

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL DIVISION

REGION 3 ENVIRONMENTAL SECTION

6601 CENTENNIAL BOULEVARD NASHVILLE, TENNESSEE 37243-1402 (615) 335-8783

BUTCH ELEY
DEPUTY GOVERNOR &
COMMISSIONER OF TRANSPORTATION

BILL LEE GOVERNOR

MEMORANDUM

To: Brandon Chance

Headquarters Environmental Section

From: Evelyn DiOrio

Region 3 Environmental Section

Date: September 26, 2024

Subject: Environmental Boundaries for:

Smith/Putnam Counties, I-40 Truck Parking and Bridge Replacement over the Caney Fork River

PIN: 131552.01

An ecological evaluation of the subject project has been conducted in response to an initial evaluation request, with the following results:

STREAMS: There are two (2) streams and four (4) wet weather conveyances within the project area.

WETLANDS: There are no wetlands within the project area.

OTHER FEATURES: There is one (1) potential sinkhole and one (1) potential cave within the project area.

SPECIES:

- USFWS: Coordination with USFWS has been completed and it was determined there will be No Effect on federally listed species.
- TWRA: TWRA coordination was completed and a time of year restriction for in stream work will be required due to multiple state listed species.
- TDEC DNA: TDEC DNA coordination was completed and no effects on state listed plant species are anticipated as a result of this project. There are a number of state listed species in the vicinity, so if the scope of work changes further coordination may be warranted.

SPECIAL NOTES: There are no special notes for the subject project.

COMMITMENTS: The following are commitments and will be added in PPRM:

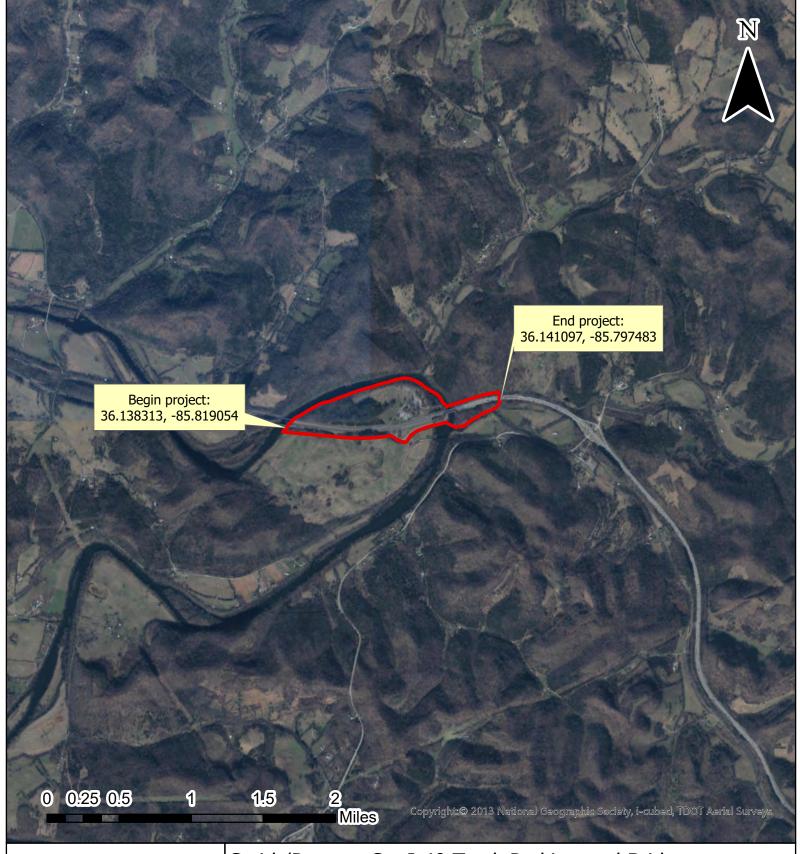
In accordance with the Programmatic Consultation for Addressing Cliff Swallows and Barn Swallows on Transportation Projects dated 9/16/2020, cliff swallow and barn swallow nests, eggs, or birds (young and adults) will not be disturbed between April 15 and July 31. From August 1 to April 14, nests may be removed or destroyed, and measures may be implemented to prevent future nest building at the site (e.g., closing off area using netting).

Due to the presence of multiple state listed fish species, in stream work is prohibited from April 1 to June 30.

Haul road(s) shall not extend beyond one-third the stream width to avoid obstructing flow.

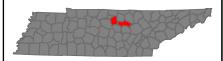
If the scope of work for this project is revised, please contact the regional biologist for additional review and agency coordination as soon as possible. Your assistance is appreciated. If you have any questions or comments, please contact me at (615) 837-5004 or evelyn.diorio@tn.gov.

xc: R3.EnvTechOffice TDOT.Env.Ecology Kimberly Welch

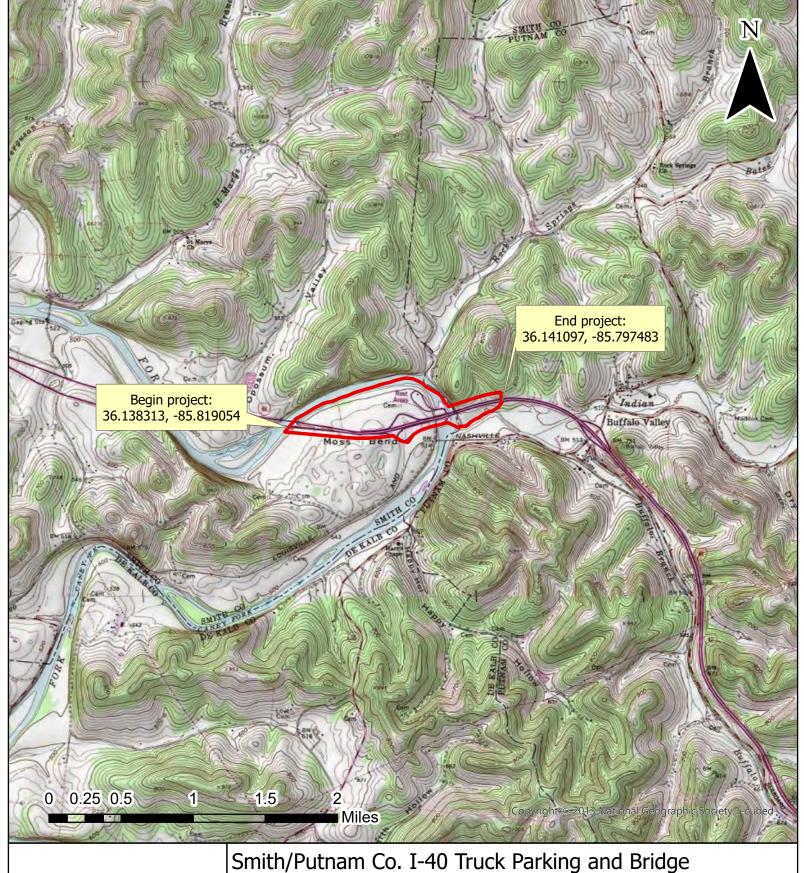


Smith/Putnam Co. I-40 Truck Parking and Bridge Replacement over the Caney Fork River

