Large Filing Separator Sheet

Case Number: 09-479-EL-BGN

File Date: 12/11/2009

Section: 2 of 4

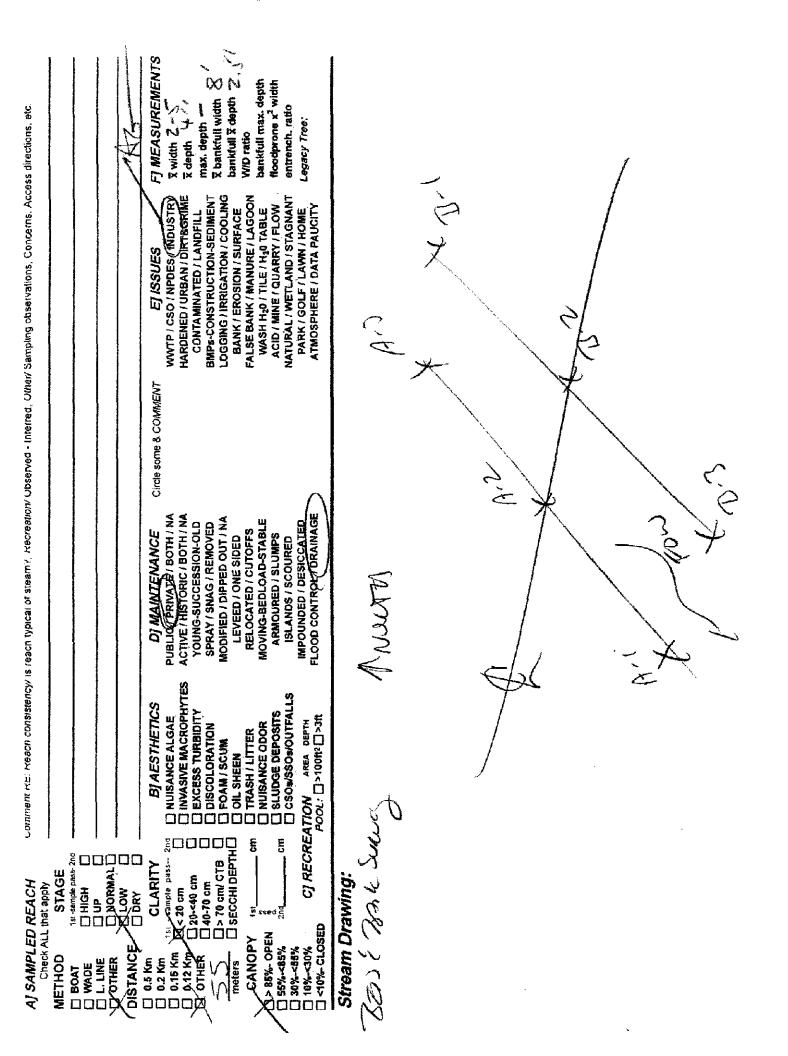
Number of Pages: 200

Description of Document: Response

WATERBODY CROSSING DATA FORM PROJECT: HOUSIN - T-FAMM 10126129 DATE: FIELD CREW: CONS SMS LOCATION: TO SO 50152 WAT ERBODY ID ATK 530051 **GPS FEATURE TYPE** ne (1-7 (open/closed)(line/polygon) PHOTO ID and DIRECTION ARANON NAME - 5-CAT MIAMIRINEL TRIB to South Tor UNDAMEN (or tributary to) WATERBODY TYPE (stream/pond/ditch/culvent) STREAM tEr nithert FLOW REGIME (perennial/intermittent/ephemerai) WIDTH (observed/OHW) DEPTH $\mathcal{L}^{\prime\prime}$ 2,5 (observed/OHW) FLOW RATE (dry/stagnant/low/moderate/high) FLOW DIRECTION SUBSTRATE (mud/silt/gravel/cobble/boulders/bedrock) BANK VEGETATION SCICED-LAS (upland/welland cover type) 510pE 1:1 - W 2:1 - E 63 SKETCH: NORTH -Little Frond ٦ - no scan pr -no starth B.2 ᠕ᢢᡗ FISH AND WILDLIFE OBSERVATIONS: FFRTGOIL NOTES: Ducos

myped AI Intermitten-

-260	0052AUS	13/26/09
	OhioEPA Qualitative Habitat Evaluation Index and Use Assessment Field Sheet QHE	El Score: 39
1	Stream & Location: UMAMED JR. 1 to Jack FORK RM:	Date: / 3/ 26/ 03
GREGA	T <u>Miami (LUCA</u> River Code: - STORET #: Lat/Long.: 40.58 55 18 2.	
	1) SUBSTRATE Check ONLY Two substrate TYPE BOXES;	
	BEST TYPES POOL PIEFLE OTHER TYPES POOL PIEFLE ORIGIN	QUALITY
~		HEAVY [-2] DIMODERATE [-4] Substrate
20	Image: Sile of the second s	DINORMAL [0]
t		
50	NUMBER OF BEST TYPES: 4 or more [2] sludge from point-sources) LACUSTURINE [0]	MOVERALE 11 Maximum O NORMAL [1] 20 O NONE [1]
200	Comments	
NOC NOLTH	diameter log that is stable, well developed rootwad in deep / fasl water, or deep, well defined, functional pools.	AMOUNT heck ONE (Or 2 & average) EXTENSIVE >75% [11] MODERATE 25-75% [7] SPARSE 5-425% [3] NEARLY ABSENT 45% [1] Cover Maximum 20
	3] CHANNEL MORPHOLOGY Check ONE in each calegory (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY HIGH [4] EXCELLENT [7] NONE [6] HIGH [3] MODERATE [3] GOOD [5] RECOVERED [4] MODERATE [2] LOW [2] FAIR [3] RECOVERING [3] LOW [1] NONE [1] FOOR [1] RECENT OR NO RECOVERY [1] Comments	
	4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank &	averace)
	River right looking downstream RIPARIAN WIDTH FLOOD PLAIN QUALITY R EROSION B WIDE > 50m [4] B FOREST, SMAMP [3] C NONE / LITTLE [3] B MODERATE 10-50m [3] B SHOULD SHOULD OF OLD FIELD [2] C C MODERATE [2] B NARROW 5-10m [2] C RESIDENTIAL PARK, NEW FIELD [1] C MIDE > 60m [3] HEAVY / SEVERE [1] C VERY NARROW < 5m [1] C FENCED PASTURE, ROWCROP [0] Indicate post 1000	DNSERVATION TILLAGE [1] IBAN OR INDUSTRIAL [0] NING / CONSTRUCTION [0] weddminant land use(s) m riparian. Ripartan
	Comments //	Maximum 10
	Check ONE (ONLY!) Check ONE (Or 2 & average) Check ALL that apply Check ONE (Or 2 & average)	Recreation Potential Primary Contact Secondary Contact torde one and comment on backs Current Maximutin 12
	Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (Or 2 & average).	ON NO RIFFLE [metric=0]
	RIFFLE DEPTH RUN DEPTH RIFFLE / RUN SUBSTRATE RIFFLE / RUN BEST AREAS > 19cm [2] MAXIMUM > 50cm [2] STABLE (e.g., Cobbie, Bouilder) [2] NO	EMBEDDEDNESS
	BEST AREAS 5-10cm [1] AXUMUM < 50cm [1] MOD. STABLE (e.g., Large Gravel) [1] BEST AREAS < 5cm UNSTABLE (e.g., Fine Gravel, Sand) [0] MO	
	1 10 UCAMIR	TENSIVE [-1] Run Maximum
AREAN	6] GRADIENT (9, 3 ft/mi) UVERY LOW - LOW [2-4] %POOL: %GLIDE: DRAINAGE AREA MODERATE [5-10] / %RUN: %RIFFLE: WN3i+ 8' (mi ²) HIGH - VERY HIGH [10-6] %RUN: %RIFFLE:	Maximum 10
	EPA 4520 1065-> 1060 => 2827.70' 5/106 => 9.5	61/mi Gradiat



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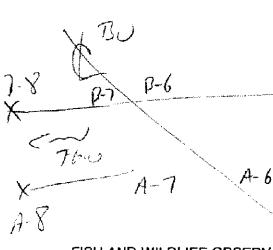
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PROJECT:	Hardin Windform DATE:	10/27/09
LOCATION:	BU NW of WTG-211 FIELD CREW:	Sparks & Cowell

WATERBODY CROSSING DATA FORM

WATERBODY ID	SBUD53A4/B		
GPS FEATURE TYPE (open/closed)(line/polygon)	Line (1-8)		
PHOTO ID and DIRECTION	#1 FE		
NAME (or tributary to)	UDDADELI	ncory Run-	military
WATERBODY TYPE (stream/pond/ditch/culvert)	Stream		
FLOW REGIME (perennial/intermittent/ephemeral)	Int		
WIDTH (observed/OHW)	-/10		
DEPTH (observed/OHW)	- /3-		
FLOW RATE (dry/stagnant/low/moderate/high)	Dry		
FLOW DIRECTION	E		
SUBSTRATE (mud/silt/gravel/cobble/boulders/bedrock)	Sitty clay		
BANK VEGETATION (upland/wetland cover type)	Emergent		

SKETCH: ANDRETH



B-3 × A-1 X-7 7-2

AL

NOTES: 1) FROSIDA ; MO SIDJQA ; MO SCOLA 2;1 (4540) MADRES AL INTERMEDIATE

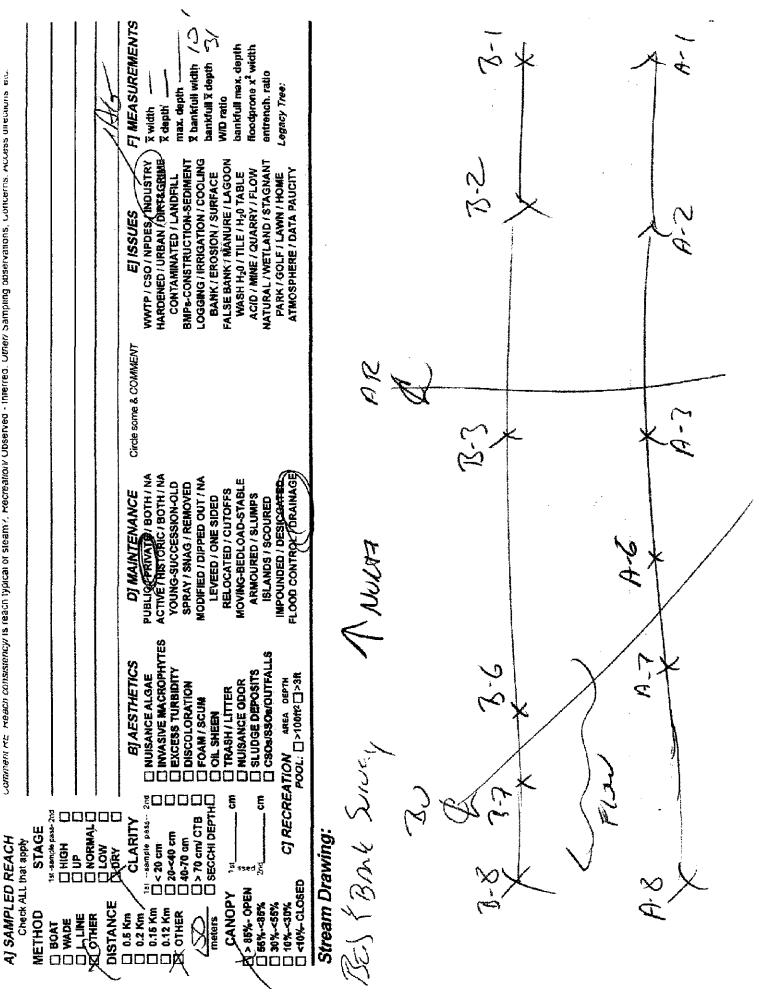
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10/2+109

ChicEPA	Qualitative Habitat Evaluation I and Use Assessment Field Sh	
Stream & Location: Uni	AMEN MCCOY Run TR	b RM: Date: 10127109
1,350 NOOTH CANT of -	TRISY ITER Scorers Full Name & Affilia	
River Code:	STORET #: Lat/Long.: 40	•
BEST TYPES POOL RIF	ote every type present	Check ONE (Or 2 & average) N QUALITY
BLDR /SLABS [10] BOULDER [9]		
		S [0] SIL NORMAL [0]
GRAVEL [7] GRAVEL [7] GI SAND [6] GI		NE IVI JODA LEXTENSIVE [-2]
NUMBER OF BEST TYPES;	(Score natural substrates; ignore CRIPINAP to 4 or more [2] sludge from point-sources) CLACUSTUR	UNE IOT SI NORMAL [0] 20
Comments	3 or less [0] □ SHALE [-1] □ COAL FINE	
21 INSTREAM COVER Indicate	e presence 0 to 3: 0-Absent; 1-Very small amounts or if more	common of marginal AMOUNT
ouality:	2-Moderate amounts, but not of highest quality or in small a le or greater amounts (e.g., very large boulders in deep or fa sloped rootwad in deep / last water, or deep, well-defined, full	mounts of biobest
UNDERCUT BANKS [1]	POOLS > 70cm [2] OXBOWS, BAC	KWATERS [1] CKNODERATE 25-75% [7]
OVERHANGING VEGETATIC		
ROOTMATS [1] Comments		Cover R
HERACEAS		20
3] CHANNEL MORPHOLOGY SINUOSITY DEVELOPN	Check ONE in each category (Or 2 & average) IENT CHANNELIZATION STABILI	TY
HIGH [4] EXCELLEN		
🗆 LOW [2] 🛛 FAIR [3]	RECOVERING [3]	Channel
NONE [1] POOR [1] Comments	RECENT OR NO RECOVERY [1]	Maximum 7
AT BANK FROSION AND BIE	ARIAN ZONE Check ONE in each category for EACH B	AllK (Cr.2 nor book & avama)
River right looking downstream	RIPARIAN WIDTH	UALITY L R
	RDE > 50m (4) D FOREST, SWARD (3) HODERATE 10-50m (3) XX SHRUB OR OLD FIELD (2)	
1 1 HEAVY / SEVERE [1] 1 V	ARROW 5-10m [2]	- Indicate predominant land use(st
Comments	ONE [0] A DOPEN PASTURE ROWCH	LOP 01 past 100m riparian. Riparlan Amerikan
		10
5) POOL(/ GLIDE AND RIFFL MAXIMU M DEP TH	.E/RUN QUALITY CHANNEL WIDTH CURRENT VELC	CITY Recreation Potential
	eck ONE (Or 2 & average) Check ALL that ap WIDTH > RIFFLE WIDTH [2] TORRENTIAL [-1] SLO	
🗌 0.7-<1m [4] 🗌 POOL	WIDTH = RIFFLE WIDTH [1] U VERY FAST [1] WINT	ERSTITIAL [-1] ERMITTENT [-2]
0.2~<0.4m [1]	MODERATE (1) MODERATE (1) MODERATE (1) Indicate for reach - pool	DIES [1] Pool / Pool /
Comments	24 -	Maximum
	ffles; Best areas must be large enough to su	pport a population
of riffle-obligate species RIFFLE DEPTH R		RIFFLE / RUN EMBEDDEDNESS
□ BEST AREAS > 10cm [2] □ MAX □ BEST AREAS 5-10cm [1] □ MAX	KIMUM > 50cm [Z] 🔲 STABLE (e.g., Cobbie, Bouider) [Z] KIMUM < 50cm [1] 🔲 MOD. STABLE (e.g., Large Gravel)	[1] NONE [2]
BEST AREAS < 5cm [metric=0]	UNSTABLE (e.g., Fine Gravel, Sund	ION MODERATE ION RITTLE I
Comments	NORTHE	
6] GRADIENT () I timi) [VERY 10W - LOW [2-4] %POOL:	
STILEAM WITH ID! 1 ml?)	Schigh - very high [10-6] 6 %RUN:	%RIFFLE: Maximum 10
EPA 4520 2,500	104031030 101	06/16/06
~!~	(471 =)	21.14st/mi GANNOT



UURINER AL MEED CONSISTERCY IS REACH TYPICAL OF STEAM?, MECREATION UDSERVED - INTERFED. URBEN SAMPHING ODSERVATIONS, UORIGENIS, MCUESS URECUMA

	WATERBODY CROSSING DATA FORM		
PROJECT:	Hardin Wind Farm	DATE:	10/27/09
LOCATION:	6 of WTB175	FIELD CREW:	SMS \$ DJC

WATERBODY ID	STB175054A/B		
GPS FEATURE TYPE (open/closed)(line/polygon)	Line/1-9		
PHOTO ID and DIRECTION	#13 facing A	_ 14 + Jaluat;	ふしつ
NAME (or tributary to)	McCoy Run		
WATERBODY TYPE (stream/pond/ditch/culvert)	stream .		
FLOW REGIME (perennial/intermittent/ephemeral)	Perennial		
WIDTH (observed/OHW)	4'/10'.		
DEPTH (observed/OHW)	4"/2'		
FLOW RATE (dry/stagnant/low/moderate/high)	Stagnant		
FLOW DIRECTION	North		
SUBSTRATE (mud/silf/gravel/cobble/boulders/bedrock)	silt		
BANK VEGETATION (upland/wetland cover type)	PEM		

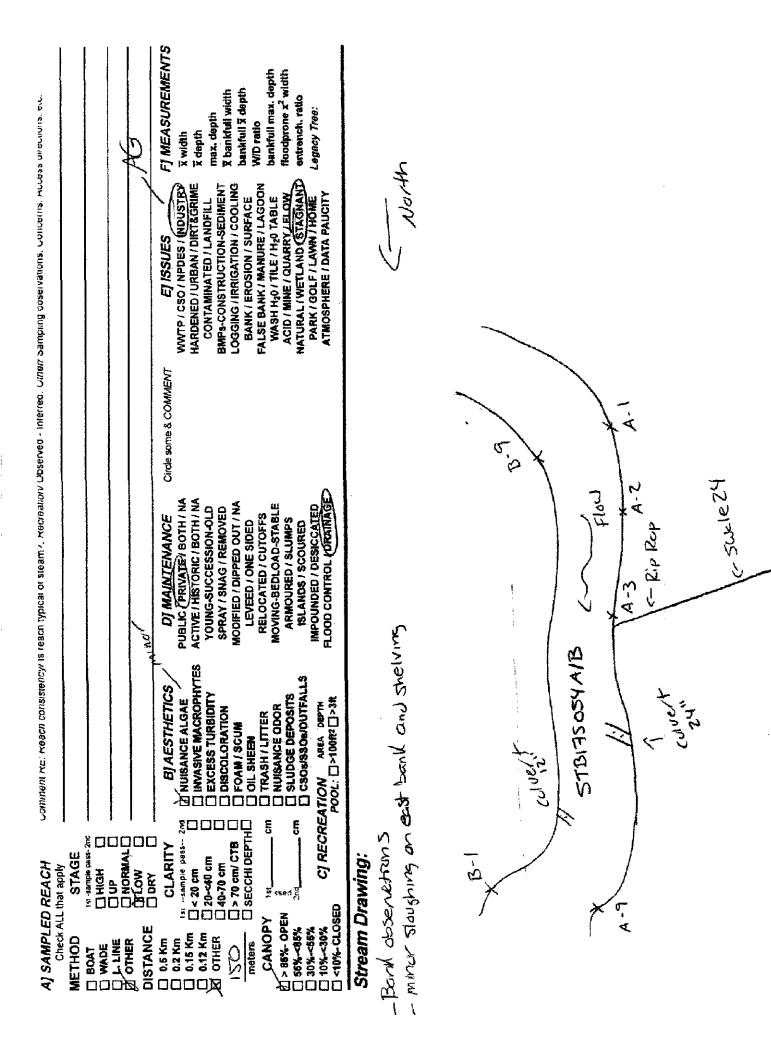
SKETCH:

B1 Acuvedx BU B-9 Flow Ag 2 wert Bui 3

Minnows, Aquatic insects

NOTES: Algae growth at surface, clear (turbid Nside), minor slonghing of E bank, no erosion, undercut banks, 1:1 50% banks, silt w/~10% cobble NAPPES AS INTERMILLENT

OhidEPA	•	bitat Evaluation ssment Field S		IEI Score:	<u>FD</u>
Stream & Location: MC	Cay Run : Hardin	County	RM:	Date: /0 / 27	+109
"SULLWEST of CRIS		rers Full Name & Affl		, SMS	
River Code:	STORET #:	Lat/Long.: 4	<u>2.6/98/83</u>	7238 m	e verified location
1] SUBSTRATE Check ONL estimate %	or note every lyne present		Check ONE (Or 2 &		
BEST TYPES POOL					
BOULDER [9]		🛄 🗍 π.ι.s (i)	SNT.	HODERATE [-1]	Substr
[2] COBBLE [8] [] GRAVEL [7]			N IOT	I NORMAL [0]	9
SAND [6]	[] [] ARTIFICIAL [0] _		ONE OI CODEA	DEXTENSIVE [-2]	Ľ
NUMBER OF BEST TYPE	(Score natural su S: 4 or more [2] sludge from	point-sources)	URINE (0)	VS NORMAL [0]	Maximi 20
Comments	() 3 or less (0)	SHALE [COAL FI	7	E] NONE [1]	
AL (ALO TOTAL AL COLUTE)	inale amazona A ta 2. A Abarret 4			ol	
Qui	icate presence 0 to 3: 0-Absent; 1- ality; 2-Moderate amounts, but not lerate or greater amounts (e.g., ver	of highest quality or in small	amounts of highest	AMOUNT Check ONE (Or 2 & av	erage)
diameter log that is slable, well	developed rootwad in deep / fast w	ater, or deep, well-defined.	unctional pools.	EXTENSIVE >75% [11]
Z OVERHANGING VEGET	TION [1] ROOTWADS [1		ROPHYTES [1]	2 MODERATE 25-75% 3 SPARSE 5-425% [3	3
SHALLOWS (IN SLOW Y ROOTMATS [1]	(ATER) [1] BOULDERS [1	LOGS OR WO	ODY DEBRIS [1]] NEARLY ABSENT <	_
Comments				Cove Maximur	
3] CHANNEL MORPHOLC SINUOSITY DEVELC	Check ONE in each category PMENT CHANNELIZA		LITY		
		🗋 нісн (
2 MODERATE [J] [] GOOD [] LOW [2] [] FAIR [
Comments		RECOVERY [1]		Chann Meximui	- B(C)-
Glide	<u>-</u>			2	ő 🔔
4] BANK EROSION AND River right looking downstream	RIPARIAN ZONE Check ONE			(å average)	
EROSION	RIPARIAN WIDTH	FLOOD PLAIN	Ó Ó	CONSERVATION TILLA	GE M
	🖸 MODERATE 10-50m [3] 🛛 🗗 🛛	A SHRUB OR OLD FIELD		URBAN OR INDUSTRU	AL [0]
🗆 🗋 HEAVY / SEVERE [1]	VERY NARROW < 5 (1)	FENCED PASTURE M	· Indicat	e predominant land use(s	
Comments		OPEN PASTURE, ROWK	ROP [0] past 10	Xim riparian. Atparla Maximun	1
				1	
5] POOL / GLIDE AND RI MAXIMUM DEPTH	FFLE / RUN QUALITY CHANNEL WIDTH	CURRENT VEL	OCITY	Recreation Poter	rtial
Check ONE (ONLY!)	Check ONE (Or 2 & average)	Check ALL that	apply	Primary Conta	
	DOL WIDTH > RIFFLE WIDTH [2] DOL WIDTH = RIFFLE WIDTH [1]	U TORRENTIAL [-1] U S		Secondary Con	
	OOL WIDTH < RIFFLE WIDTH [0]	GAST [1]	TERMITTENT [-2]		
[] < 0.2m [0]		MODERATE [1] DE Indicate for reach - po	ols and niffes.	Pool Currer	n A
Commonto /	EEP GLIDE (.1016 METE	es :	Maximui 1	"
Indicate for functions	il riffles; Best areas must	be large enough to s		tion Dano RIPFLE	Inerica
of riffle-obligate spec RIFFLE DEPTH	RUN DEPTH RIFFI	NE (Or 2 & average). E / RUN SUBSTRATI		N PMBEDDEDNES	
BEBT AREAS > 10cm [2]	MAXIMUM > 50cm [2] [] STABL	E (e.g., Cobbie, Bouider) [2] 🗌 N	ONE [7]	
BEST AREAS < 5cm	MAXIMUM < 50cm [1] [] MOD. : [] UNST/	STABLE (e.g., Fine Gravel, Sar BLE (e.g., Fine Gravel, Sar	ah 191 🗌 11	OW [1] ODERATE [0] RMM	
[metric=0] Comments			08	XTENSIVE [-1] Reximu	me e
6] GRADIENT (34.8 fum	I) VERY LOW - LOW [2-4]	%POOL:(Ø) %GLIDI	(h) Gradier	
DRAINAGE AREA	MODERATE (6-10)	4 %RUN: (Ø %RIFFLI	Meximu	
	A HIGH - VERY HIGH [10-6]	696+ 15			0



	VATERBODY CRO			
PROJECT: Hardin	Windform	DATE: _	10/28/0	9
LOCATION: AR TO WIGH	07@ CR150	FIELD CREW: _	SMS 51	050
WATERBODY ID	SAROSSA1	B		
GPS FEATURE TYPE (open/closed)(line/polygon)	Line			
PHOTO ID and DIRECTION	Photo 1 V	\checkmark		
NAME (or tributary to)	TRID to SO	into Riva	v	
WATERBODY TYPE (stream/pond/ditch/culvert)	Stream			
FLOW REGIME (perennia/intermittent/ephemeral)	Perennial			<u></u>
WIDTH (observed/OHW)	15' / 20'			<u> </u>
DEPTH (observed/OHW)	12"+/3'+			
FLOW RATE (dry/stagnant/low/moderate/high)	Low			
FLOW DIRECTION	West			
SUBSTRATE (mud/silt/gravel/cobble/boulders/bedrock)	silt			
BANK VEGETATION (upland/wetland cover type)	PEM			
	A T			

SKETCH:

N

Ag Field

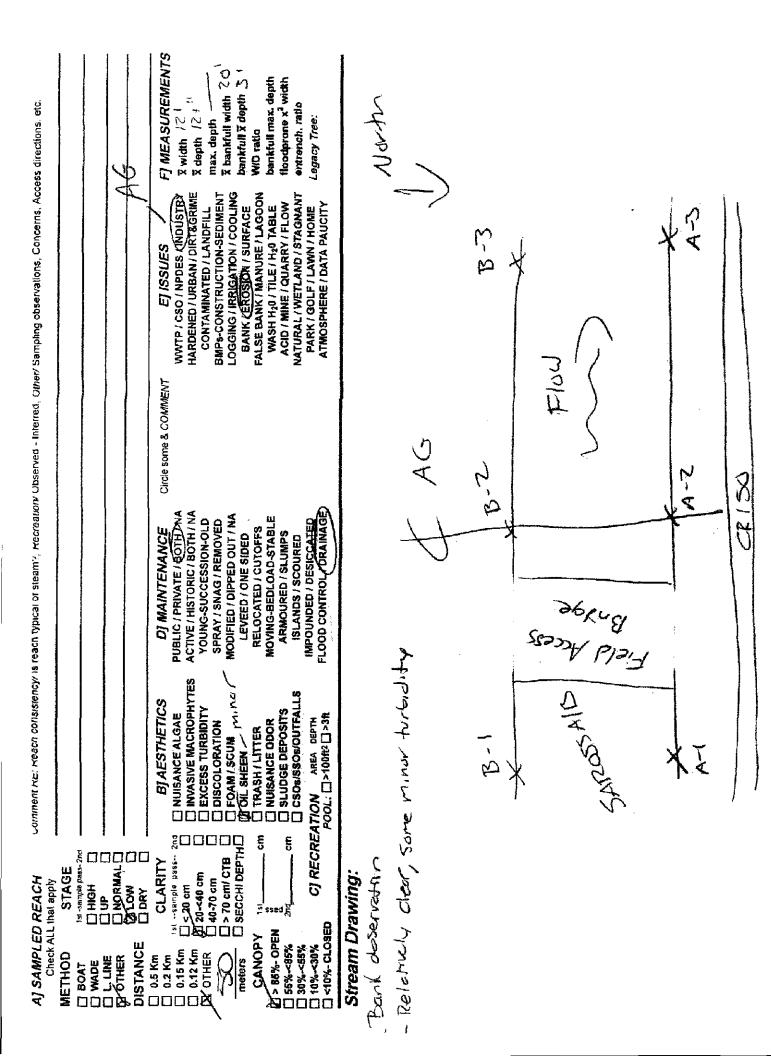
81 B2 ßЗ Existing Bridge flow A3 A2 A1 ← CR150 ->

Minnows, Aquatic Insects

NOTES: Minor erosion S bank, some shelving N bank, low turbidity, minor oil sheen observed

MAMEI AS PEACIMAC

SAR05S,	AB		10/2	28/09
Chio		Habitat Evaluation In ssessment Field She		re: 34
Stream & L Sydh	vertion: <u>Sciolo River</u>	TRU Scorers Full Name & Affiliat		1/0 125 109 JEL - TTEL
River Code	ATE Check ONLY Two substrate TYPE BOX	Lat./ Long.: 40.6	158 183.8125	Office verified location
BEST	estimate % or note every type present TYPES POOL RIFFLE OTHER TY LABS [10] I HARDPAN R [9] I DETRITUS [8] I DETRITUS [7] I SILT [2] [7] I ARTIFICIA K [5] (Score na	Ch Ch PES POOL RIFFLE ORIGIN (4) Immestore 5 [3] Immestore AL [0] Immestore Substrates: innore RIP/RAP [0]		[-2] LATE [-1] Substrate
NUMBER O Comments	F BEST TYPES; 4 or more [2] sludg	e from point-sources) LACUSTURIN SHALE [-1] COAL FINES	IE [0] 급 ^{VS} ∐ NORM/ □ NONE [[-2]	1] 20
quality: 3-High diameter log () UNDER(est quality in moderate or greater amounts (r at is stable, well developed rootwad in deep LUT BANKS [1] POOLS INGING VEGETATION [1] ROOTM WS (IN SLOW WATER) [1] BOULD	but not of highest quality or in small amo e.g., very large boulders in deep or fast / fast water, or deep, well-defined, funct > 70cm [2] OXEOWS, BACKV /ADS [1] AQUATIC MACRO	Average States (1) Average State	E 25-75% [7]
3] CHANNEL SINUOSIT HIGH [4] MODERATE LOW [2] D NONE [1] Comments	EXCELLENT [7] INONE [6] GOOD [5] I BECOVER FAIR [3] I RECOVER	ELIZATION STABILIT	E 121 Alacha	Channel Maximum 20
River right look EROS	ITTLE [3] 🔲 🔲 MODERATE 10-50m [3]	FLOOD PLAIN QU	ALITY I R DCONSERVATI DZURBAN OR II TELD [1] D MINING / CON Indicate: predominant	hand use(s) Riparlan Maximum
5] POOL/G MAXIMUN Check ONE 0.7<1m 0.4<0.7 0.2<0.4 0.2<0.4 0.2<0.4 0.2<0.4 0.2<0.4 0.2<0.4 0.2<0.4 0.2<0.4 0.2<0.4 0.2<0.4 0.2<0.4 0.2<0.4 0.2<0.4 0.2<0.4 0.2<0.4 0.2<0.4 0.4 0.2<0.4 0.4 0.2<0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	(ONLY!) Check ONE (Or 2 & average) [] POOL WIDTH > RIFFLE WID [4] [] POOL WIDTH = RIFFLE WID [7] [] POOL WIDTH < RIFFLE WID	CURRENT VELOO (ge) Check ALL (hat appli TH [2] TORRENTIAL [-1] SLOV TH [1] VERY FAST [1] INTER TH [0] FAST [1] INTER MODERATE [1] EDDI Indicate for reach - pools a	Y [1] STITIAL [-1] Seconda Seconda (circle one and (circle one and ind riffies.	n Potential Contact Contact Pool / Current Maximum
Indicate of riffle- RIFFLE D BEST AREAS C D BEST AREAS C D BEST AREAS	for functional riffles; Best areas i obligate species: Ci EPTH RUN DEPTH \$> 10cm [2] (] MAXIMUM > 50cm [2] (]) RIFFLE imetric=0] DEDNESS
Comments		NOD. 5 TABLE (e.g., Large Grave) [1] UNSTABLE (e.g., Fine Gravel, Sand) [(Riffle / Run Maximum
6] GRADIEN DRAINAC	T ().7 fimi) UVERY LOW - LOW		%GLIDE:	Gradient Maximum 10
EPA 4520 11566"-	311592"=33,930'	964-2 966' =	21, 344fmi = 32.6"	761/mi braniert



SARIOSAID

128/09

N	VATERBODY CR	OSSING DATA	FORM	
PROJECT: Howald	as Tou	DATE:	1012	8109
LOCATION: ALTO L	JR = 192	FIELD CREW:	6207	GTC
WATERBODY ID	SALID	3AIR		*
GPS FEATURE TYPE (open/closed)(line/polygon)	Line			
PHOTO ID and DIRECTION	SONCE	FT.		
NAME (or tributary to)	PAYDEN	Run		
WATERBODY TYPE (stream/pond/ditch/cuivert)	SIREAN	ン		
FLOW REGIME (perennial/intermittent/ephemeral)	INTEDINI	Hont		
WIDTH (observed/OHW)	12/12	3		
DEPTH (observed/OHW)	1512	/		
FLOW RATE (dry/stagnant/low/moderate/high)	Low			
FLOW DIRECTION	NORTH			
SUBSTRATE (mud/silt/gravel/cobble/boulders/bedrock)	5:1+/	conhle/	RUCIL	
BANK VEGETATION (upland/wetland cover type)	SHRUD			

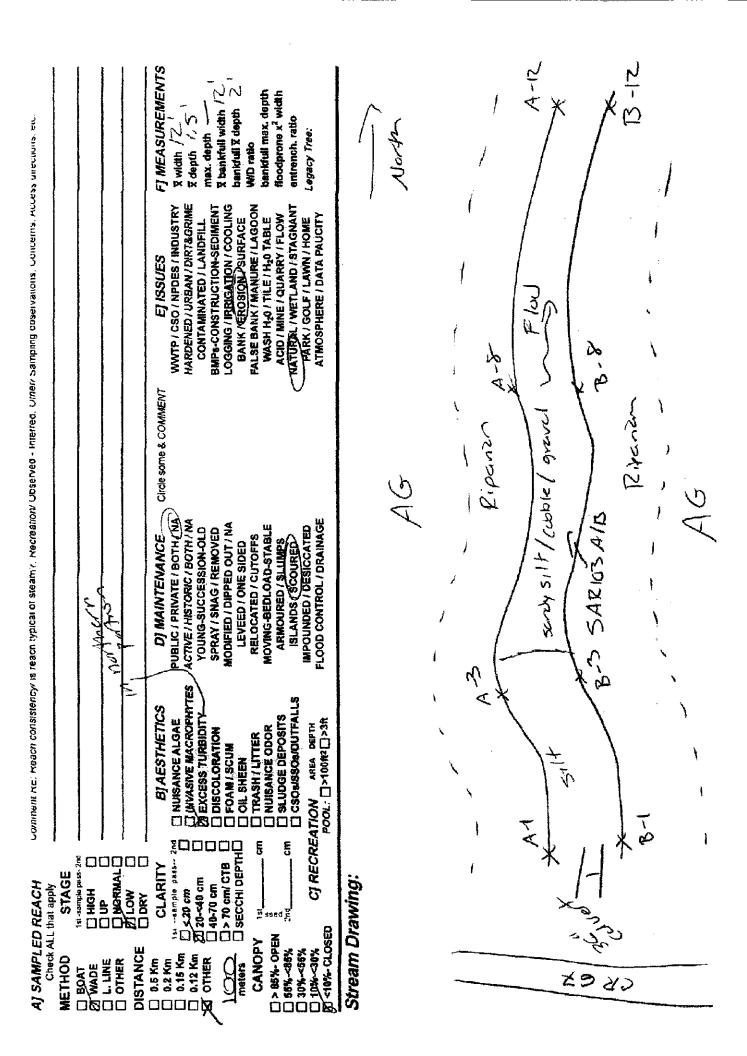
SKETCH: 36/1 Concrete aver p-1 アイナ У

3-1

KA-5 K KB-5 K B-6 K F-7 3-5 B-4 R P-10 \$ * * B-9 B-12 4÷

NOTES: TURbid / Undercut banks, Minor scour bank, riporion forested 15 on east bank, Recent Roin at bends on west bank, 30'on west bank MAMEN AS INTERMILLENT

