



April 12, 2022

Division of Water Resources
Tennessee Department of Environment and Conservation
711 R.S. Gass Boulevard
Nashville, TN 37216

RE: Hydrological Determination (HD) Report – Sanford Hwy 96 Site, Highway 96, Triune, Williamson County

The attached hydrologic determination (HD) report (Attachment 1) is submitted **to qualify for treatment provided for in §69-3-108(r)**. A determination was conducted of one channel draining off-site to an unnamed tributary to identify water resource impacts of developing the site. The attached HD report identified the following water resource features:

Wet Weather Conveyance 1 (WWC-1) – Start: 35.852099, -86.651099; End: 35.851482, -86.651533

The property owner of the site assessed is Greg Sanford. A signed property access permission letter is attached to this report.

Please contact me via my cell phone or by email if you have any questions. All submitted information is true, accurate and complete.

Sincerely,

Anthony A. Grow, PG
TNQHP 1128-TN15
Cell (931) 273-4681

Attachments

1. Hydrologic Determination Report – Sanford Hwy 96 Site
2. Property Access Permission Letter

Hydrologic Determination Report

Sanford Hwy 96 Site
Triune, Tennessee

Prepared by
Anthony A. Grow, PG
TNQHP 1128-TN15

January 22, 2022

Contents

Topographic Vicinity Map
Hydrologic Determined Features Map
HD Field Data Sheets and Photographs
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Normal Weather Conditions Calculation

TOPOGRAPHIC VICINITY MAP



TOPOGRAPHIC MAP
SANFORD PROPERTY
WILLIAMSON COUNTY, TENNESSEE
JANUARY 22, 2022



LEGEND

Property Boundary



HYDROLOGIC DETERMINATION FEATURES MAP



HYDROLOGIC DETERMINATION MAP
SANFORD SITE
WILLIAMSON COUNTY, TENNESSEE
JANUARY 22, 2022



LEGEND

- Stream
- Wet Weather Conveyance
- Jurisdictional Pond
- Spring/Seep



HD PHOTO LOCATION MAP

SANFORD SITE

WILLIAMSON COUNTY, TENNESSEE

JANUARY 22, 2022



LEGEND

- Stream
- Wet Weather Conveyance
- Photo Numbers
- Spring/Seep



HYDROLOGIC DETERMINATION
FIELD DATA SHEETS & PHOTOGRAPHS

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: <i>WILLIAMSON</i>	Named Waterbody: <i>UNNAMED</i>	Date/Time: <i>1-22-22</i>
Assessors/Affiliation: <i>ANTHONY A. GROW / 1128-TNIS TNQHP</i>		Project ID :
Site Name/Description: <i>SANFORD HWY 96</i>		
Site Location: <i>HWY 96 - 0.5 MILES EAST OF TRIUNE</i>		
USGS quad: <i>TRIUNE</i>	HUC (12 digit):	Lat/Long: <i>START: 35.852099, -86.651099</i> <i>END: 35.851482, -86.651533</i>
Previous Rainfall (7-days) :		
Precipitation this Season vs. Normal : very wet wet <u>average</u> dry drought unknown		
Source of recent & seasonal precip data : <i>Cocorahs No. TN-WM- TN-WL-90</i>		
Watershed Size : <i>3 ACRES</i>	Photos: <u>Y</u> or N (circle) Number : <i>1-2, 3-4</i>	
Soil Type(s) / Geology : <i>GULLIED LAND - ROCKLAND</i>		Source: <i>USDA</i>
Surrounding Land Use : <i>AGRICULTURAL</i>		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes) : Severe Moderate <u>Slight</u> Absent		

Primary Field Indicators Observed

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

NOTE : If any Primary Indicators 1-9 = "Yes", then STOP; absent directly contradictory evidence, determination is complete.

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-WPC Guidance For Making Hydrologic Determinations, Version 1.4*

Overall Hydrologic Determination = *WET WEATHER CONVEYANCE (WWC-1)*

Secondary Indicator Score (if applicable) = *13.5*

Justification / Notes :

CHANNEL DRY DESPITE SIGNIFICANT RAIN.