PIN: 131552.01



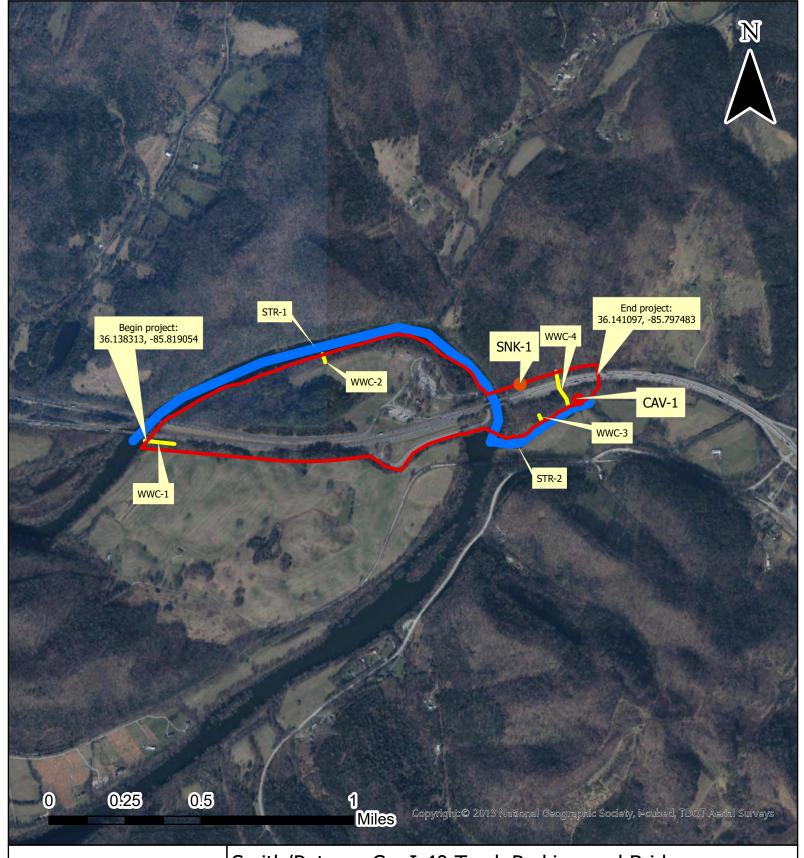


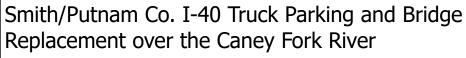


Smith/Putnam Co. 1-40 Truck Parking and Bridge Replacement over the Caney Fork River

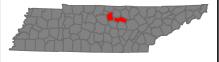
PIN: 131552.01



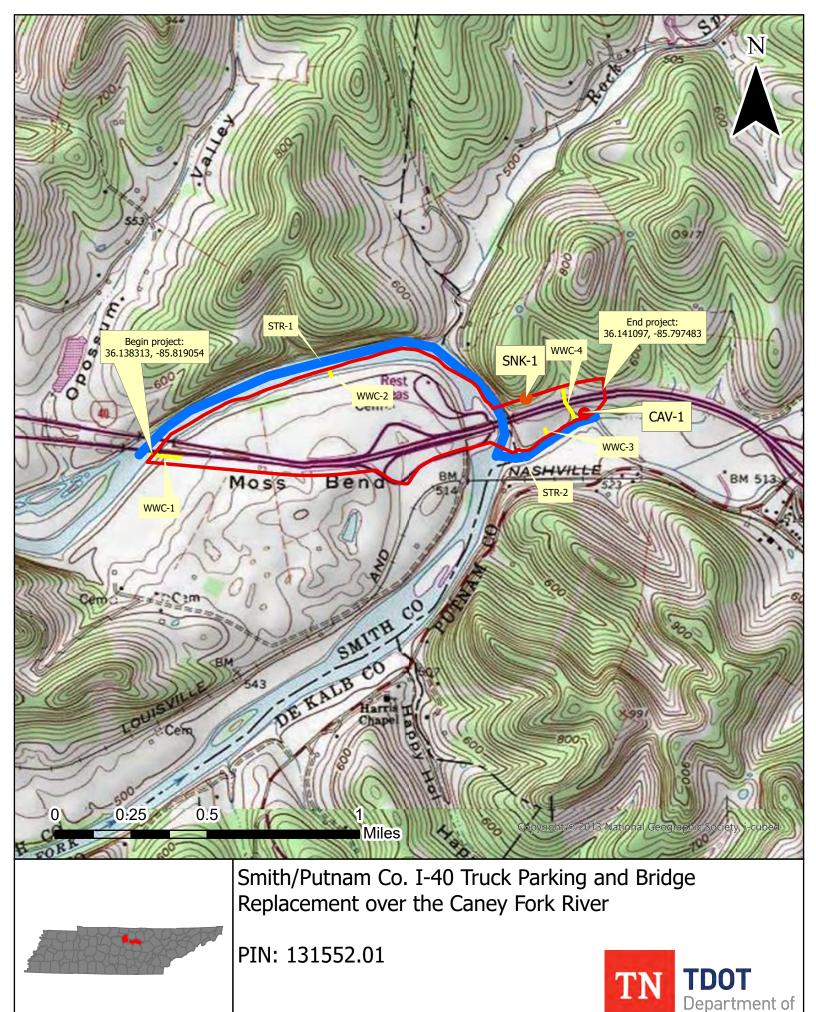




PIN: 131552.01







Transportation

Water Resource Table

PIN: 131552.01

Based on: ETSA

Date: 12/14/2023

Water Resources (Non-Wetland)								
Label	Туре	Latitude	Longitude	Receiving Waters	Quality			
STR-1	Perennial Stream	36.141983	-85.810155	Cumberland River	ETW/Impaired (303(d))			
STR-2	Perennial Stream	36.138627	-85.801272	Caney Fork River	Fully Supporting			
WWC-1	Wet Weather Conveyance	36.138589	-85.818901	Caney Fork River	Unassessed			
WWC-2	Wet Weather Conveyance	36.141784	-85.810451	Caney Fork River	Unassessed			
WWC-3	Wet Weather Conveyance	36.139532	-85.800223	Caney Fork River	Unassessed			
WWC-4	Wet Weather Conveyance	36.141392	-85.799378	Caney Fork River	Unassessed			

Project: Smith/Putnam	I-40 Truck Parking and Bridge R			Repla	eplacement over the Caney Fork River P				PIN:1	PIN:131552.01		
Biologist:	MLB/EWD Affiliation:			-T	-TDOT D					8/26/20	24	
1-Station : from plans												
2-Map label and name	WWC-1											
3-Latitude/Longitude	36.138589, -85	.8189	01									
4-Feature description:												
-channel identification	perennial stream			intermitte	nt stre	am	epheme	eral stream		wwo		✓
-HD score (if applicable)	17											
-OHWM indicators	bed & banks	✓	depos	sition		presence debris	of litter	scour		√	veg absent, be matted	nt, 🚺
	change in plant community	$\underline{\checkmark}$	terres	uction of strial veg		multiple o	ts _	sedim	ent sortir	ng	water staining	
	change in soil character	✓	leaf lit or ab	tter disturb sent)	natural lir impressed	_	shelvi	ng		wracking	
-channel bottom width	5.8 ft					-top of b	ank wid	th	32.5	5 ft		
-width and max depth at ordinary high water mark	W: 5.8 ft						D: 0	.4 ft				
-width at bankfull	17.7ft											
-bank height	LDB-8ft						RDB-	8 ft				
-riffle/pool complex or other specialized habitat present?	no											
-dominant riparian species:	LDB: sycamor	e, silv	er ma	ple								
(LDB /RDB)	RDB: sycamor	e, pav	v paw									
-particle size distribution %	Silt/Sand: 98		Grav	el: 0		Cobble: ()	Boulde	r: 2		Bedrock: 0	
5-photo numbers	1-4			-				•				
6-HUC -8 Code & Name	05130108 Caney	Fork R	River									
7-Assessed	yes			no		✓						
8-ETW	yes]	no		✓						
9-303 (d) List	yes no	-	1	siltation			habitat	:		othe	r:	
10-Notes								_				
TO-INOTES	Down grad 50 ft from 0 concrete lingrade cont since the 0 due to wee	Cane ned (rol is Cane	ey Fo chan s like y Fo	ork Riv inel is ily part irk Rive	er) is muc of the	s much h less d ne Cane vels fluc	more efined y Forl tuate	develo _l l. The a k durino	ped, u rea d g the d	p gra own (cours	idient of gradient of e of the da	the ay
Culvert size and Condition	n/a											

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.5

Named Waterbody:			Date/Time: 8/26/2024
Assessors/Affiliation: MLB/EWD -			Project ID :
Site Name/Description: I-40 Truck Parking ar	nd Bridge Replacement over the C	aney Fork River	PIN:131552.01
Site Location: WWC-1			
HUC (12 digit): 051301080904 Indian C	reek		Lat/Long:
Previous Rainfall (7-days) :	0.01 inches		36.138589, -85.818901
Precipitation this Season vs. Normal: abr Source of recent & seasonal precip data: NOAA past	•	age low abn	ormally dry unknown
Watershed Size : <2 sq miles		County: S	mith/Putnam
Soil Type(s) / Geology: Arrington silt loa	ım, 0 to 2 percent slopes, oc	casionally floc	oded Source: NRCS
Surrounding Land Use : Agricultural			
Degree of historical alteration to natural ch	nannel morphology & hydrology oderate Slight	•	escribe fully in Notes) : osent

Primary Field Indicators Observed

Primary Indicators	NO	YES
Hydrologic feature exists solely due to a process discharge	√	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	√	WWC
Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	√	wwc
Daily flow and precipitation records showing feature only flows in direct response to rainfall	√	wwc
 Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase 	√	Stream
6. Presence of fish (except Gambusia)	√	Stream
7. Presence of naturally occurring ground water table connection	√	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	✓	Stream
Evidence watercourse has been used as a supply of drinking water	✓	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 17

Justification / Notes:

Feature was scored at the most developed area which is likely part of the Caney Fork during the course of the day since the Caney Fork River levels fluctuate about 6 ft over a 24 hr period due to week-nightly generation from dam. Area up gradient of concrete lined channel much less developed and would score much lower.

1. demarcation between riparian corridor and bank less obvious, some parts of banks lacking clear demarcation between bed and bank due to scour at the foot of the grade controls

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = 6)		Absent	Weak	Moderate	Strong
Continuous bed and bank	2	0	1	2	3
2. Sinuous channel	1	0	1	2	3
3. In-channel structure: riffle-pool sequences	0	0	1	2	3
4. Sorting of soil textures or other substrate	0.5	0	1	2	3
5. Active/relic floodplain	0	0	0.5	1	1.5
6. Depositional bars or benches	0	0	1	2	3
7. Braided channel	0	0	1	2	3
Recent alluvial deposits	0	0	0.5	1	1.5
Natural levees	0	0	1	2	3
10. Headcuts	0	0	1	2	3
11. Grade controls	1.5	0	0.5	1	1.5
12. Natural valley or drainageway	1	0	0.5	1	1.5
13. At least second order channel on existing L NRCS map	JSGS or 0	No :	= 0	Yes	= 3

B. Hydrology (Subtotal = 5)	Absent	Weak	Moderate	Strong
14. Subsurface flow/discharge into channel 0	0	1	2	3
15. Water in channel and >48 hours since sig. rain 1	0	1	2	3
16. Leaf litter in channel (January – September) 0.5	1.5	1	0.5	0
17. Sediment on plants or on debris 1	0	0.5	1	1.5
18. Organic debris lines or piles (wrack lines) 1	0	0.5	1	1.5
19. Hydric soils in channel bed or sides of channel 1.5	No	= 0	Yes =	= 1.5

C. Biology (Subtotal = 6)		Absent	Weak	Moderate	Strong
20. Fibrous roots in channel bed 1	3	3	2	1	0
21. Rooted plants in the thalweg ¹	3	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	0	1	2	3
23. Bivalves/mussels	0	0	1	2	3
24. Amphibians	0	0	0.5	1	1.5
25. Macrobenthos (record type & abundance)	0	0	1	2	3
26. Filamentous algae; periphyton	0	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0	0.5	1	1.5
28.Wetland plants in channel bed ²	0	0	0.5	1	1.5

¹ Focus is on the presence of terrestrial plants.

Total Points = 17	•
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Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes:

² Focus is on the presence of aquatic or wetland plants.

Project: Smith/Putnam	I-40 Truck Parking and Bridge			Replacement over the Caney Fork River PIN:131552.					131552.01				
Biologist:	MLB/EWD Affiliation:			-T[-TDOT			Date:			8/24		
1-Station : from plans													
2-Map label and name	WWC-2												
3-Latitude/Longitude	36.141784, -85	5.8104	51										
4-Feature description:													
-channel identification	perennial stream	1		intermitte	nt strea	ım	ephem	eral stream		wwo			\checkmark
-HD score (if applicable)	18												
-OHWM indicators	bed & banks	\checkmark	depo	sition		presence debris	of litter _	scour			veg absent matted	, bent,	
	change in plant community	\checkmark	terre	ruction of strial veg	✓	multiple of flow even		sedin	nent sorti	ng	water stair	ning	
	change in soil character		leaf li or ab	itter disturb sent		natural lii impressed		shelv	ing		wracking		
-channel bottom width	2.5 ft					-top of	oank wid	th	8 ft				
-width and max depth at ordinary high water mark	W: 2.5 ft						D: 0	.3 ft					
-width at bankfull	2.5 ft												
-bank height	LDB - 5.5 f	t					RDB-	5.5 ft					
-riffle/pool complex or other specialized habitat present?	no												
-dominant riparian species:	LDB: boxelde	r, red r	maple	, sycamo	re								
(LDB /RDB)	RDB: paw pav	v, syca	amore	, black wa	alnut,	red maple	!						
-particle size distribution %	Silt/Sand: 10	0	Grav	vel: 0	Ī	Cobble:	0	Boulde	er: 0		Bedrock:	0	
5-photo numbers	5-7			•	•			•					
6-HUC -8 Code & Name	05130108 Cane	y Fork	River										
7-Assessed	yes			no		✓							
8-ETW	yes		1	no		✓							7.
9-303 (d) List	yes no	1	·	siltation			habitat	:		othe	r:		
10-Notes			_										
TO-INOTES	last ~20 ft likely part Fork River generation overnight channel.	of the leven	e Ca els flu n da	aney Fouctuate m. Wat	ork d abo er w	uring thout 6 ft of as likel	e cou over a y flow	rse of t 24 hr p ing bac	he da eriod k into	y sind due t Can	ce the C to week- ey Fork	aney -nigh after	/ itly
Culvert size and Condition	n/a												