<form><form><form></form></form></form>
Normal Code: Storers Full Name & Affiliation: DRAKS Course - TTerministic Code: River Code:
NORETH CR67 Scorers Full Name & Affiliation: SPARKS Course - TTex- River Code: Office working -
1] SUBSTRATE Check ONLY Two substrate TYPE BOXES. extinuale % or note every type present BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE ORIGIN OUALITY BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE ORIGIN OUALITY BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE ORIGIN OUALITY BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE ORIGIN OUALITY BOULDER 19 BOULDER 19 BOULDER 19 BOULDER 19 BOULDER 19 BOULDER 19 BEST TYPES POOL RIFFLE OTHER TYPES BEST TYPES I A or more [2] studge from point-sources) BEDROCK 19 Correnature substrates, ignore BEDROCK 19 Start TYPES: 4 or more [2] studge from point-sources) BEDROCK 19 Comments O's or less 10 Start rest 10 Start rest 10 Contents 20 or less 10 Start rest 10 Contents 20 or rest water, or deprover fast water, rare discussers 11 Contents 10 of highest quality in moderate or greater amounts, but not of highest quality or insmall amounts or limore common of marginal AMOUNT quality: 3-Highest quality in moderate or greater amounts, but not of highest quality or insmall amounts of highest (1) Conder that is stable, well developed rootwall in deep / test water, or deprover head find, fundinari pods. BOULDER 11 Construct BANKS [1] Check ONE in each category (07 2 4 average) SHALLOWS (IN SLOW WATER) [1] BOULDERS [1] Comments SHALLOWS (IN SLOW WATER) [1] BOULDERS [1] Comments SHALLOWS (IN SLOW WATER) [1] BOULDERS [1] Comments SHALLOWS (IN SLOW WATER) [1] BOULDERS [1] Channet [2] LOW [2] Channe
Check ONE (072 & average) Check ONE (072 & average) Check ONE (072 & average) ORIGIN <
BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE ORIGIN QUALITY BLDR /SLABS (10) HAADPAN (4) Limestone (1) HEATY (-2) HEATY (-2) HEATY (-2) BOULDER [9] DETRITUS [3] HAADPAN (4) HAADPAN (4) HEATY (-2) HEATY (-2) COBBLE [9] DETRITUS [3] HADPAN (4) WETLANDS (7) HEATY (-2) HADPAN (4) COBBLE [9] DETRITUS [3] HADPAN (4) WETLANDS (7) HADPAN (4) HADPAN (4) COBBLE [9] DETRITUS [3] HADPAN (4) WETLANDS (7) HADPAN (4) HADPAN (4) COBBLE [6] HADPAN (4) WETLANDS (7) HADPAN (4) HADPAN (4) HADPAN (4) COBBLE [6] HADPAN (4) WETLANDS (7) HADPAN (4) HADPAN (4) HADPAN (4) HADPAN (4)
BIDR SILABS [10] BILT [11] SILT [12]
PICCOBBLE B PILLING KLTZ PRETANDE [0] PILLING [0] PRETANDE [0] P
Image: Same (s)
NUMBER OF BEST TYPES: 4 or more [2] studge from point-sources) LAGUSTURINE [9] SI HORBIAL [9] 20 Comments (3 or less [0] SHALE [-1] COAL FINES [-2] NOME [1] NOME [1] 2] /NSTREAM COVER Indicate presence 0 to 3. 0-Absent, 1-Very small amounts or if more common of marginal automs of highest quality in moderate amounts. but not of highest quality or in-small amounts of highest quality in moderate or greater amounts. but not of highest quality or in-small amounts of highest quality in moderate or greater amounts. but not of highest quality or in-small amounts of highest quality in moderate or greater amounts. but not of highest quality or in-small amounts of highest quality in moderate or greater amounts. but not of highest quality or in-small amounts of highest quality in moderate or greater amounts. but not of highest quality in moderate or greater amounts but not of highest quality in moderate or greater amounts [1] AMOUNT quality 3-Highest quality in moderate or greater amounts but of highest quality or in-small amounts of highest quality in moderate or greater amounts [2] AMOUNT Check ONE (0/2 & average) dimeter of the greater amounts [1] POOLS > 700m [2] OXBOWS, BACKWATERS [1] MODERATE 25-75% [7] MODERATE 25-75% [7] dimeter of the greater amounts [1] ROOTWADS [1] AQUATIC MACROPHYTES [1] MEARLY ABSENT <5% [7]
Comments (3 or less [0] State[1] COAL FINES [-2] 2] /NSTREAM COVER indicate presence 0 to 3. 0-Absent; 1-Very small amounts or in more common of marginal quality: 2-Moderate amounts, but nod highest quality or in small amounts of highest quality in moderate or greater amounts, but nod highest quality in moderate or greater amounts, but nod highest quality in moderate or greater amounts, but nod highest quality in moderate or greater amounts, but nod highest quality in moderate or greater amounts, but nod highest quality in moderate or greater amounts, but nod highest quality in moderate or greater amounts, but nod highest quality in moderate or greater amounts, but nod highest quality in moderate or greater amounts, but nod highest quality in moderate or greater amounts, but nod highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large clamber of the pools > 70cm [2] AMOUNT Charter 10g that is stable, well developed rootwall in deep / set water, or deep, well-defined, functional pools. Extensive > 75% [7] Context 2-75% [7] POOLS > 70cm [2] OXBOWS, BACKWATERS [1] BOULDERS [1] OXBOWS, BACKWATERS [1] Starse > 54274 [3] Comments Shallows (in SLOW WATER) [1] BOULDERS [1] OXBOWS, BACKWATERS [1] Starse > 54274 [3] Comments Starse [1] BOULDERS [1] LOGS OR WOODY DEBRIS [1] Starse > 54274 [3] Comments Starse [1] BOULDERS [1] LOGS OR WOODY DEBRIS [1] Starse > 54274 [3] Starse [1]
2] //NSTREAM COVER Indicate presence 0 to 3. 0-Absent: 1-Very small amounts or if more common of marginal quality: 2-Moderate amounts, but not of highest quality or in-small amounts of highest quality: 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast watar, large dameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools. AMOUNT Quality: 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast watar, large dameter log that is stable, well defined, functional pools. MODERATE 25-75%, [7] Charters [1] POOLS > 70cm [2] OXBOWS, BACKWATERS [1] MODERATE 25-75%, [7] OVERHANGING VEGETATION [1] POOLS > 70cm [2] OXBOWS, BACKWATERS [1] MODERATE 25-75%, [7] ShalLOWS (IN SLOW WATER) [1] BOULDERS [1] Llogs or wooddy DEBRIS [1] MODERATE 25-75%, [7] Comments Gover (I) BOULDERS [1] Llogs or wooddy DEBRIS [1] MEARLY ABSENT <5%, [7]
quality: 2-Moderate amounts (e.g., very large boulders in deep or fast water, targe transmit is stable, well developed rootwal in deep / fast water, or deep, well-defined, functional pools. Check ONE (Or 2 & average) contracter log that is stable, well developed rootwal in deep / fast water, or deep, well-defined, functional pools. EXTENSIVE >75% [11] contracter log that is stable, well developed rootwal in deep / fast water, or deep, well-defined, functional pools. EXTENSIVE >75% [11] contracter log that is stable, well developed rootwal in deep / fast water, or deep, well-defined, functional pools. EXTENSIVE >75% [11] contracter log that is stable, well developed rootwal in deep / fast water, or deep. well-defined, functional pools. EXTENSIVE >75% [11] contracter log that is stable, well developed rootwal in deep / fast water, or deep. well-defined, functional pools. EXTENSIVE >75% [11] contracter log that is stable, well developed rootwal in deep / fast water. Moderate amounts (e.g., well-defined, functional pools. contracter log that is stable, well developed rootwal in deep / fast water. Moderate amounts (e.g., well-defined, functional pools. contracter log that is stable. Moderate amounts (e.g., well-defined, functional pools. Moderate amounts (fill in the stable well-defined, functional pools. contracter log that is stable. Moderate amounts (fill in the stable well-defined, functional pools. Moderate amounts (fill in the stable well-defined, functional pools. cont
quality: 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, targe diapeter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools. Image: Construction of the constructing of the construction of the construction of the cons
JONDERCUT BANKS [1] POOLS > 78 cm [2] OXBOWS, BACKWATERS [1] MODERATE 25-75% [7] OVERHANGING VEGETATION [1] ROOTWADS [1] AQUATIC MACROPHYTES [1] SPARSE 5<25% [3]
Image: Strain of the strain
RootMats [1] Cover Cover Sincents 3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY 3] HIGH [4] Excellent [7] NONE [6] HIGH [3] HIGH [3] MODERATE [3] GOOD [5] RECOVERED [4] MODERATE [2] LOW [2] FAIR [3] RECOVERING [3] LOW [1] NONE [1] POOR [1] RECENT OR NO RECOVERY [1] Channel [1] Comments Gilde Job Job Job
Maximum 20 3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY 21 HIGH [4] EXCELLENT [7] NONE [6] HIGH [3] MODERATE [3] GOOD [5] D RECOVERED [4] MODERATE [2] LOW [2] FAIR [3] RECOVERED [4] LOW [1] NONE [1] POOR [1] RECENT OR NO RECOVERY [1] Channel [1] Comments G[1] Channel [2] [1]
SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY # HIGH [4] = EXCELLENT [7] NONE [6] = HIGH [3] MODERATE [3] = GOOD [5] STRECOVERED [4] = HIGH [3] MODERATE [3] = GOOD [5] STRECOVERED [4] = HIGH [3] LOW [2] = FAIR [3] = RECOVERING [3] = LOW [1] NONE [1] = POOR [1] = RECENT OR NO RECOVERY [1] Channel [1] Comments = Gijde = Gijde = Gijde
SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY # HIGH [4] = EXCELLENT [7] NONE [6] = HIGH [3] MODERATE [3] = GOOD [5] STRECOVERED [4] = HIGH [3] MODERATE [3] = GOOD [5] STRECOVERED [4] = HIGH [3] LOW [2] = FAIR [3] = RECOVERING [3] = LOW [1] NONE [1] = POOR [1] = RECENT OR NO RECOVERY [1] Channel [1] Comments = Gijde = Gijde = Gijde
[A] HIGH [A] $[A]$ EXCELLENT [7] $[A]$ NONE [8] $[A]$ HIGH [3] $[A]$ MODERATE [3] $[G]$ GOOD [5] $[A]$ RECOVERED [A] $[A]$ MODERATE [2] $[A]$ LOW [2] $[A]$ FAIR [3] $[A]$ RECOVERING [3] $[A]$ MODERATE [2] $[A]$ NONE [1] $[A]$ FAIR [3] $[A]$ RECOVERING [3] $[A]$ LOW [1] $[A]$ NONE [1] $[A]$ POOR [1] $[A]$ RECENT OR NO RECOVERY [1] Channel $[A]$ OUT $[A]$ POOR [1] $[A]$ RECENT OR NO RECOVERY [1] $[A]$ Maximum 20
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $
D NONE [1] D POOR [1] D RECENT OR NO RECOVERY [1] Channel Maximum 20
Glide
4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)
L ROSION D WIDE > 50m [4] D FOREST, SWAMP [3] D CONSERVATION TILLAGE [1] D MONE / LITTLE [3] D D MODERATE 10-50m [3] D SHRUB OR OLD FIELD [2] D URBAN OR INDUSTRIAL [0]
TO MODERATE [2]
HEAVY / SEVERE [1] U VERY NARROW < 5m [1] FENCED PASTURE [1] Indicate predominant land use(s) D NONE [0] OPEN PASTURE, ROWCROP [0] past 100m ripertan. Represent
Comments Maximum D
5) POOL / GLIDE AND RIFFLE / RUN QUALITY
MAXIMUM DEPTH CHANNEL WIDTH CURRENT VELOCITY Recreation Potential
Check ONE (ONLY!) Check ONE (Or 2 & average) Check ALL (hat apply Primary Contact
0.7-<1m [4] POOL WIDTH = RIFFLE WIDTH [1] VERY FAST [1] INTERSTITIAL [-1] (circle one and comment on back)
2 0.4~0.7m (2)
□ < 0.2m [0] Indicate for reach - pools and riffles. Current <
Comments 18" DEEP (14572 mater) Maximum
Indicate for functional riffles; Best areas must be large enough to support a population
of riffle-obligate species: Check ONE (Or 2 & average). <u>Vano APPLE Internetvi</u> RIFFLE DEPTH RUN DEPTH RIFFLE / RUN SUBSTRATE RIFFLE / RUN EMBEDDEDNESS
BEST AREAS > 10cm [2] MAXIMUM > 50cm [2] STABLE (e.g., Cobble, Boulder) [2]
BEST AREAS 6-10cm [1] MAXIMUM < 50cm [1] MOD. STABLE (e.g., Large Gravel) [1] LOW [1] LOW [1] UNSTABLE (e.g., Fine Gravel, Sand) [0] MODERATE [0] Riffle (
[metric=0] Glide
RI GRADIENT / O
6] GRADIENT (69 f/mi) UVERY LOW - LOW [2-4] () %POOL: () %GLIDE: () Gradient (
6] GRADIENT (69 fr/mi) UVERY LOW - LOW [2-4] DRAINAGE AREA UMODERATE [6-10] TREAM WINTY 12 (mi2) HIGH - VERY HIGH [10-6] WRUN: WRUN: WRIFFLE: Maximum 10
DRAINAGE AREA MODERATE (6-10)



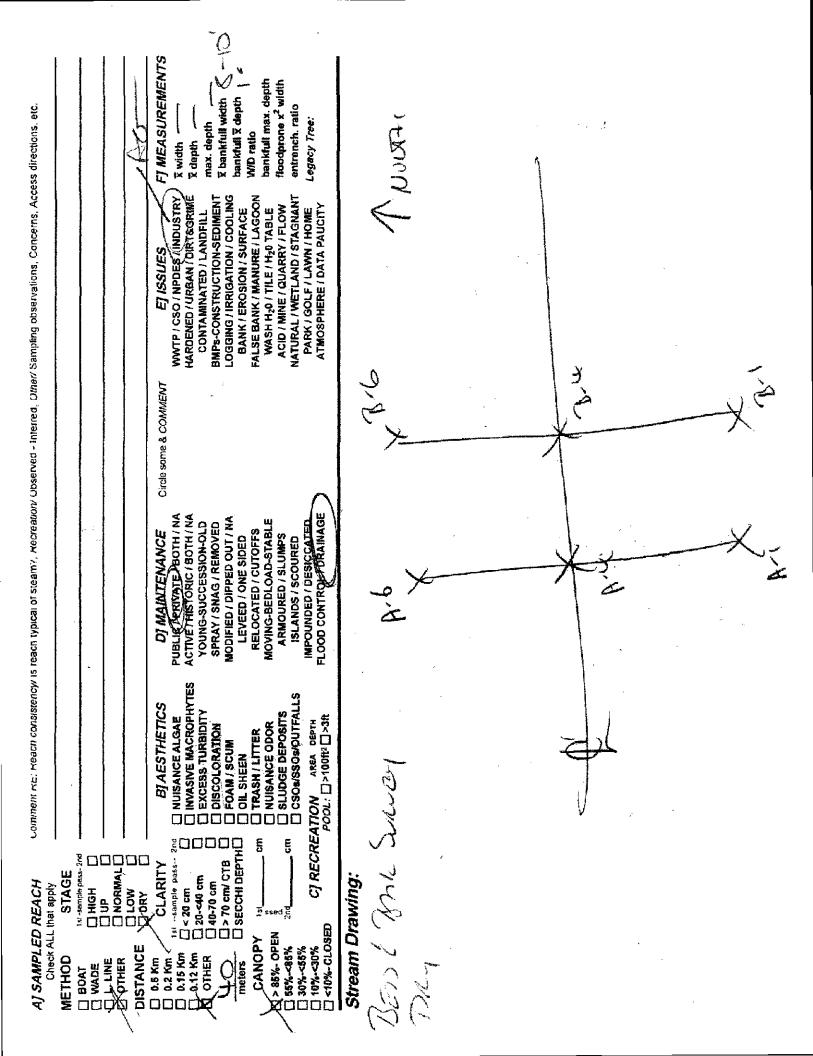
SA02135A13 WATE

10/22/09

· · ·	WATERBODY CROSSING DATA FORM
PROJECT: HOLDAL	DATE: 10/28/09
LOCATION: ALLE	NTG-102 FIELD CREW: DOT), GJC
WATERBODY ID	SARIOSAR
GPS FEATURE TYPE (open/closed)(line/polygon)	line(1-6)
PHOTO ID and DIRECTION	Photo 8 => Mil Photo 9=> Sade
NAME (or tributary to)	UNMANEN TRID to SCIOD River
WATERBODY TYPE (stream/pond/ditch/culvert)	AGDitz
FLOW REGIME (perennial/intermittent/ephemeral) WIDTH	Echemeiar
(observed/OHW) DEPTH	- 18-10'
(observed/OHW) FLOW RATE	
(dry/stagnant/low/moderate/high) FLOW DIRECTION	<u>FDRT</u>
SUBSTRATE	NORDZ ADOS ON BEAT VER
(mud/silt/gravel/cobble/boulders/bedrock) BANK VEGETATION	Dilty Cla
(upland/wetland cover type)	Early Successiver_
AWERT	*A-6 9 × B-6 954 DENVER -Reed Compy C -la Reguerd
	-A-4 3-4
FISH AND WILDLIFE OBSER	VATIONS A-1 78-1
	(8)
NOTES:	no evorin, no start, Bab 30
·	

NOE mamed

SAN	- DY ATTS			10/22/29
	ChicEPA	Qualitative Habitat E and Use Assessme		QHEI Score: 36
~	Stream & Location: Unnf	med Traib to Sei	Oto River RM.	Date: 10/28/09
13,40x	V NULTH OF CRISO	Scorers Full	I Name & Affiliation: DELA	MUNE, / COLLINS - TTEL
	River Code:	_STORET #: La	1./ Long.: 40.6254 1	33-2017- Office verified D
	1] SUBSTRATE Check ONLY Two estimate % pr got	substrate TYPE BOXES: every type present	Check ONE (C	r 2 & sverage)
	BEST TYPES POOL RIFFI		ILE ORIGIN	QUALITY
		MARDPAN [4]		HEAVY [-2]
	COBBLE [8]	_ [] [] DETRITUS [3] _, [] [] MUCK [2] ,	U WETLANDS [0]	
	GRAVEL [7] GRAVEL [7]		SANDSTONE (0)	
	BEDROCK (5)	(Score natural substrates, ior		
		4 or more [2] sludge from point-source		MODERATE [-1] Maximum S NORMAL [0] 20
	Comments	3 or less (0) \	COAL FINES [-2]	Change Bil
	2] INSTREAM COVER Indicate p	means () to 2: 0 Abcost: 1 \//	amounts as if more common of me	
	quality; 2	Moderate amounts, but not of highest	quality or in small amounts of high	est Check ONE (Or 2 & average)
	 quality; 3-Highest quality in moderate diameter log that is stable, well develo 	red rootwad in deep / fast water, or de	ep, well-defined, functional pools,	EXTENSIVE >75% [11]
	UNDERCUT BANKS [1]	POOLS > 70cm [2] [1] ROOTWADS [1]	OXBOWS, BACKWATERS [1] AQUATIC MACROPHYTES [5]	MODERATE 25-75% [7]
	SHALLOWS (IN SLOW WATER		LOGS OR WOODY DEBRIS	
	ROOTMATS [1]			Cover
	Comments HFIRIALEON			Maximum 20
	31 CHANNEL MORPHOLOGY	heck ONE in each category (Or 2 & an	verage)	
	SINUOSITY DEVELOPME	NT CHANNELIZATION	STABILITY	
	☐ HIGH [4]	[7] [] NONE [6] [] RECOVERED [4]		
		EKRECOVERING [3]		
	Comments		(Y [1]	Channel A
				20
	4] BANK EROSION AND RIPA			bank & average)
*		$\frac{PARIAN WIDTH}{E > 50m [4]} = \frac{1}{D} \frac{R}{E = EORES}$		CONSERVATION TILLAGE [1]
		ERATE 10-50m [3]		URBAN OR INDUSTRIAL [0]
	MODERATE [2] INA	2ROW 5-10m 121 🖊 🔽 🗌 RESIDE	NTIAE, PARK, NEW FIELD [1]	MINING / CONSTRUCTION [0]
·	XXNO			licate predominant land use(s) st 100m riparian. Riparian
	Comments	~/~		Maximum
	5] POOL / GLIDE AND RIFFLE			
	MAXIMUM DEPTH CI		URRENT VELOCITY	Recreation Potential
		: ONE (Or 2 & average) IDTH > RIFFLE WIDTH (2) 🛛 TORRI	Check ALL that apply ENTIAL [-1] C SLOW [1]	Primary Contact
	0.7~1m [4] DOOL W	IDTH = RIFFLE WIDTH [1] 🛛 VERY	FAST [1] INTERSTITIAL [-	Secondary Contact
	□ 0.4-<0.7m [2] □ POOL W □ 0.2-<0.4m [1]	DTH < RIFFLE WIDTH [0] DFAST	[1]	-2] Pool / (
	[] < 0.2m [0]		ate for reach - pools and riffles.	Gurrent
	<i>Comments</i>	une - DRy		Maximum
	Indicate for functional riff	es; Best areas must be large	enough to support a pop	
	of riffle-obligate species: RIFFLE DEPTH RU	Check ONE (Or 2 & N DEPTH RIFFLE / RUN	average). NSUBSTRATE RIFFLE /	
	BESTAREAS > 10cm [Z] MAXI	4UM > 50cm [2] 🔲 STABLE (e.g., Co	obble, Boulder) [2]	
	BESTAREAS 5-10cm [1] MAXI	6UM < 50cm [1] 🗋 MOD. STABLE (e	e.g., Large Gravel) [1]	
	BEST AREAS < 5cm [metric=0]		Fine Gravel, Sand) [0]	MODERATE [0] Run EXTENSIVE [1] Maximum
	Comments '	lily		THREAD ALL OF THE ALL
		VERY LOW - LOW [2-4]	%POOL:	
STREAM		MODERATE [6-10] HIGH - VERY HIGH [10-6]	%RUN: 🖉 %RIF	
		15 × 12/1	ET.	06/16/05
		165 327601	5/00 =9	661/mi graniat
			1523 mi - 1	in orthe clarking



WATERBODY CROSSING DATA FORM					
PROJECT: HARD' WIND FALL	DATE: 10129109				
LOCATION: Blun We 675 68	FIELD CREW: ATT GJC				

WATERBODY ID	FRUIDAIR .	
	SUTORI	
GPS FEATURE TYPE	1 1 1 1 1 1 1 1 1 1	
(open/closed)(line/polygon)	(ine (1-14)	
PHOTO ID and DIRECTION		
	Anto 46(15) => NOR57+ jon -1/ Philo 3=35 (pon -	- 14-
NAME	Trib to Scioto care	
(or tributary to)	Trib to Scioto Live	
WATERBODY TYPE		
(stream/pond/ditch/culvert)	AGTISTEL	
FLOW REGIME		
(perennial/internittent/ephemeral)	EPHEMERAL	
WIDTH		
(observed/OHW)	- / 6-12'	
DEPTH		
(observed/OHW)		
FLOW RATE		
(dry/stagnant/low/moderate/high)	dry U Some NUMB Areas	
FLOW DIRECTION		
	NORTH	
SUBSTRATE		
(mud/silt/gravel/cobble/boulders/bedrock)	Silty Clay/Cla	
BANK VEGETATION		
(upland/wetland cover type)	EARLY SUCCESSIVAL	

SKETCH: -> NORATH

- CRACIEIS Substrate - Some Exposes chime

A-14 -X---+ A @ > A-1 Source Source SILVIIO A/I] SZUOZOAIB A-2 N --- - +--1-5' - Some scarg >4540 slong - 1:1 inputy - min Slowing Sih Share ~ 2:1 FISH AND WILDLIFE OBSERVATIONS:

DEEK TRActs Some min nach - buccues

NOTES: Concited to STUDZO AID to SUT & STUDIFAR TO Naist Crindins' Scons VEI bec

SIGNOAR	10/24/00
ChicEPA Qualitative Habitat Evaluation Index and Use Assessment Field Sheet	QHEI Score: 38
	M: Date:/ 0/ 24/04
~ TOO NORTH & CRITO Scorers Full Name & Affiliation: DE	
River Code:STORET #: Lat./ Long.: 40.6386	183. 3626 Office verified
1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present Check ONE	(Or 2 & average)
BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE ORIGIN	
	SILT SILT Substrate
COBBLE [8]	
	DEA DEXTENSIVE [-2]
BEDROCK [5] (Score natural substrates; ignore IRIP/RAP [0]) NUMBER OF BEST TYPES: 4 or more [2] sludge from point-sources) LACUSTURINE [0] III	NORMAL [0] 20
Comments	
2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, lard diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional poor UNDERCUT BANKS [1] POOLS > 70cm [2] OXBOWS, BACKWATERS OVERHANGING VEGETATION [1] ROOTWADS [1] AQUATIC MACROPHYTES SHALLOWS (IN SLOW WATER) [1] BOULDERS [1] LOGS OR WOODY DEBRIS	ighest Check ONE (Or 2 & average) (1) EXTENSIVE >73% [11] (1) C MODERATE 25-75% [7] (1) SPARSE \$<25% [3]
ROOTMATS[1]	Cover
HERMAN	Maximum 20
3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)	
SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY	• • •
HIGH [4] EXCELLENT [7] NONE [6] HIGH [3] MODERATE [3] GOOD [5] RECOVERED [4] MODERATE [2]	•
LOW [2] FAIR [3] RECOVERING [3] LOW [1] NONE [1] FOOR [1] RECENT OR NO RECOVERY [1] Comments	Channel 7
	20
4) BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 p River right looking downstream RIPARIAN WIDTH ELOOD PLAIN ONAL ITY	per bank & everage)
EROSION WIDE > 50m [4] EOREST, SWAMP [3] NONE / LITTLE [3] MODERATE 10-60m [3] CL SHRUB OR OLD FIELD [2] MODERATE [2] NARROW 5-10m [2] RESIDENTIAL, PARK, NEW FIELD [1] HEAVY / SEVERE [1] VERY NARROW < 5m [1] FENCED PASTURE (NOW CROP [0])	CONSERVATION TILLAGE [1] CONSERVATION TILLAGE [1] CURBAN OR INDUSTRIAL [9] CURBAN OR INDUSTRIAL
Comments //	Maximum 10
5) POOL / GLIDE AND RIFFLE / RUN QUALITY	
MAXIMUM DEPTH CHANNEL WIDTH CURRENT VELOCITY	Recreation Potential
Check ONE (ONLY!) Check ONE (Or 2 & average) Check ALL that apply 2 > 1m [6] DOCL WIDTH > RIFFLE WIDTH [2] TORRENTIAL [-1] SLOW [1]	Primary Contact Secondary Contact
□ 0.7-<1m [4] □ POOL WIDTH = RIFFLE WIDTH [1] □ VERY FAST [1] □ INTERSTITIAL □ 0.4-<0.7m [2] □ POOL WIDTH < RIFFLE WIDTH [0] □ FAST [1] □ INTERMITTEN	- [-1] (cleate ene and comment on back)
.□ 9.2~0.4m [1] □ MODERATE [1] □ EDDIES [1]	Pool /
Comments	Currente Meximum
Indicate for functional riffles; Best areas must be large enough to support a p	R
of riffle-obligate species: Check ONE (Or 2 & average).	Opuration ON RIFFLE [metric=0]
RIFFLE DEPTH RUN DEPTH RIFFLE / RUN SUBSTRATE RIFFLE D BESTAREAS > 19cm [2] MAXIMUM > 50cm [2] D STABLE (e.g., Cobbie, Bouker) [2]	E / RUN EMBEDDEDNESS
📋 BEST AREAS 5-10cm [1] 🛛 LJ MAXIMUM < 50cm [1] 🛄 MOD. STABLE (e.g., Large Gravel) [1]	
BEST AREAS < 5cm I UNSTABLE (e.g., Fine Gravel, Sand) [0] (metric=0] Comments DCLU	
DRAINAGE AREA NODERATE (8-10)	GLIDE: Gradient
EPA 4520	06/16/06
960-2955=22,5098-3 5	53 Gt/mi cransest

FI MEASUREMENTS bankfull max. depth Boodprone x² width bankfull ž depth X bankfull width entrench. ratio max. depth Legacy Tree: SILLOID AIL W/D ratio X depth X width LOGGING / IRRIGATION / COOLING FALSE BANK / MANURE / LAGOON HARDENED / URBAN / DIRT&GRIME BMPs-CONSTRUCTION-SEDIMENT NATURAL / WETLAND / STAGNANT WWTP / CSO / NPDES/ INDUSTR) ACID / MINE / QUARRY / FLOW ATMOSPHERE / DATA PAUCITY **BANK / EROSION / SURFACE** WASH H20 / TILE / H20 TABLE CONTAMINATED / LANDFILL PARK / GOLF / LAWN / HOME EI ISSUES. せって チャ Circle some & COMMENT STUDIO RID IMPOUNDED TDESICCATED FLOOD CONTROL PORAINAGE PUBLIQ PRIVATE BOTH / NA ACTIVE/HISTORIC/BOTH/NA **WODIFIED / DIPPED OUT / NA** MOVING-BEDLOAD-STABLE VOUNG-SUCCESSION-OLD SPRAY / SNAG / REMOVED すとうつく DI MAINTENANCE **RELOCATED / CUTOFFS** ARMOURED / SLUMPS ISLANDS SCOURED LEVEED / ONE SIDED TRASH / LITTER NO CO C INVASIVE MACROPHYTES BIAESTHETICS EXCESS TURBIDITY NUISANCE ALGAE POOL: 0>100ft20>3ft AREA DEPTH D NUISANCE ODOR DISCOLORATION FOAM / SCUM **OIL SHEEN** JED & June Sur CJ RECREATION ۵ğ E ŝ STUOZOA12 1st -somple page- 2nd --sample pass--D > 70 cm/ CTB **ČLARITY** STAGE 🗌 20-c40 cm 1 40-70 cm Stream Drawing: AJ SAMPLED REACH Check ALL that apply < 20 cH</p> **G G R A** 5 CION CLOSED 131 X > 85%- OPEN CANOPY 0 55%-45% 0 30%-45% 0 10%-40% DISTANCE And State OTHER OTHER 0.5 Km 0.2 Km METHOD 0.15 Km 0.12 Km OTHER C WADE D BOAT

Uptiment rtc: Reach consistency is reach typical of steam;, recreation/ Ubserved - Interred. Other/ Sampling observations, Concerns, Access directions, etc.

STB79026

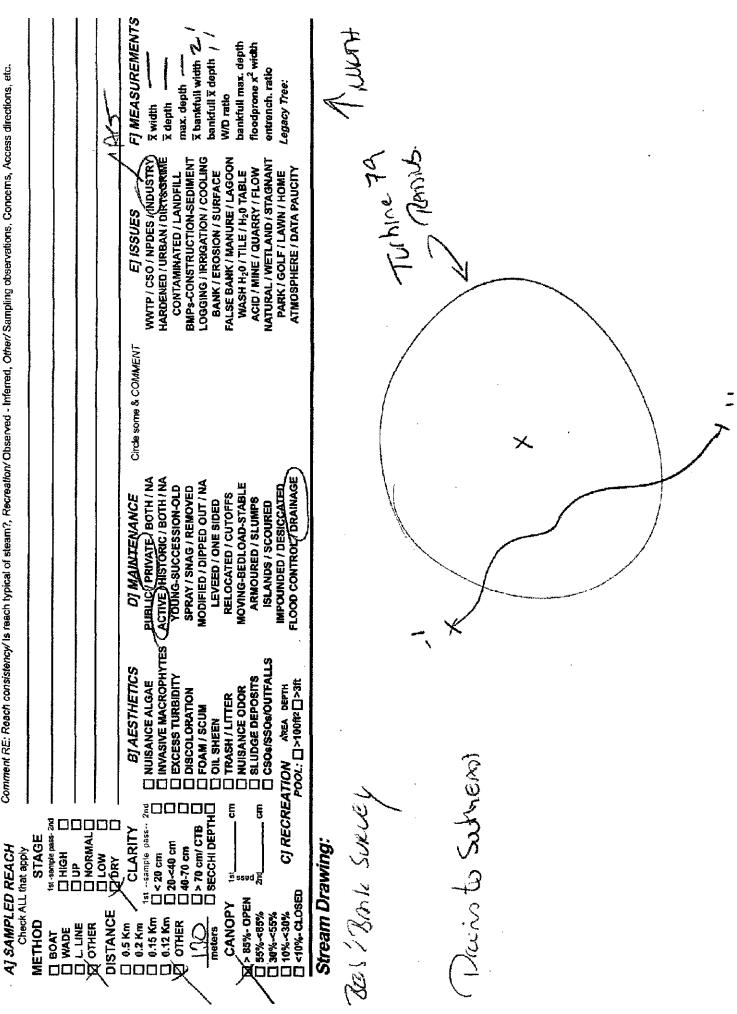
10/22/09

	WATERBODY CR	OSSING DATA	FORM		
PROJECT: HORDinh	In PAR	DATE:	10/2	2,09	
LOCATION: 400	-79	FIELD CREW	I: KA	<u>sms</u>	
WATERBODY ID	10-0-	71			٦
GPS FEATURE TYPE	STISTRO	(6			-
(open/closed)(line/polygon) PHOTO ID and DIRECTION	19 = DNURA	<u>, , , , , , , , , , , , , , , , , , , </u>	<u></u>		-
	20-3 520	-		50.00	_
(or tributary to)	Unnamo	5- FIDO	J TOUGAN	s scarbo	
WATERBODY TYPE (stream/pond/ditch/culvert)	AG Ditel	\sim (SN	AII)		
FLOW REGIME (perennial/intermittent/ephemeral)	EPHEM	ERA			
WIDTH (observed/OHW)	-/z'				1
DEPTH					-
(observed/OHW) FLOW RATE				··	-
(dry/stagnant/low/moderate/high) FLOW DIRECTION	DRY				_
SUBSTRATE	-Jost-		<u> </u>		-
(mud/silt/gravel/cobble/boulders/bedrock)	Silty Cla	a wis	une of	Avel (SCATT	pr.
BANK VEGETATION (upland/wetland cover type)	TORUS 3	UCCRSSION	A.		
SKETCH:		-		<	
K	B79026-1			Sinvare	
	X			at back in	
N				(Z'I in place	~)
om					
-	$\langle \rangle$				
			1		
	\sim	5TB 75102			
	>	KIB PPICE			
FISH AND WILDLIFE OBSEF	IVATIONS:	51			
- FLOC	this to T.	RAD A	(ireda_		
hange DEER)		•
NOTES:					•
StiRicite / Swac	marka	- K. hu	MANC		
- Marine Julia Com			<u>710 °C</u>		•

NOT MAMED.