PHOTO #1: WWC-1 (Wet Weather Conveyance)
Date: 1-22-22
Lon/Lat: 35.851997, -86.651181
View upstream



PHOTO #2: WWC-1 (Wet Weather Conveyance)
Date: 1-22-22
Lon/Lat: 35.851997, -86.651181
View downstream



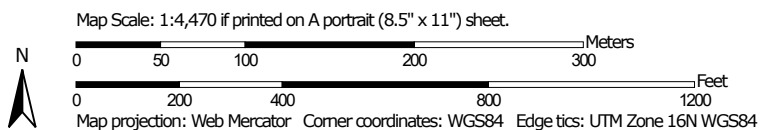
PHOTO #3: WWC-1 (Wet Weather Conveyance)
Date: 1-22-22
Lon/Lat: 35.851588, -86.651477
View upstream



PHOTO #4: WWC-1 (Wet Weather Conveyance)
Date: 1-22-22
Lon/Lat: 35.851588, -86.651477
View downstream

USDA SOILS MAP DATA

Soil Map—Williamson County, Tennessee
(Sanford Hwy 96)



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

4/12/2022
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Williamson County, Tennessee
Survey Area Data: Version 16, Sep 10, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 14, 2020—Mar 1, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ArB	Armour silt loam, 2 to 5 percent slopes	2.3	14.0%
ArB2	Armour silt loam, 2 to 5 percent slopes, eroded	1.6	9.5%
ArC2	Armour silt loam, 5 to 12 percent slopes, eroded	1.5	8.8%
BrC2	Braxton cherty silt loam, 5 to 12 percent slopes, eroded	0.1	0.4%
CfD2	Culleoka flaggy loam, 12 to 20 percent slopes, eroded	1.6	9.9%
DnB	Donerail silt loam, 2 to 5 percent slopes	0.7	4.0%
DnC2	Donerail silt loam, 5 to 12 percent slopes, eroded	0.6	3.4%
Gu	Gullied land	2.3	13.8%
Lp	Lindell silt loam, 0 to 2 percent slopes, occasionally flooded	0.8	5.0%
MoD	Ashwood-Mimosa-Rock outcrop complex, 5 to 15 percent slopes	0.1	0.3%
Rc	Rockland	1.4	8.4%
StB2	Stiversville silt loam, 2 to 5 percent slopes	3.0	18.3%
StC2	Stiversville silt loam, 5 to 12 percent slopes, eroded	0.7	4.2%
Totals for Area of Interest		16.6	100.0%

NORMAL WEATHER CONDITIONS CALCULATION

Table 1. Calculation of Weather Conditions - Sanford Hwy 96 Site

	Month	Long-term rainfall records			Actual Rainfall	Condition (dry, wet, normal)	Condition value	Month weight value	Product of previous two columns
		Minus One Std. Dev. (DRY)	Normal (Mean inches)	Plus One Std. Dev. (WET)					
1 st prior month*	Dec 2021	2.44	5.42	8.40	7.65	NORMAL	2	x 3	6
2 nd prior month*	Nov 2021	2.75	4.95	7.15	2.00	DRY	1	x 2	2
3 rd prior month*	Oct 2021	1.39	3.27	5.15	3.96	NORMAL	2	x 1	2
								Sum =	10

Note:

If sum is:	
6-9	then prior period has been drier than normal
10-14	then prior period has been normal
15-18	Then prior period has been wetter than normal

Condition value:	
Dry =	1
Normal =	2
Wet =	3

Conclusions: Normal weather conditions.



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Station Report Summary

Station 1 : Example: CO-LR-273

Station 2 :

Station 3 :

Start Date: **End Date:**

Stations:

TN-WL-90
Nolensville 2.4 SW
Lat: 35.9263
Lon: -86.681607

* indicates Multi-Day Accumulation Report

Station **TN-WL-90**

Date	Precip in.
01/15/2022	0.00
01/16/2022	1.05
01/17/2022	0.82
01/18/2022	0.00
01/19/2022	T
01/20/2022	1.45
01/21/2022	0.00
Totals :	3.32 in.