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.5

Named Waterbody:	Date/Time: 6/18/24
Assessors/Affiliation: MLB/EWD -TDOT	Project ID :
Site Name/Description: I-40 Truck Parking and Bridge Replacement over the Caney Fo	ork River PIN:131552.07
Site Location: WWC-2	
HUC (12 digit): 051301080905 Center Hill Lake	Lat/Long:
Previous Rainfall (7-days): 0.05 in	36.141784, -85.810451
Precipitation this Season vs. Normal: abnormally wet elevated average low Source of recent & seasonal precipidata: NOAA past weather/AgACIS last 7 days	ow abnormally dry unknown
Watershed Size : <2 sq mi	County: Smith/Putnam
Soil Type(s) / Geology: Arrington silt loam, 0 to 2 percent slopes, occasiona	nally flooded Source: NRCS
Surrounding Land Use : Forested	
Degree of historical alteration to natural channel morphology & hydrology (circle of Moderate Slight	one & describe fully in Notes) : Absent

Primary Field Indicators Observed

Primary Indicators	NO	YES
Hydrologic feature exists solely due to a process discharge	✓	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	✓	WWC
Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	√	wwc
Daily flow and precipitation records showing feature only flows in direct response to rainfall	√	wwc
 Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase 	√	Stream
6. Presence of fish (except Gambusia)	✓	Stream
7. Presence of naturally occurring ground water table connection	✓	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	✓	Stream
Evidence watercourse has been used as a supply of drinking water	✓	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 18

Justification / Notes:

Form completed in last ~20 ft is much more developed and even had some flow but this area is likely part of the Caney Fork during the course of the day since the Caney Fork River levels fluctuate about 6 ft over a 24 hr period due to week-nightly generation from dam. Water was likely flowing back into Caney Fork after overnight generation brought water levels high enough to flow into this channel.

Up gradient portion much less developed (see photos).

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = 5.5)		Absent	Weak	Moderate	Strong
Continuous bed and bank	2.5	0	1	2	3
2. Sinuous channel	0	0	1	2	3
3. In-channel structure: riffle-pool sequences	0	0	1	2	3
4. Sorting of soil textures or other substrate	0	0	1	2	3
5. Active/relic floodplain	0	0	0.5	1	1.5
6. Depositional bars or benches	0	0	1	2	3
7. Braided channel	0	0	1	2	3
Recent alluvial deposits	0.5	0	0.5	1	1.5
9. Natural levees	0	0	1	2	3
10. Headcuts	1.5	0	1	2	3
11. Grade controls	0	0	0.5	1	1.5
12. Natural valley or drainageway	1	0	0.5	1	1.5
13. At least second order channel on existing L NRCS map	JSGS or 0	No:	= 0	Yes	= 3

B. Hydrology (Subtotal = 6.5)	Absent	Weak	Moderate	Strong
14. Subsurface flow/discharge into channel	0	1	2	3
15. Water in channel and >48 hours since sig. rain 2	0	1	2	3
16. Leaf litter in channel (January – September) 1	1.5	1	0.5	0
17. Sediment on plants or on debris	0	0.5	1	1.5
18. Organic debris lines or piles (wrack lines) 0	0	0.5	1	1.5
19. Hydric soils in channel bed or sides of channel 1.5	No	= 0	Yes =	: 1.5

C. Biology (Subtotal = 6)		Absent	Weak	Moderate	Strong
20. Fibrous roots in channel bed 1	2	3	2	1	0
21. Rooted plants in the thalweg 1	2	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	0	1	2	3
23. Bivalves/mussels	0	0	1	2	3
24. Amphibians	0	0	0.5	1	1.5
25. Macrobenthos (record type & abundance)	0	0	1	2	3
26. Filamentous algae; periphyton	0	0	1	2	3
27. Iron oxidizing bacteria/fungus	1.5	0	0.5	1	1.5
28.Wetland plants in channel bed ²	0.5	0	0.5	1	1.5

¹ Focus is on the presence of terrestrial plants.

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

Notes:

² Focus is on the presence of aquatic or wetland plants.

Project: Smith/Putnam	I-40 Tru	ck Parl	king and Bride	ge Repla	cement ove	r the Can	ey Fork R	iver	PIN:1	31552.01		
Biologist:	TNS/MLB/EWD	Affi	liation:	-TI	DOT		Date:			8/29	9/24	
1-Station : from plans												
2-Map label and name	STR-1 (Caney F	ork)										
3-Latitude/Longitude	36.141983, -85.	.81015	55									
4-Feature description:												
-channel identification	perennial stream		√ intermi	ttent strea	am	epheme	ral stream		wwc			
-HD score (if applicable)												
-OHWM indicators	bed & banks	\checkmark	deposition	\checkmark	presence debris	of litter 🗸	scour		✓	veg absent, matted	bent,	\checkmark
	change in plant community	\checkmark	destruction of terrestrial veg		multiple o flow event	ts 🔽	sedim	ent sorting	<u> </u>	water staini	ng	
	change in soil character	\checkmark	leaf litter distu or absent	ırb 🗸	natural lin impressed		shelvi	ng	✓	wracking		
-channel bottom width	228 ft				-top of b	ank widt	า	260	ft			
-width and max depth at ordinary high water mark	W: 234 ft					D: 1	l ft be	elow 1	ГОЕ	3		
-width at bankfull	246 ft											
-bank height	LDB- 12 ft					RDB -	12 ft					
-riffle/pool complex or other specialized habitat present?	yes					•						
-dominant riparian species:	LDB: paw paw	, syca	more									
(LDB /RDB)	RDB: box elder											
-particle size distribution %	Silt/Sand: 40		Gravel: 40)	Cobble: 2	20	Boulde	er: 0		Bedrock:	0	
5-photo numbers	8-12					-						
6-HUC -8 Code & Name	05130108 Caney	Fork Ri	iver									
7-Assessed	yes	√	no									
8-ETW	yes	✓	no									
9-303 (d) List	yes	√	siltatio	n		habitat:			othe	r:		
	no											
10-Notes	ETW due to	o a n	umber o	f fede	ral and s	state li	sted m	ussels				
		o a 11		1000	ar arra (Julio III	oto a m	400010				
	303d due to	o DC), flow re	gime,	and tem	peratu	ıre					
	swallows o	n all	bridges (over C	aney Fo	ork wit	hin pro	ject ar	ea			
Culvert size and												
Condition	n/a											
	""											

Project: Smith/Putnam	I-40 Tru	I-40 Truck Parking and Bridge Replacement over the Caney Fork River PIN:131552.01							131552.01			
Biologist:	TNS/EWD	TNS/EWD Affiliation: -TDOT					Date:			8/26/2024		
1-Station : from plans												
2-Map label and nam	e STR-2 (Indian C	reek)										
3-Latitude/Longitude	a 36.138627, -85	.801272										
4-Feature description	1:											
-channel identification	perennial stream	✓	intermitte	nt stream		ephemer	al stream		wwc			
-HD score (if applicable)												
-OHWM indicators	bed & banks	de	position		oresence d debris	of litter	scour		✓	veg absent, bent, matted	\checkmark	
	change in plant community	✓ te	estruction of rrestrial veg	1	multiple ob flow event	s V	sedime	nt sorting	√	water staining		
	change in soil character	1./	af litter disturb absent		natural lin npressed c		shelvin	g		wracking		
-channel bottom width	12 ft				-top of b	ank width	1	65 ft				
-width and max depth at ordinary high water mark	W: 23 ft					D: 4.	5 ft					
-width at bankfull	57 ft											
-bank height	LDB- 20 ft					RDB - 1	0 ft					
-riffle/pool complex or ot specialized habitat prese												
-dominant riparian specie	LDB: sycamor	e, box eld	der, silver m	naple								
(LDB /RDB)	RDB: silver ma	ple, syca	more									
-particle size distribution	% Silt/Sand: 40	G	ravel: 45	С	obble: 1	15	Boulder	: 0		Bedrock: 0		
5-photo numbers	13-14	•			<u> </u>		•	•		•		
6-HUC -8 Code & Name	05130108 Caney	Fork River	-									
7-Assessed	yes	√	no									
8-ETW	yes		no		√							
9-303 (d) List	yes		siltation			habitat:			othe	r:		
	no	√										
10-Notes	fich choom											
	fish observ	ea										
Culvent size and												
Culvert size and Condition												
Contaition	n/a											

Ecology Field Data Sheet: Other Resource Features

(Caves/Rock Houses; Potential Sinkholes; Specialized Habitats; Other)

Project: Smith/Putnam Co. I-40 Truck Parking and Bridge Replacement over the Caney Fork River PIN #: 131552.01

Date of survey: 8/26/24 Biologist(s): EWD/MLB Affiliation: TDOT

1-Station: from plans		
2-Map label	SNK-1	
3-Lat/Long	36.140792, -85.801194	
4-Potential impact size	1 sq ft	
5-Feature name	potiential sinkhole	
6-Feature description:		
what is the feature	potential sinkhole on top of rock bluff along I-40 east of Caney Fork River	
portion affected		
connection to other features		
photo number(s)	23	
other information		
7- HUC code & name if applicable (12-digit)	051301080904 Indian Creek	
8-Notes		

Project: Smith/Putnam	I-40 T	ruck Pa	rking a	nd Bridge F	Repla	cement over	the Ca	ney Fo	ork River	PIN:1	31552.01	
Biologist:	TNS/EW	TNS/EWD Affiliation: -TDOT Date: 8/27/2							8/27/2024			
1-Station : from plans												
2-Map label and name	WWC-3	WWC-3										
3-Latitude/Longitude	36.139532, -8	35.8002	23									
4-Feature description:												
-channel identification	perennial strea	m		intermitter	t strea	am	ephem	eral st	ream	wwc		\checkmark
-HD score (if applicable)	12.5											
-OHWM indicators	bed & banks	√		sition		presence of debris	<u>L</u>		scour	✓	veg absent, bent, matted	$\overline{\mathbf{V}}$
	change in plant community		terre	ruction of strial veg		multiple ob flow event	s	<u> </u>	sediment sorting		water staining	
	change in soil character	\checkmark	or ab	tter disturb sent		natural lin impressed o			shelving		wracking	
-channel bottom width	2.1 ft					-top of b	ank wic	lth	2.9 f	t		
-width and max depth at ordinary high water mark	W: 2.9 f	t					D: 0	.4 f	t			
-width at bankfull	2.9 ft											
-bank height	LDB- 2 ft						RDB-	1.5	5 ft			
-riffle/pool complex or other specialized habitat present?	no											
-dominant riparian species:	LDB: elm, sy	camore)									
(LDB /RDB)	RDB: elm, wh	nite oak	(
-particle size distribution %	Silt/Sand: 80)	Grav	/el: 0		Cobble: ()	Во	oulder: 20*		Bedrock: 0	
5-photo numbers	15-16			•		-			•		•	
6-HUC -8 Code & Name	05130108 Cane	ey Fork F	River									
7-Assessed	yes			no		✓						
8-ETW	yes]	no	_	✓						
9-303 (d) List	yes no	 	7	siltation			habita	t:		othe	r:	
10-Notes									_			
10 140005		s rip ı	rap p	olaced t	o pr	event ei	rosior	n ne	ar conflue	nce	with indian	
	creek											
Culvert size and												
Condition	l n/a											
	11/4											
<u> </u>												

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.5

			Date/Time: 8/27/2024
VD -TDOT			Project ID :
ing and Bridge Replacem	ent over the Caney	/ Fork River	PIN:131552.01
an Creek			Lat/Long:
0 inche	es .		36.139532, -85.800223
abnormally wet elevaAA past weather/AgACIS last 7 days	vated average	low abn	ormally dry unknown
		County: S	mith/Putnam
ilt loam, phosphatic			Source: NRCS
ral channel morphology Moderate	& hydrology (circ		escribe fully in Notes) :
	ing and Bridge Replacement of the American Creek O inche abnormally wet eleved past weather/AgACIS last 7 days will loam, phosphatic oral channel morphology	ing and Bridge Replacement over the Caney an Creek O inches abnormally wet elevated average A past weather/AgACIS last 7 days silt loam, phosphatic ral channel morphology & hydrology (circle)	ing and Bridge Replacement over the Caney Fork River an Creek O inches abnormally wet elevated average low abnormality average low abnormality average low abnormality average low abnormality av

Primary Field Indicators Observed

Primary Indicators	NO	YES
Hydrologic feature exists solely due to a process discharge	✓	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	√	WWC
Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	√	wwc
Daily flow and precipitation records showing feature only flows in direct response to rainfall	√	wwc
 Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase 	√	Stream
6. Presence of fish (except Gambusia)	√	Stream
7. Presence of naturally occurring ground water table connection	✓	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	✓	Stream
Evidence watercourse has been used as a supply of drinking water	✓	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5*

Overall Hydrologic Determination = WWC	
Secondary Indicator Score (if applicable) = 12.5	

Justification / Notes:

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = ⁶)		Absent	Weak	Moderate	Strong
Continuous bed and bank	2	0	1	2	3
2. Sinuous channel	0	0	1	2	3
3. In-channel structure: riffle-pool sequences	1	0	1	2	3
4. Sorting of soil textures or other substrate	0.5	0	1	2	3
5. Active/relic floodplain	0	0	0.5	1	1.5
6. Depositional bars or benches	0	0	1	2	3
7. Braided channel	0	0	1	2	3
Recent alluvial deposits	0	0	0.5	1	1.5
9. Natural levees	0	0	1	2	3
10. Headcuts	0	0	1	2	3
11. Grade controls	1.5	0	0.5	1	1.5
12. Natural valley or drainageway	1	0	0.5	1	1.5
13. At least second order channel on existing L NRCS map	JSGS or 0	No :	= 0	Yes	= 3

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

C. Biology (Subtotal = 5)		Absent	Weak	Moderate	Strong
20. Fibrous roots in channel bed 1	2.5	3	2	1	0
21. Rooted plants in the thalweg 1	2.5	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	0	1	2	3
23. Bivalves/mussels	0	0	1	2	3
24. Amphibians	0	0	0.5	1	1.5
25. Macrobenthos (record type & abundance)	0	0	1	2	3
26. Filamentous algae; periphyton	0	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0	0.5	1	1.5
28.Wetland plants in channel bed ²	0	0	0.5	1	1.5

¹ Focus is on the presence of terrestrial plants.

Total Points = 12.5

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

Notes:

² Focus is on the presence of aquatic or wetland plants.

Project: Smith/Putnam	I-40 Tru	ıck Par	rking a	nd Bridge	Repla	cement over	r the Can	ey Fork R	iver	PIN:	131552.01	
Biologist:	TNS/EWD	Aff	iliati	on:	-TI	ООТ		Date:			8/26/2024	,
1-Station : from plans												
2-Map label and name	WWC-4											
3-Latitude/Longitude	36.141392, -85	.7993	78									
4-Feature description:												
-channel identification	perennial stream			intermitte	ent strea	am	epheme	eral stream		wwo		\checkmark
-HD score (if applicable)	14.5										_	
-OHWM indicators	bed & banks	\checkmark	depo	sition		presence of debris	of litter Y	scour			veg absent, bent, matted	
	change in plant community	\checkmark		uction of strial veg		multiple of flow event		I II Sediment Sorting		g	water staining	
	change in soil character	\checkmark	leaf lit or ab:	tter disturb sent)	natural lin impressed		shelv	ing		wracking	
-channel bottom width	6.7 ft					-top of b	ank widt	:h	8 ft			
-width and max depth at ordinary high water mark	W: 6.7 ft						D: 0	.6 ft				
-width at bankfull	7.3 ft											
-bank height	LDB- 0.6						RDB-	2.5 ft				
-riffle/pool complex or other specialized habitat present?	no						•					
-dominant riparian species:	LDB: sugar m	aple, s	sycam	ore, elm								
(LDB /RDB)	RDB: sugar ma				ry							
-particle size distribution %	Silt/Sand: 40			el: 5		Cobble:	15	Boulde	er: 15		Bedrock: 25	
5-photo numbers	17-22			110				1	1.0			
6-HUC -8 Code & Name	05130108 Caney	Fork F	River									
7-Assessed	yes			no		√						
8-ETW	yes			no		√						
9-303 (d) List	yes			siltation			habitat	:		othe	r:	
	no	√										
10-Notes	feature assessed north of I-40, down gradient side much more incised, but				ut							
	still has leaf litter and some plants in the thalweg			a c								
	our has real litter and some plants in the thalwey											
Culvert size and												
Condition	38 in pipe previously slip lined about 3 ft perching at outlet											

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.5

Named Waterbody:			Date/Time: 8/26/2024
Assessors/Affiliation: TNS/EWD -TD			Project ID :
Site Name/Description: I-40 Truck Parking and E	Bridge Replacement over the Cane	y Fork River	PIN:131552.01
Site Location: WWC-4			
HUC (12 digit): 051301080904 Indian Cre-	ek		Lat/Long:
Previous Rainfall (7-days) :	0.01 inches		36.141392, -85.799378
Precipitation this Season vs. Normal: abnormal source of recent & seasonal precipidata: NOAA past weat	mally wet elevated average her/AgACIS last 7 days	ow abn	ormally dry unknown
Watershed Size : <2 sq miles		County: S	mith/Putnam
Soil Type(s) / Geology : Rock land, limeston	e	·	Source: NRCS
Surrounding Land Use : Forested			
Degree of historical alteration to natural chan Severe Mode			escribe fully in Notes) : osent

Primary Field Indicators Observed

Primary Indicators	NO	YES
Hydrologic feature exists solely due to a process discharge	✓	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	✓	WWC
Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	√	wwc
Daily flow and precipitation records showing feature only flows in direct response to rainfall	√	wwc
 Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase 	√	Stream
6. Presence of fish (except Gambusia)	✓	Stream
7. Presence of naturally occurring ground water table connection	✓	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	✓	Stream
Evidence watercourse has been used as a supply of drinking water	✓	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5*

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 14.5

Justification / Notes:

feature assessed north of I-40, down gradient side much more incised, but still has leaf litter and some plants in the thalweg

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = 8.5)		Absent	Weak	Moderate	Strong
Continuous bed and bank	2	0	1	2	3
2. Sinuous channel	0	0	1	2	3
3. In-channel structure: riffle-pool sequences	1	0	1	2	3
4. Sorting of soil textures or other substrate	1.5	0	1	2	3
5. Active/relic floodplain	0	0	0.5	1	1.5
6. Depositional bars or benches	0	0	1	2	3
7. Braided channel	0	0	1	2	3
Recent alluvial deposits	1	0	0.5	1	1.5
9. Natural levees	0	0	1	2	3
10. Headcuts	0	0	1	2	3
11. Grade controls	1.5	0	0.5	1	1.5
12. Natural valley or drainageway	1.5	0	0.5	1	1.5
13. At least second order channel on existing L NRCS map	JSGS or 0	No:	= 0	Yes	= 3

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

C. Biology (Subtotal = 5)		Absent	Weak	Moderate	Strong
20. Fibrous roots in channel bed 1	2.5	3	2	1	0
21. Rooted plants in the thalweg 1	2.5	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	0	1	2	3
23. Bivalves/mussels	0	0	1	2	3
24. Amphibians	0	0	0.5	1	1.5
25. Macrobenthos (record type & abundance)	0	0	1	2	3
26. Filamentous algae; periphyton	0	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0	0.5	1	1.5
28.Wetland plants in channel bed ²	0	0	0.5	1	1.5

¹ Focus is on the presence of terrestrial plants.

Total Points = 14.5

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

Notes:

² Focus is on the presence of aquatic or wetland plants.

Ecology Field Data Sheet: Other Resource Features

(Caves/Rock Houses; Potential Sinkholes; Specialized Habitats; Other)

Project: Smith/Putnam Co. I-40 Truck Parking and Bridge Replacement over the Caney Fork River PIN #: 131552.01

Date of survey: 8/27/24 Biologist(s): EWD/TNS Affiliation: TDOT

1-Station: from plans		
2-Map label	CAV-1	
3-Lat/Long	36.140792, -85.801194	
4-Potential impact size	6 sq ft	
5-Feature name	potiential cave	
6-Feature description:		
what is the feature	potential sinkhole on top of rock bluff along I-40 east of Caney Fork River	
portion affected		
connection to other features		
photo number(s)	24	
other information		
7- HUC code & name if applicable (12-digit)	051301080904 Indian Creek	
8-Notes		



Photo 1. WWC-1 looking up gradient near beginning of feature and before concrete lined channel starts



Photo 2. WWC-1 looking down gradient within concrete lined channel portion of feature



Photo 3. WWC-1 looking up gradient at scoured area shortly after concrete lined portion ends



Photo 4. WWC-1 looking down gradient where it meets the Caney Fork River (STR-1)



Photo 5. WWC-2 looking up gradient at beginning of feature

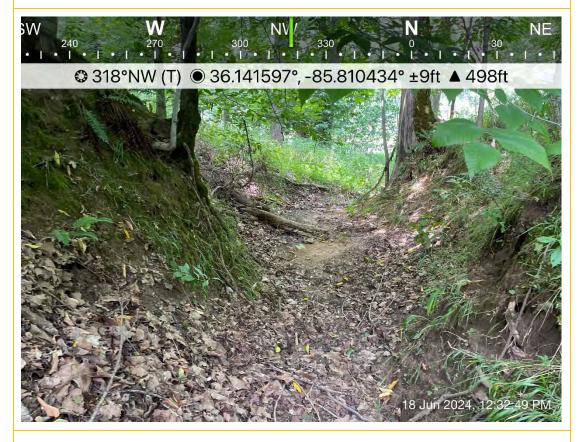


Photo 6. WWC-2 looking down gradient in the middle of the feature



Photo 7. WWC-2 looking downstream near confluence with Caney Fork (STR-1)



Photo 8. STR-1 (Caney Fork River) looking upstream at I-40 bridge



Photo 9. STR-1 (Caney Fork River) looking downstream at I-40 bridge from near confluence with STR-2 (Indian Creek)

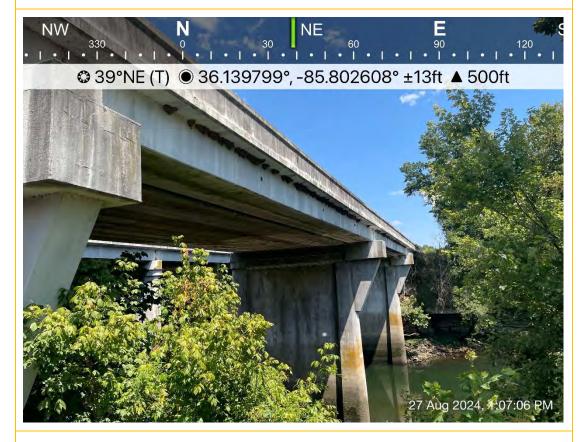


Photo 10. Swallows' nests on EB I-40 bridge over STR-1 (Caney Fork River) at LM 17.16



Photo 11. Swallows' nests on WB I-40 bridge over STR-1 (Caney Fork River) at LM 16.20



Photo 12. Swallows' nests on EB I-40 bridge over STR-1 (Caney Fork River) at LM 16.20



Photo 13. STR-2 (Indian Creek) looking upstream

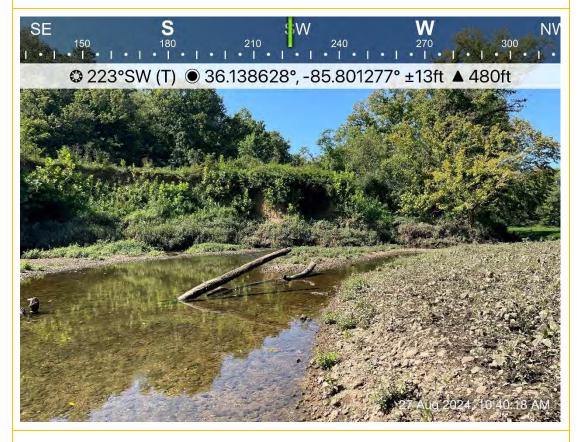


Photo 14. STR-2 (Indian Creek) looking downstream



Photo 15. WWC-3 looking up gradient



Photo 16. WWC-3 looking down gradient



Photo 17. WWC-4 looking up gradient from culvert inlet north of I-40



Photo 18. WWC-4 looking down gradient at culvert inlet north of I-40



Photo 19. WWC-4 culvert outlet south of I-40



Photo 20. WWC-4 looking down gradient from culvert outlet south of I-40



Photo 21. WWC-4 looking up gradient south of I-40 near STR-2 (Indian Creek)



Photo 22. WWC-4 looking down gradient south of I-40 near STR-2 (Indian Creek)



Photo 23. SNK-1 potential sinkhole



Photo 24. CAV-1 potential cave

Steve A. Walker

From: Griffith, John <john_griffith@fws.gov>
Sent: Thursday, June 6, 2024 3:13 PM

To:Steve A. WalkerCc:Sikula, Nicole R

Subject: Re: [EXTERNAL] Steve Walker added you to an IPaC project

*** This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email - STS-Security. ***

Steve,

Thank you for your correspondence requesting review of the Interstate (I-) 40 Truck Parking and Bridge Replacement over the Caney Fork River in Smith and Putnam counties, Tennessee. The scope of work includes addition of a 125-bay truck parking expansion adjacent to the existing Welcome Center, replacing twin I-40 bridges over the Caney Fork River, and updating ramp acceleration and deceleration length at this location to current standards. The project would utilize two conceptual typical sections for I-40: 4-lane freeway with depressed median or a 6-lane freeway with median barrier. Bridge replacements would involve demolition and removal of the existing structures and a retaining wall. The project length is approximately 0.86 mile. You are requesting a list of federally threatened or endangered species that may be present in the project area.

Our database indicates that several federally listed mussels historically occurred in this reach of the Caney Fork River. However, since the Center Hill Dam became operational in 1951, altered water temperatures have affected mussel survival and reproduction for miles downstream. Multiple mussel surveys conducted post-construction of the dam have confirmed that the cold water temperatures have resulted in extirpation of federally listed mussels from the tailwater reach below Center Hill Dam. We are not aware of any other federally listed or proposed species or critical habitat that would be impacted by the project. Based on the best information available at this time, we believe that the requirements of the Endangered Species Act (ESA) are fulfilled for all species that currently receive protection under the ESA. Obligations under section 7 of the ESA should be reconsidered if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

Implementation of standard construction BMPs would be necessary to ensure instream work is separated from flowing waters and that project-related pollutants are kept out of the Caney Fork River. If required for construction, the instream haul road(s) should be limited to no greater than one-third the stream width to avoid obstructing flow. Equipment staging and maintenance areas should be developed an adequate distance away to prevent the introduction of petroleum-based pollutants into the water. Fresh concrete and cement dust must be kept out of the water as they alter chemical properties and can be toxic to aquatic species.

This email will serve as our official project response. Please let me know if we can offer further assistance. Thanks,

John Griffith Transportation Biologist U.S. Fish and Wildlife Service Tennessee Field Office 931-525-4995 (office) 931-261-3755 (cell)

Steve A. Walker

From: twrasurveymgmt@gmail.com

Sent: Friday, May 17, 2024 10:03 AM

To: Steve A. Walker; Casey Parker

Subject: [EXTERNAL] Environmental Review Request: 1715965200000

Steve Walker

Auto-generated email

DO NOT REPLY

Tennessee Wildlife Resource Agency has received your submission. If additional information is required, Biodiversity Division staff will reach out via the contact information you provided. Although we strive to respond to review requests as quickly as possible, a formal response may take up to 30 days.

Thank you,

TWRA Biodiversity



TENNESSEE WILDLIFE RESOURCES AGENCY

ELLINGTON AGRICULTURAL CENTER 5107 EDMONDSON PIKE NASHVILLE, TENNESSEE 37211

June 14, 2024

Re: Smith County, I-40 Interchange-Welcome Center Improvement project along I-40 EB & WB in Smith & Putnam County, PIN 131552.01

Mr. Steve Walker,

The Tennessee Wildlife Resources Agency has reviewed the information that you provided regarding the subject project in Smith and Putnam County, Tennessee. Your letter to us requested comments by our agency regarding potential impacts to endangered species, wetlands, and other areas of concern as we may think pertinent due to the proposed project.

This project involves improvements to I-40 Interchange-Welcome Center along I-40 EB & WB in Smith & Putnam County and construction of 125 bay truck parking expansion adjacent to the existing Welcome Center, replace twin bridges at I-40 over the Caney Fork River, and update ramp acceleration and deceleration length at this location to current standards. The project will utilize two conceptual typical sections for I-40: 4 lane freeway with depressed median, and 6 lane freeway with median barrier for the proposed bridge replacements. The project length is approximately 0.86 miles. The bridges being replaced on I-40 cross the Caney Fork River and will require demolition and removal activities of the existing structures to include an existing retaining wall.

I have reviewed the information that you provided regarding the proposed project in Smith and Putnam County, Tennessee. In-stream work is expected, therefore to minimize impacts to the State Endangered species, Lake Sturgeon (*Acipenser fulvescens*), and State Threatened species, Blue sucker (*Cycleptus elongatus*), request preference given to prohibit instream construction during the combined species spawning season from April 1 through June 30 and not recommend fish sweeps due to the size and depth of the river.

Thank you for the opportunity to review and comment on this proposed project. If you have further questions regarding this matter; please contact me at (731) 431-0012.

Sincerely,

Casey Parker

Cary take

Wildlife Biologist/Liaison to TDOT and the Federal Highway Administration

Cc: Andy Barlow TWRA and John Griffith US Fish and Wildlife

Steve A. Walker

From: Dillon Blankenship

Sent: Tuesday, September 24, 2024 1:32 PM

To: Steve A. Walker

Cc: Shawn Wurst; Rita M. Thompson

Subject: RE: Smith-Putnam Co; PIN 131552.01_ Design Build Rest Area Improvements (TDEC

DNA coordination) review

Attachments: project_report_pin_13155201_smith_putnam_c_3502_3995.pdf; project_shapefile_pin_

13155201_smith_putna_3502_3995.zip

Hi Steve,

The Division of Natural Areas - Natural Heritage Program has reviewed the above referenced project with respect to rare plant species.

PUTNAM COUNTY: The most sensitive portion of the study area with regard to rare plant species is the rocky bluff line on the Putnam County side of the Caney Fork River from which RTE species have been documented (approximately 36.1405785, -85.8017945). Insofar as the project work area ends at the base of the SSE facing bluff north of I-40, impacts to this area would be avoided and we would not anticipate impacts to state-listed plant species.

SMITH COUNTY: The project plans provided to us do not indicate any direct impacts to the vegetated area around (36.1407859, -85.8041982) or contiguous habitat along the river, so we do not anticipate any impacts to documented RTE plant species at that location or any other locations in the study area on the Smith County side of the Caney Fork River.

You may use this email as evidence of consultation with our office.

I have attached a copy of the ERT report (and shapefile) that would be generated for this project by our Environmental Review Tool, as a reference.

Regards,

Dillon



Dillon Blankenship | Data Manager | Env. Review Coordinator Division of Natural Areas | Natural Heritage Program Davy Crockett Tower, 8th Floor 500 James Robertson Parkway Nashville, TN 37243 p. 615-532-4799 dillon.blankenship@tn.gov

www.tn.gov/environment/natural-areas

We value your feedback! Please complete our customer satisfaction survey.

From: Steve A. Walker <Steve.A.Walker@tn.gov>

Sent: Tuesday, August 27, 2024 11:23 AM

To: Dillon Blankenship < Dillon.Blankenship@tn.gov>

Cc: Shawn Wurst <Shawn.Wurst@tn.gov>; Rita M. Thompson <Rita.M.Thompson@tn.gov>

Subject: Smith-Putnam Co; PIN 131552.01_ Design Build Rest Area Improvements (TDEC DNA coordination) review

Good Morning Dillion,

TDOT is proposing improvements to the Smith County Rest area along I-40 at the Smith-Putnam County line. The main purpose of this project is to add a truck parking area shown on the conceptual plan design attached to this correspondence. Also included in this project is the replacement of the I-40 bridges over the Caney Fork River right at the county line. During our review we have noted multiple plant species within 1 and 4 miles with two being within the proposed project ETSA (study area). Due to the observed records within the study boundary this project does not fit our MOA with TDEC (DNA). One record is shown very near the project limits. TDOT is assuming presence for these species but does not anticipate impacts to any shown based upon the proposed project limits. Please review the information attached (conceptional plans) and let me know if you all have any concerns for these plants or others that we may not know of anywhere else within this proposed project area? The area nearest the record for (*Eriogonum harperi*) Harper's umbrella-plant (E) will extend to the edge of existing pavement (east side of I-40 bridge) and possibly into the existing drainage ditch for work to tie in the new bridge structure into the existing alignment of I-40 (eastside of Caney Fork River). Let me know if you have any questions or need any additional information.

Thanks Steve



Steve A.Walker | TESS AD Environmental Division/Ecology Section Region 3 James K. Polk Building, 9th Floor 505 Deaderick Street, Nashville, TN 37243-0334 p. 615-253-9908 Steve.a.walker@tn.gov tn.gov/tdot

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