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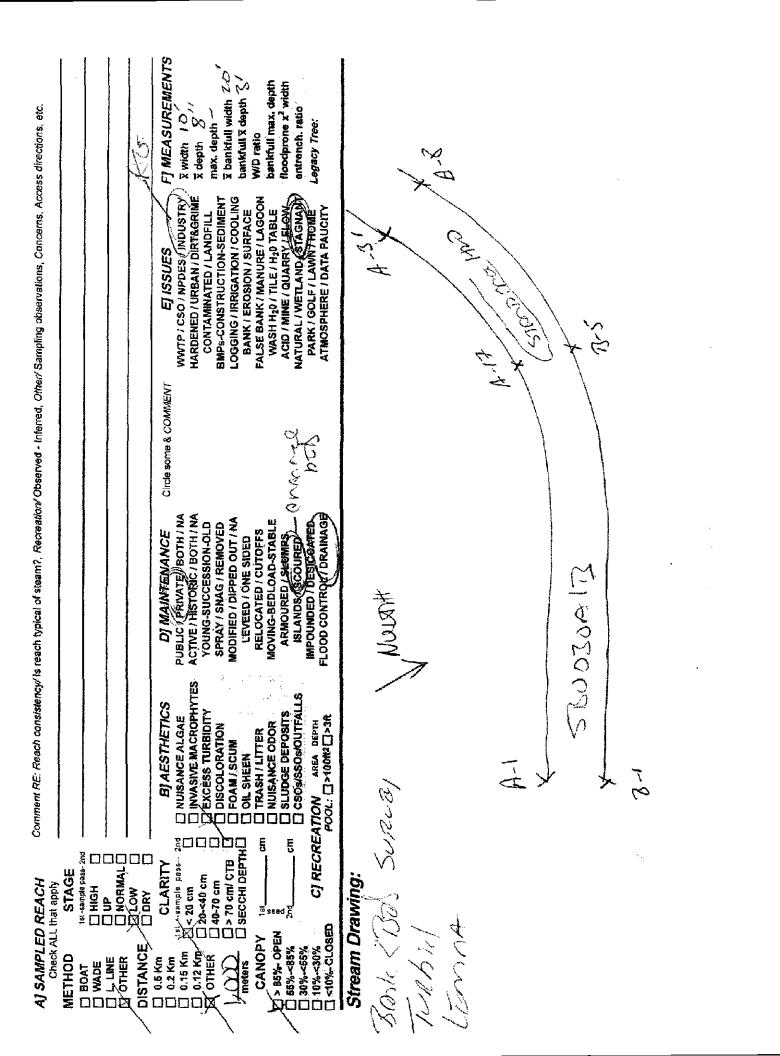
571574026	10122101
	ssment Field Sheet QHEI Score:
Stream & Location: Unnamed Als Dilch	- Drain 10 Scient RM: Date: 10/22/09 rers Full Name & Affiliation: DECANUNT, 1500415 -TTEL
River Code:STORET #:	Lat./ Long.: 42.6999 183.7506
1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present BEST TYPES POOL RIFFLE OTHER TYPES P	Check ONE (Or 2 & average)
BLS1 11725 POOL RIFFLE OTHER 11725 P BLDR /SLABS [10] M	
	WETLANDS [0] SILT NORMAL [0]
SAND [6] [7/1] ARTIFICIAL [0]	SANDSTONE [0] SODED EXTENSIVE [-2]
Score natural sub NUMBER OF BEST TYPES: 4 or more [2] sludge from (point-sources) [] LACUSTURINE [0] 29 78 [] MODERATE [-1] Maximum point-sources) [] LACUSTURINE [0] 20 [] SHALE [-1] [] NONE [1]
Comments 3 or less [0]	COAL FINES [-2]
quality; 3-Highest quality in moderate or greater amounts (e.g., ver diameter log that is stable, well developed rootwad in deep / fast w UNDERCUT BANKS [1] POOLS > 70cm OVERHANGING VEGETATION [1] ROOTWADS [1] SHALLOWS (IN SLOW WATER) [1] BOULDERS [1] ROOTMATS [1] BOULDERS [1] ROOTMATS [1]	cf highest quality or in small amounts of nignest y large boulders in deep or fast water, large rater, or deep, well-defined, functional pools. [] EXTENSIVE >75% [11] [] OXBOWS, BACKWATERS [1] [] MODERATE 25-75% [7] [] AQUATIC MACROPHYTES [1] [] XSPARSE 5-<25% [3]
3] CHANNEL MORPHOLOGY Check ONE in each category	
	ATION STABILITY
	MODERATE [2]
b INONE [1] POOR [1] PRECENT OR NOT Comments	
4) BANK EROSION AND RIPARIAN ZONE Check ONE River right looking downatream _ RIPARIAN WIDTH	E in each category for EACH BANK (Or 2 per bank & average)
MODERATE [2]	RESIDENTIAL, PARK, NEW FIELD [1] . MINING / CONSTRUCTION [0]
HEAVY / SEVERE [1] U VERY NARROW < 5m [1] [] VERY NARROW < 5m [1] [] VERY NARROW < 5m [1] []	FENCED PASTURE [1] Indicate predominant land use(s) Popen PASTURE ROWCROP[0] past 100m tiperian. Riparian
A GINORE / CITELE [5] Imoderate to som [3] Imoderat	Maximum O
	10
MAXIMUM DEPTH CHANNEL WIDTH Check ONE (ONLY!) Check ONE (Or 2 & average)	
	CURRENT VELOCITY Check ALL that apply Recreation Potential Primary Contact
	Check ALL that apply Primary Contact Check ALL that apply TORRENTIAL [-1] SLOW [1] VERY FAST [1] INTERSTITIAL [-1]
0.7<1m [4] POOL WIDTH = RIFFLE WIDTH [1] 0.4<0.7m [2] POOL WIDTH < RIFFLE WIDTH [0] 0.2<0.4m [1] 0.2<0.4m [1]	Check ALL that apply Check ALL
0.7~1m [4] POOL WIDTH = RIFFLE WIDTH [1] 0.4~0.7m [2] POOL WIDTH < RIFFLE WIDTH [0] 0.2~0.4m [1] 0.2~0.4m [0]	Check ALL that apply Check ALL that apply Check ALL that apply TORRENTIAL [-1] Source and comment on book Frimary Contact Secondary Contact (atrose one and comment on book) Frimary Contact Secondary Contact Secon
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Check ALL that apply Check ALL that apply TORRENTIAL [-1] SLOW [1] VERY FAST [1] INTERSTITIAL [-1] A SAST [1] INTERMITTENT [-2] MODERATE [1] EDDIES [1] Indicate for reach - pools and riffles. Primary Contact Secondary Contact Secondary Contact Current Network on and comment on back Primary Contact Secondary Co
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Check ALL that apply Creck ALL that apply TORRENTIAL [-1] SLOW [1] VERY FAST [1] INTERSTITIAL [-1] ANDERATE [1] EDDIES [1] Indicate for reach - pools and riffles. Primary Contact Secondary Contact (droke one and comment on back) Primary Contact Secondary Co
0.7~tm [4] POOL WIDTH = RIFFLE WIDTH [1] 0.4~0.7m [2] POOL WIDTH < RIFFLE WIDTH [0] 0.2~0.4m [1] 0.2~0.4m [1] 0.2~0.2m [0] Comments Indicate for functional riffles; Best areas must of riffle-obilgate species: Check OF RIFFLE DEPTH RUN DEPTH RIFFLE BEST AREAS > 10cm [2] MAXIMUM > 50cm [2] STABL	Check ALL that apply Check ALL that apply TORRENTIAL [-1] SLOW [1] CVERY FAST [1] INTERSTITIAL [-1] FAST [1] INTERMITTENT [-2] MODERATE [1] EDDIES [1] Indicate for reach - pools and riffles. be large enough to support a population NE (Or 2 & average). LE / RUN SUBSTRATE RIFFLE / RUN EMBEDDEDNESS LE (e.g., Cobble, Boulder) [2] NONE [2] STABLE (e.g., Large Gravet) [1]
0.7~(in [4] POOL WIDTH = RIFFLE WIDTH [1] 0.4~0.7m [2] POOL WIDTH < RIFFLE WIDTH [0] 0.2~0.4m [1] 0.2~0.4m [1] 0.2~0.4m [1] 0.2~0.2m [0] Comments Indicate for functional riffles; Best areas must of riffle-obilgate species: Check OI RIFFLE DEPTH BEST AREAS > 10cm [2] MAXIMUM > 50cm [2] BEST AREAS > 10cm [2]	Check ALL that apply Check ALL that apply TORRENTIAL [-1] SLOW [1] CVERY FAST [1] INTERSTITIAL [-1] FAST [1] INTERMITTENT [-2] MODERATE [1] EDDIES [1] Indicate for reach - pools and riffles. be large enough to support a population NE (Or 2 & average). LE / RUN SUBSTRATE RIFFLE / RUN EMBEDDEDNESS LE (e.g., Cobble, Boulder) [2] NONE [2] STABLE (e.g., Large Gravel, Sand) [0] UNODERATE [0] Riffle / (Compared Sand) [0]
0.7~tm [4] POOL WIDTH = RIFFLE WIDTH [1] 0.4~0.7m [2] POOL WIDTH < RIFFLE WIDTH [0] 0.2~0.4m [1] 0.2~0.4m [1] 0.2~0.2m [0] Comments Indicate for functional riffles; Best areas must of riffle-obligate species: Check OF RIFFLE DEPTH RUN DEPTH RIFFL BEST AREAS > 10cm [2] MAXIMUM > 50cm [2] STABL BEST AREAS 5-10cm [1] MAXIMUM < 50cm [1] MOD, 50cm [2] BEST AREAS 5-10cm [1] MAXIMUM < 50cm [1] MOD, 50cm [1] BEST AREAS 5-10cm [1] MAXIMUM < 50cm [1] MOD, 50cm [2] BEST AREAS 5-10cm [1] MAXIMUM < 50cm [1] MOD, 50cm [1] BEST AREAS 5-10cm [1] MAXIMUM < 50cm [1] MOD, 50cm [1] BEST AREAS 5-10cm [1] MAXIMUM < 50cm [1] MOD, 50cm [1] BEST AREAS 5-10cm [1] MAXIMUM < 50cm [1] MOD, 50cm [1] BEST AREAS 5-10cm [1] MAXIMUM < 50cm [1] MOD, 50cm [1] BEST AREAS 5-10cm [1] MAXIMUM < 50cm [1] MAXIMUM < 50cm [1]	Check ALL that apply Check ALL that apply TORRENTIAL [-1] SLOW [1] CVERY FAST [1] INTERSTITIAL [-1] FAST [1] INTERMITTENT [-2] MODERATE [1] EDDIES [1] Indicate for reach - pools and riffles. be large enough to support a population NE (Or 2 & average). LE / RUN SUBSTRATE RIFFLE / RUN EMBEDDEDNESS LE (e.g., Cobble, Boulder) [2] NNONE [2] STABLE (e.g., Large Gravel, Sand 10]
0.7~(im [4] POOL WIDTH = RIFFLE WIDTH [0] 0.4~0.7m [2] POOL WIDTH < RIFFLE WIDTH [0] 0.2~0.4m [1] 0.2~0.4m [1] 0.2~0.4m [1] 0.2~0.4m [1] 0.2~0.2m [0] Comments Indicate for functional riffies; Best areas must of riffie-obligate species: Check OF RIFFLE DEPTH RUN DEPTH RIFFL BEST AREAS > 10cm [2] MAXIMUM > 50cm [2] STABL BEST AREAS 5-10cm [1] MAXIMUM < 50cm [1] MOD. 5 BEST AREAS 5-00cm [2] UNSTA	Check ALL that apply TORRENTIAL [-1] SLOW [1] VERY FAST [1] INTERSTITIAL [-1] FAST [1] INTERMITTENT [-2] MODERATE [1] EDDIES [1] Indicate for reach - pools and riffles. Pool / Current Maximum 12 be large enough to support a population NE (Or 2 & average). LE / RUN SUBSTRATE RIFFLE / RUN EMBEDDEDNESS LE (e.g., Cobble, Boulder) [2] NONE [2] STABLE (e.g., Large Gravel) [1] LOW [1] ABLE (e.g., Fine Gravel, Sand) [0] %POOL: %GLIDE: Gradient Maximum 8
□ 0.7 <tim [4]<="" td=""> □ POOL WIDTH = RIFFLE WIDTH [0] □ 0.4 < 0.7m [2] □ POOL WIDTH < RIFFLE WIDTH [0] □ 0.2 <<0.4m [1] □ < 0.2m [0] Comments □ 2.40.4m [1] □ < 0.2m [0] Comments Indicate for functional riffles; Best areas must of riffle-obligate species: Check O RIFFLE DEPTH RUN DEPTH RIFFL □ BEST AREAS > 10cm [2] □ MAXIMUM > 50cm [2] □ STABL □ BEST AREAS > 5.10cm [1] □ MAXIMUM < 50cm [1] □ MOD.5 □ BEST AREAS > 5.10cm [1] □ MAXIMUM < 50cm [1] □ MOD.5 □ BEST AREAS > 5.10cm [1] □ MAXIMUM < 50cm [2] □ STABL □ BEST AREAS > 5.10cm [1] □ MAXIMUM < 50cm [1] □ MOD.5 □ BEST AREAS > 5.10cm [1] □ MAXIMUM < 50cm [1] □ MOD.5 □ BEST AREAS > 5.10cm [1] □ MAXIMUM < 50cm [1] □ MOD.5 □ BEST AREAS > 5.10cm [1] □ MAXIMUM < 50cm [1] □ MOD.5 □ BEST AREAS = 5.10cm [1] □ MAXIMUM < 50cm [2] □ STABL □ BEST AREAS = 5.10cm [1] □ MAXIMUM < 50cm [2] □ MAXIMUM < 50cm [1] □ BEST AREAS = 5.10cm [1] □ MAXIMUM < 50cm [1] □ MAXIMUM < 50cm [1] □ DRAINAGE AREA □ MODER</tim>	Check ALL that apply Check ALL that apply TORRENTIAL [-1] SLOW [1] VERY FAST [1] INTERSTITIAL [-1] FAST [1] INTERMITTENT [-2] MODERATE [1] EDDIES [1] Indicate for reach - pools and riffles. Pool / Current Maximum 12 be large enough to support a population NE (Or 2 & average). LE / RUN SUBSTRATE RIFFLE / RUN EMBEDDEDNESS LE (e.g., Cobble, Boulder) [2] NONE [2] STABLE (e.g., Large Gravel) [1] LOW [1] ABLE (e.g., Fine Gravel, Sand) [0] %POOL: %GLIDE: Gradient Maximum 8



Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

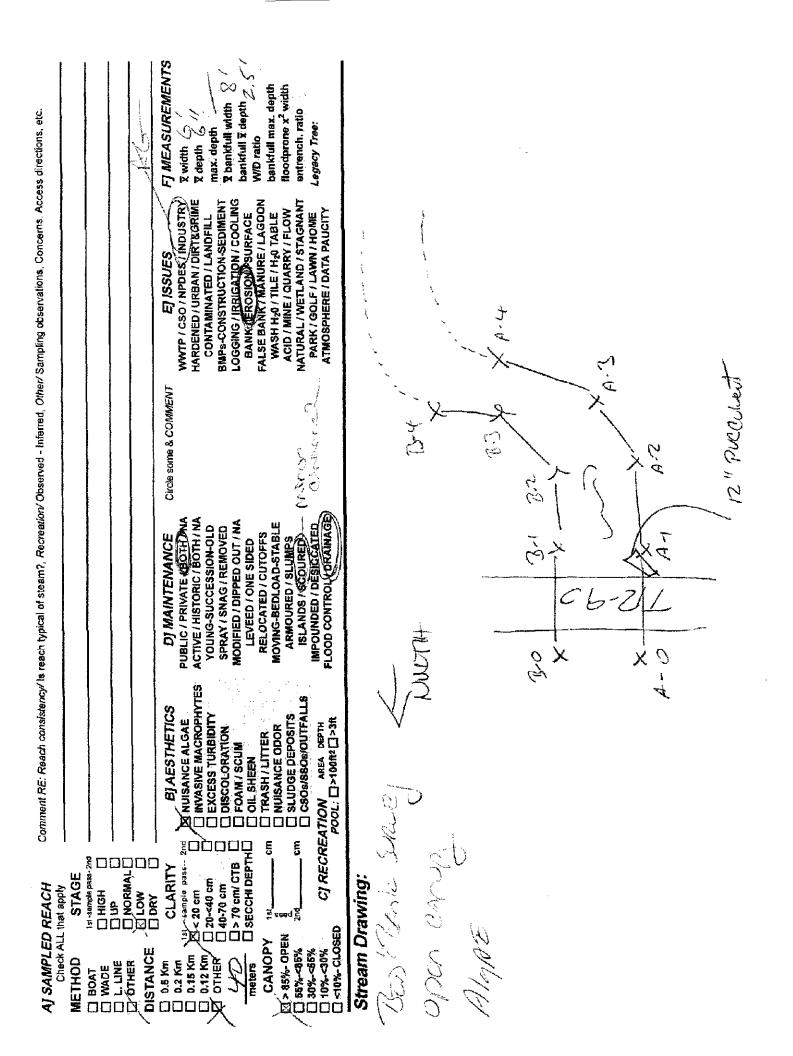
WATERBODY CROSSING DATA FORM ು 10/23/ PROJECT: DATE: FIELD CREW: DELPATION 1 SPACKS LOCATION: WATERBODY ID GPS FEATURE TYPE 7 (open/closed)(line/polygon) PHOTO ID and DIRECTION RONT 2 NAME (or tributary to) WATERBODY TYPE (stream/pond/ditch/culvert) FLOW REGIME (perennial/intermittent/ephemeral) 120 WIDTH 10 (observed/OHW) DEPTH જી (observed/OHW) FLOW BATE (dry/stagnant/low/moderate/high) FLOW DIRECTION SUBSTRATE (mud/silt/gravel/cobble/boulders/bedrock) BANK VEGETATION VCIA (upland/wetland cover type) 2.2 Sa 18274 311248 SKETCH: 45-1093 NOUTH 21 NUCR 6' 四十小 ſ \bigcirc or capili j 20 13' s. 18" prc Culvear Dept-ob work ø 17 ~!· A-2 A-3 D-4 A-5 A-6 A-7 A-8 _12.1 A-1 52er ÷، 11-4 1)-7 2-2 Upinas Foreist FISH AND WILDLIFE OBSERVATIONS: NOTES: NAVIN WALK わかたれのも GLOMMAL MADRES SCIDIO RIVER THEID

SB	UOJOAIZ		10123109
	ChicEPA	Qualitative Habitat Evaluation Index and Use Assessment Field Sheet	QHEI Score: 0.5
	Stream & Location: ()	AMEN SCIOTO RULER TILIB	RM:Date:10 23109
42.4U	12/ Suth N 000	Scorers Full Name & Affiliation:	
$\partial \omega$	River Code:	STORET #: Lat/Long.:40.696	1 International
	11 SUBSTRATE Check ONLY TH	vo substrate TYPE BOXES:	183.7491 Incertion
	estimate % or n	nte every type present Check ON	E (Or 2 & average)
	BLOR /SLABS [10]	FLE OTHER TYPES POOL RIFFLE ORIGIN	
			SUT MODERATE [-1] Substrate
	COBBLE (8]	D MUCK [2] D WETLANDS [0] X D SILT [2] X HARDPAN [0]	D NORMAL [0]
	SAND [6]	ARTIFICIAL [0] SANDSTONE [0]	DDEA DEXTENSIVE [-2]
		(Score natural substrates; jonore RIP/RAP [0]	MOUERATE [-1] Maximum
		□ 4 or more [2] sludge from point-sources) □ LACUSTURINE [0] □ □ 3 or less [0] □ SHALE [-1]	-S∐ NORMAL [0] 20 □ NONE [1]
	Comments		
		e presence 0 to 3: 0-Absent; 1-Very small amounts or if more common	
	- Ouality	2-Moderate amounts, but not of highest quality or in small amounts of	highest
	diameter log that is stable, well deve	e or greater amounts, (e.g., very large boulders in deep or fast water, is eloped rootwad in deep / fast water, or deep, well-defined, functional po	arge Extensive >75% (11)
	UNDERCUT BANKS [1]	POOLS > 70cm [2] OXBOWS, BACKWATER	S [1] K MODERATE 25-75% [7]
	SHALLOWS (IN SLOW WAT	IN [1] AQUATIC MAGROPHYTE FR) [1] BOULDERS [1] LOGS OR WOODY DEBR	
	ROOTMATS [1]		Cover
	Comments		Maximum
	Frais cou		20
	3] CHANNEL MORPHOLOGY SINUOSITY DEVELOPN	Check ONE in each category (Or 2 & average)	
			t
	MODERATE [3] GOOD [5]	RECOVERED [4]	ľ
Ň	LOW [2] FAIR [3]		Channel (
_			
	Comments	стана. Стана	Maximum
	6117	<u> </u>	20
	4] BANK EROSION AND RIP	ARIAN ZONE Check ONE in each category for EACH BANK (Or 2)	20 20 per bank & average)
	4] BANK EROSION AND RIP		per bank & average)
~ ^	4] BANK EROSION AND RIF River right looking downstream EROSION	ADE > 50m [4] FLOOD PLAIN QUALITY ADE > 50m [4] FOREST, SWAMP [3] ODERATE 10-50m [3] CASHRUB OR OLD FIELD R	20 20 per bank & average) R CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0]
Soutr- Voest+*	4] BANK EROSION AND RIP River right looking downstream EROSION NONE ALLITLE [3]	BIPARIAN WIDTH FLOOD PLAIN QUALITY MDE > 50m [4] D FOREST, SWAMP [3] ODERATE 10-50m [3] D SHRUB OF OLD FIELD [2] ARROW 5-10m [2] The perspective state of the second st	20 per bank & average) B CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0]
	4] BANK EROSION AND RIP River right looking downstream EROSION NONE ALLITLE [3]	RIPARIAN WIDTH FLOOD PLAIN QUALITY MDE > 50m [4] D HODERATE 10-50m [3] D HODERA	20 per bank & average) R CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] Indicate predominant land use(s)
	4] BANK EROSION AND RIF River right looking downstream EROSION NONE ALLITLE [3] MODERATE [2] HEAVYTSEVERE [1] V	RIPARIAN WIDTH FLOOD PLAIN QUALITY MDE > 50m [4] D HODERATE 10-50m [3] D HODERA	20 per bank & average)
	4] BANK EROSION AND RIP River right looking downstream R EROSION ANONE ALITILE [3] ANONE ALITILE [3] ANODERATE [2] ANODERATE [2] ANODERATE [1] Comments	RIPARIAN WIDTH FLOOD PLAIN QUALITY ADE > 50m [4] D HODERATE 10-50m [3] D ARROW 5-10m [2] D ERY NARROW < 6m [1]	20 per bank & average) R CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] I MINING / CONSTRUCTION [0] Indicate predominant land use(s) past 100m riparian. Riparian
	4] BANK EROSION AND RIF River right looking downstream EROSION NONE ALITLE[3] MODERATE[2] HEAVYTSEVERE [1] Comments 5] POOL / GLIDE AND RIFFL	RIPARIAN WIDTH FLOOD PLAIN QUALITY ARE STATE 10-50m [4] DE FOREST, SWAMP [3] HODERATE 10-50m [3] DE SHRUB OF OLD FIELD [2] ARROW 5-10m [2] DE RESIDENTIAL PARK, NEW FIELD [2] ARROW 5-10m [2] DE RESIDENTIAL PARK, NEW FIELD [2] ONE [0] DE FENCED PASTURE, ROWCROP [0] AM/ A DE FOREST, SUBMIC ADDITION	20 per bank & average)
	4] BANK EROSION AND RIF River right looking downstream BEROSION ANONE ALITILE [3] ANONE ALITILE [3] ANODERATE [2] ANODERATE [2] ANODERATE [1] Comments 5] POOL / GLIDE AND RIFFL MAXIMUM DEPTH Check ONE (ONLY) Check	RIPARIAN WIDTH FLOOD PLAIN QUALITY AREOW 5-10m [3] B FOREST, SWAMP [3] ARROW 5-10m [3] B FOREST, SWAMP [3] AN / A B FOREST, SWAMP [3] AN / A B FOREST, SWAMP [3] CURRENT VELOCITY CURRENT VELOCITY Check ALL that apply Check ALL that apply	20 per bank & average) R CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] Indicate predominant land use(s) past 100m riperian. Maximum 10
	4] BANK EROSION AND RIP River right kooking downstream B EROSION A NONE ALITUE[3] Comments 5] POOL / GLIDE AND RIFFL MAXIMUM DEPTH Check ONE (ONLY) Check ONLY Check	RIPARIAN WIDTH FLOOD PLAIN QUALITY AREOW 5-10m [3] D FOREST, SWAMP [3] ARROW 5-10m [2] D FOREST, SWAMP [3] ONE [0] D FOREST, SWAMP [3] AM A A A CHANNEL WIDTH CURRENT VELOCITY CHANNEL WIDTH Check ALL that apply WIDTH > RIFFLE WIDTH [2] TORRENTIAL [-1]	20 per bank & average)
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	4] BANK EROSION AND RIP River right booking downstream EROSION B K NONE ALITILE[3] M MODERATE[2] M HEAVYTSEVERE [1] V Comments 5] POOL / GLIDE AND RIFFL MAXIMUM DEPTH Check ONE (ONLY) Chi > 1m [6] POOL 0.7~(1m [4] POOL 0.4~(0.7m [2] POOL	RIPARIAN WIDTH FLOOD PLAIN QUALITY AREOW 5-10m [3] Destruction (3) ARROW 5-10m [3] Destruction (3) ARROW 5-10m [2] Destruction (3) ONE [0] Destruction (3) AM A A A A A CHANNEL WIDTH CURRENT VELOCITY CHANNEL WIDTH Check ALL that apply MDTH > RIFFLE WIDTH [2] TORRENTIAL [-1] SLOW [1] WIDTH = RIFFLE WIDTH [2] TORRENTIAL [-1] SLOW [1] WIDTH = RIFFLE WIDTH [2] TORRENTIAL [-1] INTERSTITIAL [-1] WIDTH = RIFFLE WIDTH [2] MODERATE [1] INTERSTITIAL [-1] WIDTH = RIFFLE WIDTH [2] MODERATE [1] INTERSTITIAL [-1] WIDTH = RIFFLE WIDTH [2] MODERATE [1] INTERSTITIAL [-1]	20 per bank & average) CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] Indicate precominant land use(s) past 100m riparian Maximum 10 Construction Potential Primary Contact Secondary Contact Carte one and comment on backt
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10123109 WATERBODY CROSSING DATA FORM 10123/29 PROJECT: //intoin TILAN FRID DATE: SANS LOCATION: TU -TRAG FIELD CREW: WATERBODY ID RUOZIA GPS FEATURE TYPE € (open/closed)(line/polygon) PHOTO ID and DIRECTION NAME TAN Canil. (or tributary to) WATERBODY TYPE musi 101 (stream/pond/ditch/culvert) FLOW REGIME tont RmA (perennial/intermittent/ephemeral) WIDTH R (observed/OHW) DEPTH 6 %,< (observed/OHW) FLOW RATE STAG NANT (dry/stagnant/low/moderate/high) FLOW DIRECTION SUBSTRATE 01 (mud/silt/gravel/cobble/boulders/bedrock) BANK VEGETATION NC C SICA-(upland/wetland cover type) Enst 1:1 50% SKETCH: UDETI Y WRIT 3:1 4545 3 32 3-1 Ŋ-X-SEVERE FERNOV)-0 X A.L A-1 FISH AND WILDLIFE OBSERVATIONS: MRAYFILL (LARME 12 2R n I NOTES: ALFAE by ST BANK Sever erod 10- TLOD DIANE ·** AS INTERMillerit--manel

SK	OOZZA	13	10123109
	OhioEPA	Qualitative Habitat Evaluation and Use Assessment Field S	
	Stream & Location	YAMEN SCIDIO RUERTRID	RM:Date: 107% 109
TT29C) u 1, SCO EAST O		Mation: DRANKOT ISPACKS -TTB
	River Code:	STORET #: Lat/Long.:U	0.7037 183.7247 Office verified location
	1] SUBSTRATE Check ONL estimate %	or note every type present	Check ONE (Or 2 & average)
	BEST TYPES POOL	RIFFLE OTHER TYPES POOL RIFFLE ORI	· · · · · · · · · · · · · · · · · · ·
	BLOR /SLABS [10] BOULDER [9]		
	COBBLE [8] GRAVEL [7]	[] [] MUCK [2] [] WETLAN [] SILT [2] [] MHARDPA	
	SAND (6)		
	NUMBER OF BEST TYPE	(Score natural substrates; ignore C RIP/RAP S-04 or more [2] sludge from point-sources) LACUST	10] 4 (I MODERATE [-1] Meximum URINE [0] 11 S[] NORMAL [0] 20
	Comments	3 or less [0] SHALE	and second a full
	que quality: 3-Highest quality in mod	TION [1] ROOTWADS [1] AQUATIC MA	amounts of highest Check ONE (Or 2 & avarage)
	ROOTMATS [1]		Cover
	Comments HTGGRANEOLS.		Maximum 20
		GY Check ONE in each category (Or 2 & average)	
	SINUOSITY DEVELO		
	HIGH [4] EXCEL MODERATE [3] GOOD		
/	LOW [2] LOW [2]		1] Channel 9
	4] BANK EROSION AND	RIPARIAN ZONE Check ONE in each category for EACH	BANK (Or 2 per bank & average)
_	River right looking downstream	RIPARIAN WIDTH	QUALITY
WEST		1 WIDE > 50m [4] □ □ FOREST, 8WAMP [3] 1 MODERATE 10-50m [3] □ □ SHRUB OKOLD FIELD	12 CONSERVATION TILLAGE [1] 12 URBAN OR INDUSTRIAL [0]
FALT		□ NARROW 5-10m [2]	WFIELD [1] C HINING / CONSTRUCTION [0]
		NONE [0]	CROP [9] Indicate predominant land use(s) past 100m riparian. Riparlan
	Comments		Maximum 6
	5] POOL / GLIDE AND RI	MA (KURALITY	ITTY; AGERWAT 10
	MAXIMUM DEPTH	CHANNEL WIDTH CURRENT VE	
		Check ONE (Or 2 & average) Check ALL that OL WIDTH > RIFFLE WIDTH [2] TORRENTIAL [-1] [] 3	
	□ 0.7<1m [4] □ PC □ 0.4<0.7m [2] □ PC	OL WIDTH = RIFFLE WIDTH [1] 🛛 VERY FAST [1] 🖓 🗍 I	
	🔲 0.2-<0.4m [1]		ODIES [1] Pool /
	Comments / //	indicate for reach - po	ols and riffles. Current
	Indicate for functiona	DEEP or DIS2 meters i riffles; Best areas must be large enough to s	
	of riffle-obligate spec	ies: Check ONE (Or 2 & average),	MAN HIPPLE [metric=0]
	RIFFLE DEPTH	RUN DEPTH RIFFLE / RUN SUBSTRAT MAXIMUM > 50cm [2] STABLE (e.g., Cobble, Boulder)	
	BEST AREAS 5-10cm [1]	MAXIMUM < 50cm [1] 🔲 MOD. STABLE (e.g., Large Grave	i) [1] LOW [1]
	[] BEST AREAS < 5cm [metric=0]	UNSTABLE (e.g., Fine Grave), Sa	nd) [0] INDERATE [0] Riffle / Run EXTENSIVE [-1] Meximum
	Comments	no (KEAIE	- maxmum B
Mans we	6] GRADIENT (67,6 ft/m DRAINAGE AREA) □ VERY LOW - LOW [24] □ MODERATE (8-10]	GLIDE: Gradient
		RUN:	
		RUN:	06/16/08

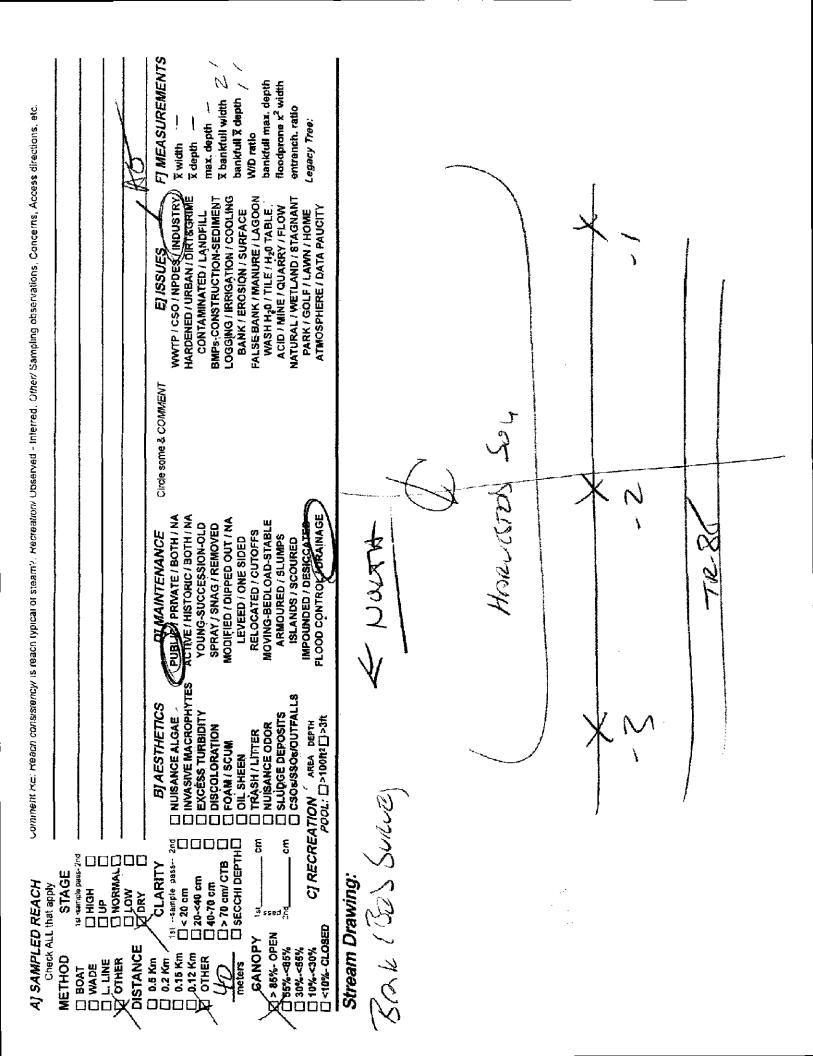


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		FIELD CRE	- 413 -	PA	
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PHOTO ID and DIRECTION	143 M	URDY	(
NAME	Unnamei	~	Di DE SI	bl	
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stream/pond/ditch/culvert)	KOGID SIT	TEVIL			
FLOW REGIME perennial/intermittent/ephemeral)	EPITER	ERAC			
WIDTH	-12'				
observed/OHW) DEPTH	14				
observed/OHW)	-//				
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LOW DIRECTION	NURDY	1 hour	Dor Shin	+ topu	Sh
SUBSTRATE	- JUCIF		1 Crip Strigg	<u>n source</u>	
mud/silt/gravel/cobble/boulders/bedrock 3ANK VEGETATION	5.17/ -	ForUT	<u></u>		VCU
upland/wetland cover type)	FALL	Succes	Jul		
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FISH AND WILDLIFE OBSE	RVATIONS:		<i></i>		
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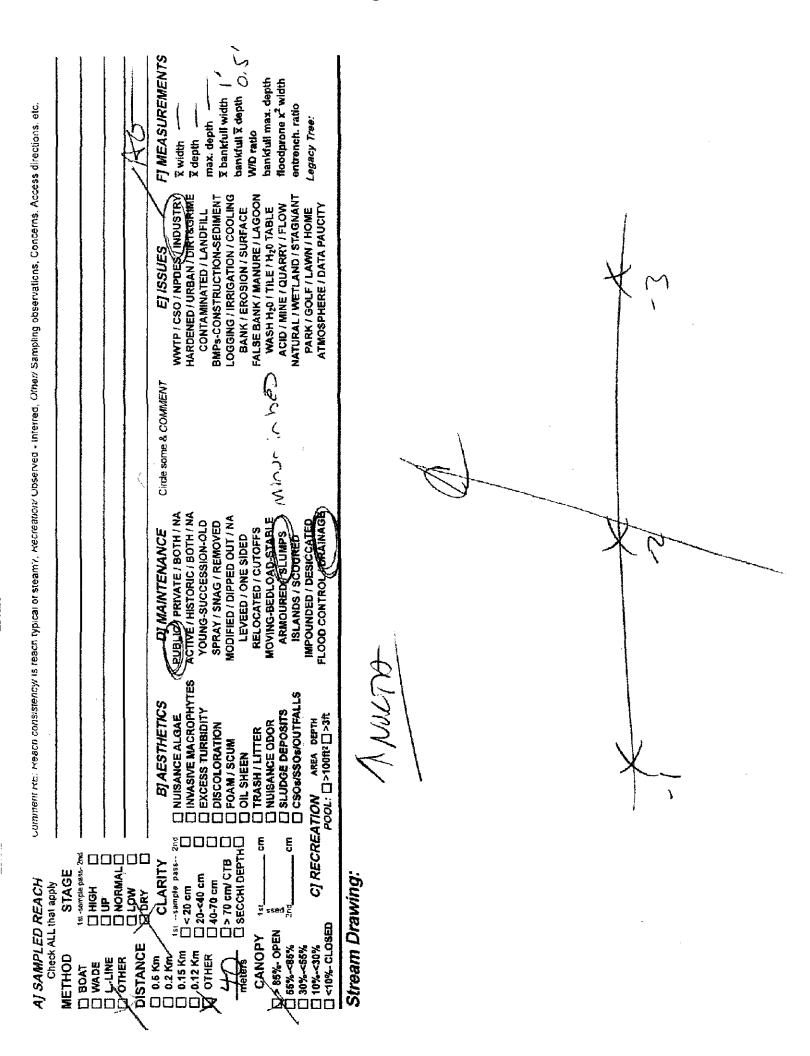
5150034		10/24/09
ChicEPA	Qualitative Habitat Evaluatio and Use Assessment Field	
Stream & Location: Un	Amer RAADLINE Ditch	RM: Date: 0124 109
EAST OF TR &	Scorers Full Name & A	filiation: DELAMM ISPACKS - TTEC
River Code:	STORET #: Lat./ Long.: u	0.6697183.7447 Office verified Location
1] SUBSTRATE Check ONLY T estimate % or	nte every tune present	Check ONE (Or 2 & average)
BEST TYPES POOL RI	FFLE OTHER TYPES POOL RIFFLE OI	RIGIN QUALITY
		ITONE [1]
		ANDS [0] SILI / NORMAL [0]
GRAVEL [7]		
T BEDROCK 151	(Score natural substrates: innore SPPR	AP [0] AN MODERATE [-1] Maximum
NUMBER OF BEST TYPES:	4 or more [2] sludge from point-sources) LACU	STURINE [0] III SUI NORMAL [0] 20
Comments		FINES [-2]
quality quality; 3-Highest quality in modera diameter log that is stable, well dev UNDERCUT BANKS [1] OVERHANGING VEGETATIK SHALLOWS (IN SLOW WAT ROOTMATS [1] Comments	ER) [1] BOULDERS [1] LOGS OR 1	all amounts of highest or fast water, large Check ONE (Or 2 & everage) d. functional pools. [] EXTENSIVE >75% [11]
3] CHANNEL MORPHOLOG SINUOSITY DEVELOP	Check ONE in each category (Or 2 & average)	עדו עס
		BILITY · · · · · · · · · · · · · · · · · · ·
MODERATE [3] GOOD [5]	RECOVERED [4]	DERATE [2]
LOW [2] LI FAIR [3]	RECOVERING [3]	(1) Channel
Comments		Maximum 5
A BANK FROSION AND R	PARIAN ZONE Check ONE in each category for EAC	CH RANK (Or 2 nor hank & georgena)
River right looking downstream		IN OHALITY
	VIDE > 50m (4)	
	NODERATE 10-50m [3] 🛛 🔀 SHRUB OR OLD FIEL NARROW 5-10m [2] 🛛 🕅 🗌 RESIDENTIAL PARK	
Comments 🕺		WCROP past 100m riparian. Riparian
		Ditch Cutaron / Rilling
5] POOL / GLIDE AND RIFF MAXIMUM DEPTH	LE / RUN QUALITY CHANNEL WIDTH CURRENT V	ELOCITY Recreation Potential
Check ONE (ONLY!) Ch	eck ONE (Or 2 & average) Check ALL t	Primary Contact
	. WIDTH > RIFFLE WIDTH [2] □ TORRENTIAL [-1] □ . WIDTH = RIFFLE WIDTH [1] □ VERY FAST [1] 、 □	Cocollina Collect
🔲 0.4<0.7m [2] 🗌 POO	WIDTH < RIFFLE WIDTH [0] [FAST [1]	INTERMITTENT [-2]
.□ 0.2<0.4m [1] ▷≪ 0.2m [0]	Indicate for reach	Pool / Po
Comments	GITDE/MU	Maximum
Indicate for functional r	iffles; Best areas must be/large enough to	support a population $1/$
of riffle-obligate species	Check ONE (Or 2 & average).	INO RIFFLE [metric=0]
	RUN DEPTH RIFFLE / RUN SUBSTRA XIMUM > 50cm [2] [] STABLE (4.g., Cobble, Boulds	
BESTAREAS 5-10cm [1]	XIMUM < 50cm [1] 🛄 MOD. STABLE (e.g., Large Gr	ivel) [1] 🗌 LOW [1]
BEST AREAS < 5cm [metric=0]	UNSTABLE (e.g., Fine Gravel, s	Send) [0]
Comments	NO TELLIC	Maximum
	VERY LOW - LOW [2-4] (2-4) (2-4) (2-4)	
	HIGH - VERY HIGH [10-8]	
EPA 4520		06/16/06
970->965=)2,10	10,73' 5402 =) 12	44 6t/m?



ALOST				10124
	WATERBODY CRO			1100-
PROJECT: DODAL	JUD FAIL	DATE: FIELD CREW:	1012	HO4 SM(
			-109.07	
WATERBODY ID	KAR:U3	5		
GPS FEATURE TYPE (open/closed)(line/polygon)	Line (1-	.3)		······································
PHOTO ID and DIRECTION	SEJER	17		
NAME (or tributary to)	UDMAMEN		Ditch	
WATERBODY TYPE (stream/pond/ditch/culvert)	KOAD-SIDA	X-11		
FLOW REGIME (perennial/intermittent/ephemeral)	EPHEM		·	, , , , , , , , , , , , , , , , ,
WIDTH	- 1 1'	<u> </u>		
(observed/OHW) DEPTH	- 19.	$\overline{}$		
(observed/OHW) FLOW RATE	DRU	ა		
(dry/stagnant/low/moderate/high) FLOW DIRECTION	WEST			
SUBSTRATE		E TRE	A GAL	T.
(mud/silf/gravel/cobble/boulders/bedrock) BANK VEGETATION (upland/wetland cover type)		CC Calinur		<u></u>
SKETCH: MULTIT	¢	~	sonts.	45-21
1)		- 7
		-		
+	X	<u> </u>	-	
	1444 - 1444 - 1444 - 1444 - 1444 - 1444 - 1444 - 1444 - 1444 - 1444 - 1444 - 1444 - 1444 - 1444 - 1444 - 1444 -			
,				
FISH AND WILDLIFE OBSEF	IVATIONS:			
		<u>- ~ /0</u>	CRUIN	
		- mir	TRUINS	wied has
	IN FEAT	UE		

NUT mapped

50035			1012410	27
ChicEPA	Qualitative Habitat I and Use Assessme		QHEI Score:	P
Stream & Location: UnnA	mai Rubnsing	Ditch RN	1: Date: 0 24	+/oq
NORTH OX TICINO		Il Name & Affiliation: DC		-178
River Code:	_STORET #:L	at/Long.: 40.6578	183.7451 Om	location
1] SUBSTRATE Check ONLY Two sestimate % or note	substrate TYPE BOXES; every type present	Check ONE (Or 2 & average)	•
BEST TYPES POOL RIFFL	E OTHER TYPES POOL RIP		QUALITY	
BLDR /SLABS [10] BOULDER [9] BOULDER [9]	HARDPAN [4]		HEAVY [-2]	Substrate
		WETLANDS [0]	NORMAL [0]	
G GRAVEL [7] - 75 72	SILT [2]	SANDSTONE [0]	FREE [1]	D
	(Score natural substrates; ii			Maximum
NUMBER OF BEST TYPES:	4 or more [2] sludge from point-sou 5 or less (0)			20
Comments		COAL FINES [-2]		
quality: 3-Highest quality in moderate o diameter log that is stable, well develop UNDERCUT BANKS [1] OVERHANGING VEGETATION SHALLOWS (IN SLOW WATER) ROOTMATS [1]	Moderate amounts, but not of highes r greater amounts (e.g., very large b sed rootwad in deep / fast water, or d POOLS > 70cm [2] [1] ROOTWADS [1]	it quality or in small amounts of hig oulders in deep or fast water, large	Imest Check ONE (Or 2 & av Imest EXTENSIVE >75% [Imest MODERATE 25-75% Imest SPARSE 5-	11] [7] [8% [1]
Comments			Maximu 2	54
HEARSKAN GOUD	heck ONE in each category (Or 2.8	averace)		
SINUOSITY DEVELOPME	NT CHANNELIZATION	STABILITY		
HIGH [4] EXCELLENT [MODERATE [3] GOOD [5]	7] INONE [6] RECOVERED [4]	HIGH [3]		
🗋 LOW [2] 🛛 🗖 FAIR [3]	RECOVERING [3]	LOW [1]	(here)	
Comments	RECENT OR NO RECOVE	RY [1]	Chann Maximu	
	/		2	
	ARIAN WIDTH E > 60m (4) D FORE DERATE 10-50m (3) D SHRU ROW 5-10m [2] D RESID Y NARROW < 5m [1] D D FENC	FLOOD PLAIN QUALITY ST, SWAMP (3) B OR OLD FIELD(2) ENTIAL PARK, NEW FIELD (1) ED PASTURE (1) #		AL [0] CICOURT J ION [0] ⁵⁾
Comments WOT N TATT	Row om	Ditch / En	1 SUCC/ CUR	
	IANNEL WIDTH		Recreation Poter	11
	ONE (Or 2 & average)	Check ALL that apply RENTIAL [-1] SLOW [1]	Primary Conta Secondary Con	11
🗌 0.7~1m [4] 🛛 🗌 POOL W	DTH = RIFFLE WIDTH [1] U VER	Y FAST [1] DINTERSTITIAL [-1] (circle one and comment or	
0.4~<0.7m [2] POOL ₩ 9.2~<0.4m [1]	IDTH < RIFFLE WIDTH [0] 🔲 FAS'	T [1] INTERMITTENT DERATE [1] EDDIES [1]	[-2] Poo	ù 🦳
X < 0.2m [0]		licate for reach - pools and riffles.	Curre Maximu	
Comments DILU	-			2
Indicate for functional riffle of riffle-obligate species:	es; Best areas must be larg Check ONE (Or 2		pulation DNO RIFFLE	[metric=0]
RIFFLE DEPTH RU	N DEPTH RIFFLE / RU	N SUBSTRATE RIFFLE		35
☐ BEST AREAS > 10cm [2] ☐ MAXIN ☐ BEST AREAS 5-10cm [1] ☐ MAXIN ☐ BEST AREAS < 5cm [metric=0]	IUM > 50cm [2] [] STABLE (ø.g., (IUM < 50cm [1] [] MOD. STABLE [] UNSTABLE (ø.g	Cobble, Boulder) [2] (e.g., Large Gravel) [1] J., Fine Gravel, Sand) [0]	NONE [2] LOW [1] MODERATE [0] Riffle	
Comments	Ry	. 1	EXTENSIVE [-1] Maximu	J.
DRAINAGE AREA	VERY LOW - LOW [2-4] 6 MODERATE [8-10]			
	HIGH - VERY HIGH [10-6]	%RUN: ()%RII	PPLE:	10
EPA 4520 9.75-)970 =	\$ 5,152 bed =	3,976m =)	5.12 61/~	67957et



SBUD36AIN

		OSSING DATA FOR	2M	
	ARINA WAD FARM	DATE:	10124/09	
LOCATION: <u>13</u>) Sat of 116-126 No1012-130	FIELD CREW:	Rob, Sm	· <u>\$</u>
WATERBODY ID	53403			
GPS FEATURE TY (open/closed)(line/polygon	PE (Sec			
PHOTO ID and DIF		172		
NAME (or tributary to)	FIAT TO	2pnc1+	·····	
WATERBODY TYF (stream/pond/ditch/culvert)	E Soara		· ·	
FLOW REGIME (perennial/intermittent/eph		nittent		
WIDTH (observed/OHW)	27-5118	1		
DEPTH (observed/OHW)	4/12	1		
FLOW RATE (dry/stagnant/low/moderate	e/high) SNAGC(nt	·····	
FLOW DIRECTION				
SUBSTRATE (mud/silt/gravel/cobble/bou	Z.1. 0	_	PEN VEG	
BANK VEGETATIC (uptand/wetland cover type) (Drui (ucconiune		
SKETCH:	planou zann	2:1 ~ 45%	-TIDALH	ż
	,		•	
	504		- Suth hale	
	· · · · · · · · · · · · · · · · · · ·		erocles 2	(i:1)
MURTH	FARM ARC	CSI RS	- KINTEH	(1-1)
	Al A-2 COUL	Sun A-J		
		······································		M2p 211-121)
N X		*	A-4	SIIM
	IST BA CON -	A-3	77.5	traded
	Residuntia	TR		
			λ λ^{A-6}	
\sim	FE OBSERVATIONS:	1.34	2-1-1	A-7
(RALOUR TRAIL	purroun (be	2	2.711	<u>·) -</u>
NOTES:	- 10-11cours COC	<u> </u>		<u>,</u>
Cunerete	Athin lined 1	halss ne	As bridge	
tonks r		ary verila:	ver in Are	
		- 10010-		

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⁻ MANES AS INTERMILLEST

5700	136 A 13	2		10124/09
<u>Oh</u>		Qualitative Habita Ind Use Assessn	t Evaluation Index nent Field Sheet	QHEI Score: 36
Stream o	Location: FIAT	BRANCH		1: Date: 10/ 24/09
CR			Fuil Name & Affiliation: De	ADDUCTY I SPARKS TTEL
River Co		STORET #:	Lat/Long.: 40.6403	183.7585 Office vertified location
	TRATE Check ONLY Two sub estimate % or note ev	erv type present	Check ONE (Or 2 & average)
	ST TYPES POOL RIFFLE			
ПП вог	LDER [9]		🗆 TILLS [1]	SUIT MODERATE [-1] Substrate
□ □ COE □ □ GRA		MUCK [2] MUCK [2] MUCK [2]	WETLANDS [0]	
III SAN		ARTIFICIÁL [0]	s; ignore RIP/RAP [0]	DEO I EXTENSIVE [-2] I NODERATE [-1] SI NORMAL [0] NONE [1]
NUMBEI	OF BEST TYPES: 4	or more [2] sludge from point-		NORMAL [0] 20
Comme	nts X ³	or less (0)	SHALE [-1] COAL FINES [-2]	
21 /4/8 76	EAM COVED Indicate ores	POOP () to 3: 0-Absent: 1-)(env s	mail amounts or if more common of r	
-	quality; 2-Mo	derate amounts, but not of high	est quality or in small amounts of hig	hest
	og that is stable, well developed ERCUT BANKS [1]	rootwad in deep / fast water, o POOLS > 70cm [2]	e boulders in deep or fast water, larg or deep, well-defined, functional pool 	
	RHANGING VEGETATION [1]	ROOTWADS [1]	AQUATIC MACROPHYTES	1 SPARSE 5-25% [J]
	LLOWS (IN SLOW WATER) [1)TMATS [1]		LOGS OR WOODY DEBRIS	MEARLY ABSENT <5% [1]
Commei	n ts	SNER	Bridge any	Maximum
21 CHAM	NEL MORPHOLOGY Che		<u> </u>	
SINUO			÷ ·	
HIGH (4			HIGH [3]	
	FAIR [3]	RECOVERING [3]	- LOW [1]	Channel
			VERT [1]	
Commei	nts ''			Maximum : A
		AN ZONE OF A DUE :		20
4] BANK River righ		DIAN MINTU	ch category for EACH BANK (Or 2 pe FLOOD PLAIN QUALITY	r bank & average)
4] BANK River Agh	EROSION AND RIPARI		FLOOD PLAIN QUALITY	T DENK & EVERAGE)
4] BANK Byer Agh EF		RIAN WIDTH 50m [4] D FOI RATE 10-50m [3] C C SHI DW 5-10m [2] D D REE	FLOOD PLAIN QUALITY REST, SWAMP (3) RUB OF CLD FIELD (2) IDENTION PART NEW FIELD (1)	20 20 P Dank & average) Conservation tallage [1] URBAN OR INDUSTRIAL [0]
4] BANK Byer Agh EF	EROSION AND RIPARI. I looking downstream RIPA COSION I looking downstream R RIPA COSION I I I I I I I I I I I I I I I I I I I	RIAN WIDTH 50m [4]	FLOOD PLAIN QUALITY REST, SWAMP [3] [RUB OFFICID FIELD[2] [BIDEN DOC, PARK, NEW FIELD [1] [RCED PASTURE [1] [20 B CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] Indicate predominant land use(s)
4] BANK Byer Agh EF	EROSION AND RIPARI I looking downstream COSION E / LITTLE [3] E / LITTLE [3] I MODEL ERATE [2] I NARRO A / SEVERE [1] V NONE	RIAN WIDTH 50m [4]	FLOOD PLAIN QUALITY REST, SWAMP [3] [RUB OFFICID FIELD[2] [BIDEN DOC, PARK, NEW FIELD [1] [RCED PASTURE [1] [20 B CONSERVATION TELAGE [1] CONSERVATION TELAGE [1] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [9] Indicate predominant land use(s) past 100m riparian. Riparian Maximum
4) BANK River right EF D D NON D MOD D MOD	EROSION AND RIPARI, I looking downstream RIPA COSION RIPA E / LITTLE [3] MODE ERATE [2] NARRO I / SEVERE [1] VERY I I / SEVERE [1] NONE I / SEVERE [1] NONE	RIAN WIDTH 50m [4] RATE 10-60m [3] W 5-10m [2] WARROW < 5m [1] C FEI 10 FEI 10 FEI 10 FEI 10 FEI	FLOOD PLAIN QUALITY REST, SWAMP [3] [RUB OFFICID FIELD[2] [BIDEN DOC, PARK, NEW FIELD [1] [RCED PASTURE [1] [20 B CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] Indicate predominant land use(s) past 100m riparian. Riparian
4) BANK River right Booth B NON S MOD S MO	EROSION AND RIPARI, I boking downstream RIPA COSION II Wride: E / LITTLE [3] II Model ERATE [2] II NARRO A / SEVERE [1] II VERY I II III VERY I III IIII VERY I IIII IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	RIAN WIDTH 50m [4] RATE 10-50m [3] W 5-10m [2] WARROW < 5m [1] COMPARENT NARROW < 5m [1] COMPARENT COM	FLOOD PLAIN QUALITY REST, SWAMP [3] RUB OGCOLD FIELD [2] RUB OGCOLD FIELD [2] RUB OGCOLD FIELD [2] RUB OGCOLD FIELD [2] RUB PASTURE [1] EN PASTURE [1] CURRENT VELOCITY	20 B CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] Indicate predominant land use(s) past 100m riparian. Riparian Maximum 10 Recreation Potential
4) BANK River right B NON Commen SJ POOL MAXIN Check I 2 1	EROSION AND RIPARI, Looking downstream RIPA COSION United in the second s	RIAN WIDTH 50m [4] RATE 10-60m [3] RATE 10-60m [3] W 5-10m [2] W 5-10m [2] W 5-10m [2] RUN State of the state	FLOOD PLAIN QUALITY REST, SWAMP [3] RUB OFFILD FIELD[3] BIDEN DOL, PARK, NEW FIELD [1] ICED PASTURE [1] EN PASTURE (OWCROP [0] CURRENT VELOCITY Check ALL that apply ORRENTIAL [-1]	CONSERVATION TELAGE [1] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] mdicate predominant land use(s) mast 100m riperian. Riparian Maximum 10 Recreation Potential Primary Contact Secondary Contact
4) BANK River right Boot Not Signo Signo Signo Signo Comment Signo Check Check Check Check Check	I boking downstream RIPARI, I boking downstream RIPA COSION III WIDE: E / LITTLE [3] III MODE: E / LITTLE [3] III MODE: E / LITTLE [3] III MODE: E / LITTLE [3] IIII MODE: E / LITTLE [3] IIII MODE: E / LITTLE [3] IIII MODE: E / LITTLE [3] IIIII MODE: E / LITTLE [3] IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	RIAN WIDTH B 50m [4] C RATE 10-60m [3] C W 5-10m [2] C W 5-10m [2] C WARROW < 5m [1]	FLOOD PLAIN QUALITY REST, SWAMP [3] RUB OR OLD FIELDES] BIDEN DOL, PARK, NEW FIELD [1] CED PASTURE [1] EN PASTURE (1) CURRENT VELOCITY Check ALL that apply ORRENTIAL [-1] SLOW [1] ERY FAST [1] INTERSTITIAL	CONSERVATION TELAGE [1] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] molicate predominant land use(s) past 100m riperian. Riparian Maximum 10 Recreation Potential Primary Contact Secondary Contact torce one and comment on same
4] BANK River righ Biver righ Biver righ Biver righ Biver righ Biver righ Commen Si POOL MAXIN Check 0.7 0.4 0.7	EROSION AND RIPARI, I boking downstream RIPA COSION III WIDE: E / LITTLE [3] III MODE! E / LITTLE [3] IIII MODE! E / LITTLE [3] IIII MODE! E / LITTLE [3] IIIII MODE! E / LITTLE [3] IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	RIAN WIDTH B 50m [4] C RATE 10-60m [3] C W 5-10m [2] C W 0 7 4 average M > RIFFLE WIDTH [2] C M < RIFFLE WIDTH [2]	FLOOD PLAIN QUALITY REST, SWAMP [3] RUB OFFILD FIELD[3] RUB OFFILD FI	A CONSERVATION TILLAGE [1] CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] mdicate predominant land use(s) mdicate predominant lan
4] BANK River righ Biver righ Biver righ Biver righ Biver righ Biver righ Commen Si POOL MAXIN Check 0.7 0.4 0.7	EROSION AND RIPARI, I boking downstream RIPA COSION I WIDE: E / LITTLE [3] I MODE: I / SEVERE [1] VERY ! I / M DEPTH CHA ONE (ONLY!) Check O m [6] POOL WIDT <0.7m [2]	RIAN WIDTH B 50m [4] B RATE 10-60m [3] S DW 5-10m [2] D WARROW < 5m [1]	FLOOD PLAIN QUALITY REST, SWAMP [3] RUB OFFILD FIELD[3] RUB OFFILD FI	CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] Mining / COntact Secondary Contact Secondary Contact Secondary Contact Secondary Contact Secondary Contact
4) BANK River righ Biver righ Biver righ Biver righ Biver righ Commen 5] POOL MAXIN Check 1 0.7 0.4 0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	EROSION AND RIPARI, I boking downstream R RIPA COSION I WIDE: E / LITTLE [3] I MODE! I / SEVERE [1] I VERY !! I / SEVERE [1] I POOL WID1 <0.7m [2]	RIAN WIDTH 50m [4] \Box For RATE 10-50m [3] \Box SHI DW 5-10m [2] \Box RES NARROW < 5m [1] \Box FEF [0] \Box OPI RUN QUALITY NNEL WIDTH NE ($Or 2 \& average$) TH > RIFFLE WIDTH [2] \Box TC TH = RIFFLE WIDTH [3] \Box YI H < RIFFLE WIDTH [4] \Box	FLOOD PLAIN QUALITY REST, SWAMP [3] RUB OGCOLD FIELD [2] RUB OGCOLD [2] RUB	The park & average) CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] Indicate predominant land use(s) past 100m riperian. Riparian Maximum 10 Recreation Potential Primary Contact Secondary Contact Secondary Contact (three one and comment on basis) Pool / Current Maximum 12
4) BANK River right Biver right Biver right Biver right Biver right Biver right Biver right Biver right Biver right Comment SJ POOL MAXIN Check I 0.7 0.4 0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	EROSION AND RIPARI, I boking downstream R RIPA COSION I WIDE: E / LITTLE [3] I MODE! I / SEVERE [1] I VERY !! I / SEVERE [1] I POOL WID1 <0.7m [2]	RIAN WIDTH 50m [4] RATE 10-50m [3] W 5-10m [2] W 5-10m [2] RARROW < 5m [1] C FER (0) RUN QUALITY NNEL WIDTH NE ($Or 2 \& average$) H> RIFFLE WIDTH [2] H > RIFFLE WI	FLOOD PLAIN QUALITY REST, SWAMP [3] RUB OK OLD FIELD [3] RUB OK OK ON CROP[10] RUB OK OK ON CROP[10] RUB OK OK OK OK OK OK OK CURRENT VELOCITY Check ALL that apply OK OK OK OK OK OK OK CURRENT VELOCITY Check ALL that apply OK OK OK OK OK OK OK OK OK OK OK CURRENT VELOCITY Check ALL that apply OK	CONSERVATION TILLAGE [1] CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] MAXIMUM 10 Recreation Potential Primary Contact Secondary Contact Secondary Contact Secondary Contact Current Maximum 12 POULATION NO RIFFLE [metric=0]
4) BANK River righ Brever righ Start Si POOL MAXIN Check 1 0.7 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	EROSION AND RIPARI, I boking downstream R RIPA COSION I WIDE: E / LITTLE [3] I MODE! I / SEVERE [1] VERY ! I / SEVERE [1] POOL WID! I POOL WID! <1m [4]	RIAN WIDTH 50m [4] RATE 10-60m [3] RATE 10-60m [3] W 5-10m [2] W	FLOOD PLAIN QUALITY REST, SWAMP [3] RUB OR OLD FIELD [3] RUB PASTURE OWCROD [3] RUB PASTUR	CONSERVATION TILLAGE [1] CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] mdicate predominant land use(s) hast 100m riperian. Riparian Maximum 10 Recreation Potential Primary Contact Secondary Contact Secondary Contact Secondary Contact Secondary Contact Naximum 12 Poulation NO RIFFLE [metric=0] / RUN EMSEDDEDNESS NONE [2]
4) BANK River right Biver right Biver right Biver right Biver right Biver right Biver right Comment SJ POOL MAXIN Check I D 0.7 D 0.4 D 0.7 D 0.4 D 0.7 D 0.4 D 0.4 D 0.7 D 0.4 D 0.5 D 0.4 D 0.5 D	EROSION AND RIPARI, I boking downstream R RIPA COSION Image: State of the state of t	RIAN WIDTH 8 50m [4] 6 RATE 10-60m [3] 5 RATE 10-60m [3] 5 WATE 10-60m [3] 10 WATE 10-60m [3] 10 WATE 10-60m [3] 10 WATE 10-60m [3] 10 WATE 10-7	FLOOD PLAIN QUALITY REST, SWAMP [3] RUB OF OLD FIELD [3] RUB OF	CONSERVATION TILLAGE [1] CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] Recreation Potential Primary Contact Secondary Contact Secondary Contact Secondary Contact Secondary Contact Naximum 12 Pool / Current Naximum 12 POOL RUN EMSEDDEDNESS NONE [2] LOW [1]
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4) BANK River right Biver right Biver right Biver right Biver right Comment SJ POOL MAXIN Check I D 1 0.7 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	EROSION AND RIPARI, I boking downstream R RIPA COSION I WIDE: E / LITTLE [3] I MODE! E / SEVERE [1] I VERY !! I / SEVERE [1] I POOL WID1 <0.7m [2]	RIAN WIDTH 50m [4] 50m [4] RATE 10-60m [3] Carrier (2) Carrier (2)	FLOOD PLAIN QUALITY REST, SWAMP [3] RUB OF OLD FIELDES] RUB OF OLD FIELDES] RUB OF OLD FIELDES] RUE PASTURE (1) EN PASTURE (1) EN PASTURE (1) EN PASTURE (1) EN PASTURE (1) CLICR ALL that apply ORRENTIAL [-1] SLOW [1] ENY FAST [1] INTERSTITIAL INTERMITTENT ODERATE [1] EDDIES [1] INTERMITTENT ODERATE [1] INTERMITTENT ODERATE [1] INTERMITTENT ODERATE [1] EDDIES [1] INTERMITTENT ODERATE [1] INTERMITTENT ODERATE [1] INTERMITTENT INTERMITTE	CONSERVATION TELAGE [1] URBAN OR INDUSTRIAL [0] MiNING / CONSTRUCTION [0] Mining / CONS
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4] BANK Byer righ B F B F B F B F B F B F B F B F	EROSION AND RIPARI, I boking downstream RIPA COSION \Box WIDE: E / LITTLE [3] \Box MODE: ERATE [2] \Box MODE: I / SEVERE [1] \Box WORE I / SEVERE [1] \Box WORE I / SEVERE [1] \Box VERY I I / SEVERE [1] \Box VENT <0.11	RIAN WIDTH 50m [4] \square FOR RATE 10-50m [3] \square SHI DW 5-10m [2] \square RES HARROW < 5m [1] \square FER WARROW < 5m [1] \square FER [0] \square OPI RUN QUALITY NNEL WIDTH NE (Or 2 & average) TH > RIFFLE WIDTH [2] \square TC TH = RIFFLE WIDTH [2] \square TC	FLOOD PLAIN QUALITY REST, SWAMP [3] RUB OF OLD FIELDES] RUB OF OLD FIELDES] RUB OF OLD FIELDES] RUE OF OLD FIELDES] RUE PASTURE (1) EN PASTURE (1) EN PASTURE (1) EN PASTURE (1) EN PASTURE (1) EN PASTURE (1) EN PAST (1) EN PAST (1) EN FAST (1) INTERMITTENT ODERATE [1] INTERMITTENT ODERATE [1] INTERMITTENT ODERATE [1] INTERMITTENT ODERATE [1] INTERMITTENT ODERATE [1] INTERMITTENT ODERATE [1] RUN SUBSTRATE RIFFLE I, Cobble, Boulder) [2] E (e.g., Large Gravel) [1] e.g., Fine Gravel, Sand) [0] %POOL: (
4] BANK Byer righ B F B F B F B F B F B F B F B F	EROSION AND RIPARI, I boking downstream RIPA COSION \Box WIDE: E / LITTLE [3] \Box MODE: ERATE [2] \Box MODE: I / SEVERE [1] \Box WORE I / SEVERE [1] \Box WORE I / SEVERE [1] \Box VERY I I / SEVERE [1] \Box VENT <0.11	RIAN WIDTH 50m [4] \square FOR RATE 10-50m [3] \square SHI DW 5-10m [2] \square RES HARROW < 5m [1] \square FER WARROW < 5m [1] \square FER [0] \square OPI RUN QUALITY NNEL WIDTH NE (Or 2 & average) TH > RIFFLE WIDTH [2] \square TC TH = RIFFLE WIDTH [2] \square TC	FLOOD PLAIN QUALITY REST, SWAMP [3] RUB OF OLD FIELD [3] RUB PASTURE OWCRODIE] CURRENT VELOCITY Check ALL that apply ORRENTIAL [-1] SLOW [1] ENY FAST [1] INTERSTITIAL ST [1] INTERSTITIAL ST [1] INTERSTITIAL ST [1] INTERSTITIAL ST [1] INTERSTITIAL ST [1] RUB COMPOSE [1] INTERMETTENT ODERATE [1] EDDIES [1] INDERATE [1] EDDIES [1] INDERATE [1] EDDIES [1] INTERMETTENT ODERATE [1] EDDIES [1] RUN SUBSTRATE RIFFLE CODDIE, Boulder) [2] LE (e.g., Large Gravel) [1] e.g., Fine Gravel, Sand) [0] %POOL: (CONSERVATION TILLAGE [1] CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] Indicate predominant land use(s) maximum 10 Recreation Potential Primary Contact Secondary Contact Secondary Contact (Indicate one and comment on basis) (Indicate one one and commen

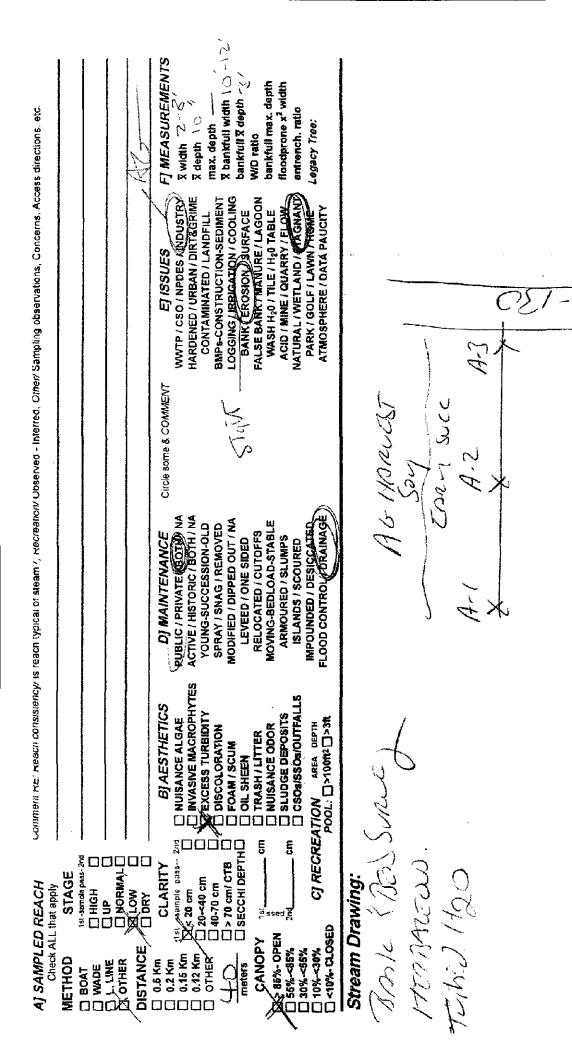
FI MEASUREMENTS bankfull max. depth floodprone x² width bankfull X depth X bankfull width entrench. ratio Legacy Tree: max. depth W/D ratio X depth X width LOGGING / IRRIGATION / COOLING HARDENED / URBAN / DIRT&GRIME BMPs-CONSTRUCTION-SEDIMENT FALSE BANK / MANURE / LAGOON NATURAL / WETLAND / STAGNANT WWTP / CSO / NPDES / INDUSTRY ACID / MINE / QUARRY / FLOW WASH H20 / TILE / H20 TABLE ATMOSPHERE / DATA PAUCITY BANK / EROSION / SURFACE PARK / GOLF / LAWN / HOME CONTAMINATED / LANDFILL EI ISSUES K Cy, Acces Circle some & COMMENT Ploy Freeze H Starly ٩. FLOOD CONTROL / DRAINAGE PUBLIC / PRIVATE / BOTH / NA ACTIVE / HISTORIC / BOTH / NA MODIFIED / DIPPED OUT / NA MOVING-BEDLOAD-STABLE YOUNG-SUCCESSION-OLD SPRAY / SNAG / REMOVED IMPOUNDED / DESICCATED RELOCATED / CUTOFFS DI MAINTENANCE ARMOURED / SLUMPS LEVEED / ONE SIDED ISLANDS / SCOURED $\overline{\sim}$ ן ל INVASIVE MACROPHYTES CSOs/SSOS/OUTFALLS **BJAESTHETICS** C EXCESS TURBIDITY DISCOLORATION FOAM / SCUM OL SHEEN TRASH / LITTER NUISANCE ODOR INVISANCE ALGAE SLUDGE DEPOSITS CJ RECREATION AREA DEPTH POOL: []>100ft2 []>3ft TOSERNE Such П žD 5 ຮູ 1 st -sample pass- 2nd □ > 70 cm/ CTB CLARITY sample pass-STAGE 20-<40 cm Stream Drawing. NURA AJ SAMPLED REACH □ 40-70 cm Check ALL that apply × 20 cm <u>₿</u> 5 sed □ 10%-30% □ <10%- CLOSED > 85%- OPEN CANOPY DISTANCE 30%-<56% 0.15 Km 0.12 Km, OTHER 🔲 0.6 Km METHOD L. LINE Q-OTHER 0.2 Km WADE meters 90 **BOAT** ष्र Π

voimment ma: reach consistency is reach typical of steam?. Recreation' Observed - Interted. Other/ Sampling observations, Concerns, Access directions, etc.

	WATERBODY CROSSING DATA FORM
PROJECT: MOLDA L	Ling Take, DATE: 10/24/09
LOCATION: The SIE	of WTB 126 FIELD CREW: ROD SANS
Na/	C12-135
WATERBODY ID	5RUO77AIR
GPS FEATURE TYPE	
(open/closed)(line/polygon) PHOTO ID and DIRECTION	Lice (1-)
	11= DWEXT
NAME (or tributary to)	TRIDUTDRY TOFIAT BRANCH
WATERBODY TYPE	STREEAW
(stream /pond/ditch/culvert) FLOW REGIME	
(perenn lal/intermittent/ephemeral)	Interemitte
WIDTH (observed/OHW) Z	+8' 10'-12'
DEPTH	10/1/21
(observed/OHW) FLOW RATE	
(dry/stagnant/low/moderate/high)	SIPGNAT
FLOW DIRECTION	NOGHLATIST
SUBSTRATE	
(mud/silt/gravel/cobble/boulders/bedrock) BANK VEGETATION	
(upland/wetland cover type)	Emanget / Eny Vacanius
SKETCH:	RA15
	NOCTH 7. 11 40
	An-Horistes such 11:1 50
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NORTH	
1010717	
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	acould and
FISH AND WILDLIFE OBSER	VATIONS:
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NOTES: MOTES: <u>LEANIN</u> Sulfin oder MARES AS INTERMICTERTS

OhioFPA	• • • • • •	Habitat Evaluation Ind	CHELSCOLD V
		sessment Field Shee	
		The IS FLATTIMA	
012 130			n: DELAMON / SADELLS
River Code:	- STORET #:	Lat./Long.:40.64	FD6 18 3. 1220 100
estima	ONLY Two substrate TYPE BOXE. te % or note every type present	Chec	k ONE (Or 2 & average)
BEST TYPES	POOL RIFFLE OTHER TYP	ES POOL RIFFLE ORIGIN	
BLDR /SLABS [10]	[] [] HARDPAN [] [] DETRITUS		HEAVY [-2]
	🛄 🛄 MUCK.[2]	WETLANDS [0]	
GRAVEL [7]	(2) SILT (2)		DEXTENSIVE [-2]
BEDROCK [5]	(Score natur	ral substrates, ignore RIP/RAP (0)	NODERATE [-1]
	YPES: LI 4 of more [2] studge	from point-sources) LACUSTURINE SHALE [-1]	
Comments		COAL FINES -	2]
quality; 3-Highest quality in diarneter log that is stable, UNDERCUT BANKS OVERHANGING VE SHALLOWS (IN SLO ROOTMATS [1]	moderate or greater amounts (e.g well developed rootwad in deep / i [1] POOLS > GETATION [1] ROOTWA		tter, large Check ONE (07 2 & average nal pools. TERS [1] C MODERATE 25-75% [7] HYTES [1] SPARSE 5<25% [3]
Comments			Maximum
HERSACC	OLOGY Check ONE in each cat		20
	000 [5]	IG [3] / LOW [1]	[2] Channel (
Comments	AIR [3] DRECOVERIN DOR [1] DRECENT OR	IG [3] [1] I NO RECOVERY [1]	Channel Maximum 20
NONE [1] Comments 4] BANK EROSION A River right looking downstrea		IG [3] LOW [1] I NO RECOVERY [1] ONE in each category for EACH BANK EL COD PLAIN OUA	Channel Maximum 20 (Or 2 per bank & average)
A NONE [1] Comments 4] BANK EROSION A River right looking downstrea EROSION	AIR [3] PRECOVERING DOR [1] RECENT OR ND RIPARIAN ZONE Check " RIPARIAN WIDTH I WIDE > 50m [4]	IG [3] LOW [1] NO RECOVERY [1] ONE in each category for <i>EACH BANK</i> FLOOD PLAIN QUA	Channel Maximum 20 (Or 2 per bank & average) LITY
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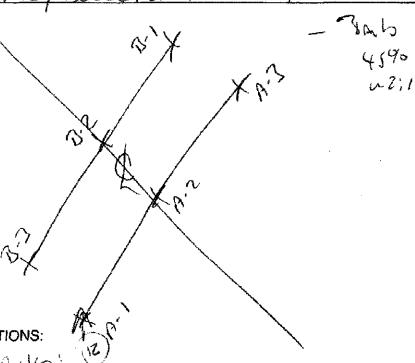
I Derk

	WATERBODY CROSSING DATA FORM	
	HORD' WIND FORM DATE: 10124/09	
LOCATION:	To south of WTG-M2 FIELD CREW: RED, SMS	

WATERBODY ID	SBUDJ8AITS.
GPS FEATURE TYPE (open/closed)(line/polygon)	line(1-3)
PHOTO ID and DIRECTION (Photo 12 => NORTH EAST
NAME (or tributary to)	mc car Rin
WATERBODY TYPE (stream/pond/ditch/culvert)	STREAM
FLOW REGIME (perennial/intermittent/ephemeral)	intermittant
WIDTH (observed/OHW)	4-61/151
DEPTH (observed/OHW)	6"114'
FLOW RATE (dry/stagnant/low/moderate/high)	STAGNANT
FLOW DIRECTION	NOLTH EAST
SUBSTRATE (mud/silt/gravel/cobble/boulders/bedrock)	SIH ESDID Mix
BANK VEGETATION (upland/wetland cover type)	EARLY SUCCESSION

SKETCH:

TNULT

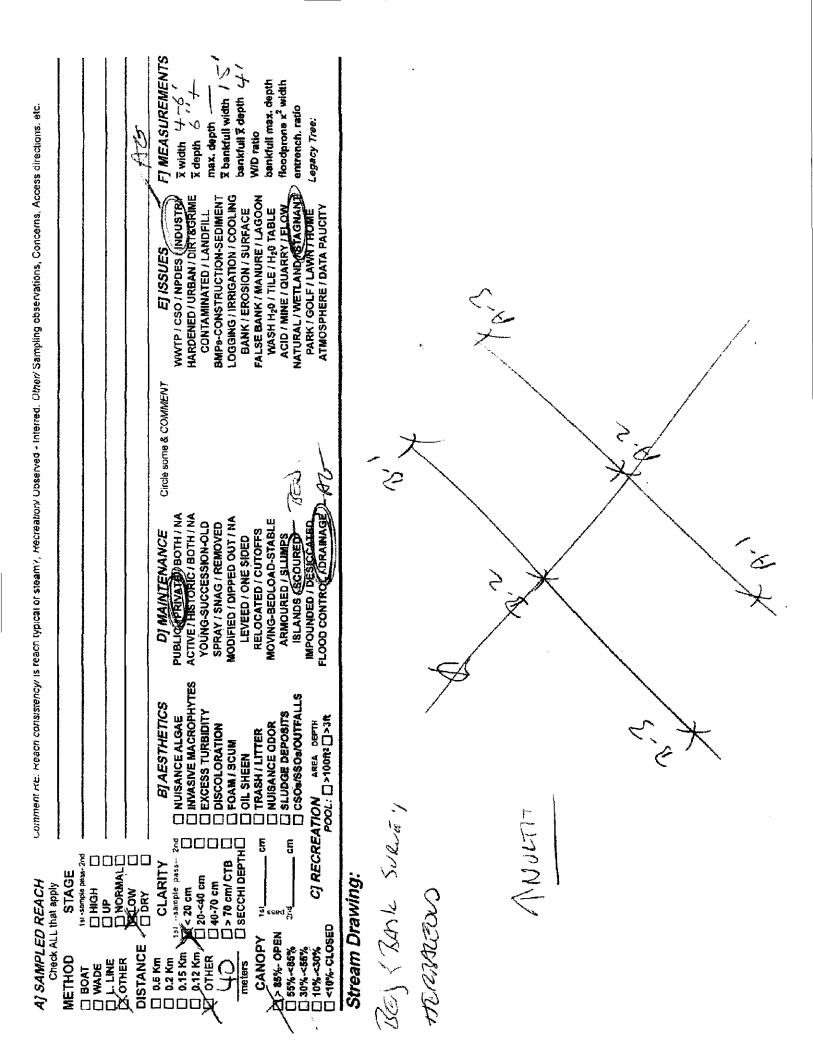




SNALL, DEER MARIN

NOTES: Juchinifimunisant both sister Totalin minerate EAST; light in whit MAMEIS AS INTERMILLENT

5	BUDISBAITS			10124109
	ChicEPA	Qualitative Habitat Evand Use Assessmer		QHEI Score:
	Stream & Location: MCC	oy Run	RI	И:Date: 10/ 7.4./ 09
25	SO NOUTH Of River Code:	<u>CCCISO</u> Scorers Full STORET #: Lai	Name & Affiliation: 12 t/Long.: L10.6442	183.7222 Office vertiled D
	1] SUBSTRATE Check ONLY Two estimate % or not	substrate TYPE BOXES;	Check ONE	Or 2 & average)
	BEST TYPES POOL RIFF II BLOR (SLABS [10]	OTUED TVOCO	LE ORIGIN DIMESTONE [1] DITULS [1] WETLANDS [0] VIHAROPAN IM	QUALITY QUALITY HEAVY [-2] SILT NORMAL [0] FREE [1] DE DEXTENSIVE [-2] NORMAL [0] SUBSTRATE Maximum NORMAL [0] NORMAL [0] NORMAL [0] NORMAL [0] NORMAL [0] NORMAL [0] NORMAL [0] SUBSTRATE Maximum 20
	2] INSTREAM COVER Indicate p	resence 0 to 3: 0-Absent: 1-Very small	-	narginal AMOUNT
	quality: 3-Highest quality in moderate diameter log that is stable, well develo UNDERCUT BANKS [1] OVERHANGING VEGETATION SHALLOWS (IN SLOW WATER	Moderate amounts, but not of highest or or greater amounts (e.g., very large bou ped rootwad in deep / fast water, or der POOLS > 70cm [2] [1] ROOTWADS [1]	quality or in small amounts of hi ulders in deep or fast water, larg	ghest Chack ONE (0r 2 & average) s.] EXTENSIVE >76% [11] 1] [MODERATE 25-75% [7]] [1] [] SPARSE 5<25% [3]
	Comments			Cover Meximum 20
	3] CHANNEL MORPHOLOGY SINUOSITY DEVELOPME		rerage) STABILITY	
	HIGH [4] EXCELLENT		HIGH [3]	
/	Comments	RECOVERING [3]	[1]	Channel Meximum 20
	4] BANK EROSION AND RIPA River right looking downstream RI		tegory for EACH BANK (Or 2 pe	er bank & average)
EVEST.)E > 50m [4] D FORES1	T, SWAMP [3]	L R CONSERVATION TILLAGE [1] CURBAN OR INDUSTRIAL [0]
EAST		RROW 5-10m [2] 👘 🔟 🔲 RESIDE	NTIAL, PARK, NEW FIELD [1]	I I MINING / CONSTRUCTION [0]
	Comments			Indicate predominant land use(s) past 100m riparian. Alpartan Maximum 10
	5] POOL / GLIDE AND RIFFLE MAXIMUM DEPTH C		URRENT VELOCITY	Recreation Potential
	Check ONE (ONLY!) Chec	KONE (Or 2 & average)	Check ALL that apply ENTIAL [-1] I SLOW [1]	Primary Contact Secondary Contact
	0.7-<1m [4] POOL V 0.4-<0.7m [2] POOL V		FAST [1] DINTERSTITIAL	[-1] (circle one and comment on back)
	[]0.2<0.4m [1] [] < 0.2m [0]	MODE Indic	RATE [1] DEDDIES [1] ate for reach - pools and riffles.	Pool / Current
		es; Best areas must be large	1524 MEREL)	Maximum 12
	of riffle-obligate species:	Check ONE (Or 2 &	average).	/ RUN EMBEDDEDNESS
	BESTAREAS > 10cm [Z] MAXI	MUM > 50cm [Z] [] STABLE (e.g., Co MUM < 50cm [1] [] MOD. STABLE (e	abbie, Bouider) [2] a.g., Large Gravel) [1]	NONE [2] LOW [1]
	BEST AREAS < 5cm [metric=0] Comments		Fine Gravel, Sand) [0]	MODERATE [0] Run EXTENSIVE [-1] Maximum
	6] GRADIENT (12, 9 ft/mi)		%POOL: 20 %C	BLIDE: 160 Gradient
STREAM	wirstn 151 (mi2)	MODERATE [6-10] HIGH - VERY HIGH [10-6]	%RUN: 🖉 %R	IFFLE: Maximum 10
	EPA 4520 985-2975	-=)4,084.75' =)	101/ 2) 12,92,61/ 6ratient
			1.77(- Ind answhich in -



WATERBODY CROSSING DATA FORM MR. CD in WIND FRIMDATE: 10/24/09 PROJECT: JAB 172 FIELD CREW: _ LOCATION: 1 in WATERBODY ID 10799/15 **GPS FEATURE TYPE** 6.50 1 -(open/closed)(line/polygon) PHOTO ID and DIRECTION WCHE GAS NAME 125 (or tributary to) WATERBODY TYPE (stream/pond/ditch/culvert) FLOW REGIME Conternet (perennial/intermittent/ephemeral) WIDTH 151 1 (observed/OHW) DEPTH 1 + (observed/OHW) FLOW RATE Juby bridge)m1 (dry/stagnant/low/moderate/high) FLOW DIRECTION HEATERS SUBSTRATE 51 +---(mud/sill/gravel/cobble/boulders/bedrock) BANK VEGETATION FANLI ani SUCCES. AC (upland/wetland_cover_type) Ame SISPE 4540 2:1 XIORTA SKETCH: Low Blow My Spin Rop My 50 CR A-3 13-1 A.2 ×B-3 A-1 X FISH AND WILDLIFE OBSERVATIONS: ELRASIA mill 50Ails NOTES: AMOM UN ER Minn had Scourin MAMEN AL A ATTIM IN 4

JEUDJARIJ	PC1+51C1
ChieFPA Qualitative Habitat Evaluation Index and Use Assessment Field Sheet	QHEI Score:
Stream & Location: MCCD4 RUN	RM: , Date: 10/24/09
<u>CRISO</u> Scorers Full Name & Affiliation: D	
	7/83.7337 Office verified
1] SUBSTRATE Check ONLY Two substrate TYPE BOXES: estimate % or note every type present Check ON	E (Or 2 & average)
BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE ORIGIN	QUALITY HEAVY [-2] SILT HOODERATE [-1] Substrate NORMAL [0] FREE [1] PDES EXTENSIVE [-2] MODERATE [-1] Mavigum
2] /NSTREAM COVER indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common quality; 2-Moderate amounts, but not of highest quality or in small amounts of quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, ta diarneter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pr UNDERCUT BANKS [1] POOLS > 70cm [2] OXBOWS, BACKWATERS OVERHANGING VEGETATION [1] POOLS > 70cm [2] OXBOWS, BACKWATERS SHALLOWS (IN SLOW WATER) [1] BOULDERS [1] LOGS OR WOODY DEBR ROOTMATS [1]	Inignest Check ONE (Or 2 & average) arge Deck ONE (Or 2 & average) pols EXTENSIVE >75% [11] S [1] EXTENSIVE >75% [3] IS [1] SPARSE 5 INS [1] NEARLY ABSENT <5% [1]
Comments HEARACEAN	
3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY HIGH [4] EXCELLENT [7] NONE [6] HIGH [3] MODERATE [3] GOOD [5] RECOVERED [4] MODERATE [2]. LOW [2] FAIR [3] RECOVERING [3] LOW [1] NONE [1] POOR [1] RECENT OR NO RECOVERY [1] Comments	Chernel Maximum 20
4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (or 2 River right looking downstream RIPARIAN WIDTH FLOOD PLAIN QUALITY REROSION BWDE > 50m [4] BFOREST, SWAMP [3] I NONE / LITTLE [3] NODERATE 10-50m [3] SWAMP [3] MODERATE [2] NODERATE 10-50m [2] SWAMP [3] HEAVY / SEVERE [1] C VERY NARROW S-10m [2] SWAMP [3] MODERATE [2] C NONE [0] SWARD ASTURE [1] Comments	CONSERVATION TILLAGE [1]
5] POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH CHANNEL WIDTH CURRENT VELOCITY Check ONE (ONLY!) Check ONE (Or 2 & average) Check ALL that apply > 1m [6] POOL WIDTH > RIFFLE WIDTH [2] TORRENTIAL [-1] SLOW [1] 0.7-<1m [4]	NT [-2] Pool / Current Maximum
Indicate for functional riffles; Best areas must be large enough to support a of riffle-obligate species: Check ONE (Or 2 & average). RIFFLE DEPTH RUN DEPTH RIFFLE / RUN SUBSTRATE RIFFL BEST AREAS > 10cm [2] MAXIMUM > 50cm [2] STABLE (e.g., Cobble, Boulder) [2] BEST AREAS > 10cm [1] MAXIMUM > 50cm [1] MOD. STABLE (e.g., Large Gravel) [1] BEST AREAS < 5cm UNSTABLE (e.g., Fine Gravel, Sand) [9] [metric=0]	
TREPARTIES (10) STREPARTE (10) STREP	AGLIDE: 100 Gradiant 8 RIFFLE: Maximum 10 06/16/06
EPA4520 985-3975 => 4,084,75 => 10/274 = 3) 12,924/ Gradient

F] MEASUREMENTS x width ろー子・ X depth 6"ナ floodprone x² width bankfull max. depth bankfull X depth X bankfull width Upminent RE: Reach consistency is reach typical of steam?, Recreation Ubserved - Interred. Other/ Sampling observations, Concerns, Access directions, etc entrench. ratio max. depth Legacy Tree: W/D ratio LOGGING / IRRIGATION / COOLING BANK (EROSION) SURFACE FALSE BANKTMANURE / LAGOON HARDENED / URBAN / DIRT&GRIME BMPs-CONSTRUCTION-SEDIMENT NATURAL / WETLAND STAGNAN WWTP / CSO / NPDES/ [NDUSTRY ATMOSPHERE / DATA PAUCITY WASH H20 / TILE / H20 TABLE **CONTAMINATED / LANDFILL** ACID / MINE / QUARRY / ELOW PARK / GOLF / LAWN 7HOW ET ISSUES Circle some & COMMENT R2 30 TDRAINAGE PUBLIC / PRIVATE PBOTH / NA ACTIVE THISTORIC / BOTH / NA MODIFIED / DIPPED OUT / NA **NOVING-BEDLOAD-STABLE** YOUNG-SUCCESSION-OLD SPRAY / SNAG / REMOVED ISLANDS-FSCOURED RELOCATED / CUTOFFS DIMAINTENANCE **ARMOURED / SLUMPS** へんよ LEVEED / ONE SIDED β. FLOOD CONTROR NUCOT SUNVASIVE MACROPHYTES **BIAESTHETICS** 🗂 excess turbidity NUISANCE ALGAE CJ RECREATION AREA DEPTH POOL: 1 >100ft2 >3ft DISCOLORATION TRASH / LITTER FOAM / SCUM OIL SHEEN ECRAIA MILLON BEISK RANK SURVE z-sample pase-- 2nd < 20 cm</p> 5 E 1st -sample pass- 2nd CLARITY STAGE □ 20-<40 cm Stream Drawing: AJ SAMPLED REACH □ 40-70 cm Check ALL that apply 24 20 cm HURMERS ÷. 0 30%-<55% 0 10%-<34% 0 <10%- CLOSED PT> 85%- OPEN CANOPY DISTANCE 0.5 Km]] 56%-≪85% 0.15 Km 0.12 Km CHOD . SC OTHER **OTHER** 0.2 Km L. LINE Z DDÒ

SRISU OHOAIR 10/24/09 WATERBODY CROSSING DATA FORM HARD'S WINSTMA-10/24/09 PROJECT: DATE: FIELD CREW: SmS LOCATION: QU WATERBODY ID 21142A **GPS FEATURE TYPE** e (...-(open/closed)(line/polygon) PHOTO ID and DIRECTION >NURTHWEST NAME MC Que Run 63 (or tributary to) WATERBODY TYPE (stream/pond/ditch/culvert) FLOW REGIME TERMICEENE (perennial/intermittent/ephemeral) WIDTH (observed/OHW) DEPTH ø (observed/OHW) FLOW RATE stang nan t (dry/stagnant/low/moderate/high) FLOW DIRECTION BEAH WEST SUBSTRATE SiH/SMD (mud/silt/gravel/cobble/boulders/bedrock) **BANK VEGETATION** EARLY SUCCESSIONAR (upland/wetland cover type) ¥ P-9 JOME(monensie) SKETCH: ∿` Rock Sloughy Want minur erronin HILLY VESCHOOSEN Slopes Avery 3-9 3:1 -40% - Pen in (Wonnel $\beta \sim 1$ ~ 9090au FISH AND WILDLIFE OBSERVATIONS: none in al scon in hab Maring BADY Scat (connel ENJES NOTES: Chalica W PEN (Reed Compy NO SCOURS

MAMES ASINTERMILLED +

SBUDYOAIR	10/24/09
OhioEPA Qualitative Habitat Evaluation Index and Use Assessment Field Sheet	QHEI Score: 39
	RM:Date:10/24/09
<u>CK/SC</u> River Code:STORET #: Lat./Long.: 40.6447	EAMUNTY / SPARKS - TTEC 183. 72 29 Office verified hocation
1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every lyne present Check ONE	(Or 2 & average)
BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE ORIGIN	QUALITY
COBBLE [8] C MUCK [2] WETLANDS [0]	
SAND [6] [] CARTIFICIAL [0] [] SANDSTONE [0] [] BEDROCK [5] (Score natural substrates; ignore [] RIP/RAP [0]	DE MODERATE [-1] Maximum
NUMBER OF BEST TYPES: 4 ar more [2] sludge from point-sources) 4 LACUSTURINE [0] Comments	³ [] NORMAL [0] 20 [] NONE [1]
2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common o	f marginal AMOUNT
quality; 2-Moderate amounts, but not of highest quality or in small amounts of I quality; 3-Highest quality in moderate or greater amounts (e.g., very targe boulders in deep or fast water, lai diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional por	ge Check ONE (Or 2 & average) Dis. DECTENSIVE >75% [11]
UNDERCUT BANKS [1] POOLS > 70cm [2] OXBOWS, BACKWATERS OVERHANGING VEGETATION [1] RODTWADS [1] AQUATIC MACROPHYTES SHALLOWS (IN SLOW WATER) [1] BOULDERS [1] LOGS OR WOODY DEBRI	S LI SPARSE 5-25% [3]
ROOTMATS [1]	Cover Maximum
HEALKATED) 31 CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)	20
SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY HIGH [4] EXCELLENT [7] NONE [6] [] HIGH [3]	
MODERATE [3] GOOD [5] RECOVERED [4] MODERATE [2] STLOW [2] FAIR [3] RECOVERING [3] LOW [1] NONE [1] POOR [1] RECENT OR NO RECOVERY [1]	Channel
Comments	Meximum 20
4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2) River right looking downstream RIPARIAN WIDTH FLOOD PLAIN QUALITY	_
RIPARIAN WIDTH FLOOD PLAIN QUALITY EROSION D WIDE > 50m (4) D FOREST, SWAMP [3] NONE (LITTLE [3] D MODERATE 10-50m [3] XD SHRUB OF OLD FIELD [2] MODERATE [2] D MARROW 5-10m [2] D RESUDENTIAL PARK, NEW FIELD [1]	L B CONSERVATION TILLAGE [1]
MODERATE [2] O NARROW 5-10m [2] O RESIDENTIAL-PARK, NEW FIELD [1] HEAVY / SEVERE [1] O VERY NARROW < 5m [4] FENCED PASTURE [1] O VERY NONE [0] OPEN PASTURE, ROWCROP [0]	Indicate predominant land use(s) past 100m riparian. Riparian
Comments	Maximum 10
5] POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH CHANNEL WIDTH CURRENT VELOCITY	Recreation Potential
Check ONE (ONLY!) Check ONE (Or 2 & average) Check ALL that apply [] > 1m [6] [] POOL WIDTH > RIFFLE WIDTH [2] [] TORRENTIAL [-1] [] SLOW [1] [] 0.7~1m [4] [] POOL WIDTH = RIFFLE WIDTH [1] [] VERY FAST [1] [] INTERSTITIAL	Primary Contact Secondary Contact
0.4-<0.7m [2]	IT [-2]
$\mathcal{B} < 0.2m$ [0] <i>comments</i> \mathcal{L}' DEC 61.2E (1016 M)	Current Maximum
Indicate for functional riffles; Best areas must be large enough to support a p of riffle-obligate species: Check ONE (Or 2 & average).	NO REFLE MONCED
BESTAREAS > 10cm [2] [] MAXIMUM > 50cm [2] [] STABLE (e.g., Cobble, Boulder) (2)	
□ BEST AREAS 5-10cm [1] □ MAXIMUM < 50cm [1] □ MOD. STABLE (e.g., Large Gravel) [1] □ BEST AREAS < 5cm □ UNSTABLE (e.g., Fine Gravel, Sand) [0] [metric=0]	LOW [1] MODERATE [0] Riffle / Run EXTENSIVE [-1] Maximum
$\frac{Comments}{6] GRADIENT (19,2 tv/mi) \Box VERY LOW - LOW [2-4] = 24,0001 \cdot (3) - 24,0001 \cdot (3) $	
DRAINAGEAREA MODERATE (6-10)	GLIDE:
EPA 4520 980-990 - 1751,80 10/	06/16/06
- a, 10000 - 522 mi	> 19.16 /1/mi 67A1

F] MEASUREMENTS X bankfull width Z O 3 floodprone x³ with bankfull max. depth bankfull ž depth ⊼width & ′′ ⊼depth ≁′′ Comment KE: React consistency: is reach typical of steam?, Recreation/ Ubserved - Interred. Other/ Sampling observations, Concerns, Access directions, etc. max. depth 🗝 entrench. ratio Legacy Tree: W/D ratio NATURAL / WETLAND (STAGNAND) LOGGING / IRRIGATION / COOLING BMPs-CONSTRUCTION-SEDIMENT FALSE BANK / MANURE / LAGOON WWTP / CSO / NPDES({ INDUSTRY HARDENED / URBAN / DIRTRUCKIM ATMOSPHERE / DATA PAUCITY BANK / EROSION / SURFACE WASH H20 / TILE / H20 TABLE ACID / MINE / QUARRY LELOW CONTAMINATED / LANDFILL PARK / GOLF / LAWN THOME EJ ISSUES 08-130 \overline{Q} Circle some & COMMENT NUSCA PUBLIC / PRIVATEZ BOTH NA ACTIVE / HISTORIC/BOTH / NA MODIFIED / DIPPED OUT / NA **WOVING-BEDLOAD-STABLE** DRAINAG YOUNG-SUCCESSION-OLD SPRAY / SNAG / REMOVED IMPOUNDED / DESICCATED **RELOCATED / CUTOFFS** ARMOURED / SLUMPS DI MAINTENANCI LEVEED / ONE SIDED ISLANDS / SCOURED FLOOD CONTROLO , ± 3 INVASIVE MACROPHYTES BIAESTHETICS EXCESS TURBIDITY NUISANCE ALGAE BOIL SHEEN // EM. AREA DEPTH INUISANCE ODOR CANTUR CRACK 🗆 TRASH / LITTER FOAM (SCUN/ CJ RECREATION 80 C SECCHI DEPTH LEU 1st -sample pass- 2nd -sample pass-U > 70 cm/ CTB CLARITY STAGE □ 20-<40 cm AJ SAMPLED REACH 040-70 cm Check ALL that apply Stream Drawing D DRY < 20 cm</p> **€** C <10%- CLOSED 275 85%- OPEN CANOPY 0 30%-<56% DISTANCE <u>by 55%-<85%</u> D L. LINE 0.15 Km 0.5 Km METHOD 🗖 0.12 Km 0.2 Km C WADE OTHE meters BOAT Γ Ø

WATERBODY CROSSING DATA FORM PROJECT: HONDIN WIND FROM DATE: 7 (LOCATION: ARABO EAST OF WRS- 175 FIELD CREW: WAT ERBODY ID してん **GPS FEATURE TYPE** (open/closed)(line/polygon) PHOTO ID and DIRECTION NHATE ->` NAME (or tribulary to) WATERBODY TYPE (stream/pond/ditch/culvert) FLOW REGIME er (perenmial/intermittent/ephemeral) WIDTH (observed/OHW) DEPTH ſ (observed/OHW) FLOW RATE some low (Jun) ALOPT (dry/stagnant/low/moderate/high) FLOW DIRECTION DIMARC nXI Arets SUBSTRATE (mud/silt/gravel/cobble/boulders/bedrock) BANK VEGETATION UNRY SUCCESS : INAN (upland/wetland cover type) 500 - Slopen Steep (1: SKETCH: - Chand open 509, - Eman Lejen Easyes -min nrhid - High degree of Slaghing MERONIA - Sume unnaced hours NE - 51000 - 2:1 (4195) A-2 A-FISH AND WILDLIFE OBSERVATIONS: NOTES: May INTERMiltont MAMES AD

592041717	10/24/09
ChieEPA Qualitative Habitat Evaluation Index and Use Assessment Field Sheet	QHEI Score: 34
	PM: Date: Ute < 1.0
Stream & Location: MCCDY KUA WIZOD WEST & CRISO /TRGS INth Scorers Full Name & Affiliation: D	RM:Date: 10124 109
River Code: STORET # Lat/Long.: 40 40 7	183.7245 Office verified location
11 SURSTRATE Check DNLY Two substrate TYPE BOXES	
estimate % or note every type present Check ON BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE ORIGIN	E (Or 2 & average) QUALITY
	SILT NORMAL [0]
Image: Gravel [7] Image: Gravel	
Score natural substrates; ignore RIP/RAP [0]	MODERATE [-1] Maximum
Commento U3 or less [0] USHALE [-1]	⁻³ ∐ NORMAL [0] 20 □ NONE [1]
Comments	
2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent: 1-Very small amounts or if more common of	of marginal AMOUNT
quality; 2-Moderate amounts, but not of highest quality or in small amounts of quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, la diagneter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional po-	arge Check ONE (Or 2 & average)
UNDERCUT BANKS [1] POOLS > 70cm [2] OXBOWS, BACKWATER	S [1] 32 MODERATE 25-75% [2]
OVERHANGING VEGETATION [1] ROOTWADS [1] AQUATIC MACROPHYTE SHALLOWS (IN SLOW WATER) [1] BOULDERS [1] LOGS OR WOODY DEBR	
ROOTMATS [1]	Cover
Fmmets	Maximum 20
3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)	
SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY	
☐ HIGH [4]	
Cow [2] EAR [3] Recovering [3] Image: Low [1] None [1] Image: Poor [1] Image: Recent or No Recovery [1] Image: Low [1]	Channel
Comments	Maximum 20
4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 River right looking dewinstman,	i -
INONE / LITTLE [3] I MODERATE 10-50m [3] E SHRUB OG OLD FIELD DA MODERATE [2] I NARROW 5-10m [2] I RESIDENTIAL PARK, NEW FIELD [1]	LI LI URBAN OR INDUSTRIAL [0]
XHEAV) / SEVERE [1] VERY NARROW < 5m [1] FENCED PASTURE [1]	Indicate predominent land use(s)
Comments	past 100m riparien. Riperien 6 Maximum 6
	10
5] <i>POOL / GLIDE AND RIFFLE / RUN QUALITY</i> MAXIMUM DEPTH CHANNEL WIDTH CURRENT VELOCITY	Recreation Potential
Check ONE (ONLY!) Check ONE (Or 2 & average) Check ALL that apply	Primary Contact
□ > 1m (6] □ POOL WIDTH > RIFFLE WIDTH [2] □ TORRENTIAL [-1] □ SLOW [1] □ 0.7-<1m [4] □ POOL WIDTH = RIFFLE WIDTH [1] □ VERY FAST [1] ↓ [1] ↓ [1]	L [-1] (circle one and comment on back)
0.4-<0.7m [2] CPOOL WIDTH < RIFFLE WIDTH [0] FAST [1] INTERMITTE 0.2-<0.4m [1] BODIES [1] BODIES [1]	NT [-2]
<pre>indicate for reach - paols and rifle</pre>	
comments & Deep Glipe (12032 meter)	12
Indicate for functional riffles; Best areas must be large enough to support a of riffle-obligate species: Check ONE (Or 2 & average).	
RIFFLE DEPTH RUN DEPTH RIFFLE / RUN SUBSTRATE RIFFL	E / RUN EMBEDDEDNESS
□ BEST AREAS > 10cm [2] □ MAXIMUM > 50cm [2] □ STABLE (e.g., Cobble, Boulder) [2] □ BEST AREAS 5-10cm [1] □ Q MAXIMUM < 50cm [1] □ MOD. STABLE (e.g., Large Gravel) [1]	
BEST AREAS < Scm [metric=0] [metric=0] [DunSTABLE (e.g., Fine Gravel, Sand) [0] [metric=0]	EXTENSIVE (4) Run
Comments	
	GLIDE:
DRAINAGE AREA 🚺 MODERATE (6-10)	RIFFLE: Maximum
EPA 4520	06/16/06
- STAGNAT W/ INTERSTO	ACRIMO
min 7727101 -115/1	المسترين المراسل

F) MEASUREMENTS floodprone x² width bankfull max. depth X bankfull width bankfull X depth upriment me: meach consistency is reach typical of steamy, mechanized by Ubserved - Interfed, Uther/ Sampling observations, Concerns, Access directions, etc. entrench. ratio X width 2-X depth 8// Legacy Tree: max. depth W/D ratio 1500 LOGGING / IRRIGATION / COOLING BANK (EROSION) SURFACE FALSE BANK TNANURE / LAGOON BMPs-CONSTRUCTION-SEDIMENT NATURAL / WETLAND (STAGNAN) PARK / GOLF / LAWN / HOME WWTP / CSO / NPDESY INDUSTR HARDENED / URBAN / DIRTEGRIM WASH H20 / TILE / H20 TABLE ATMOSPHERE / DATA PAUCITY ACID / MINE / QUARRY LELOW CONTAMINATED / LANDFILL EJ ISSUES Circle some & COMMENT ц К FLOOD CONTROL DRAINAGE ERIVALE BOTH / NA ACTIVE / HISTORIC / BOTH / NA MODIFIED / DIPPED OUT / NA MOVING-BEDLOAD-STABLE YOUNG-SUCCESSION-OLD SPRAY / SNAG / REMOVED RELOCATED / CUTOFFS IMPOUNDED / DESLOCATE DI MAINTENANCE ARMOURED / SLUMPS LEVEED / ONE SIDED ISLANDS / SCOURED N-N レイ PUBLIC INVASIVE MACROPHYTES **BIAESTHETICS** EXCESS TURBIDITY NUISANCE ALGAE POOL: 0>100ft20>3ft AREA DEPTH DISCOLORATION FOAM / SCUM OIL SHEEN TRASH / LITTER DISCOLORATION I NUISANCE ODOR 3 d Z CJ RECREATION 20-40 cm 80 5 1st -somple pass- 2nd C > 70 cm/ CTB CLARITY STAGE □ 20-<40 cm □ 40-70 cm Stream Drawing AJ SAMPLED REACH Check ALL that apply < 20 cm 2128-50 8.55 ∑ + 85%- OPEN 55%-<86% 10%-<55% 10%-<30% 10%-<10%-<10% Z JE1) 1 CANOPY DISTANCE 0.5 Km 0.2 Km 0.15 Km BOAT WADE C. LINE OTHER METHOD 0.12 Kg () () meters

SAR042AIN

	. 1		SSING DATA PO	13 FIME		
PROJECT:	HAUSIN U.	is Fran	DATE: _	1012	5109	
LOCATION:		USA TO 85	FIELD CREW: _	RAD	SMS	
WATERBODY	ID	SAR 04	ZAIR			
GPS FEATUR (open/closed)(line/p	olygon)	Line (1.	3)			
PHOTO ID and		I (NOLM	11155			
NAME (or tributary to)		Mrcoy Ru,	stributa	ay		··
WATERBODY (stream/pond/ditch/c	culvert)	STREAM	~			
FLOW REGIM		TOTER	mitten	<u> </u>		
WIDTH (observed/OHW)		311	21			
DEPTH (observed/OHW)		6"+1"	31			
FLOW RATE		STAGA	Ant /D	124	· · ·	
FLOW DIREC		NORTH WC	51		<u></u>	
	ole/boulders/bedrock)	Silt IV	EL-ICUN	hle ke	Pud	
Upland/wetland cov		UpIMD /	CARLY SU	CCESV /1	vê C	
SKETCH:				- 52	vghe Sis	
i n/a	Att	n Ar			-	
	2.	Y Y	Monal	- Au	ERAGC 4	suislope 2/

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33,

121

12'

WATERRONV CROSSING DATA FORM

Chande Hale 1:1

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10125109

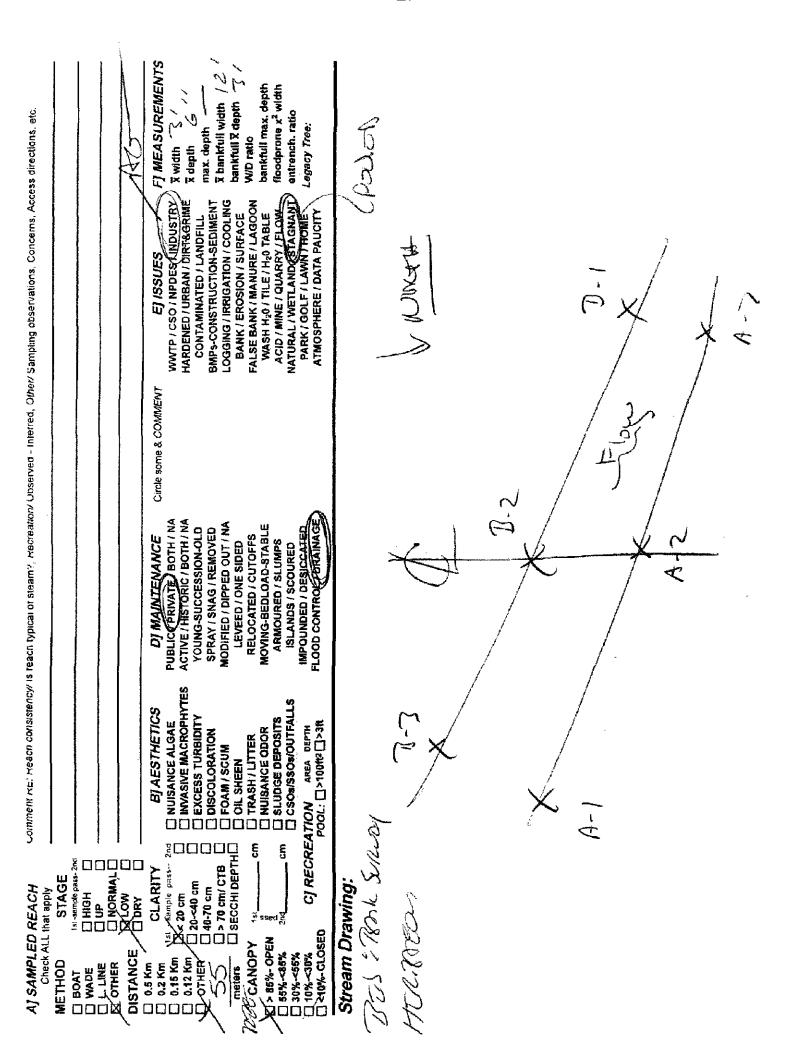
Contra Surres H FISH AND WILDLIFE OBSERVATIONS: NUME OBSERVED

A-1

NOTES: Exil Stream Champines in Mr. Ally

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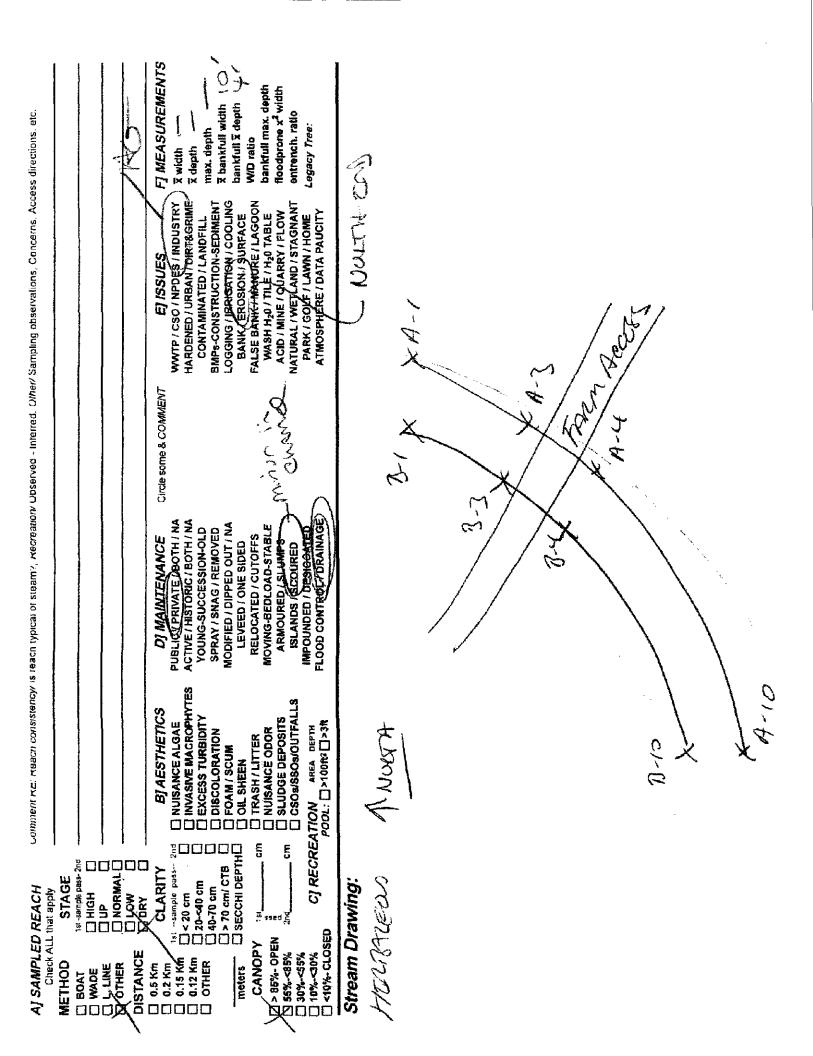
SFIRO42AIN 10/25/09 Qualitative Habitat Evaluation Index QHEI Score: and Use Assessment Field Sheet Stream & Location: MC Cox Run TRIDIAL RM: Date: 1º 1 1 11 WI, FOU BALT Scorers Full Name & Affiliation: DELOHUNTU I SPALKS T 772 Lat/Long.: 40.6401 183.7131 verified River Code: location 🗆 STORET #: 1] SUBSTRATE Check ONLY Two substrate TYPE BOXES: Check ONE (Or 2 & average) QUALITY ORIGIN BEST TYPES TI LIMESTONE [1] HARDPAN [4] BLDR /SLABS [10] HEAVY [-2] BOULDER [9] DETRITUS [3] MODERATE [-1] Substrate SILT WETLANDS [0] NORMAL [0] HARDPAN [0] 🗍 🔲 GRAVEL (7) 🗌 FREE [1] NODERAL DI NODERAL DI NORMAL [0] SANDSTONE OI EXTENSIVE [-7] SAND [5] ARTIFICIAL [0] (Score natural substrates; fonore RIP/RAP 101 MODERATE [-1] BEDROCK [5] Maximum NUMBER OF BEST TYPES: 4 or more [2] sludge from point-sources) 20 SHALE [-1] 😡 3 or less [0] Comments COAL FINES [-2] 2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest AMOUNT quality; 3-Highest quality in moderate or greater amounts, but not or highest quality or in showing of the show Check ONE (Or 2 & average) T EXTENSIVE >75% [11] OXBOWS, BACKWATERS [1] MODERATE 25-75% [7]; AQUATIC MACROPHYTES [1] SPARSE 5-425% [3] LOGS OR WOODY DEBRIS [1] NEARLY ABSENT <5% [1] UNDERCUT BANKS [1] .. OXBOWS, BACKWATERS [1] POOLS > 70cm [2] ... ROOTWADS [1] **OVERHANGING VEGETATION [1]** SHALLOWS (IN SLOW WATER) [1] **BOULDERS [1]** ROOTMATS [1] Cover Comments Maximum 20 HERRARDA. 3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY [] HIGH [4] NONE [6] EXCELLENT [7] HIGH [3] MODERATE [3] GOOD (5) MODERATE [2] **RECOVERED** [4] LOW [1] LOW [2] RECOVERING [3] FAIR 3 Channe/ D NONE [1] D POOR [1] RECENT OR NO RECOVERY [1] Maximum Comments 2n 4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average) FLOOD PLAIN QUALITY River right looking downstream **RIPARIAN WIDTH** □ □ WIDE > 50m [4] CONSERVATION TILLAGE [1] EROSION E FOREST, SWARF [3] NONE / LITTLE [3] URBAN OR INDUSTRIAL (0) □ □ MODERATE 10-50m [3] K SHRUB OR OLD FIELD 21 MODERATE [2] I NARROW 5-10m [2] RESIDENTIAL, PARK, NEW FIELD [1] . MINING / CONSTRUCTION [0] HEAVY / SEVERE [1] ... VERY NARROW < 5m [1] E FENCED PASTURE Indicate predominant land use(s) past 100m riparian. Riparian C DOPEN PASTURE ROWCROP Riparian **Comments** Maximum 5) POOL / GLIDE AND RIFFLE / RUN QUALITY **Recreation Potential** MAXIMUM DEPTH CHANNEL WIDTH CURRENT VELOCITY Check ONE (ONLY!) Check ONE (Or 2 & average) Check ALL that apply Primary Contact POOL WIDTH > RIFFLE WIDTH [2] 🗌 > 1m [6] TORRENTIAL [-1] SLOW [1] Secondary Contact POOL WIDTH = RIFFLE WIDTH [1] 🗍 0.7-<1m [4] VERY FAST [1] INTERSTITIAL [-1] (circle one and comment on bacid) 🗍 0.4~<0.7m [2] POOL WIDTH < RIFFLE WIDTH [0] FAST [1] INTERMITTENT [-2] MODERATE [1] DEDDIES [1] Indicate for reach - pools and rifles. 0.2-<0.4m (1) Pool / < 0.2m (0) Curmet Maximum 26mments " DEEP GINE (0.1524 METER Indicate for functional riffles; Best areas must be large enough to support a population NO RIFFLE [metric=0] of riffle-obligate species: Check ONE (Or 2 & average). RIFFLE / RUN SUBSTRATE RIFFLE / RUN EMSEDDEDNESS RUN DEPTH RIFFLE DEPTH □ BEST AREAS > 10cm [2] □ MAXIMUM > 50cm [2] □ STABLE (a.g., Cobble, Boulder) [2] NONE (2) MAXIMUM < 50cm (1) MOD. STABLE (e.g., Large Gravel) [1] BEST AREAS 5-10cm [1] LOW [1] BEST AREAS < 5cm (metric=0) Riffle . UNSTABLE (e.g., Fine Gravel, Sand) [0] BODERATE [0] EXTENSIVE [-1] Maximum Comments ND 6] GRADIENT (ZO IUmi) UVERY LOW LOW (24) %POOL:(4~3)} %GLIDE Gradians DRAINAGE AREA MODERATE [6-10] Maximum %RUN: %RIFFLE mi2} VA HIGH - VERY HIGH 10-67 STREEM WISTLY 12! (10 06/16/08 EPA 4520 995=)990 u13001 1.246 = 201336+1mi GARIAT



WATERBODY CROSSING DATA FORM MM DATE: 25 PROJECT: HOUNA NIGN ()LOCATION: BU South WEST OK 11575 59 WATERBODY ID $\supset \bigcirc$ **GPS FEATURE TYPE** 10 (open/closed)(line/polygon) PHOTO ID and DIRECTION 名う 54 ゆうんに NAME 12 (or tributary to) WATERBODY TYPE (stream/pond/ditch/cuivert) FLOW REGIME . iintMU (perennial/intermittent/ephemeral) WIDTH (TED WIDT 4 (observed/OHW) DEPTH (observed/OHW) FLOW RATE (dry/stagnant/low/moderate/high) FLOW DIRECTION SUBSTRATE Chhle en (mud/sill/gravel/cobble/boulders/bedrock) **BANK VEGETATION** 1001 (upland/wetland cover type) no scoum SKETCH: TNOLTH × A-1 18-1 R-7 ine CAT MAR 1:1 Was Mark 211 (A.Z 3.2 -no shecin 11.2 THRM ACCESSRO MUNCRASTE to SELLIC Sloughty AS law->monenare R-10 CRUSSin, 6 1.7 - ubsaus pail + 1.3. FISH AND WILDLIFE OBSERVATIONS: DILR THREED MALLOUD TRACKS NOTES:

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quality: 3-Highest quality in moderable amounts: bit not of highest quality or is small amounts of highest quality in moderable or greater amounts: (a) wery large boulders in deep of fast water, for deep, well-defined, functional pools. Check ONE (Or 2 & average) Quality: 3-Highest quality in moderable or greater amounts: (a) work large or fast water, or deep, well-defined, functional pools. Check ONE (Or 2 & average) Quality: 3-Highest quality in moderable or greater amounts: (a) work large or fast water, or deep, well-defined, functional pools. Check ONE (Or 2 & average) Quality: 3-Highest quality in moderable or greater amounts: (a) work large or fast water, or deep, well-defined, functional pools. Check ONE (Or 2 & average) Quality: 3-Highest quality in moderable or greater amounts: (a) work large or fast water. Or deep, well-defined, functional pools. Check ONE (Or 2 & average) Quality: 3-Highest quality in moderable or greater amounts: (a) work (or 2 per benk & average) SinUOSITY DevelopMent Quality: 3-Highest quality in moderable or greater and the pool of fast water, or deep, well-defined, functional pools. Check ONE (or 2 & average) SinUOSITY DevelopMent Channel Lization Stability Moderable additional pools. Moderable additional pools. Check ONE (or 2 per benk & average) SinUOSITY DevelopMent Check ONE in each category for EACH BANK (Or 2 per benk & average) River right loobing downstream RIPARIAN WIDTH
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Image: Second
ANONE / LITTLE [3] MODERATE 10-50m [3] SHRUB OR OLD FIELD [2] URBAN OR INDUSTRIAL [0] MODERATE [2] NARROW 5-10m [2] RESIDENTIAL PARK, NEW FIELD [1] MINING / CONSTRUCTION [0] HEAVY / SEVERE [1] VERY NARROW < 5m [1] FENCED PASTURE [4] Indicate predominent land use(s)
Comments ID
5) POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH CHANNEL WIDTH CURRENT VELOCITY Check ONE (ONLY!) Check ONE (Or 2 & average) Check ALL that apply Primary Contact
> 1m [6] POOL WIDTH > RIFFLE WIDTH [Z] TORRENTIAL [-1] SLOW [1] 0.7 < 1m [4]
0.2<<0.4m [1]
Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (Or 2 & average). RIFFLE DEPTH RUN DEPTH RIFFLE / RUN SUBSTRATE RIFFLE / RUN EMBEDDEDNESS
□ BEST AREAS > 10cm [2] □ MAXINUM > 50cm [2] □ STABLE (e.g., Cobble, Boulder) [2] □ NONE [2] □ BEST AREAS 5-10cm [1] □ MAXINUM < 50cm [1] □ MOD. STABLE (e.g., Large Gravel) [1] □ LOW [1] □ LOW [1] □ BEST AREAS < 5cm □ UNSTABLE (e.g., Eine Gravel Sand) [0] □ MODERATE [0] Riffie [
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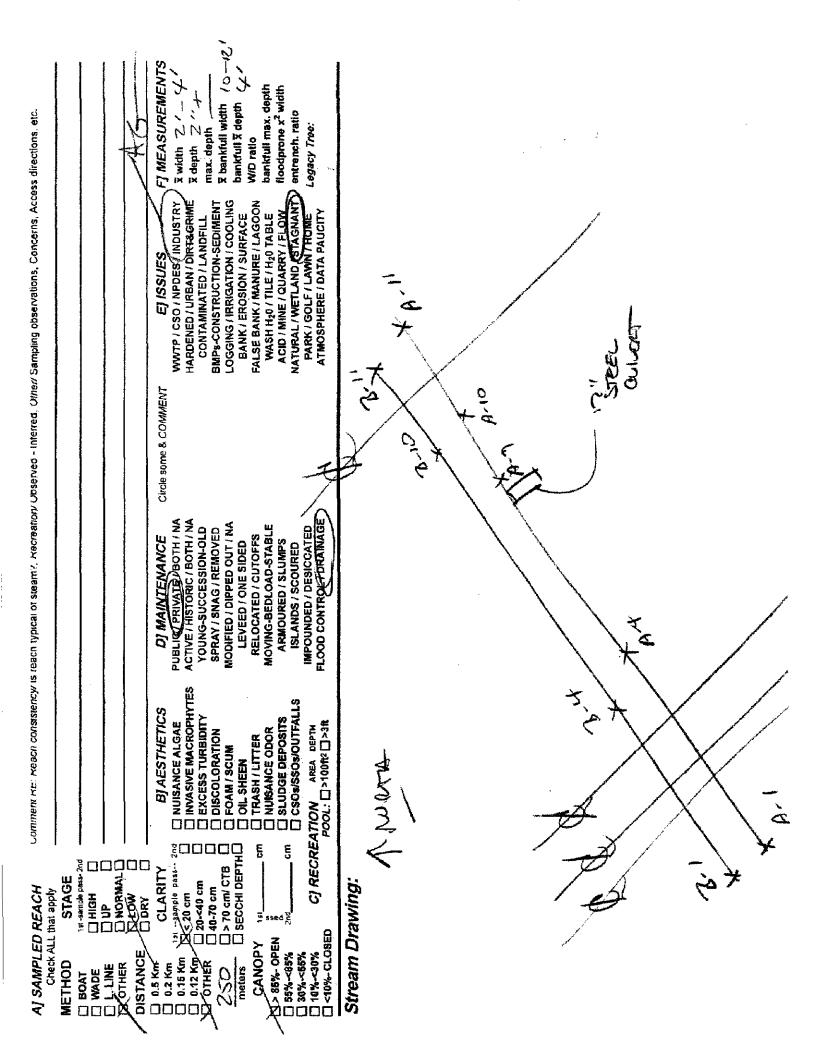
SISO046AID 12/06/2 12/25/09 WATERBODY CROSSING DATA FORM -ALM DATE: 10125109 PROJECT: FLARDO WINN WS NWOLUTE 127 FIELD CREW: (12) LOCATION: WATERBODY ID 2 GPS FEATURE TYPE 1-11 (open/closed)(line/polygon) PHOTO ID and DIRECTION VNE NAME PADRH (or tributary to) WATERBODY TYPE (stream/pond/ditch/culvert) FLOW REGIME nillent (perennial/intermittent/ephemeral) WIDTH (observed/OHW) DEPTH (observed/OHW) FLOW RATE MONT (dry/stagnant/low/moderate/high) FLOW DIRECTION SUBSTRATE (mud/silt/gravel/cobble/boulders/bedrock) BANK VEGETATION Scrassiuna (upland/wetland cover type) - MEAR WATER SKETCH: * " * I NORTH - 1:1 (50%+ Aronge N'IP - min shuhy - she wij P.'0 A Erosin (au) Ð Un Rankersyes e Echert Ar A-9 (\cdot, \cdot) 12" STEEL COLLINATOS FISH AND WILDLIFE OBSERVATIONS: NOTES: -5- ~2' wide water / 2" DEEP AT FR MES MINTERMELTENT

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	WATERBODY CROSSING DATA FORM								
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	LOCATION: BU NOLTHOG WIG 127 FIELD CREW: DOTS, SUS								
	WATERBODY ID	573-046	. 610						
	GPS FEATURE TYPE (cpen/closed)(line/polygon)	line (1	- 11)						
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	NAME (or tributary to)	FIAT	SRAnch				-		
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and a	(mud/silt/gravel/cobble/boulders/bedrock) BANK VEGETATION	Silty	\sim				-		
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	FISH AND WILDLIFE OBSEF	VATIONS:							
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NOTES:

MAPPES AS INTERMILLENTE

530046A13	10/25/09
ChieFPA Qualitative Habitat Evaluation Ind and Use Assessment Field Shee	
Stream & Location: FIAT TRADCH	RM: Date: 10/25/09
ULOW FEET BASTOL CR75 Scorers Full Name & Affiliati	
River Code: STORET #: Lat/Long.:40.6	372 183.7618 Office verified L
1] SUBSTRATE Check ONLY Two substrate TYPE BOXES: estimate % or note every type present Che	eck ONE (Or 2 & average)
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	aj SILI DNORMAL [0]
GRAVEL [7] GRAVEL [7]	
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Comments Coal Fines	(-2)
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OVERHANGING VEGETATION [1] ROOTWADS [1] AQUATIC MACRO	PHYTES (1) SPARSE 5-25% [3]
SHALLOWS (IN SLOW WATER) [1] BOULDERS [1] LOGS OR WODDY ROOTMATS [1]	
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3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY	<i>,</i>
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☐ MODERATE [3] ☐ GOOD [5] ☐ RECOVERED [4]	E [2]
	Channel Meximum
Comments	20
4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BAN	K (Or 2 per bank & avarage)
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MODERATE [2] NARROW 5-10m [2] C RESIDENTIAL, PARK, NEW F	
Q QNONE [0] QOPEN PASTURE ROWCROI	P[0] Indicate predominant land use(s) past 100m riperian. Riparlan
Comments	Maximum X
5] POOL / GLIDE AND RIFFLE / RUN QUALITY	
MAXIMUM DEPTH CHANNEL WIDTH CURRENT VELOG	
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□ 0.4-<0.7m (2] □ POOL WIDTH < RIFFLE WIDTH [0] □ FAST [1] □ INTER □ 0,2-<0.4m [1] □ EDDI	RMITTENT [-2]
indicate for reach - pools a	
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Indicate for functional riffles; Best areas must be large enough to supp of riffle-obligate species; Check ONE (Or 2 & average).	ort a population NNO RIFFLE [metric=0]
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□ BESTAREAS > 10cm [2] □ MAXIMUM > 50cm [2] □ STABLE (e.g., Cobble, Boulder) [2] □ BESTAREAS 5-10cm [1] □ MAXIMUM < 50cm [1] □ MOD. STABLE (e.g., Large Gravel) [1]	NONE [2] LOW [1]
BEST AREAS < 5cm UNSTABLE (e.g., Fine Gravel, Sand) (C	MODERATE IN RITIO
[metric=0] Comments bio @K()/C	
6] GRADIENT (4) 1 N/mi), UVERY LOW - LOW [24]	
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EPA 4520 980-975= 6,372,51' 5/	06/16/06
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lial in the	CONTRACTOR



Case No. 09-470-EL-BGN

RESPONSE TO 16 (C)

APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): A.

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardia Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Delineated Wetland (WBU033) State: Ohio

County/parish/borough: Hardin City: Cessna Center coordinates of site (lat/long in degree decimal format): Lat. 40.7037° Long. 83.7288° Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Unnamed Scioto River Tributary

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: N/A

Name of watershed or Hydrologic Unit Code (HUC): 5060001

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: 12/03/09

Field Determination. Date(s): 10/23/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

- 1. Waters of the U.S.
 - a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - 50 Isolated (interstate or intrastate) waters, including isolated wetlands
 - b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: linear feet: width (ft) and/or acres. Wetlands: 0.320 acres.
 - c. Limits (boundaries) of jurisdiction based on: Elevation of established OHWM (if known):
- 2. Non-regulated waters/wetlands (check if applicable):³
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

 Wetland adjacent to TNW Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4,

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions: Watershed size: Drainage area:

Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches

- (ii) Physical Characteristics:
 - (a) <u>Relationship with TNW:</u>

 Tributary flows directly into TNW.
 Tributary flows through **Tributaries before entering TNW**.

Project waters are		river miles from TNW.
Project waters are		river miles from RPW.
Project waters are		aerial (straight) miles from TNW.
Project waters are		aerial (straight) miles from RPW.
Project waters cros	ss or serve	as state boundaries. Explain:

Identify flow route to TNW⁵: Tributary stream order, if known:

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b)	General Tributary Characteristics (check all that apply): Tributary is: Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain:
	Tributary properties with respect to top of bank (estimate): Average width: feet Average depth: feet Average side slopes:
	Primary tributary substrate composition (check all that apply): Silts Concrete Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:
	Tributary condition/stability [e.g., highly croding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Tributary gradient (approximate average slope): %
(c)	<u>Flow:</u> Tributary provides for: Example: Estimate average number of flow events in review area/year: Example: Describe flow regime: Other information on duration and volume:
	Surface flow is: Characteristics:
	Subsurface flow: Explain findings: . Dye (or other) test performed: .
	Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): Clear, natural line impressed on the bank changes in the character of soil shelving Vegetation matted down, bent, or absent leaf hitter disturbed or washed away sediment deposition water staining Discontinuous OHWM. ⁷ Explain:
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): Image: High Tide Line indicated by: Image: Mean High Water Mark indicated by: Image: Image
	emical Characteristics:
Cha	aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain:

Identify specific pollutants, if known:

(iii)

.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

- (a) <u>General Wetland Characteristics:</u>
 Properties:
 Wetland size: acres
 Wetland type. Explain:
 Wetland quality. Explain:
 Project wetlands cross or serve as state boundaries, Explain:
- (b) <u>General Flow Relationship with Non-TNW:</u> Flow is: **Control** Explain:

Surface flow is: **Example** Characteristics:

Subsurface flow: **The state**: Explain findings: Dye (or other) test performed:

- (c) <u>Wetland Adjacency Determination with Non-TNW:</u>
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **provention** river miles from TNW. Project waters are **provention** aerial (straight) miles from TNW. Flow is from: **provention**. Estimate approximate location of wetland as within the **provention** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis:

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

- TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
- 2. <u>RPWs that flow directly or indirectly into TNWs.</u>
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Mapped as unnamed Scioto River tributary with intermediate flow; Bed and bank, water depth of 12 plus inches, low flow conditions, and minnows and mussles observed.
 - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ft).

- Other non-wetland waters: acres.
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: 0.230 acres.

- 6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.
 - Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: 0.022 acres.

- 7. Impoundments of jurisdictional waters.⁹
 - As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
 - Demonstrate that impoundment was created from "waters of the U.S.," or
 - Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 - Demonstrate that water is isolated with a nexus to commerce (see E below).

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- from which fish or shellfish are or constraints
 which are or could be used for indus
 Interstate isolated waters. Explain:

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

[🚺] Other factors. Explain:

⁸See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Identify water body and summarize rationale support	ng determination:
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Provide estimates for jurisdictional waters in the review area (check all that apply):

width (ft). Tributary waters: linear feet

Other non-wetland waters: acres.

- Identify type(s) of waters:
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:Man-made residential pond with no observed inlet or outlet.
- Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

3 Lakes/ponds: acres.

- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): width (ff). linear feet,
- Lakes/ponds: 0.320 acres.
 - Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below);
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
 - Data sheets prepared by the Corps:
 - Corps navigable waters' study:

🔯 U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999 -

Present.

USGS NHD data.

USGS 8 and 12 digit HUC maps.

U.S. Geological Survey map(s). Cite scale & quad name: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH; USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

X National wetlands inventory map(s). Cite name: WETDBA.CONUS wet poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009.

State/Local wetland inventory map(s): Ohio Wetlands Inventroy - Hardin County; The Ohio Department of Natural Resources (DNR): 1/1/1991.

FEMA/FIRM maps: Floodway Areas - Hardin County: Ohio Department of Natural Resources Division of Water; Hardin County FEMA NFIP maps; 1/9/1974.

 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
 Photographs: Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101.

or Differ (Name & Date): Previous determination(s). File no. and date of response letter: Applicable/supporting case law: Applicable/supporting scientific literature: Other information (please specify):

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B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM **U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION 1: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Delineated Wetland (WBU004)

State: Ohio County/parish/borough: Hardin City: Marion

Center coordinates of site (lat/long in degree decimal format): Lat. 40.6931° , Long. 83.8135°

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Mapped Unnamed Intermittent Scioto River Tributary

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. 図図

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 12/03/09
- Field Determination. Date(s): 10/19/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters 砌
 - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: linear feet: width (ft) and/or acres. Wetlands: 0.127 acres.
- c. Limits (boundaries) of jurisdiction based on: Elevation of established OHWM (if known):
- 2. Non-regulated waters/wetlands (check if applicable):³
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions: Watershed size:

> Drainage area: Average annual rainfail: 35.65 inches Average annual snowfail: 27.6 inches

(ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>

 Tributary flows directly into TNW.
 Tributary flows through minimum tributaries before entering TNW.

Project waters are	Book	river miles from TNW.
Project waters are		river miles from RPW.
Project waters are		aerial (straight) miles from TNW.
Project waters are	Part of these	aerial (straight) miles from RPW.
		as state boundaries. Explain:

Identify flow route to TNW³: Tributary stream order, if known:

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b)	General Tributary Characteristics (check all that apply): Tributary is: In Natural Image: Artificial (man-made) Explain: Image: Manipulated (man-altered) Explain:
	Tributary properties with respect to top of bank (estimate): Average width: feet Average depth: feet Average side slopes:
	Primary tributary substrate composition (check all that apply): Concrete Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Muck
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: . Presence of run/riffle/pool complexes. Explain: . Tributary geometry: . Tributary gradient (approximate average slope): %
(c)	Elow: Tributary provides for: Estimate average number of flow events in review area/year: Describe flow regime: Other information on duration and volume:
	Surface flow is: Characteristics:
	Subsurface flow: Explain findings: . Dye (or other) test performed: .
	Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank changes in the character of soil shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining Discontinuous OHWM. ⁷ Explain:
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: Mean High Water Mark indicated by: oil or scum line along shore objects survey to available datum; fine shell or debris deposits (foreshore) physical markings/characteristics tidal gauges other (list):
	emical Characteristics: aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known:

(iii)

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⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Ē Wetland fringe. Characteristics:
- \square Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings;
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

- Physical Characteristics: 6)
 - (a) General Wetland Characteristics:
 - Properties:
 - Wetland size: 0.1267 acres

Wetland type. Explain: Palustrine Emergent/Palustrine Open Water.

Wetland quality. Explain: Low quality - man made bermed farm pond with fringe emergent wetlands (approximately

3 feet wide).

Project wetlands cross or serve as state boundaries. Explain: No.

(b) <u>General Flow Relationship with Non-TNW</u>: Flow is: **Internet Scioto River tributary to the** west. Exchange between the farm pond and tributary through the culvert would occur intermittently (flow - less than three months) .

Surface flow is: Contried

Characteristics: Culverted.

Subsurface flow: **United States**. Explain findings: Dye (or other) test performed:

- (c) <u>Wetland Adjacency Determination with Non-TNW:</u>
 - Directly abutting
 - Not directly abutting

Discrete wetland hydrologic connection. Explain: Farm pond is hydrologically connected to an unnamed Scioto River tributary via an 18 inch PVC culvert .

Ecological connection. Explain:

Separated by berm/barrier. Explain: The wetland and tributary are separated by an earthen berm.

- (d) Proximity (Relationship) to TNW
 - Project wetlands are **(Norm project** river miles from TNW.
 - is aerial (straight) miles from TNW. Project waters are
 - Flow is from: Mediated

Estimate approximate location of wetland as within the **set set and** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Water Generally Clear.

Identify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from adjacent agricultural fields.

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain: Emergent/90% Aquatic/80%.
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings: Potential Only None Observed.
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

Characteristics of all wetlands adjacent to the tributary (if any) 3.

All wetland(s) being considered in the cumulative analysis:

Approximately (0.1267) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Wetland (farm pond with fringe wetlands) is hydrologically connected to unnamed Scioto River tributary via an 18 inch culvert. Interchange could potentially occur into and out of the pond from the tributary. Tributary discharges indirectly to non TNW portion of the Scioto River.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

- TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: INWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
- 2. <u>RPWs that flow directly or indirectly into TNWs.</u>
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Mapped as unnamed Scioto River tributary with intermediate flow; Bed and bank, water depth of 12 plus inches, low flow conditions, and minnows and mussles observed.
 - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

acres.

- Tributary waters: linear feet width (ft).
- Other non-wetland waters:
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

acres.

- Tributary waters: linear feet width (ft).
- Other non-wetland waters:
 - Identify type(s) of waters:

Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. 4.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- 🕮 Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: 0.1267 acres.

- 6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.
 - Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and 圝 with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

- As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- Demonstrate that impoundment was created from "waters of the U.S.," or
- Ð Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- M Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):18

- which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain:

⁸See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹º Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Repanos.

	Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	 Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: . Wetlands: acres.
F.	 NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres. Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
<u>SEC</u>	CTION IV: DATA SOURCES.
А.	 SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water, Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999 – Present. M USGS NHD data. USGS S and 12 digit HUC maps. U USG S and 12 digit HUC maps. U USG S and 12 digit HUC maps. U USG S Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Oli; USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Oli; US. Department of Agriculture, Natural Resources Conservation Service; 20051129. National wetlands inventory map(s). Cite name: WETDBA.CONUS_wet_poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National Wetlands Inventory map(s): Ohio Wetlands Inventory - Hardin County; The Ohio Department of Natural Resources (DNR); 11/1991. FEMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water; Hardin County FEMA NFIP maps; 1/9/1974. 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

. . .

Photographs: Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101. or Other (Name & Date):
 Previous determination(s). File no. and date of response letter:
 Applicable/supporting case law:
 Applicable/supporting scientific literature:
 Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM **U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Delineated Wetland (WBU044)

State: Ohio County/parish/borough: Hardin City: McDonald

Center coordinates of site (lat/long in degree decimal format): Lat. 40.6418° , Long. 87.7434°

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: McCoy Run

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: N/A Name of watershed or Hydrologic Unit Code (HUC): 5060001

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: 12/03/09

Field Determination. Date(s): 10/25/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Areno "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

29 Waters subject to the ebb and flow of the tide. M

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply); ¹
 - TNWs, including territorial seas 鋷
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: linear feet: width (ft) and/or acres. Wetlands: 0.954 acres.
- c. Limits (boundaries) of jurisdiction based on: Elevation of established OHWM (if known):
- 2. Non-regulated waters/wetlands (check if applicable);³
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

Wetland adjacent to TNW Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions: Watershed size: Drainage area:

Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches

- (ii) Physical Characteristics:
 - (a) <u>Relationship with TNW:</u>
 Tributary flows directly into TNW.
 Tributary flows through **Content** tributaries before entering TNW.

Project waters	are		river miles from TNW.
Project waters	are	RUSA	river miles from RPW.
Project waters	are		aerial (straight) miles from TNW.
Project waters	are		aerial (straight) miles from RPW.
Project waters	cros	ss or serve	as state boundaries. Explain:

Identify flow route to TNW⁵: Tributary stream order, if known:

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b)	General Tributary Characteristics (check all that apply): Tributary is: Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain:
	Tributary properties with respect to top of bank (estimate): Average width: feet Average depth: feet Average side slopes:
	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Explain: Tributary gradient (approximate average slope): %
(c)	Flow: Tributary provides for: Differentiation Estimate average number of flow events in review area/year: Differentiation Describe flow regime: Other information on duration and volume:
	Surface flow is: Characteristics :
	Subsurface flow: Explain findings:
	Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): the presence of litter and debris clear, natural line impressed on the bank the presence of litter and debris clear, natural line impressed on the bank the presence of litter and debris destruction of terrestrial vegetation destruction of terrestrial vegetation shelving between the presence of wrack line vegetation matted down, bent, or absent sediment sorting leaf litter disturbed or washed away scour sediment deposition multiple observed or predicted flow events water staining abrupt change in plant community other (list): .
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: Mean High Water Mark indicated by: oil or scum line along shore objects survey to available datum; physical markings/characteristics physical markings; tidal gauges other (list):
) Ch	emical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain:

Identify specific pollutants, if known:

(iii)

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - ☐ Federally Listed species. Explain findings: ☐ Fish/spawn areas. Explain findings:

 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

- (i) Physical Characteristics:
 - (a) General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
 - (b) General Flow Relationship with Non-TNW: Flow is: **Pick Lat.** Explain:

Surface flow is: Field Lie Characteristics:

Subsurface flow: **Explain findings**: Dye (or other) test performed:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:
- (d) Proximity (Relationship) to TNW
 - Project wetlands are **services** river miles from TNW. aerial (straight) miles from TNW. Project waters are Flow is from: Rec Estimate approximate location of wetland as within the **the province** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis:

Approximately () acres in total are being considered in the cumulative analysis. For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

- TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
- 2. <u>RPWs that flow directly or indirectly into TNWs.</u>
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Mapped as unnamed Scioto River tributary with intermediate flow; Bed and bank, water depth of 12 plus inches, low flow conditions, and minnows and mussles observed.
 - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: lin Other non-wetland waters: linear feet width (ft).
- acres.
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section 111.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: 0.230 acres.

Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. 6.

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and 1994 with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: 0.022 acres.

7. Impoundments of jurisdictional waters.⁹

- As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- Demonstrate that impoundment was created from "waters of the U.S.," or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED (INTERSTATE OR INTRA-STATE) WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):10

- which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain:

- Other factors. Explain:

⁸See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁸ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Repanos.

Identify water body an	d summarize	rationale	supporting	determination:
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Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: width (ft). linear feet

Other non-wetland waters: acres.

- Identify type(s) of waters:
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- 📰 If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:Man-made residential pond with no observed inlet or outlet.
- Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR. factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
 - Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply);

- Non-wetland waters (i.e., rivers, streams): linear feet. width (ft).
- X Lakes/ponds: 0.954 acres.
 - Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant.

 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/defineation report.
 - Data sheets prepared by the Corps:
 - Corps navigable waters' study:

U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center, 1999 -Present.

🛛 USGS NHD data.

USGS 8 and 12 digit HUC maps.

🛛 U.S. Geological Survey map(s). Cite scale & quad name: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH; USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

National wetlands inventory map(s). Cite name: WETDBA.CONUS_wet_poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009.

State/Local wetland inventory map(s): Ohio Wetlands Inventroy - Hardin County; The Ohio Department of Natural Resources (DNR); 1/1/1991.

FEMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water, Hardin County FEMA NFIP maps; 1/9/1974.

100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

Photographs: 🛛 Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101.

or Other (Name & Date): Previous determination(s). File no. and date of response letter: Applicable/supporting case law: Applicable/supporting scientific literature: Other information (please specify):

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B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM **U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): A. -

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Delineated Wetland (WBU018AB)

State: Ohio County/parish/borough: Hardin City: Cessna

Center coordinates of site (lat/long in degree decimal format): Lat. 40.6853° , Long. 83.7572°

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Scioto River

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

网 Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: 12/03/09

Ø Field Determination. Date(s): 10/21/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There The "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - C I TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Ē Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: linear feet: width (ft) and/or acres. Wetlands: 0.230 acres.
- c. Limits (boundaries) of jurisdiction based on: Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):³

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions: Watershed size:

Drainage area: Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches

(ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>
 [] Tributary flows directly into TNW.
 [] Tributary flows through tributaries before entering TNW.

Project waters a	are		river miles	from TNW.	
Project waters :	are	5 5 5 5 5	river miles	from RPW.	
Project waters a	are		aeriai (strai	ight) miles fro	om TNW.
Project waters a	are		aerial (strai	ght) miles fro	om RPW.
Project waters (

Identify flow route to TNW⁵; Tributary stream order, if known:

^{*} Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

³ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b)	General Tributary Characteristics (check all that apply): Tributary is: Image: State of the st
	Tributary properties with respect to top of bank (estimate): Average width: feet Average depth: feet Average side slopes:
	Primary tributary substrate composition (check all that apply): Concrete Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Muck Other. Explain: .
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Tributary gradient (approximate average slope): %
(c)	<u>Flow:</u> Tributary provides for: Example: Estimate average number of flow events in review area/year: Example: Describe flow regime: Other information on duration and volume:
	Surface flow is: Characteristics:
	Subsurface flow: Explain findings: . Dye (or other) test performed:
	Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): the presence of litter and debris clear, natural line impressed on the bank the presence of litter and debris changes in the character of soil destruction of terrestrial vegetation shelving the presence of wrack line yeagetation matted down, bent, or absent sediment sorting leaf litter disturbed or washed away scour sediment deposition multiple observed or predicted flow events water staining abrupt change in plant community other (list): Discontinuous OHWM. ⁷ Explain:
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): Image: High Tide Line indicated by: Image: Mean High Water Mark indicated by: Image: Oil or scurn line along shore objects Image: Survey to available datum; Image: Oil or scurn line along shore objects Image: Survey to available datum; Image: Ophysical markings/characteristics Image: Other (list):
	emical Characteristics: aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
CII	Explain:

Identify specific pollutants, if known:

(iii)

.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: 0.230 acres

Wetland type. Explain: Palustrine forested/scrub/shrub/emergent.

Wetland quality. Explain: Moderate quality - Several established strata; Part of 125 foot wide forested area

surrounded by agricultural fields.

Project wetlands cross or serve as state boundaries. Explain: No.

(b) General Flow Relationship with Non-TNW:

Flow is: Explain: Wetland is separated from non TNW portion of Scioto River by an approximatly 100 foot wide upland area which includes a bermed area associated with the Scioto River and an abandoned rail road right-of-way.

Surface flow is: Not the state

Characteristics:

Subsurface flow: **Problem** Explain findings:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain: The wetland is separated from the Scioto River by an approximately 100 foot wide upland area; This upland includes woody species that would provide cover for wildlife transitioning between these two features.

Separated by berm/barrier. Explain: The wetland and Scioto River are separated by an earthen berms associated with the Scioto River and an abandoned rail road easement.

(d) Proximity (Relationship) to TNW

Project wetlands are **Second and an analysis** river miles from TNW. Project waters are **Higgs and an analysis** aerial (straight) miles from TNW. Flow is from: **Second and an analysis** floodplain. Estimate approximate location of wetland as within the **Second and an analysis** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Well established wetland vegetation, soils and hydrology.

Identify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from adjacent agricultural fields.

(iii) Biological Characteristics. Wetland supports (check all that apply):

Riparian buffer. Characteristics (type, average width):

Vegetation type/percent cover. Explain: Forested/40%; Scrub Shrub/30%; Emergent/80%.

- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis:

Approximately (0.230) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Wetland is located approximatly 100 feet from the Scioto River (non TNW portion). No hydrolgic connection was observed. Upland area between the wetland and Scioto River includes woody material that could be used as cover for wildlife; A bermed area associated with the Scioto River and an abandoned rail road right-of-way also occurred within this upland area.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.

2. RPWs that flow directly or indirectly into TNWs.

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Mapped as unnamed Scioto River tributary with intermediate flow; Bed and bank, water depth of 12 plus inches, low flow conditions, and minnows and mussles observed.
- Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

acres

Tributary waters: linear feet width (ft).

F Other non-wetland waters:

Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

acres.

- Tributary waters: linear feet width (ft).
- Other non-wetland waters;
 - Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: 0.230 acres.

- 6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.
 - Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

- As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- Demonstrate that impoundment was created from "waters of the U.S.," or
- Ð Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):10

- which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain:

⁸See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Other factors. Explain: Identify water body and summarize rationale supporting determination: Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: Wetlands: acres. F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above): Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): width (ft). linear feet Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Ē Wetlands: acres. Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): width (ft). linear feet. Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres. SECTION IV: DATA SOURCES. A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. \square Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: 🔯 U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999 -Present. 🛛 USGS NHD data. USGS 8 and 12 digit HUC maps. 🕅 U.S. Geological Survey map(s). Cite scale & quad name: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH: USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001. 🔟 USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129. National wetlands inventory map(s). Cite name: WETDBA.CONUS_wet_poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009.

State/Local wetland inventory map(s): Ohio Wetlands Inventroy - Hardin County; The Ohio Department of Natural Resources (DNR); 1/1/1991.

EEMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water; Hardin County FEMA NFIP maps; 1/9/1974.

100-year Floodplain Elevation is: (Natio

(National Geodectic Vertical Datum of 1929)

Photographs: Acrial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101. or Other (Name & Date):
 Previous determination(s). File no. and date of response letter:
 Applicable/supporting case law:
 Applicable/supporting scientific literature:
 Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM **U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Delineated Wetland (WBU031)

State: Ohio County/parish/borough: Hardin City: Cessna

Center coordinates of site (lat/long in degree decimal format): Lat. 40.7039° 🗱, Long. 83.7479°

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Unnamed Scioto River Tributary

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

図図 Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 12/03/09 M
- X Field Determination. Date(s): 10/23/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
 - Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There We waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

- 1. Waters of the U.S.
 - a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas **1**5.
 - Wetlands adjacent to TNWs
 - 72 Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - 36 Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands
 - b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: linear feet: width (ft) and/or acres. Wetlands: 0.022 acres.
 - c. Limits (boundaries) of jurisdiction based on: Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):³

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

^t Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section 111.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section 111.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions: Watershed size;

Drainage area: Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches

(ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>

 Tributary flows directly into TNW.
 Tributary flows through tributaries before entering TNW.

Project waters are **Here the** river miles from TNW. Project waters are **Here the** river miles from RPW. Project waters are **Here the** aerial (straight) miles from TNW. Project waters are **Here the** aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵: Tributary stream order, if known:

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(ieral Tributary butary is:	🗌 Natur 🗌 Artifi	<u>stics (check all tha</u> al cial (man-made). pulated (man-alte	Explain:			
	Trì	butary proper Average wid Average dep Average side	th: feath: feath:	eet	ık (estimate):		
	Prir	nary tributary Silts Cobbles Bedrock		Imposition (check Imposition (check <t< td=""><td></td><td></td><td>Concrete</td><td></td></t<>			Concrete	
	Pre: Trit	sence of run/ri outary geomet	iffle/pool co ry: Poll []	[e.g., highly erodi omplexes. Explain nate average slope)	r.	ng banks].	Explain: .	
(Esti Oth Sur	butary provide imate average Describe flo er information face flow is:	number of w regime: n on duratio	flow events in rev n and volume: Characteristics:	iew area/ye	ar: A Chi		
		Dye (or o butary has (ch Bed and	other) test p eck all that banks		bly):			
		clean chan chan chan shel vege leaf sedin wate other	r, natural lir rges in the c ving station matte litter disturf ment depos er staining r (list):	ne impressed on the character of soil ad down, bent, or a bed or washed awa ition	e bank 🗍 	destructi the prese sedimen scour multiple	ence of litter and debris ion of terrestrial vegeta ence of wrack line t sorting observed or predicted hange in plant commun	tion flow events
				/M. ⁷ Explain:	•			
	Iffi	High Ti Dil oil o fine phys tidal	ide Line ind r scum line shell or deb		ts 🗌	an High W survey to physical n	nt of CWA jurisdiction /ater Mark indicated by available datum; narkings; 1 lines/changes in veget	<i>r</i> :
		al Characteri rize tributary		color is clear dis	colored oil	v film: wa	ter mality: general wat	ershed characteristics, e

haracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain:

Identify specific pollutants, if known:

.

⁵A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- \Box Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

- (i) Physical Characteristics:
 - (a) General Wetland Characteristics:
 - Properties:
 - Wetland size: 0.022 acres
 - Wetland type. Explain: Palustrine emergent.

Wetland quality, Explain: Low quality - Emergent road side wetland dominated by Phalaris arundinacea. Project wetlands cross or serve as state boundaries. Explain: No.

(b) General Flow Relationship with Non-TNW:

Flow is: Enterthing of the second second within an agricultural swale that drains to an unnamed Scioto River tributary, which discharges directly to non TNW portion of the Scioto River.

Surface flow is: Discrete

Characteristics: Surface flow, although not observed, would follow the agricultural swale.

Subsurface flow: Eight List. Explain findings: Dye (or other) test performed:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 Ecological connection. Explain:

 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Ships and the** river miles from TNW. Project waters are **Automotive** aerial (straight) miles from TNW. Flow is from: No. P. . Estimate approximate location of wetland as within the first floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Roadside emergent wetland located in an agricultural swale dominated by Phalaris arundinacea.

Identify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from adjacent agricultural fields; road run-

off.

(jii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain: Scrub shrub/15%; Emergent/95%.
- Habitat for:

 - Federally Listed species. Explain findings:
 Fish/spawn areas. Explain findings:
 Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: Approximately (0.022) acres in total are being considered in the cumulative analysis. For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N) Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section IILD: Wetland is located within an agricultural swale that drains to an unnamed tributary to the Scioto River, which discharges directly to non TNW portion of the Scioto River.
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D;

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Mapped as unnamed Scioto River tributary with intermediate flow; Bed and bank, water depth of 12 plus inches, low flow conditions, and minnows and mussles observed.
- Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

acres.

- width (ft). Tributary waters: linear feet
- 2.00 Other non-wetland waters:
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- linear feet width (ft).
- Tributary waters: linear Other non-wetland waters: acres.
 - Identify type(s) of waters:

Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. 4.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- 🕮 Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: 0.230 acres.

- 6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.
 - Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and 23 with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: 0.022 acres.

- 7. Impoundments of jurisdictional waters.⁹
 - As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
 - Demonstrate that impoundment was created from "waters of the U.S.," or
 - Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 - Demonstrate that water is isolated with a nexus to commerce (see E below).
- E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰
 - which are or could be used by interstate or foreign travelers for recreational or other purposes.
 - from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
 - which are or could be used for industrial purposes by industries in interstate commerce.
 - . . Interstate isolated waters. Explain:
 - Other factors. Explain:

⁸See Footnote # 3.

To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[&]quot; Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres. Identify type(s) of waters:

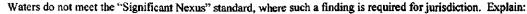
Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delincation Manual and/or appropriate Regional Supplements.

Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).



Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

Non-wetland waters (i.e., rivers, streams): width (ft). linear feet

Lakes/ponds: acres.

Other non-wetland waters: acres. List type of aquatic resource:

Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
 - Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below);
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
 - Data sheets prepared by the Corps:
 - Corps navigable waters' study:

U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999 -Present.

- 🛛 USGS NHD data.
- USGS 8 and 12 digit HUC maps.

🕱 U.S. Geological Survey map(s). Cite scale & guad name: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH; USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

X National wetlands inventory map(s). Cite name: WETDBA.CONUS_wet_poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009. State/Local wetland inventory map(s): Ohio Wetlands Inventroy - Hardin County; The Ohio Department of Natural Resources

(DNR); 1/1/1991.

FEMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water; Hardin County FEMA NFIP maps; 1/9/1974.

 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
 Photographs: Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101.

or D Other (Name & Date): Previous determination(s). File no. and date of response letter: Applicable/supporting case law: Applicable/supporting scientific literature: Other information (please specify):

,

B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 125

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Flat Branch (SAR013AB) City: McDonald State: Ohio County/parish/borough: Hardin

Center coordinates of site (lat/long in degree decimal format): Lat. 40.6623° , Long. 83.7695°

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Flat Branch

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

XX Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

S Office (Desk) Determination. Date: 12/01/09

Field Determination. Date(s): 10/21/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- 9 Å Waters subject to the ebb and flow of the tide.
- Π Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): 1
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 60 linear feet: 10 width (ft) and/or .0138 acres. Wetlands: acres.
- c. Limits (boundaries) of jurisdiction based on: Elevation of established OHWM (if known):
- 2. Non-regulated waters/wetlands (check if applicable):³ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

- 1. Characteristics of non-TNWs that flow directly or indirectly into TNW
 - (i) General Area Conditions: Watershed size: 2045536.521
 Drainage area: 48826.03
 Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches
 - (ii) Physical Characteristics:
 - (a) <u>Relationship with TNW:</u>

 ☐ Tributary flows directly into TNW.
 ☑ Tributary flows through tributaries before entering TNW.

Project waters are	Justin more river miles from TNW.
Project waters are	Lor less river miles from RPW.
Project waters are	Muter miles aerial (straight) miles from TNW
Project waters are	Lior loss aerial (straight) miles from RPW.
Project waters cros	ss or serve as state boundaries. Explain: No.

Identify flow route to TNW⁵: Flat Branch discharges directly to non-TNW portion of Scioto River. Tributary stream order, if known: Two (2).

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b)	General Tributary Characteristics (check all that apply): Tributary is: Inatural Image: Artificial (man-made). Explain:
	Tributary properties with respect to top of bank (estimate): Average width: 10 feet Average depth: 2.5 feet Average side slopes:
	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Emergent Other. Explain: .
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stable Vegetated Banks. Presence of run/riffle/pool complexes. Explain: None - Glide. Tributary geometry: Tributary gradient (approximate average slope): (7.6 ft/mi) %
(c)	Flow: Tributary provides for: State Flow Estimate average number of flow events in review area/year: Describe Describe flow regime: Seasonal Flow - Greater than three months. Other information on duration and volume: Stagnant.
	Surface flow is: Destruction of the second s
	Subsurface flow: Universe . Explain findings: . Dye (or other) test performed:
	Tributary has (check all that apply): □ □ Bed and banks □ OHWM ⁶ (check all indicators that apply): □ □ □ clear, natural line impressed on the bank □ □ □ clear, natural line impressed on the bank □ □ □ clear, natural line impressed on the bank □ changes in the character of soil □ destruction of terrestrial vegetation □ shelving □ vegetation matted down, bent, or absent □ sediment deposition □ sediment deposition □ sediment deposition □ abrupt change in plant community □ other (list): □ Discontinuous OHWM. ⁷ Explain:
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply). High Tide Line indicated by: Mean High Water Mark indicated by: oil or scum line along shore objects survey to available datum; fine shell or debris deposits (foreshore) physical markings/characteristics tidal gauges other (list):

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water Clear.

Identify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from adjacent agricultural fields.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings: Minnows Observed.
 - Other environmentally-sensitive species. Explain findings: Mussel Observed.
 - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

- (i) Physical Characteristics:
 - (a) <u>General Wetland Characteristics:</u> Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
 - (b) <u>General Flow Relationship with Non-TNW</u>: Flow is: **Explain:**

Surface flow is: **Every** Characteristics:

Subsurface flow: **Explain findings:** Dye (or other) test performed:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:
- (d) Proximity (Relationship) to TNW
- Project wetlands are **Project are river** miles from TNW. Project waters are **Project are areal** (straight) miles from TNW. Flow is from: **Pite Last**. Estimate approximate location of wetland as within the **Particular** floodplain.
- (ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and blological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.

2. <u>RPWs that flow directly or indirectly into TNWs.</u>

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
- Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Mapped as Flat Branch with intermittent flow; Bed and bank, water depth of six inches, and stagnant flow conditions observed.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

🕮 Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
 - Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. 6.

E Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

- As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- Demonstrate that impoundment was created from "waters of the U.S.," or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water meets the criteria for one of the categories presented Demonstrate that water is isolated with a nexus to commerce (see E below).
- E. ISOLATED (INTERSTATE OR INTRA-STATE) WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):10
 - which are or could be used by interstate or foreign travelers for recreational or other purposes.
 - from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce.

 - Interstate isolated waters. Explain:
 - Other factors. Explain:

⁸See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- 1 Other non-wetland waters: acres.
 - Identify type(s) of waters:
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
 - Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
 - Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

B Non-wetland waters (i.e., rivers, streams): width (ft). linear feet

圓 Lakes/ponds: acres.

- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet. width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
 - X Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
 - Data sheets prepared by the Corps:

Corps navigable waters' study:

U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999 -Present.

🛛 USGS NHD data.

USGS 8 and 12 digit HUC maps.

🔯 U.S. Geological Survey map(s). Cite scale & quad name: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH; USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

🔯 USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

X National wetlands inventory map(s). Cite name: WETDBA.CONUS wet_poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National

Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009. State/Local wetland inventory map(s): Ohio Wetlands Inventory - Hardin County; The Ohio Department of Natural Resources (DNR); 1/1/1991.

🔀 FEMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water; Hardin County FEMA NFIP maps; 1/9/1974.

100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

Photographs: 🖂 Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101.

or Other (Name & Date):

Previous determination(s). File no. and date of response letter:
 Applicable/supporting case law:
 Applicable/supporting scientific literature:
 Other information (please specify):

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B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Unnamed Scioto River Tributary (SAR022AB)

City: McDonald State: Ohio County/parish/borough: Hardin

Center coordinates of site (lat/long in degree decimal format): Lat. 40.6743° St. Long. 83.7523° St.

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Unnamed Scioto River Tributary

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

M M M Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 12/01/09 Field Determination. Date(s): 10/22/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
 - Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - X Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - F., Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - E Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 60 linear feet: 6 width (ft) and/or .0083 acres. Wetlands: acres.
- c. Limits (boundaries) of jurisdiction based on: Reconciliation and the second se Elevation of established OHWM (if known):
- 2, Non-regulated waters/wetlands (check if applicable):³
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

- 1. Characteristics of non-TNWs that flow directly or indirectly into TNW
 - (i) General Area Conditions; Watershed size: 2045536.52
 Drainage area: 48826.03
 Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches
 - (ii) Physical Characteristics:
 - (a) <u>Relationship with TNW:</u>

 □ Tributary flows directly into TNW.
 ☑ Tributary flows through a tributaries before entering TNW.

Project waters are **30 (or energy** river miles from TNW. Project waters are **1 (or fest** river miles from RPW. Project waters are **30 (demore)** aerial (straight) miles from TNW. Project waters are **1 (or fest**) aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: No.

Identify flow route to TNW⁵: Unnamed tributary (roadside ditch) drains to unnamed Scioto River tributary, which discharges directly to non TNW portion of the Scioto River.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and crosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: One (1).

((b)	General Tributary Characteristics (check all that apply): Tributary is: Instruct Image: State of the state of th
		Tributary properties with respect to top of bank (estimate): Average width: 6 feet Average depth: 2 feet Average side slopes:
		Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Emergent/100% Other, Explain: Clay.
		Tributary condition/stability [e.g., highly croding, sloughing banks]. Explain: Stable Banks; Vegetated. Presence of run/riffle/pool complexes. Explain: None - Dry. Tributary geometry: Reference of the stability of the stabi
	(c)	Flow: Tributary provides for: Constant of the second seco
		Surface flow is: Continued. Characteristics:
		Subsurface flow: Calinatia Explain findings:
		Tributary has (check all that apply):
		If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: oit or scum line along shore objects fine shell or debris deposits (foreshore) physical markings/characteristics tidal gauges other (list): High Tide Line indicated by: Mean High Water Mark indicated by: Survey to available datum; physical markings/characteristics other (list):
(ili)	Ch Cha	emical Characteristics: aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Dry.

Identify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from proximal agricultural fields.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
 - Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

- (i) Physical Characteristics:
 - (a) General Wetland Characteristics: **Properties:** Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
 - (b) General Flow Relationship with Non-TNW: Flow is: **Pick: ...** Explain:

Surface flow is: Pick List Characteristics:

Subsurface flow: **Bislicity**. Explain findings: Dye (or other) test performed:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:
- (d) <u>Proximity (Relationship) to TNW</u> Project wetlands are **Prod Frid** river miles from TNW. Project waters are **Pred Live** aerial (straight) miles from TNW. Flow is from: **Prot Frid**. Estimate approximate location of wetland as within the **states** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis:

Approximately () acres in total are being considered in the cumulative analysis. For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: Unmapped roadside ditch drains indirectly through mapped unnamed Scioto River tributary to non TNW portion of the Scioto River.
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.

2. RPWs that flow directly or indirectly into TNWs.

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
- Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. 4.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres

Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. б.

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.9

- As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- Demonstrate that impoundment was created from "waters of the U.S.," or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):10

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- from which fish or shellfish are or could be taken and sold in interstate or foreign comm which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain:
- Other factors. Explain:

⁸See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Identify water body and summarize rationale supporting determination:

- Provide estimates for jurisdictional waters in the review area (check all that apply):
- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
- Identify type(s) of waters:
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
 - Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
- Waters do not meet the Constant of the order of the order

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

Non-wetland waters (i.e., rivers, streams): width (ft). linear feet

Lakes/ponds: acres.

- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Ē Lakes/ponds: acres.
- 14 Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
 - Data sheets prepared by the Corps:
 - Corps navigable waters' study:

U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999 -

Present.

- USGS NHD data.
- USGS 8 and 12 digit HUC maps.

U.S. Geological Survey map(s). Cite scale & quad name: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH; USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

🛛 USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

National wetlands inventory map(s). Cite name: WETDBA.CONUS_wet_poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009.

🛛 State/Local wetland inventory map(s): Ohio Wetlands Inventory - Hardin County; The Ohio Department of Natural Resources (DNR); 1/1/1991.

🔯 FEMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water; Hardin County FEMA NFIP maps: 1/9/1974.

100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

M Photographs: X Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101.

or Other (Name & Date):

Previous determination(s). File no. and date of response letter:
 Applicable/supporting case law:
 Applicable/supporting scientific literature:
 Other information (please specify): .

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B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

Α. **REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):**

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: McCoy Run (SAR041AB) State: Ohio

County/parish/borough: Hardin City: Lynn

Center coordinates of site (lat/long in degree decimal format): Lat. 40.6213° Long. 83.7245°

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: McCoy Run

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: 12/03/09

Field Determination. Date(s): 10/24/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

- 1. Waters of the U.S.
 - a. Indicate presence of waters of U.S. in review area (check all that apply): 1
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - X Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 65 linear feet: 10 width (ft) and/or .0149 acres. Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable);³

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

- (i) General Area Conditions: Watershed size: 2045536.52 Drainage area: 29780.543 Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches
- (ii) Physical Characteristics:
 - (a) <u>Relationship with TNW:</u>

 ☐ Tributary flows directly into TNW.
 ☑ Tributary flows through tributaries before entering TNW.

Project waters are **Mon in the** river miles from TNW. Project waters are **Mon in the** river miles from RPW. Project waters are **Solution** acrial (straight) miles from TNW. Project waters are **Solution** acrial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: No.

Identify flow route to TNW⁵: McCoy Run discharges directly to Non TNW portion of Scioto River. Tributary stream order, if known: Two (2).

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b)	General Tributary Characteristics (check all that apply):			
Tributary is: 🔲 Natural				
	 Artificial (man-made). Explain: Manipulated (man-altered). Explain: Chanalized McCoy Run. 			
EN manipulated (man-anered). Explain, chanalized intervely Ron.				
	Tributary properties with respect to top of bank (estimate):			
	Average width: 10 feet			
	Average depth: 3 feet Average side slopes:			
	ravingo sido siopos, and			
	Primary tributary substrate composition (check all that apply):			
	Silts Sands Concrete			
	Cobbles Gravel Muck Bedrock Vegetation, Type/% cover: Emergent/10%			
	Other. Explain:			
	Tributary condition/stability [e.g., highly croding, sloughing banks]. Explain: Both Banks Highly Eroded; Abundant			
Sloughing Bar				
	Presence of run/riffle/pool complexes. Explain: Some interstitial runs - Stagnant. Tributary geometry:			
	Tributary gradient (approximate average slope): (34.8 ft/mi) %			
(c)				
	Tributary provides for:			
	Estimate average number of flow events in review area/year: 2010 Describe flow regime: Saeasonal Flow - Greater than three months.			
	Other information on duration and volume: Stagnant; Some low flow between pools.			
	Surface flow is: Discharge First. Characteristics:			
	Subsurface flow: Explain findings:			
	Dye (or other) test performed:			
	Tributary has (check all that apply):			
	Bed and banks OHWM ⁶ (check all indicators that apply):			
	\boxtimes clear, natural line impressed on the bank \square the presence of litter and debris			
	changes in the character of soil destruction of terrestrial vegetation			
	shelving I the presence of wrack line			
	vegetation matted down, bent, or absent sediment sorting			
	 leaf litter disturbed or washed away sediment deposition sediment deposition 			
	water staining abrupt change in plant community			
	other (list):			
	Discontinuous OHWM. ⁷ Explain:			
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):			
	High Tide Line indicated by: Mean High Water Mark indicated by:			
	oil or scum line along shore objects survey to available datum;			
	fine shell or debris deposits (foreshore) k physical markings;			
	physical markings/characteristics vegetation lines/changes in vegetation types.			
	tidal gauges other (list):			
(iii) Che	emical Characteristics:			

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water Moderate Turbidity.

Identify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from proximal agricultural fields.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings: Minnows Observed.
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

- (a) General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
- (b) General Flow Relationship with Non-TNW:

Flow is: Pick Last. Explain:

Surface flow is: Plat bis: Characteristics:

Subsurface flow: Protection. Explain findings: Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

- Not directly abutting
- Discrete wetland hydrologic connection. Explain:
 Ecological connection Evelution

 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Project vetlands are river miles from TNW**. Project waters are **Rice Free** aerial (straight) miles from TNW. Flow is from: Pick Last. Estimate approximate location of wetland as within the presented floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

Characteristics of all wetlands adjacent to the tributary (if any) 3.

All wetland(s) being considered in the cumulative analysis:

Approximately () acres in total are being considered in the cumulative analysis. For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	<u>Size (in acres)</u>
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Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

- TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
- 2. RPWs that flow directly or indirectly into TNWs.
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Mapped as McCoy Run with intermittent flow; Bed and banks, water depth of 8 inches and stgnant to low flow conditions observed.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- 9 Other non-wetland waters: acres.
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: lin Other non-wetland waters: linear feet width (ft).
- acres.
 - Identify type(s) of waters:

Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. 4.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- 🔝 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- 🔠 Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. 5.
 - Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.
 - Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

- 7. Impoundments of jurisdictional waters.⁹
 - As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
 - Demonstrate that impoundment was created from "waters of the U.S.," or
 - n Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 - Demonstrate that water is isolated with a nexus to commerce (see E below).
- E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY which are or could be used by interstate or foreign travelers for recreational or other purposes.

 - which are or could be used for industrial purposes by industries in interstate commerce.
 - Interstate isolated waters. Explain:
 - Other factors. Explain:

⁸See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

- Identify type(s) of waters:
- Wetlands: acres

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- 🔟 If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the . "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant ive Other: (explain, if not covered above): Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

Non-wetland waters (i.e., rivers, streams): width (ft). linear feet

Lakes/ponds: acres.

- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet. width (ft).
- Lakes/ponds: acres.
- Ē Other non-wetland waters: acres. List type of aquatic resource:
- 8 Wetlands: acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
 - Data sheets prepared by the Corps: Corps navigable waters' study:

U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999-

Present.

- USGS NHD data.
- USGS 8 and 12 digit HUC maps.

🔀 U.S. Geological Survey map(s). Cite scale & quad name: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH; USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

🔯 USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

🕅 National wetlands inventory map(s). Cite name: WETDBA.CONUS_wet_poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009.

State/Local wetland inventory map(s): Ohio Wetlands Inventory - Hardin County; The Ohio Department of Natural Resources (DNR); 1/1/1991.

🔯 FEMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water; Hardin County FEMA NFIP maps; 1/9/1974.

100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

Photographs: 🖾 Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101.

or Other (Name & Date):

Previous determination(s). File no. and date of response letter:
 Applicable/supporting case law:
 Applicable/supporting scientific literature:
 Other information (please specify): .

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B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM **U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Unnamed McCoy Run Tributary (SAR042AB)

State: Ohio County/parish/borough: Hardin City: Lynn

Center coordinates of site (lat/long in degree decimal format): Lat. 40.6401° 🕷, Long. 83.7171° 📳

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Unnamed McCoy Run Tributary

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 12/01/09
- Field Determination. Date(s): 10/25/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Areno "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Ke "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - EĨ TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 68 linear feet: 12 width (ft) and/or .0187 acres. Wetlands: acres.
- c. Limits (boundaries) of jurisdiction based on: Estimated by Original Elevation of established OHWM (if known):
- 2. Non-regulated waters/wetlands (check if applicable):³
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanes* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

- (i) General Area Conditions: Watershed size: 2045536.52 Area Drainage area: 29780.543 Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches
- (ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>

 □ Tributary flows directly into TNW.
 ☑ Tributary flows through it ributaries before entering TNW.

Project waters are **30 for multiplicity** river miles from TNW. Project waters are **10 for multiplicity** river miles from RPW. Project waters are **10 for more** aerial (straight) miles from TNW. Project waters are **10 for fees** aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: No,

Identify flow route to TNW⁵: Unnamed tributary drains to McCoy Run, which discharges directly to non TNW portion of the Scioto River.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: One (1).

((b)	General Tributary Characteristics (check all that apply): Tributary is: Image: Antificial (man-made) Explain: Image: Antificial (man-made) X Manipulated (man-altered) Explain: Image: Antificial (man-made) X Manipulated (man-altered) X Manipulated (man-altered)
		Tributary properties with respect to top of bank (estimate): Average width: 12 feet Average depth: 3 feet Average side slopes:
		Primary tributary substrate composition (check all that apply): Silts Sands Cobbles Gravel Bedrock Vegetation. Type/% cover: Emergent/75% Other. Explain: .
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Moderate Bank Sloughing. Presence of run/riffle/pool complexes. Explain: None - Stagnant and Dry. Tributary geometry: Net Complexes Tributary gradient (approximate average slope): (20 ft/mi) %
l	(c)	Flow: Tributary provides for: Estimate average number of flow events in review area/year: Describe flow regime: Seasonal Flow - Greater than three months. Other information on duration and volume: Stagnant and Dry.
		Surface flow is: Discrete and the state of t
		Subsurface flow: Upperformed:
		Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank changes in the character of soil shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining other (list):
		Discontinuous OHWM. ⁷ Explain:
		If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: oil or scum line along shore objects fine shell or debris deposits (foreshore) physical markings/characteristics tidal gauges other (list): High Tide Line indicated by: Mean High Water Mark indicated by: Survey to available datum; Physical markings; Vegetation lines/changes in vegetation types.
		emical Characteristics: aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: Water in Pools Relativey Clear. Identify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from proximal agricultural fields.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

- (i) Physical Characteristics:
 - (a) <u>General Wetland Characteristics:</u> Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
 - (b) <u>General Flow Relationship with Non-TNW</u>: Flow is: **Previou** Explain:

Surface flow is: **Deliver** Characteristics:

Subsurface flow: **Picture**. Explain findings:

- (c) <u>Wetland Adjacency Determination with Non-TNW:</u>
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick First** river miles from TNW. Project waters are **Pick First** aerial (straight) miles from TNW. Flow is from: **Pick Fist**. Estimate approximate location of wetland as within the **Pick Fist** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis:

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N) Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

- TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
- 2. RPWs that flow directly or indirectly into TNWs.
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Mapped unnamed McCoy Run tributary withn intermittent flow; Bed and bank, water depth of 6 inches, and dry to stagnant flow conditions observed.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres
 - Identify type(s) of waters:

3. Non-RPWs³ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 - Other non-wetland waters: acres.
 - Identify type(s) of waters:

Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. 4.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 - 🛄 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
 - Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. 6.

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

- As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- Demonstrate that impoundment was created from "waters of the U.S.," or
- 1 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- E Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):10

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
 which are or could be used for industrial purposes by industries in interstate commerce.
 Interstate isolated waters. Explain:

- Other factors. Explain:

⁸See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Identify water body and summarize rationale supporting determination:

- Provide estimates for jurisdictional waters in the review area (check all that apply):
- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
- Identify type(s) of waters:
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
 - Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
- Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- 圖 Lakes/ponds: acres.
- Other non-Wetlands: Other non-wetland waters: acres. List type of aquatic resource:
- acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet. width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Other non-Wetlands: acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/defineation report.
 - Data sheets prepared by the Corps:

18 Corps navigable waters' study:

🗵 U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water, Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center, 1999 -Present

USGS NHD data,

USGS 8 and 12 digit HUC maps.

🛛 U.S. Geological Survey map(s). Cite scale & quad name; USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH; USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

X National wetlands inventory map(s). Cite name: WETDBA.CONUS wet poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC, FWS/OBS-79/31; National Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009.

State/Local wetland inventory map(s): Ohio Wetlands Inventory - Hardin County; The Ohio Department of Natural Resources (DNR); 1/1/1991.

FEMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water; Hardin County FEMA NFIP maps; 1/9/1974.

100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

Photographs: 🖾 Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Obio Geographically Referenced Information Program; 20070101.

or Dother (Name & Date):

Previous determination(s). File no. and date of response letter:
 Applicable/supporting case law:
 Applicable/supporting scientific literature:
 Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM **U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Unnamed Scioto River Tributary (SAR105AB)

City: McDonald State: Ohio County/parish/borough: Hardin

Center coordinates of site (lat/long in degree decimal format): Lat. 40.6254° 2, Long. 83.8017° 2.

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Unnamed Scioto River Tributary

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

M Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 12/01/09
- Field Determination. Date(s): 10/28/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are inavigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply); ¹
 - TNWs, including territorial seas
 - Ċ. Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Ē Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 60 linear feet: 10 width (ft) and/or .0138 acres. Wetlands: acres.
- c. Limits (boundaries) of jurisdiction based on: Limits (boundaries) of jurisdiction based on: Elevation of established OHWM (if known):
- 2. Non-regulated waters/wetlands (check if applicable):³
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

⁴ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

- General Area Conditions: Watershed size: 2045536.52
 Drainage area: 48826.03
 Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches
- (ii) Physical Characteristics:
 - (a) <u>Relationship with TNW:</u>
 Tributary flows directly into TNW.
 Tributary flows through a tributaries before entering TNW.

Project waters are **30 correntines** river miles from TNW. Project waters are **1.2** river miles from RPW. Project waters are **30 correnting** aerial (straight) miles from TNW. Project waters are **1 (or tess**) aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: No.

Identify flow route to TNW⁵: Unnamed tributary discharges directly to non TNW portion of Scioto River. Tributary stream order, if known: None assigned; Scioto River stream order is Three (3).

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

³ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b)	General Tributary Characteristics (check all that apply): Tributary is: Instural Image: Artificial (man-made) Explain: Agricultural Ditch. Image: Image: Antificial (man-made) Explain:
	Tributary properties with respect to top of bank (estimate): Average width: 10 feet Average depth: 1 feet Average side slopes:
	Primary tributary substrate composition (check all that apply):
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stable Vegetated Banks. Presence of run/riffle/pool complexes. Explain: None - Dry. Tributary geometry: Explain: Tributary geometry: Tributary gradient (approximate average slope): (9.6 ft/mi) %
(c)	Flow: Tributary provides for: Entrementation Estimate average number of flow events in review area/year: Estimate Describe flow regime: Non-RPW (Flow - Less than three months). Other information on duration and volume: Dry.
	Surface flow is: Characteristics:
	Subsurface flow: Continuent. Explain findings:
	Tributary has (check all that apply): Sed and banks OHWM ⁶ (check all indicators that apply): the presence of litter and debris clear, natural line impressed on the bank the presence of litter and debris changes in the character of soil destruction of terrestrial vegetation shelving the presence of wrack line vegetation matted down, bent, or absent sediment sorting leaf litter disturbed or washed away scour sediment deposition multiple observed or predicted flow events water staining X abrupt change in plant community other (list): .
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): If high Tide Line indicated by: Mean High Water Mark indicated by: If oil or scum line along shore objects Isurvey to available datum; If fine shell or debris deposits (foreshore) Iphysical markings; If physical markings/characteristics Isurvey to exailable datum; If idal gauges Isurvey to available datum; If other (list): Isurvey to available datum;

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Dry.

Identify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from proximal agricultural fields.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ²Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW 2.

- (i) Physical Characteristics:
 - General Wetland Characteristics: (a) Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
 - (b) General Flow Relationship with Non-TNW: Flow is: Field List. Explain:

Surface flow is: Pickeling Characteristics:

Subsurface flow: President. Explain findings: Dye (or other) test performed:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Project water** river miles from TNW. Project waters are **Project ist** aerial (straight) miles from TNW. Flow is from: Pick List. Estimate approximate location of wetland as within the **Bieletiss** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- 'n Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

Characteristics of all wetlands adjacent to the tributary (if any) All wetland(s) being considered in the cumulative analysis: 3.

Approximately () acres in total are being considered in the cumulative analysis. For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: Unmapped Scioto River Tributary (Agricultural Ditch) discharges directly to non-TNW portion of Scioto River.
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.

2. RPWs that flow directly or indirectly into TNWs.

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
- Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Mapped Intermittent McCoy Run Tributary.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - 1977 A. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and 121 with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters,"

- As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- Demonstrate that impoundment was created from "waters of the U.S.," or
- Ē Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- E Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED (INTERSTATE OR INTRA-STATE) WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY);10

- which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce.
- Ē Interstate isolated waters. Explain:
- Other factors. Explain:

⁸See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁸ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ft).

Π Other non-wetland waters: acres.

- Identify type(s) of waters:
- Wetlands: acres

Γ. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
 - Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
- Waters do not meet the organization

 Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

6919 Non-wetland waters (i.e., rivers, streams): width (ff). linear feet

Lakes/ponds: acres.

- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet. width (ff).
- Lakes/ponds: acres.
- E. Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
 - Data sheets prepared by the Corps:
 - E Corps navigable waters' study:

🐼 U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999 -

Present.

- USGS NHD data.
- USGS 8 and 12 digit HUC maps.

💹 U.S. Geological Survey map(s). Cite scale & quad name: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH; USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

🗱 USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

X National wetlands inventory map(s). Cite name: WETDBA.CONUS_wet_poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009.

State/Local wetland inventory map(s): Ohio Wetlands Inventory - Hardin County; The Ohio Department of Natural Resources (DNR): 1/1/1991.

FEMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water; Hardin County FEMA NFIP maps; 1/9/1974.

100-year Floodplain Elevation is: Photographs: Aerial (Name & (National Geodectic Vertical Datum of 1929)

Photographs: A Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101.

or Other (Name & Date):

Previous determination(s). File no. and date of response letter:
 Applicable/supporting case law:
 Applicable/supporting scientific literature:
 Other information (please specify): .

•

B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM **U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD);

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Unnamed Scioto River Tributary (SBU001AB) State: Ohio County/parish/borough: Hardin City: Marion

Center coordinates of site (lat/long in degree decimal format); Lat. 40.7003° . Long. 83,8388°

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Unnamed Scioto River Tributary

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 506001

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. X

図 Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 11/24/09
- Field Determination. Date(s): 10/19/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply); ¹
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 40 linear feet: 8 width (ft) and/or .0073 acres. Wetlands: acres.
- c. Limits (houndaries) of jurisdiction based on: Established by Contained Elevation of established OHWM (if known):
- 2. Non-regulated waters/wetlands (check if applicable):³
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

I. Characteristics of non-TNWs that flow directly or indirectly into TNW

- General Area Conditions: Watershed size: 2045536.52
 Drainage area: 12489.011
 Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches
- (ii) Physical Characteristics:
 - (a) <u>Relationship with TNW:</u>
 ☐ Tributary flows directly into TNW.
 ⊠ Tributary flows through # tributaries before entering TNW.

Project waters are **30 to a norm** river miles from TNW. Project waters are **From Ess** river miles from RPW. Project waters are **31 creations** aerial (straight) miles from TNW. Project waters are **From Ess** aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: No.

Identify flow route to TNW⁵: Discharges to non TNW portion of the Scioto River indirectly through three unnammed Scioto River tributaries.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: None assigned; next tributary stream order is One (1).

(b)	General Tributary	Characteristics	(check all that apply):

	(b)	General Tributary Characteristics (check all that apply): Tributary is: Image: Check all that apply): Xi Artificial (man-made). Explain: Agricultural Drainage Ditch. Imanipulated (man-altered). Explain:
		Tributary properties with respect to top of bank (estimate): Average width; 8 feet Average depth: 2 feet Average side slopes:
		Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Emergent Other. Explain:
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stable Vegetated. Presence of run/riffle/pool complexes. Explain: None - Glide. Tributary geometry: Explain: Tributary geometry: Explain: Stable Vegetated . Tributary gradient (approximate average slope): (4 fl/mi) %
	(c)	Flow: Tributary provides for: Second flow Estimate average number of flow events in review area/year: Describe flow regime: Seasonal flow - greater than three months. Other information on duration and volume: Stagnant.
		Surface flow is: Discrete State of the Characteristics:
		Subsurface flow: United Explain findings: . Dye (or other) test performed:
		Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): Clear, natural line impressed on the bank changes in the character of soil shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining other (list): Discontinuous OHWM. ⁷ Explain:
		If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: Mean High Water Mark indicated by: oil or scum line along shore objects survey to available datum; fine shell or debris deposits (foreshore) physical markings/characteristics tidal gauges other (list):
(iii)	Chi	emical Characteristics: aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water Clear. ntify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from adjacent agricultural fields.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

- (i) Physical Characteristics:
 - (a) <u>General Wetland Characteristics:</u>
 Properties:
 Wetland size: acres
 Wetland type. Explain:
 Wetland quality. Explain:
 Project wetlands cross or serve as state boundaries. Explain:
 - (b) <u>General Flow Relationship with Non-TNW</u>: Flow is: **Piele Est**. Explain:

Surface flow is: **Pick List** Characteristics:

Subsurface flow: **Pink Lin**. Explain findings: Dye (or other) test performed:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Freig Loss** river miles from TNW. Project waters are **Freig East** aerial (straight) miles from TNW. Flow is from: **Freig East** Estimate approximate location of wetland as within the **Freights** floodplain.

(ii) Chemical Characteristics:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

- TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
- 2. **RPWs that flow directly or indirectly into TNWs.**
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Unmapped Scioto River tributary; Bed and bank, water depth of 4 inches, and stagnant flow conditions oberved.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: Other non-wetland linear feet width (ft).
- Other non-wetland waters: acres.
- Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

🖾 Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- 🔠 Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. 6.
 - Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

- Impoundments of jurisdictional waters.⁹
 - As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
 - Demonstrate that impoundment was created from "waters of the U.S.," or
 - Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 - Demonstrate that water is isolated with a nexus to commerce (see E below).
- E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):10
 - which are or could be used by interstate or foreign travelers for recreational or other purposes.
 - from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain:

 - Other factors. Explain:

Identify water body and summarize rationale supporting determination:

^{*}See Footnote # 3.

To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁹ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanes.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - [dentify type(s) of waters:
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:

Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): in a linear feet width (ft).
- M Lakes/ponds: acres.

Other non-wetland waters: 516 acres. List type of aquatic resource:

Wetlands: acres

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams):
 Lakes/ponds: acres.
 Other non-wetland waters: acres. linear feet, width (ft).
- acres. List type of aquatic resource:
- ពា Wetlands: acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
 - Data sheets prepared by the Corps:
 - Corps navigable waters' study:

🗵 U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999 -Present.

- USGS NHD data.
- USGS 8 and 12 digit HUC maps.

🛛 U.S. Geological Survey map(s). Cite scale & quad name: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH; USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

🕱 USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

X National wetlands inventory map(s). Cite name: WETDBA.CONUS wet poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009.

State/Local wetland inventory map(s): Ohio Wetlands Inventory - Hardin County; The Ohio Department of Natural Resources (DNR): 1/1/1991.

FEMA/FIRM maps: Hardin County; Ohio Department of Natural Resources Division of Water, Hardin County FEMA NFIP maps; 1/9/1974.

(National Geodectic Vertical Datum of 1929) 100-year Floodplain Elevation is:

Photographs: 🕅 Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101.

or Other (Name & Date):

Previous determination(s). File no. and date of response letter:

Applicable/supporting case law:
 Applicable/supporting scientific literature:
 Other information (please specify):

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B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM **U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Unnamed Scioto River Tributary (SBU002AB)

State: Ohio County/parish/borough: Hardin City: Marion

Center coordinates of site (lat/long in degree decimal format): Lat. 40.6919° , Long. 83.8326°

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Unnamed Scioto River Tributary

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

 \boxtimes Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 11/25/09
- Field Determination. Date(s); 10/19/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There There "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas
 - ¥∕ A Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Π Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 40 linear feet: 7 width (ft) and/or .0064 acres. Wetlands: acres.
- c. Limits (boundaries) of jurisdiction based on: Exclusion of the sector Elevation of established OHWM (if known):
- Non-regulated waters/wetlands (check if applicable):³ 2.
 - Detentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

- (i) General Area Conditions: Watershed size: 2045536.52 area
 Drainage area: 12489.011 area
 Average annual rainfail: 35.65 inches
 Average annual snowfall: 27.6 inches
- (ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>

 □ Tributary flows directly into TNW.
 ☑ Tributary flows through a tributaries before entering TNW.

Project waters are **30 for morej** river miles from TNW. Project waters are **1 for less** river miles from RPW. Project waters are **30 for morej** aerial (straight) miles from TNW. Project waters are **1 for less** aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: No.

Identify flow route to TNW⁵: Discharges to non TNW portion of the Scioto River indirectly through two unnamed Scioto River tributaries.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

³ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: One (1).

(b) General Tributary Characteristics (check all that apply)	(b)	General Tributary	Characteristics	(check all that apply):
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	(0)	General Tributary Characteristics (check all that apply): Tributary is: Natural X Artificial (man-made). Explain: Agricultural Drainage Ditch. Manipulated (man-altered). Explain:
		Tributary properties with respect to top of bank (estimate): Average width: 7 feet Average depth: 3 feet Average side slopes:
		Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Emergent Other. Explain: Clay.
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Sloughing Banks. Presence of run/riffle/pool complexes. Explain: None - Glide. Tributary geometry: Explain: Annotation: Tributary gradient (approximate average slope): (4 ft/mi) %
	(c)	Flow: Tributary provides for: Second flow Estimate average number of flow events in review area/year: Second Flow Describe flow regime: Seasonal Flow - Greater than three months. Other information on duration and volume: Stagnant.
		Surface flow is: Discrete and supported. Characteristics:
		Subsurface flow: Containing . Explain findings: . Dye (or other) test performed: .
		Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): Clear, natural line impressed on the bank changes in the character of soil shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining other (list): Discontinuous OHWM. ⁷ Explain:
		If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: Mean High Water Mark indicated by: oil or scum line along shore objects survey to available datum; fine shell or debris deposits (foreshore) physical markings; physical markings/characteristics vegetation lines/changes in vegetation types. other (list): other (list):
(iii)		emical Characteristics: aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.) Explain: Water Clear.

Identify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from adjacent agricultural fields.

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⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- \Box Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

- **Physical Characteristics:** (i)
 - (a) General Wetland Characteristics: Properties:
 - Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
 - (b) General Flow Relationship with Non-TNW: Flow is: **Pick List**. Explain:

Surface flow is: Field Lie Characteristics:

Subsurface flow: Piek Levi. Explain findings: Dye (or other) test performed:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

 (d) <u>Proximity (Relationship) to TNW</u>
 Project wetlands are **Pick that** river miles from TNW.
 Project waters are **Pick first** aerial (straight) miles from TNW. Flow is from: Piele Lin. Estimate approximate location of wetland as within the **Decales** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: Approximately () acres in total are being considered in the cumulative analysis. For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Size (in acres)

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

- TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
- 2. RPWs that flow directly or indirectly into TNWs.
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Mapped as unnamed Scioto River tributary with intermittent flow; Bed and bank, water depth of 4 inches, and stagnant flow conditions observed.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: lin Other non-wetland waters: linear feet width (ft).
- acres.
- Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
 - 🔁 Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. 6.

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters."

- As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- Demonstrate that impoundment was created from "waters of the U.S.," or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or E-1
- Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED (INTERSTATE OR INTRA-STATE) WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
 which are or could be used for industrial purposes by industries in interstate commerce.
 Interstate isolated waters. Explain:
- Other factors. Explain:

^{*}See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁸ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ff).

Other non-wetland waters: acres.

- Identify type(s) of waters:
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers. Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based <u>solely</u> on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
- Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

Lakes/ponds: acres.

- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres. Other non-wetland waters:
 - Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
 - Data sheets prepared by the Corps:
 - Corps navigable waters' study:

U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999 – Present.

🛛 USGS NHD data.

USGS 8 and 12 digit HUC maps.

U.S. Geological Survey map(s). Cite scale & quad name; USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH; USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

National wetlands inventory map(s). Cite name: WETDBA.CONUS_wet_poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009.

State/Local wetland inventory map(s): Ohio Wetlands Inventory - Hardin County; The Ohio Department of Natural Resources (DNR); 1/1/1991.

FEMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water; Hardin County FEMA NFIP maps; 1/9/1974.

100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

Photographs: Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101.

or 🛄 Other (Name & Date):

Previous determination(s). File no. and date of response letter:
 Applicable/supporting case law:
 Applicable/supporting scientific literature:
 Other information (please specify):

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B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM **U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Unnamed Scioto River Tributary (SBU003AB)

County/parish/borough: Hardin State: Ohio City: Marion

Center coordinates of site (lat/long in degree decimal format): Lat. 40.6893° a. Long. 83.8299°

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Unnamed Scioto River Tributary

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

図 Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 11/25/09
- Field Determination. Date(s): 10/19/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Accesse "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. 2.2 Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas
 - aa 4 Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - 囿 Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 40 linear feet: 10 width (ft) and/or .0092 acres. Wetlands: acres.
- c. Limits (boundaries) of jurisdiction based on: Executive to Compare the Compared on the Comp Elevation of established OHWM (if known):
- 2. Non-regulated waters/wetlands (check if applicable):³
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

 (i) General Area Conditions: Watershed size: 2045536.52 area Drainage area: 12489.011 area Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches

(ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>
 □ Tributary flows directly into TNW.
 ☑ Tributary flows through a tributaries before entering TNW.

Project waters are **30 (ar more)** river miles from TNW. Project waters are **1 (or more)** river miles from RPW. Project waters are **30 (ar more)** aerial (straight) miles from TNW. Project waters are **1 (or lest)** aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: No.

Identify flow route to TNW⁵: Unnamed Scioto River tributary discharges directly to non TNW portion of the Scioto River.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and ecosional features generally and in the arid West.

³ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: Two (2).

((b)	<u>General Tributary Characteristics (check all that apply):</u> Tributary is: Artíficial (man-made). Explain: Agricultural/Roadside Drainage Ditch. Manipulated (man-altered). Explain:
		Tributary properties with respect to top of bank (estimate): Average width: 10 feet Average depth: 2.5 feet Average side slopes:
		Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: 20% Aquatics; Emergent Other. Explain: .
		Tributary condition/stability [e.g., highly croding, sloughing banks]. Explain: Sloughing Banks. Presence of run/riffle/pool complexes. Explain: None - Glide. Tributary geometry: Bank and Stability and Stability Tributary gradient (approximate average slope): (2.9 ft/mi) %
((c)	Flow: Tributary provides for: Scale and the second
		Surface flow is: Discrete and control of the characteristics:
		Subsurface flow: Universe . Explain findings:
		Tributary has (check all that apply): □ □ Bed and banks □ OHWM ⁶ (check all indicators that apply): □ clear, natural line impressed on the bank □ changes in the character of soil □ changes in the character of soil □ shelving □ vegetation matted down, bent, or absent □ leaf litter disturbed or washed away □ sediment deposition □ water staining □ other (list): □ Discontinuous OHWM. ⁷ Explain:
		If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: Oil or scum line along shore objects fine shell or debris deposits (foreshore) physical markings/characteristics tidal gauges other (list):
		emical Characteristics: aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water Clear.

Identify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from adjacent agricultural fields; Road run-

off.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings: Minnows Observed.
 - Other environmentally-sensitive species. Explain findings: Mussels Observed.
 - Aquatic/wildlife diversity. Explain findings:

Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW 2.

- (i) Physical Characteristics:
 - (a) General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
 - (b) General Flow Relationship with Non-TNW: Flow is: **Pick List**. Explain:

Surface flow is: Pick List Characteristics:

Subsurface flow: Pick List. Explain findings: Dye (or other) test performed:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain: \square
 - Separated by berm/barrier. Explain:
- (d) Proximity (Relationship) to TNW
 - Project wetlands are Pion last river miles from TNW. Project waters are **Prov List** aerial (straight) miles from TNW. Flow is from: Pick List. Estimate approximate location of wetland as within the **Extension** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Π Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: Approximately () acres in total are being considered in the cumulative analysis. For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

- TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
- 2. <u>RPWs that flow directly or indirectly into TNWs.</u>
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Mapped as unnamed Scioto River tributary with intermediate flow; Bed and bank, water depth of 12 plus inches, low flow conditions, and minnows and mussles observed.
 - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

🖽 Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
 - Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

- 7. Impoundments of jurisdictional waters.⁹
 - As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
 - Demonstrate that impoundment was created from "waters of the U.S.," or
 - ē Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 - Demonstrate that water is isolated with a nexus to commerce (see E below).
- E. ISOLATED (INTERSTATE OR INTRA-STATE) WATERS, INCLUDING ISOLATED WETLANDS, THE USE, **DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY** SUCH WATERS (CHECK ALL THAT APPLY):10
 - which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce.
 - Interstate isolated waters. Explain:
 - Other factors. Explain:

^{*}See Footnote # 3.

^{*} To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Identify water body and summarize rationale supporting determination:

- Provide estimates for jurisdictional waters in the review area (check all that apply):
- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
- Identify type(s) of waters:
- Et Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
 - Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
- Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

Lakes/ponds: acres.

- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
 - Data sheets prepared by the Corps:
 - . E Corps navigable waters' study:

U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999 -Present.

USGS NHD data.

USGS 8 and 12 digit HUC maps.

🔀 U.S. Geological Survey map(s). Cite scale & quad name: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH; USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

🖾 USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

X National wetlands inventory map(s). Cite name: WETDBA.CONUS wet_poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC, FWS/OBS-79/31; National Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009.

State/Local wetland inventory map(s): Ohio Wetlands Inventory - Hardin County; The Ohio Department of Natural Resources (DNR): 1/1/1991.

EEMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water, Hardin County FEMA NFIP maps; 1/9/1974.

 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
 Photographs: Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101.

or Other (Name & Date);

Previous determination(s). File no. and date of response letter:
 Applicable/supporting case law:
 Applicable/supporting scientific literature:
 Other information (please specify):

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B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardia Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Unnamed Scioto River Tributary (SBU005AB)

State: Ohio County/parish/borough: Hardin City: Marion

Center coordinates of site (lat/long in degree decimal format): Lat. 40.6894° , Long. 83.7950°

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Unnamed Scioto River Tributary

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

- Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
- 网 Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 11/25/09 \mathbf{X}
- Field Determination. Date(s): 10/20/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are in "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
 - Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 464 DETERMINATION OF JURISDICTION.

There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

- 1. Waters of the U.S.
 - a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas
 - E Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands
 - b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 40 linear feet: 24 width (ft) and/or .0220 acres. Wetlands: acres.
 - c. Limits (houndaries) of jurisdiction based on: Estimated on constants Elevation of established OHWM (if known):
- 2. Non-regulated waters/wetlands (check if applicable):³
 - Detentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanes have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

- (i) General Area Conditions: Watershed size: 2045536.52 area Drainage area: 12489.011 area Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches
- (ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>
 ☐ Tributary flows directly into TNW.
 ☑ Tributary flows through \$ tributaries before entering TNW.

Project waters are **Myoring rej** river miles from TNW. Project waters are **FryCless** river miles from RPW. Project waters are **FryCless** river miles from RPW. Project waters are **FryCless** aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: No.

Identify flow route to TNW⁵: Unnamed Scioto River tributary discharges directly non TNW portion of the Scioto River. Tributary stream order, if known: Two (2).

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b)	General Tributary Characteristics (check all that apply): Tributary is: Natural X Artificial (man-made). Explain: Agricultural/Roadside Drainage Ditch. Manipulated (man-altered). Explain:			
	Tributary properties with respect to top of bank (estimate): Average width: 24 feet Average depth: 4 feet Average side slopes:			
	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Emergent Other. Explain: .			
Vegetated	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Sloughing Banks, Some Erosion,			
Vegetated.	Presence of run/riffle/pool complexes. Explain: None - Glide. Tributary geometry: Department of the second second			
(c)	Flow: Tributary provides for: Second Providence Estimate average number of flow events in review area/year: Second Providence Describe flow regime: Perenial Flow. Other information on duration and volume: Low Flow.			
	Surface flow is: Discrete and son fuel. Characteristics:			
	Subsurface flow: Unknown. Explain findings: . Dye (or other) test performed: .			
	Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): the presence of litter and debris clear, natural line impressed on the bank the presence of litter and debris changes in the character of soil destruction of terrestrial vegetation shelving the presence of wrack line vegetation matted down, bent, or absent sediment sorting leaf litter disturbed or washed away scour sediment deposition multiple observed or predicted flow events water staining abrupt change in plant community other (list): .			
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: Mean High Water Mark indicated by: oil or scum line along shore objects survey to available datum; fine shell or debris deposits (foreshore) Mey physical markings/characteristics tidal gauges other (list):			
	emical Characteristics; protective tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, s			

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water Very Turbid.

Identify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from adjacent agricultural fields; Road run-

off.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Wetland frin Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

- (i) **Physical Characteristics:**
 - (a) <u>General Wetland Characteristics:</u> Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
 - (b) <u>General Flow Relationship with Non-TNW</u>: Flow is: **Pick Life**, Explain:

Surface flow is: Pick Tist Characteristics:

Subsurface flow: **Direction**. Explain findings:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Project at** river miles from TNW. Project waters are **Project at** (straight) miles from TNW. Flow is from: **Pick Lkt**. Estimate approximate location of wetland as within the **Pick Lkt**.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Approximately** () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
-----------------------	-----------------	-----------------------	-----------------

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.

2. <u>RPWs that flow directly or indirectly into TNWs.</u>

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Mapped as unnamed Scioto River tributary with intermediate flow; Bed and bank, water depth of 12 plus inches and low flow conditions observed.
- Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

acres

- Tributary waters: lin Other non-wetland waters: linear feet width (ft).
- - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. 4.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

- 🔠 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

б. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

- As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- Demonstrate that impoundment was created from "waters of the U.S.," or
- 030 #85 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- ē Demonstrate that water is isolated with a nexus to commerce (see E below).
- E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):10
 - which are or could be used by interstate or foreign travelers for recreational or other purposes.
 - from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
 - which are or could be used for industrial purposes by industries in interstate commerce.
 - Interstate isolated waters. Explain:
 - Other factors. Explain:

⁸See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁸ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

- Identify type(s) of waters:
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- E Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
- Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

Ø Lakes/ponds: acres.

- Ð Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): width (ft). linear feet.
- Lakes/ponds: acres.
 - Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- Office concurs with data sheets/delineation report.
 Office does not concur with data sheets/delineation report.
 - B Data sheets prepared by the Corps:
 - Corps navigable waters' study:

🔯 U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999 -Present.

🖾 USGS NHD data.

USGS 8 and 12 digit HUC maps.

🔯 U.S. Geological Survey map(s). Cite scale & quad name: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH, USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

X National wetlands inventory map(s). Cite name: WETDBA.CONUS wet poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009.

State/Local wetland inventory map(s): Ohio Wetlands Inventory - Hardin County; The Ohio Department of Natural Resources (DNR); 1/1/1991.

FEMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water; Hardin County FEMA NFIP maps; 1/9/1974.

100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

Photographs: 🕅 Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101.

or Other (Name & Date):

Previous determination(s). File no. and date of response letter:
 Applicable/supporting case law:
 Applicable/supporting scientific literature:
 Other information (please specify):

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B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Unnamed Scioto River Tributary (SBU006AB) State: Ohio County/parish/borough: Hardin City: Marion

Center coordinates of site (lat/long in degree decimal format): Lat. 40.6746° 🗸 Long. 83.7944° 🗸

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Unnamed Scioto River Tributary

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. ίX.

 \boxtimes Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 11/25/09
- Field Determination Date(s): 10/20/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide. 1
- Ē. Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): 1
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - impoundments of jurisdictional waters Ē
 - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 40 linear feet: 8 width (ft) and/or ...0073 acres. Wetlands: acres.
- c. Limits (boundaries) of jurisdiction based on: Estimated by Collins, Elevation of established OHWM (if known):
- 2. Non-regulated waters/wetlands (check if applicable):³
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional pavigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

- (i) General Area Conditions: Watershed size: 2045536.52 Area Drainage area: 48826.03 Area Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches
- (ii) Physical Characteristics:
 - (a) <u>Relationship with TNW;</u>
 ☐ Tributary flows directly into TNW.
 ⊠ Tributary flows through # tributaries before entering TNW.

Project waters are 30 for morely river miles from TNW.
Project waters are 1 for test river miles from RPW.
Project waters are 30 for morel aerial (straight) miles from TNW.
Project waters are 1 for test aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: No.

Identify flow route to TNW⁵: Unnamed Scioto River tributary discharges directly to non TNW portion of the Scioto River.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: None assigned; Scioto River stream order is Three (3).

ra .		
(b) –	General Tributary Characteristics (check all that apply):	
(-/		

	(b)	General Tributary Characteristics (check all that apply): Tributary is: Natural Artificial (man-made). Explain: Agricultural/Roadside Drainage Ditch. Manipulated (man-altered). Explain:
		Tributary properties with respect to top of bank (estimate): Average width: 8 feet Average depth: 3 feet Average side slopes:
		Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Emergent Other. Explain:
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Moderate Sloughing Banks, Vegetated. Presence of run/riffle/pool complexes. Explain: None - Glide. Tributary geometry: Determined and the stability Tributary gradient (approximate average slope): (2.5 ft/mi) %
	(c)	Flow: Tributary provides for: Second Flow Estimate average number of flow events in review area/year: 2007 granter) Describe flow regime: Seasonal Flow - Greater than three months. Other information on duration and volume: Low Flow.
		Surface flow is: Discrete and configure. Characteristics:
		Subsurface flow: Unknown . Explain findings: . Dye (or other) test performed:
		Tributary has (check all that apply): ⊠ Bed and banks ⊠ OHWM ⁶ (check all indicators that apply): ⊠ clear, natural line impressed on the bank □ changes in the character of soil □ shelving □ vegetation matted down, bent, or absent □ leaf litter disturbed or washed away □ sediment deposition □ water staining □ other (list): □ Discontinuous OHWM. ⁷ Explain:
		If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: Mean High Water Mark indicated by: oil or scum line along shore objects survey to available datum; fine shell or debris deposits (foreshore) physical markings/characteristics physical markings/characteristics vegetation lines/changes in vegetation types. other (list): other (list):
(iii)	Ch	emical Characteristics: aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water Slight Turbidity. entify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from adjacent agricultural fields; Road run-

off.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - 🗍 Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

- (a) <u>General Wetland Characteristics:</u> Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
- (b) <u>General Flow Relationship with Non-TNW</u>: Flow is: **Pick Lin**. Explain:

Surface flow is: Fick List Characteristics:

Subsurface flow: **Pick Lin**. Explain findings: Dye (or other) test performed:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW. Project waters are **Pick List** aerial (straight) miles from TNW. Flow is from: **Pick List**. Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known;

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis:

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS, THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.

2. RPWs that flow directly or indirectly into TNWs.

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
- Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Unmaped Scioto River tributary; Bed and bank, water depth of 12 plus inches, duck weed and low flow conditions observed.

- Tributary waters: linear feet width (ft).
- :3: Other non-wetland waters: acres.
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: lin Other non-wetland waters: linear feet width (ft).
- acres.
 - Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
 - 🔛 Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - 🔠 Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. 6.

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters."

- As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- Demonstrate that impoundment was created from "waters of the U.S.," or 539
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain SUCH WATERS (CHECK ALL THAT APPLY):10

- Interstate isolated waters. Explain:
- Other factors. Explain:

See Footnote # 3.

To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

- Identify type(s) of waters:
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
- Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

Lakes/ponds: acres.

- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply);

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
 - Data sheets prepared by the Corps:

Corps navigable waters' study:

U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999 – Present.

USGS NHD data.

USGS 8 and 12 digit HUC maps.

U.S. Geological Survey map(s). Cite scale & quad name: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH; USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

National wetlands inventory map(s). Cite name: WETDBA.CONUS_wet_poly; Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009.

State/Local wetland inventory map(s): Ohio Wetlands Inventory - Hardin County; The Ohio Department of Natural Resources (DNR); 1/1/1991.

FEMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water; Hardin County FEMA NFIP maps; 1/9/1974.

100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

Photographs: Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101.

or 🔲 Other (Name & Date):

Previous determination(s). File no. and date of response letter:
 Applicable/supporting case law:
 Applicable/supporting scientific literature;
 Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM **U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Unnamed Scioto River Tributary (SBU007AB) City: Marion State: Ohio County/parish/borough: Hardin

Center coordinates of site (lat/long in degree decimal format): Lat. 40.6745° , Long. 83.8207°

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Unnamed Scioto River Tributary

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

 \mathbb{X} Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 11/25/09
 - Field Determination. Date(s): 10/20/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are in avigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
 - Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas ×1
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Ē Impoundments of jurisdictional waters
 - ज्ञ Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 40 linear feet: 10 width (ft) and/or ..0092 acres. Wetlands: acres.
- c. Limits (boundaries) of jurisdiction based on: Established by CHINE. Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):³

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

- General Area Conditions: Watershed size: 2045536.52 in the Drainage area: 48826.03 in the Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches
- (ii) Physical Characteristics:
 - (a) <u>Relationship with TNW:</u>

 □ Tributary flows directly into TNW.
 ☑ Tributary flows through a tributaries before entering TNW.

Project waters are **30 (in more)** river miles from TNW. Project waters are **1 (or less)** river miles from RPW. Project waters are **30 (at more)** aerial (straight) miles from TNW. Project waters are **1 (or less)** aerial (straight) miles from RPW. Project waters cross or serve as state boundaries, Explain: No.

Identify flow route to TNW⁵: Unnamed Scioto River tributary discharges directly to non TNW portion of Scioto River. Tributary stream order, if known: None assigned; Scioto River stream order is Three (3).

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

	(D)	Tributary is: Natural Artificial (man-made). Explain: Agricultural/Roadside Drainage Ditch. Manipulated (man-altered). Explain:
		Tributary properties with respect to top of bank (estimate): Average width: 10 feet Average depth: 2 feet Average side slopes:
		Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Emergent Other. Explain: .
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: StableVegetated, Rock in Places. Presence of run/riffle/pool complexes. Explain: None - Glide. Tributary geometry: Reference average slope): (2.5 ft/mi) %
	(c)	Flow: Tributary provides for: Second Flow Estimate average number of flow events in review area/year: 20 to govern Describe flow regime: Seasonal Flow - Greater than three months. Other information on duration and volume: Low Flow.
		Surface flow is: Discrete and continue. Characteristics:
		Subsurface flow: Unknown . Explain findings: Dye (or other) test performed:
		Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): Clear, natural line impressed on the bank changes in the character of soil shelving Vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining other (list): Discontinuous OHWM. ⁷ Explain:
		If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: oil or scum line along shore objects fine shell or debris deposits (foreshore) physical markings/characteristics tidal gauges other (list):
(iii)		emical Characteristics: aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water Moderate Turbidity.

off.

Identify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from adjacent agricultural fields; Road run-

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ²Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
 - Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 Fish/spawn areas. Explain findings:

 - Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

- (i) Physical Characteristics:
 - (a) General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
 - (b) General Flow Relationship with Non-TNW: Flow is: Pick List. Explain:

Surface flow is: Pick List Characteristics:

Subsurface flow: **Pick List**. Explain findings: Dye (or other) test performed:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are Pick List river miles from TNW. Project waters are **Pick List aerial** (straight) miles from TNW. Flow is from: Pick List. Estimate approximate location of wetland as within the methods floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Ē Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

Characteristics of all wetlands adjacent to the tributary (if any) 3.

All wetland(s) being considered in the cumulative analysis: How we

Approximately () acres in total are being considered in the cumulative analysis. For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

- TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
- 2. RPWs that flow directly or indirectly into TNWs.
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Unmaped Scioto River tributary; Bed and bank, water depth of 12 inches, and low flow conditions observed.

- Tributary waters: width (ft). linear feet
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. 4.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- 🔠 Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres

6 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and 020 with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

- 7. Impoundments of jurisdictional waters.⁹
 - As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
 - Demonstrate that impoundment was created from "waters of the U.S.," or
 - è.; Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 - Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY): 10

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
 - which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain:
- Other factors. Explain:

Identify water body and summarize rationale supporting determination:

⁸See Footnote # 3.

To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁹ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based <u>solely</u> on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:

Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Other non-wetland wat Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
 - Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
 - Data sheets prepared by the Corps:
 - Corps navigable waters' study:

U.S. Geological Survey Hydrologic Atlas: National Hydrography Dataset Plus (NHDPlus); USEPA Office of Water; Vector Digital Data; 2006 and 12-Digit Watershed Boundary Data 1:24,000; USDA/NRCS - National Cartography & Geospatial Center; 1999 – Present.

- USGS NHD data.
- ⊠ USGS 8 and 12 digit HUC maps.

U.S. Geological Survey map(s). Cite scale & quad name: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic. Hardin County, OH; USDA/NRCS - National Cartography & Geospatial Center; Scale - 1:24K; 1939 - 2001.

USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) database for Hardin County, Ohio; U.S. Department of Agriculture, Natural Resources Conservation Service; 20051129.

National wetlands inventory map(s). Cite name: WETDBA.CONUS_wet_poly; Classification of Wetlands and Deepwater
 Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31; National
 Wetlands Inventory; U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation; September 25, 2009.
 State/Local wetland inventory map(s): Ohio Wetlands Inventory - Hardin County; The Ohio Department of Natural Resources

(DNR); 1/1/1991. M FERM/FIPM more: Floadway: Arone - Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Water, Hardin County: Ohio Department of Natural Resources Division of Natura

EMA/FIRM maps: Floodway Areas - Hardin County; Ohio Department of Natural Resources Division of Water, Hardin County FEMA NFIP maps; 1/9/1974.

- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: 🖾 Aerial (Name & Date): 2006 OSIP digital orthophotography MrSID County Mosaic; State of Ohio Office of Information Technology, Ohio Geographically Referenced Information Program; 20070101.
 - or 🗌 Other (Name & Date):

Previous determination(s). File no. and date of response letter:

Applicable/supporting case law: Applicable/supporting scientific literature: Other information (please specify):

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B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM **U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Huntington District; Hardin Wind Farm

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Scioto River (SBU009AB-1)

State: Ohio County/parish/borough: Hardin City: Marion

Center coordinates of site (lat/long in degree decimal format); Lat. 40.6632° &, Long. 83.7934°

Universal Transverse Mercator: NAD 83 Decimal

Name of nearest waterbody: Scioto River

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scioto River at mile 175, near Green Camp Name of watershed or Hydrologic Unit Code (HUC): 5060001

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

 \square Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: 11/25/09
- Field Determination. Date(s): 10/20/09

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): 1
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - İΠ. Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 40 linear feet: 34 width (ft) and/or .0312 acres. Wetlands: acres.
- c. Limits (boundaries) of jurisdiction based on: Established by C. Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):³

E Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWS

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional pavigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

- (i) General Area Conditions: Watershed size: 2045536.52
 Drainage area: 48826.03
 Average annual rainfall: 35.65 inches Average annual snowfall: 27.6 inches
- (ii) Physical Characteristics:
 - (a) <u>Relationship with TNW:</u>
 Tributary flows directly into TNW.
 Tributary flows through **RELEW** tributaries before entering TNW.

Project waters are **30 (or morg)** river miles from TNW. Project waters are **1 (or less)** river miles from RPW. Project waters are **30 (or morg)** aerial (straight) miles from TNW. Project waters are **1 (or less)** aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: No.

Identify flow route to TNW³: Non TNW portion of the Scioto River. Tributary stream order, if known: Three (3).

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

³ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

(0)	Tributary is: Artificial (man-made). Explain: Manipulated (man-altered). Explain: Artificial Scioto River.
	Tributary properties with respect to top of bank (estimate): Average width: 34 feet Average depth: 4 feet Average side slopes:
	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Emergent Other. Explain: .
Moderate Slo	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Moderatly Stable, Scouring on Shelves, ughing on North Bank. Presence of run/riffle/pool complexes. Explain: None - Glide. Tributary geometry: Balary and Stability Tributary gradient (approximate average slope): (1.25 ft/mi) %
(c)	<u>Flow:</u> Tributary provides for: Screen Flow Estimate average number of flow events in review area/year: Streen Exercise Describe flow regime: Perennial Flow. Other information on duration and volume: Low Flow.
	Surface flow is: Discrete and entropy. Characteristics:
	Subsurface flow: Later of the second
	Tributary has (check all that apply): Image: Second S
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: oil or scum line along shore objects fine shell or debris deposits (foreshore) physical markings/characteristics tidal gauges other (list): High Tide Line indicated by: Barrey to available datum; Vegetation lines/changes in vegetation types.
(iii) Ch	emical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water Moderate Turbidity.

Identify specific pollutants, if known: Potential pesticide, herbacide and fertalizer from adjacent agricultural fields.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- $\overline{\boxtimes}$ Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings: Minnows Observed.
 - Other environmentally-sensitive species. Explain findings: Mussels Observed.
 - Aquatic/wildlife diversity. Explain findings:

Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW 2.

- (i) Physical Characteristics:
 - (a) General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
 - (b) General Flow Relationship with Non-TNW: Flow is: Pick List. Explain:

Surface flow is: Pick List Characteristics:

Subsurface flow: Pick Eist. Explain findings: Dye (or other) test performed:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are Pick List river miles from TNW. Project waters are **Pick List** aerial (straight) miles from TNW. Flow is from: Pick List. Estimate approximate location of wetland as within the **Exercise** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

Characteristics of all wetlands adjacent to the tributary (if any) 3.

All wetland(s) being considered in the cumulative analysis:

Approximately () acres in total are being considered in the cumulative analysis. For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N) Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section IILD:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

- TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
- RPWs that flow directly or indirectly into TNWs.
 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Mapped non-TNW portion of Scioto River with perennial flow.
 - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally;

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands. <u> 245 -</u>

- B Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- E Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- 5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
 - 🖽 Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. 6.
 - 22 Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

- 7. Impoundments of jurisdictional waters.⁹
 - As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

 - Demonstrate that impoundment was created from "waters of the U.S.," or Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 - Demonstrate that water is isolated with a nexus to commerce (see E below).
- E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):10
 - which are or could be used by interstate or foreign travelers for recreational or other purposes.
 - from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
 - which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain:

 - Other factors. Explain:

Identify water body and summarize rationale supporting determination:

^{*}See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[&]quot; Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.