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 Lat: 35.9263
 Lon: -86.681607

* indicates Multi-Day Accumulation Report

Station TN-WL-90

Date	Precip in.
12/01/2021	0.00
12/02/2021	0.10
12/03/2021	0.00
12/04/2021	0.00
12/05/2021	0.02
12/06/2021	1.00
12/07/2021	0.11
12/08/2021	0.00
12/09/2021	0.00
12/10/2021	0.00
12/11/2021	1.61
12/12/2021	0.00
12/13/2021	0.00
12/14/2021	0.00
12/15/2021	0.00
12/16/2021	0.00
12/17/2021	1.10
12/18/2021	1.91
12/19/2021	0.02
12/20/2021	**
12/21/2021	**
12/22/2021	**
12/23/2021	**
12/24/2021	**
12/25/2021	**
12/26/2021	**
12/27/2021	**
12/28/2021	**
12/29/2021	**
12/30/2021	1.77 *
12/31/2021	0.01
Totals :	7.65 in.

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Stations:

TN-WL-90
 Nolensville 2.4 SW
 Lat: 35.9263
 Lon: -86.681607

* indicates Multi-Day Accumulation Report

Station **TN-WL-90**

Date	Precip in.
11/01/2021	0.00
11/02/2021	**
11/03/2021	0.02 *
11/04/2021	--
11/05/2021	--
11/06/2021	--
11/07/2021	--
11/08/2021	--
11/09/2021	--
11/10/2021	--
11/11/2021	--
11/12/2021	0.72
11/13/2021	0.01
11/14/2021	0.00
11/15/2021	0.00
11/16/2021	--
11/17/2021	--
11/18/2021	0.45
11/19/2021	--
11/20/2021	--
11/21/2021	--
11/22/2021	0.34
11/23/2021	--
11/24/2021	--
11/25/2021	--
11/26/2021	0.46
11/27/2021	--
11/28/2021	--
11/29/2021	--
11/30/2021	--
Totals :	2.00 in.

View Data : Station Report Summary US Units ▼

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 Nolensville 2.4 SW
 Lat: 35.9263
 Lon: -86.681607

* indicates Multi-Day Accumulation Report

Station TN-WL-90

Date	Precip in.
10/01/2021	0.00
10/02/2021	0.00
10/03/2021	**
10/04/2021	0.68 *
10/05/2021	--
10/06/2021	0.72
10/07/2021	0.49
10/08/2021	0.01
10/09/2021	**
10/10/2021	**
10/11/2021	**
10/12/2021	**
10/13/2021	**
10/14/2021	**
10/15/2021	**
10/16/2021	**
10/17/2021	**
10/18/2021	0.26 *
10/19/2021	**
10/20/2021	**
10/21/2021	**
10/22/2021	**
10/23/2021	0.19 *
10/24/2021	--
10/25/2021	0.81
10/26/2021	**
10/27/2021	**
10/28/2021	**
10/29/2021	0.57 *
10/30/2021	**
10/31/2021	0.23 *
Totals :	3.96 in.

Attachment 2. Property Access Permission Letter

Date: 5/7/22

Division of Water Resources
Tennessee Department of Environment and Conservation (TDEC)
711 R.S. Gass Boulevard
Nashville, TN 37216

RE: Permission to Access Property for Hydrological Determination for Sanford Hwy 96 Site, Hwy 96, Triune (Williamson County)

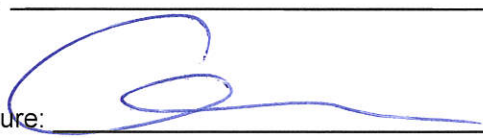
TDEC has my permission to access the property located at the Sanford Hwy 96 site located in Triune, Tennessee as referenced in the Hydrological Determination Report conducted by Mr. Anthony Grow.

Please contact me via my cell phone or email if you have any questions.

Sincerely,

Company Name (if applicable): Greg Sanford

Name: _____

Signature: 

Address: mailing = 2000 Mallory Ln Ste 130-202 Franklin TN 37067

Phone: 615-300-0753

Email: Free greg Sanford@gmail.com

Cc: Anthony A. Grow, PG, TNQHP