.5	1	1.5	0.25
13. At least second order channel on existing USGS or NRCS map	0	1	2	3	0

2 50						-
B. Hydrology (Subtotal = 2.50	Absent	Weak	Moderate	Strong		
14. Subsurface flow/discharge into channel	0	1	2	3	0	
15. Water in channel and >48 hours since sig.	0	1	2	3	0	N/A
rain					0	IN/A
16. Leaf litter in channel (January –	1.5	1	0.5	0	1.25	
September)					1.20	
17. Sediment on plants or on debris	0	0.5	1	1.5	0.5	
18. Organic debris lines or piles (wrack lines)	0	0.5	1	1.5	0.75	
19. Hydric soils in channel bed or sides of	No = 0		Yes = 1.5			
channel					0	

C. Biology (Subtotal = 3.00	Absent	Weak	Moderate	Strong	
20. Fibrous roots in channel bed ¹	3	2	1	0	0.5
21. Rooted plants in the thalweg ¹	3	2	1	0	2.5
22. Crayfish in stream (exclude in floodplain)	0	1	2	3	0
23. Bivalves/mussels	0	1	2	3	0
24. Amphibians	0	0.5	1	1.5	0
25. Macrobenthos (record type & abundance)	0	1	2	3	0
26. Filamentous algae; periphyton	0	1	2	3	0
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5	0
28. Wetland plants in channel bed ²	0	0.5	1	1.5	0
¹ Focus is on the presence of terrestrial plants.	² Focus is on the presence of aquatic or wetland plants.				

Total Points = $\frac{12.25}{2}$

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes :