nc. Ourniy	side-Carrollton	Rater(s): P. Renne	er	Date:	5/1/201
			Field Id:		
	33.5		W-PJR-0	50117-6	
	33.3		W-1 01(-0(	30117-0	
	subtotal this page				
	0 33.5 Metric	5. Special Wetlands.			
x 10 pts.	subtotal Check al	l that apply and score as indica	ted.		
	Bog (10)				
	Fen (10)				
	Old growth	forest (10)			
		sted wetland (5)			
		bastal/tributary wetland-unrestricted hydrological			
		bastal/tributary wetland-restricted hydrology	r (5)		
	Relict Wet F	Sand Prairies (Oak Openings) (10)			
		irrence state/federal threatened or endang	ered species (10)		
		nigratory songbird/water fowl habitat or usa			
		Wetland. See Question 5 Qualitative Ratin			
	2 35.5 Metric	<ol><li>Plant communities, inter</li></ol>	spersion, micro	topography.	
20pts.	subtotal 6a. Wetla	and Vegetation Communities.	Vegetation	Community Cover Scale	
		esent using 0 to 3 scale.		prises <0.1ha (0.2471 acres) contiguous are	a
	Aquatic bed			ther comprises small part of wetland's 1	
	2 Emergent			is of moderate quality, or comprises a	
	Shrub Forest			but is of low quality ther comprises significant part of wetland's 2	1
	Mudflats			is of moderate quality or comprises a small	
	Open water		part and is of hi		
	Other			omprises significant part, or more, of wetland	's 3
	6b. horizon	tal (plan view) Interspersion.	vegetation and	is of high quality	
	Select only	one.			
	High (5)			cription of Vegetation Quality	
	Moderately	• • • •		sity and/or predominance of nonnative or low	
	Moderate (3 Moderately			erant native species dominant component of the vegetation, more	1
	Low (1)	10W (2)		ative and/or disturbance tolerant native spp	1
	X None (0)			esent, and species diversity moderate to	
		ge of invasive plants. Refer		h, but generallyw/o presence of rare	
		AM long form for list. Add		endangered spp to	
		bints for coverage		ce of native species, with nonnative spp high	
		75% cover (-5)		ince tolerant native spp absent or virtually	
	X Sparse 5-25	5-75% cover (-3)		gh spp diversity and often, but not always, f rare, threatened, or endangered spp	
		nt <5% cover (0)	the presence of	i rare, tilleateried, or endangered spp	
	Absent (1)		Mudflat and O	pen Water Class Quality	
	6d. Microto	pography.	0 Absent <0.1ha		
	Score all pr	esent using 0 to 3 scale.		a (0.247 to 2.47 acres)	
		ummucks/tussucks		<4ha (2.47 to 9.88 acres)	
		dy debris >15cm (6in)	3 High 4ha (9.88	acres) or more	
	0 Standing de 0 Amphibian I	ad >25cm (10in) dbh	Microtopograf	phy Cover Scale	
	U Amphibian	recard pools	0 Absent	pily cover Scale	
				mall amounts or if more common	
			of marginal qua		
				lerate amounts, but not of highest	
tegory 2			quality or in sm	all amounts of highest quality	

and of highest quality

#### Wetland 46 Site: Sunnyside-Carrollton Rater(s): P. Renner Date: 5/1/2017 Field Id: Metric 1. Wetland Area (size). W-PJR-050117-5 0 0 Select one size class and assign score. max 6 pts subtotal >50 acres (>20.2ha) (6 pts) 0.03 acres 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) x <0.1 acres (0.04ha) (0 pts) 5 5 Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double check. max 14 pts. subtotal WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) X NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) X LOW. Old field (>10 years), shrubland, young second growth forest. (5) X MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) 13.0 18.0 Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. 3b. Connectivity. Score all that apply. max 30 pts. subtotal 100 year floodplain (1) High pH groundwater (5) Х Other groundwater (3) Between stream/lake and other human use (1) X Precipitation (1) Part of wetland/upland (e.g. forest), complex (1) Х X Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. 3c. Maximum water depth. Select one. Semi- to permanently inundated/saturated (4) >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) X <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1) double check and average. 3e. Modifications to natural hydrologic regime. Score one o None or none apparent (12) Check all disturbances observed Recovered (7) ditch point source (nonstormwater) Х Recovering (3) tile filling/grading road bed/RR track Recent or no recovery (1) dike weir dredaina stormwater input Other: 8 26 Metric 4. Habitat Alteration and Development. 4a. Substrate disturbance. Score one or double check and average. max 20 pts subtotal None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average None or none apparent (9) Check all disturbances observed Recovered (6) mowing X shrub/sapling removal Х X Recovering (3) grazing herbaceous/aquatic bed removal clearcutting sedimentation Recent or no recovery (1) Х X selective cutting dredging woody debris removal farming toxic pollutants nutrient enrichment 26

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Site: Sunny	yside-Carrollton		Rater(s): P. Renne	er		Date:	5/1/201
					Field Id:		
	26				W-PJR-050117-5		
	subtotal this page						
	0 26 M	etric 5. Specia	al Wetlands.				
ix 10 pts.	subtotal Ch	eck all that app	ly and score as indica	ted.			
	Bog	g (10)					
		า (10)					
		growth forest (10)	-				
		ture forested wetland (		any (10)			
			y wetland-unrestricted hydrology wetland-restricted hydrology				
		e Plain Sand Prairies		(3)			
		ict Wet Praires (10)	(ear eperinge) (10)				
	Kno	own occurrence state/	federal threatened or endange	ered specie	es (10)		
			gbird/water fowl habitat or usa				
		• •	Question 5 Qualitative Rating	. ,			
	0 26 M	etric 6. Plant o	communities, inter	spersi	on, microtopography.		
x 20pts.		•	ation Communities.		Vegetation Community Cov		
		ore all present using 0	to 3 scale.		Absent or comprises <0.1ha (0.2471 a		
		uatic bed		1	Present and either comprises small pa		
	1 Em	ergent			vegetation and is of moderate quality, or significant part but is of low quality	or comprises a	
	For			2	Present and either comprises signification	nt nart of wetland's 2	
		dflats		2	vegetation and is of moderate quality of		
		en water			part and is of high quality		
	Oth	ier		3	Present and comprises significant part	, or more, of wetland's 3	
		horizontal (plan viev	v) Interspersion.		vegetation and is of high quality		
		ect only one.				o	
		h (5) derately high(4)			Narrative Description of Vegetation Low spp diversity and/or predominance		
		derate (3)			disturbance tolerant native species		
		derately low (2)			Native spp are dominant component of	the vegetation, mod	
		v (1)			although nonnative and/or disturbance		
	X Nor	ne (0)			can also be present, and species diver	sity moderate to	
		Coverage of invasive			moderately high, but generallyw/o pres	ence of rare	
		ble 1 ORAM long form			threatened or endangered spp to		
		deduct points for cover			A predominance of native species, with		
		ensive >75% cover (-{ derate 25-75% cover (			and/or disturbance tolerant native spp a absent, and high spp diversity and ofte		
		arse 5-25% cover (-1)	-0)		the presence of rare, threatened, or en		
		arly absent <5% cover	(0)	1	······································		
	Abs	sent (1)	( )		Mudflat and Open Water Class Quali	ty	
		Microtopography.			Absent <0.1ha (0.247 acres)		
		ore all present using 0			Low 0.1 to <1ha (0.247 to 2.47 acres)		
		getated hummucks/tus			Moderate 1 to <4ha (2.47 to 9.88 acres	3)	
		arse woody debris >15 nding dead >25cm (10		3	High 4ha (9.88 acres) or more		
		phibian breeding pools			Microtopography Cover Scale		
			-		Absent		
					Present very small amounts or if more	common	
					of marginal quality		
				2	Present in moderate amounts, but not	0	
tegory 1					quality or in small amounts of highest of	luality	
	26 GRAND TOTA	L(max 100 pts)		3	Present in moderate or greater amount	ts	

#### Wetland 47 Site: Sunnyside-Carrollton Rater(s): P. Renner Date: 5/1/2017 Field Id: Metric 1. Wetland Area (size). W-PJR-050117-4 2 2 Select one size class and assign score. max 6 pts subtotal >50 acres (>20.2ha) (6 pts) 0.43 acres 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) X 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts) 5 7 Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double check. max 14 pts. subtotal WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) X NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) X LOW. Old field (>10 years), shrubland, young second growth forest. (5) X MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) 13.0 20.0 Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. 3b. Connectivity. Score all that apply. max 30 pts. subtotal 100 year floodplain (1) High pH groundwater (5) Х Other groundwater (3) Between stream/lake and other human use (1) X Precipitation (1) Part of wetland/upland (e.g. forest), complex (1) Х X Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. 3c. Maximum water depth. Select one. Semi- to permanently inundated/saturated (4) >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) X <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1) double check and average. 3e. Modifications to natural hydrologic regime. Score one o None or none apparent (12) Check all disturbances observed Recovered (7) ditch point source (nonstormwater) Х Recovering (3) tile filling/grading road bed/RR track Recent or no recovery (1) dike weir dredaina stormwater input Other: 8 28 Metric 4. Habitat Alteration and Development. 4a. Substrate disturbance. Score one or double check and average. max 20 pts subtotal None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average None or none apparent (9) Check all disturbances observed Recovered (6) mowing X shrub/sapling removal Х X Recovering (3) grazing herbaceous/aquatic bed removal clearcutting sedimentation Recent or no recovery (1) Х X selective cutting dredging woody debris removal farming toxic pollutants nutrient enrichment 28

ubtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Site: Sunny	side-Carrollto	on	Rater(s): P. Renne	er		Date:	5/1/201
					Field Id:	-	
	28				W-PJR-050117-4		
	subtotal this page						
	0 28	Metric 5. Specia	al Wetlands.				
x 10 pts.	subtotal	Check all that app	ly and score as indicat	ed.			
		Bog (10)					
		Fen (10)					
		Old growth forest (10)					
		Mature forested wetland		(10)			
			y wetland-unrestricted hydrolo y wetland-restricted hydrology				
		Lake Plain Sand Prairies		(5)			
		Relict Wet Praires (10)	(our openings) (10)				
			federal threatened or endange	red specie	es (10)		
			gbird/water fowl habitat or usag				
		• •	Question 5 Qualitative Rating	, ,			
	2 30	Metric 6. Plant	communities, inter	spersi	on, microtopography.		
20pts.		•	ation Communities.		Vegetation Community Cov		
		Score all present using 0	to 3 scale.		Absent or comprises <0.1ha (0.2471 a		
		Aquatic bed Emergent		1	Present and either comprises small pa		
		Emergent Shrub			vegetation and is of moderate quality, or significant part but is of low quality	or comprises a	
		Forest		2	Present and either comprises significal	nt part of wetland's 2	
		Mudflats		-	vegetation and is of moderate quality of		
		Open water			part and is of high quality	··· p ···· ·	
		Other		3	Present and comprises significant part	, or more, of wetland's 3	
		6b. horizontal (plan vie	w) Interspersion.		vegetation and is of high quality		
		Select only one.				o	
		High (5) Moderately high(4)		1	Narrative Description of Vegetation Low spp diversity and/or predominance		
		Moderate (3)			disturbance tolerant native species		
		Moderately low (2)			Native spp are dominant component of	f the vegetation, mod	
		Low (1)			although nonnative and/or disturbance		
		None (0)			can also be present, and species diver	sity moderate to	
		6c. Coverage of invasiv			moderately high, but generallyw/o pres	ence of rare	
		Table 1 ORAM long form			threatened or endangered spp to		
		or deduct points for cove			A predominance of native species, with		
		Extensive >75% cover (- Moderate 25-75% cover			and/or disturbance tolerant native spp absent, and high spp diversity and ofte		
		Sparse 5-25% cover (-1)			the presence of rare, threatened, or en		
		Nearly absent <5% cove					
		Absent (1)			Mudflat and Open Water Class Quali	ity	
		6d. Microtopography.			Absent <0.1ha (0.247 acres)		
		Score all present using 0			Low 0.1 to <1ha (0.247 to 2.47 acres)		
		Vegetated hummucks/tu			Moderate 1 to <4ha (2.47 to 9.88 acres	6)	
		Coarse woody debris >1 Standing dead >25cm (1		3	High 4ha (9.88 acres) or more		
		Amphibian breeding poo			Microtopography Cover Scale		
		,		0	Absent		
					Present very small amounts or if more	common	
					of marginal quality		
				2	Present in moderate amounts, but not	0	
tegory 2					quality or in small amounts of highest of	quality	
:	30 GRAND TO	TAL(max 100 pts)		3	Present in moderate or greater amount	ts	

#### Wetland 48 Site: Sunnyside-Carrollton Rater(s): P. Renner Date: 5/1/2017 Field Id: Metric 1. Wetland Area (size). W-PJR-050117-3 0 0 Select one size class and assign score. max 6 pts subtotal >50 acres (>20.2ha) (6 pts) 0.01 acres 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) X <0.1 acres (0.04ha) (0 pts) 4 4 Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double check. max 14 pts. subtotal WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) X NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) X LOW. Old field (>10 years), shrubland, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) X HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) 11.0 Metric 3. Hydrology. 15.0 3a. Sources of Water. Score all that apply. 3b. Connectivity. Score all that apply. max 30 pts. subtotal 100 year floodplain (1) High pH groundwater (5) Other groundwater (3) X Precipitation (1) Between stream/lake and other human use (1) Part of wetland/upland (e.g. forest), complex (1) X Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. 3c. Maximum water depth. Select one. Semi- to permanently inundated/saturated (4) >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) Х X <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1) double check and average. 3e. Modifications to natural hydrologic regime. Score one o None or none apparent (12) Check all disturbances observed Recovered (7) ditch point source (nonstormwater) Х Recovering (3) tile filling/grading road bed/RR track Recent or no recovery (1) dike weir dredaina stormwater input Other: 3 18 Metric 4. Habitat Alteration and Development. 4a. Substrate disturbance. Score one or double check and average. max 20 pts subtotal None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) K Poor (1) 4c. Habitat alteration. Score one or double check and average None or none apparent (9) Check all disturbances observed Recovered (6) mowing X shrub/sapling removal Х Recovering (3) grazing herbaceous/aquatic bed removal clearcutting sedimentation X Recent or no recovery (1) Х X selective cutting dredging woody debris removal farming toxic pollutants nutrient enrichment 18

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

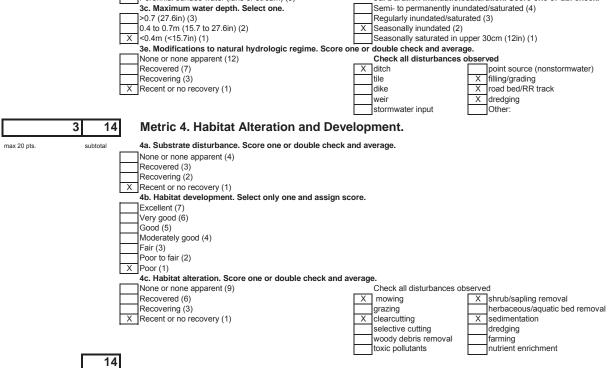
te. Sumysiu	e-Carroll	ton	Rater(s): P. Renr	ıer		Date:	5/1/201
					Field Id:		
Г	18				W-PJR-050117-3		
L							
SI	ubtotal this page						
0	18	Metric 5. Specia	al Wetlands.				
< 10 pts. s	subtotal	Check all that app	ly and score as indic	ated.			
		Bog (10)					
		Fen (10)					
		Old growth forest (10)					
		Mature forested wetland					
			y wetland-unrestricted hydro				
		Lake Plain Sand Prairies	y wetland-restricted hydrolog	JY (5)			
		Relict Wet Praires (10)	(Oak Openings) (10)				
			federal threatened or endang	aered specie	es (10)		
			gbird/water fowl habitat or us		· · /		
			Question 5 Qualitative Rati	• • •			
0	18	Metric 6. Plant	communities, inte	erspersi	on, microtopography.		
20pts. s	subtotal	•	ation Communities.		Vegetation Community C		
		Score all present using 0	to 3 scale.		Absent or comprises <0.1ha (0.247		
		Aquatic bed		1	Present and either comprises small		
	1	Emergent			vegetation and is of moderate quali	ity, or comprises a	
		Shrub Forest		2	significant part but is of low quality Present and either comprises signif	ficant part of wetland's 2	
		Mudflats		2	vegetation and is of moderate quali		
	_	Open water			part and is of high quality	ity of comprises a small	
		Other		3	Present and comprises significant p	part. or more. of wetland's 3	
		6b. horizontal (plan vie	v) Interspersion.		vegetation and is of high quality	, ,	
		Select only one.					
		High (5)			Narrative Description of Vegetati		
		Moderately high(4)			Low spp diversity and/or predomina		
		Moderate (3)			disturbance tolerant native species Native spp are dominant componer		
		Moderately low (2) Low (1)			although nonnative and/or disturba		
	X	None (0)			can also be present, and species d		
		6c. Coverage of invasiv	e plants. Refer		moderately high, but generallyw/o p	•	
		Table 1 ORAM long form			threatened or endangered spp to		
		or deduct points for cove	rage		A predominance of native species,	with nonnative spp high	
		Extensive >75% cover (-			and/or disturbance tolerant native s		
		Moderate 25-75% cover			absent, and high spp diversity and		
	X	Sparse 5-25% cover (-1)			the presence of rare, threatened, or	r endangered spp	
		Nearly absent <5% cove Absent (1)	r (0)		Mudflat and Open Water Class Q	uality	
		6d. Microtopography.			Absent <0.1ha (0.247 acres)	danty	
		Score all present using 0	to 3 scale.		Low 0.1 to <1ha (0.247 to 2.47 acre	es)	
	0	Vegetated hummucks/tu	sucks	2	Moderate 1 to <4ha (2.47 to 9.88 a	cres)	
	0	Coarse woody debris >1		3	High 4ha (9.88 acres) or more		
	0						
	0	Amphibian breeding poo	S	~	Microtopography Cover Scale		
					Absent	oro common	
				1	Present very small amounts or if mo of marginal quality	ore common	
				2	Present in moderate amounts but	not of highest	
tegory 1				2	Present in moderate amounts, but r guality or in small amounts of higher	0	

#### Wetland 49 Site: Sunnyside-Carrollton Rater(s): P. Renner Date: 5/1/2017 Field Id: Metric 1. Wetland Area (size). W-PJR-050117-2 2 2 Select one size class and assign score. max 6 pts subtotal >50 acres (>20.2ha) (6 pts) 0.45 acres 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) X 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts) 1 3 Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double check. max 14 pts. subtotal WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrubland, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) X HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) 6.0 9.0 Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. 3b. Connectivity. Score all that apply. max 30 pts. subtotal 100 year floodplain (1) High pH groundwater (5) Other groundwater (3) Between stream/lake and other human use (1) X Precipitation (1) Part of wetland/upland (e.g. forest), complex (1) Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. 3c. Maximum water depth. Select one. Semi- to permanently inundated/saturated (4) >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) Х X <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1) double check and average. 3e. Modifications to natural hydrologic regime. Score one o None or none apparent (12) Check all disturbances observed Recovered (7) X ditch point source (nonstormwater) Recovering (3) tile X filling/grading X road bed/RR track X Recent or no recovery (1) dike weir X dredaina stormwater input Other: 3 12 Metric 4. Habitat Alteration and Development. 4a. Substrate disturbance. Score one or double check and average. max 20 pts subtotal None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) K Poor (1) 4c. Habitat alteration. Score one or double check and average None or none apparent (9) Check all disturbances observed Recovered (6) mowing X shrub/sapling removal Х Recovering (3) grazing herbaceous/aquatic bed removal clearcutting X Recent or no recovery (1) Х X sedimentation selective cutting dredging woody debris removal farming toxic pollutants nutrient enrichment 12

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Site: Sunny	yside-Carrollton	Rater(s): P. Renne	er		Date:	5/1/201
			Field	ld:		
	12		W-P.	JR-050117-2		
	subtotal this page					
	0 12 Metri	c 5. Special Wetlands.				
ix 10 pts.	subtotal Check	all that apply and score as indicat	ted.			
	Bog (10)					
	Fen (10)					
		th forest (10)				
		prested wetland (5)	(10)			
		e coastal/tributary wetland-unrestricted hydrolo e coastal/tributary wetland-restricted hydrology				
		in Sand Prairies (Oak Openings) (10)	(5)			
		et Praires (10)				
		ccurrence state/federal threatened or endange	ered species (10)			
		nt migratory songbird/water fowl habitat or usa				
		1 Wetland. See Question 5 Qualitative Rating	,			
	0 12 Metri	c 6. Plant communities, inter	spersion, m	nicrotopography.		
20pts.		tland Vegetation Communities.		ation Community Cov		
		present using 0 to 3 scale.		or comprises <0.1ha (0.2471 a		
	Aquatic b			and either comprises small pa		
	1 Emergen Shrub	π.		on and is of moderate quality, int part but is of low quality	or comprises a	
	Forest			and either comprises signification	ant part of wetland's 2	
	Mudflats			on and is of moderate quality		
	Open wa	ıter		is of high quality		
	Other		3 Present	and comprises significant par	t, or more, of wetland's 3	
		contal (plan view) Interspersion.	vegetati	on and is of high quality		
	Select or	ily one.		<b>_</b>		
	High (5)	aly high (4)		ve Description of Vegetation o diversity and/or predominance		
	Moderate	ely high(4)		ince tolerant native species	se of nonnative of low	
		ely low (2)		spp are dominant component of	of the vegetation, mod	
	Low (1)	<i>xy</i> (c) (2)		n nonnative and/or disturbance		
	X None (0)			be present, and species dive		
		erage of invasive plants. Refer	moderat	tely high, but generallyw/o pre	sence of rare	
		DRAM long form for list. Add		ed or endangered spp to		
		t points for coverage		minance of native species, wit		
		e >75% cover (-5) e 25-75% cover (-3)		listurbance tolerant native spp and high spp diversity and ofte		
		5-25% cover (-1)		ence of rare, threatened, or en		
		osent <5% cover (0)	allo prod		ndangered opp	
	Absent (	1)	Mudflat	and Open Water Class Qua	lity	
		otopography.		<0.1ha (0.247 acres)		
		present using 0 to 3 scale.		to <1ha (0.247 to 2.47 acres)		
		d hummucks/tussucks		te 1 to <4ha (2.47 to 9.88 acre	es)	
		voody debris >15cm (6in) dead >25cm (10in) dbh	S  ⊓ign 4n	a (9.88 acres) or more		
		an breeding pools	Microto	pography Cover Scale		
			0 Absent			
				very small amounts or if more	e common	
				inal quality		
				in moderate amounts, but not	0	
tegory 1			quality o	or in small amounts of highest	quality	
	12 GRAND TOTAL(m	ax 100 pts)	3 Present	in moderate or greater amour	nts	
				-		

#### Wetland 50 Site: Sunnyside-Carrollton Rater(s): P. Renner Date: 5/1/2017 Field Id: Metric 1. Wetland Area (size). W-PJR-050117-1 1 1 Select one size class and assign score. max 6 pts subtotal >50 acres (>20.2ha) (6 pts) 0.13 acres 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) X 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts) 1 2 Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double check. max 14 pts. subtotal WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) X VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrubland, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) 9.0 11.0 Metric 3. Hydrology. max 30 pts 3a. Sources of Water. Score all that apply. 3b. Connectivity. Score all that apply. subtotal High pH groundwater (5) 100 year floodplain (1) Other groundwater (3) Between stream/lake and other human use (1) Precipitation (1) Part of wetland/upland (e.g. forest), complex (1) Х X Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check.



ORAM v. 5.0 Field Form Quantitative Rating

btotal this page

Site: Sunnyside	e-Carrollton	Rater(s): P. Renn	er		Date:	5/1/201
				Field Id:		
Г	14			W-PJR-050117-1		
L						
	ototal this page					
0	14 Metric 5. Sp	ecial Wetlands.				
x 10 pts. su	btotal Check all that	apply and score as indica	ated.			
	Bog (10)					
	Fen (10)					
	Old growth forest (					
	Mature forested we	ibutary wetland-unrestricted hydrol	loav (10)			
		ibutary wetland-restricted hydrolog				
		airies (Oak Openings) (10)				
	Relict Wet Praires					
		state/federal threatened or endang y songbird/water fowl habitat or us		s (10)		
		d. See Question 5 Qualitative Ratin				
-4				on, microtopography.		
< 20pts. su		egetation Communities.	•	Vegetation Community C	over Scale	
	Score all present u	•	0	Absent or comprises <0.1ha (0.247		
	Aquatic bed	-	1	Present and either comprises small		
	1 Emergent			vegetation and is of moderate quality	ty, or comprises a	
	Shrub Forest			significant part but is of low quality Present and either comprises signif	icant part of wotland's 2	
	Mudflats			vegetation and is of moderate guali		
	Open water			part and is of high quality	y or comprises a small	
	Other		3	Present and comprises significant p	part, or more, of wetland's 3	
		n view) Interspersion.		vegetation and is of high quality		
	Select only one. High (5)			Narrative Description of Vegetation	on Quality	
	Moderately high(4)			Low spp diversity and/or predomina		
	Moderate (3)			disturbance tolerant native species		
	Moderately low (2)			Native spp are dominant componen		
	Low (1)			although nonnative and/or disturbar		
	X None (0)	vasive plants. Refer		can also be present, and species di moderately high, but generallyw/o p		
	Table 1 ORAM Ion			threatened or endangered spp to		
	or deduct points fo			A predominance of native species,	with nonnative spp high	
	X Extensive >75% co			and/or disturbance tolerant native s		
	Moderate 25-75%			absent, and high spp diversity and o		
	Sparse 5-25% cov Nearly absent <5%		l	the presence of rare, threatened, or	endangered spp	
	Absent (1)			Mudflat and Open Water Class Q	uality	
	6d. Microtopogra	phy.		Absent <0.1ha (0.247 acres)	·	
	Score all present u			Low 0.1 to <1ha (0.247 to 2.47 acre		
	0 Vegetated hummu 0 Coarse woody deb			Moderate 1 to <4ha (2.47 to 9.88 ac High 4ha (9.88 acres) or more	cres)	
	0 Standing dead >25		5	High 4ha (9.66 acres) of more		
	0 Amphibian breedin			Microtopography Cover Scale		
			0	Absent		
				Present very small amounts or if mo	ore common	
				of marginal quality Present in moderate amounts, but r	not of highest	
				quality or in small amounts of highe		
tegory 1						

and of highest quality

#### Wetland 51 Site: Sunnyside-Carrollton Rater(s): P. Renner Date: 4/27/2017 Field Id: Metric 1. Wetland Area (size). W-PJR-042717-5 3 3 Select one size class and assign score. max 6 pts subtotal >50 acres (>20.2ha) (6 pts) 0.14 acres extends outside ROW 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) X 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts) 2 5 Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double check. max 14 pts. subtotal WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) X NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrubland, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) 15.0 20.0 Metric 3. Hydrology. max 30 pts 3a. Sources of Water. Score all that apply. 3b. Connectivity. Score all that apply. subtota High pH groundwater (5) 100 year floodplain (1) Other groundwater (3) Between stream/lake and other human use (1) Precipitation (1) Х Part of wetland/upland (e.g. forest), complex (1) Х X Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. 3c. Maximum water depth. Select one. Semi- to permanently inundated/saturated (4) X Regularly inundated/saturated (3) >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) X <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1) 3e. Modifications to natural hydrologic regime. Score one or double check and average. None or none apparent (12) Check all disturbances obse rved Х Recovered (7) ditch point source (nonstormwater) X filling/grading X road bed/RR track X Recovering (3) tile Recent or no recovery (1) dike dredging weir stormwater input Other: Metric 4. Habitat Alteration and Development. 7 27 4a. Substrate disturbance. Score one or double check and average. max 20 pts. subtotal None or none apparent (4) Recovered (3) X Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Check all disturbances observed

X mowing

Χ

grazing

clearcutting

selective cutting

toxic pollutants

woody debris removal

27

btotal this page

Recovered (6)

Recovering (3)

Recent or no recovery (1)

ORAM v. 5.0 Field Form Quantitative Rating

X shrub/sapling removal

nutrient enrichment

sedimentation

dredging

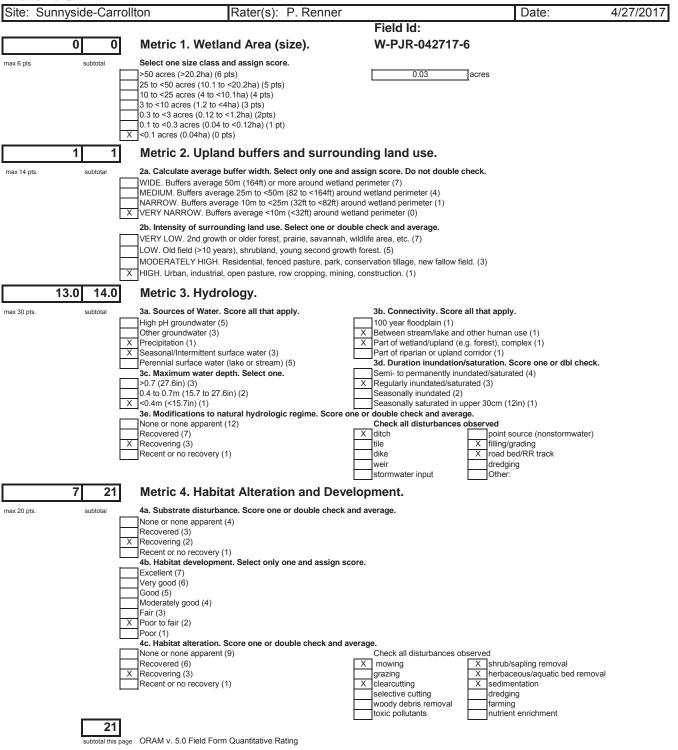
farming

Х

herbaceous/aquatic bed removal

Site: Sunnys	side-Carro	ollton	Rater(s): P. Renr	ner		Date:	4/27/201
			•		Field Id:	•	
	27				W-PJR-042717-5		
	21				W-1 01(-042717-5		
	subtotal this page	ge					
	0 27	Metric 5. Speci	al Wetlands.				
< 10 pts.	subtotal	Check all that app	ly and score as indic	ated.			
	Г	Bog (10)	,				
		Fen (10)					
		Old growth forest (10)					
	_	Mature forested wetland		(10)			
	-		ry wetland-unrestricted hydro ry wetland-restricted hydrolog				
	-	Lake Plain Sand Prairies		gy (3)			
	-	Relict Wet Praires (10)	(				
			/federal threatened or endang		es (10)		
	_		gbird/water fowl habitat or us				
	3 24		e Question 5 Qualitative Rati	• • •	ion, microtopograph	W.	
				spers		-	
20pts.	subtotal	•	ation Communities.		Vegetation Community	/	
	Г	Score all present using Aquatic bed	to 3 scale.	0	Absent or comprises <0.1ha (0. Present and either comprises si		
	-	1 Emergent			vegetation and is of moderate q		
	-	0 Shrub			significant part but is of low qua		
		Forest		2	Present and either comprises si	0	
		Mudflats			vegetation and is of moderate q	uality or comprises a small	
	-	Open water Other		3	part and is of high quality Present and comprises signification	ant part or more of wetland's 3	
	L	6b. horizontal (plan vie	w) Interspersion.	5	vegetation and is of high quality		
		Select only one.	,		3 4 9		
		High (5)			Narrative Description of Vege		
	_	Moderately high(4)			Low spp diversity and/or predor		
	-	Moderate (3) Moderately low (2)			disturbance tolerant native spec Native spp are dominant compo		
	-	X Low (1)			although nonnative and/or distu		
		None (0)			can also be present, and specie		
	-	6c. Coverage of invasi			moderately high, but generallyw	/o presence of rare	
		Table 1 ORAM long form			threatened or endangered spp t		
	Г	or deduct points for cove X Extensive >75% cover (			A predominance of native speci and/or disturbance tolerant nativ		
	-	Moderate 25-75% cover			absent, and high spp diversity a		
	-	Sparse 5-25% cover (-1			the presence of rare, threatened		
		Nearly absent <5% cove	r (0)				
	L	Absent (1)		0	Mudflat and Open Water Class	s Quality	
		6d. Microtopography. Score all present using	) to 3 scale	- 0	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 a	20100	
	Г	0 Vegetated hummucks/tu			Moderate 1 to <4ha (2.47 to 9.8		
		0 Coarse woody debris >1			High 4ha (9.88 acres) or more		
		0 Standing dead >25cm (					
		0 Amphibian breeding poo	ls	~	Microtopography Cover Scale	9	
				0	Absent Present very small amounts or i	if more common	
				I	of marginal guality		
				2	Present in moderate amounts, b	out not of highest	
				-	r recont in moderate amounte, a		
tegory 1	_			_	quality or in small amounts of hi		

and of highest quality



Site: Sunnyside-Carrollton	Rater(s): P. Renn	er	Date:	4/27/201
		Field Id:		
21		W-PJR-0427	717-6	
		11 1 01( 042)		
subtotal this page				
0 21 Metric 5.	Special Wetlands.			
x 10 pts. subtotal Check all t	hat apply and score as indica	ated.		
Bog (10)				
Fen (10)				
Old growth fore				
Mature foreste	stal/tributary wetland-unrestricted hydro	loav (10)		
	stal/tributary wetland-restricted hydrolog			
	nd Prairies (Oak Openings) (10)			
Relict Wet Pra				
	ence state/federal threatened or endang ratory songbird/water fowl habitat or us			
	etland. See Question 5 Qualitative Rati			
	Plant communities, inte		oography.	
	d Vegetation Communities.		ommunity Cover Scale	
	ent using 0 to 3 scale.		es <0.1ha (0.2471 acres) contiguous are	a
Aquatic bed	C C	1 Present and either	comprises small part of wetland's 1	
0 Emergent			f moderate quality, or comprises a	
Shrub		significant part but i		
Forest 1 Mudflats			comprises significant part of wetland's 2 f moderate quality or comprises a small	
Open water		part and is of high o		
Other			ises significant part, or more, of wetland	's 3
	(plan view) Interspersion.	vegetation and is of	f high quality	
Select only one	e.	Nerretive Descript	ion of Verstation Quality	
High (5) Moderately hig	h(4)		tion of Vegetation Quality nd/or predominance of nonnative or low	
Moderate (3)	(1)(-)	disturbance toleran		
Moderately low	v (2)	Native spp are dom	ninant component of the vegetation, mod	
Low (1)			and/or disturbance tolerant native spp	
X None (0)	of investive plants. Defer		t, and species diversity moderate to	
	of invasive plants. Refer I long form for list. Add	threatened or enda	ut generallyw/o presence of rare	
or deduct point			native species, with nonnative spp high	
Extensive >75	•		tolerant native spp absent or virtually	
Moderate 25-7			op diversity and often, but not always,	
Sparse 5-25%		the presence of rar	e, threatened, or endangered spp	
X Absent (1)	<5% cover (0)	Mudflat and Open	Water Class Quality	
6d. Microtopo	ography.	0 Absent <0.1ha (0.2		
	ent using 0 to 3 scale.	1 Low 0.1 to <1ha (0.		
	nmucks/tussucks	2 Moderate 1 to <4ha		
	debris >15cm (6in)	3 High 4ha (9.88 acre	es) or more	
0 Standing dead 1 Amphibian bre	>25cm (10in) dbh eding pools	Microtopography	Cover Scale	
		0 Absent		
			amounts or if more common	
		of marginal quality		
itegory 1		2 Present in moderate	e amounts, but not of highest mounts of highest quality	

and of highest quality

#### Wetland 53 Site: Carrollton-Sunnydale Rater(s): P. Renner Date: 4/25/2017 Field Id: Metric 1. Wetland Area (size). W-PJR-042517-6 3 3 Select one size class and assign score. max 6 pts subtotal >50 acres (>20.2ha) (6 pts) 2.10 acres 25 to <50 acres (10.1 to <20.2ha) (5 pts) extends outside ROW 10 to <25 acres (4 to <10.1ha) (4 pts) X 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts) 4 7 Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double check. max 14 pts. subtotal WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) X NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) X LOW. Old field (>10 years), shrubland, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) X HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) 11.0 18.0 Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. 3b. Connectivity. Score all that apply. max 30 pts. subtotal 100 year floodplain (1) High pH groundwater (5) Other groundwater (3) X Precipitation (1) Х Between stream/lake and other human use (1) Part of wetland/upland (e.g. forest), complex (1) Х X Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. 3c. Maximum water depth. Select one. Semi- to permanently inundated/saturated (4) >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) X <0.4m (<15.7in) (1) Х Seasonally saturated in upper 30cm (12in) (1) double check and average. 3e. Modifications to natural hydrologic regime. Score one o None or none apparent (12) Check all disturbances observed Recovered (7) ditch X point source (nonstormwater) Х Recovering (3) tile X filling/grading X road bed/RR track Recent or no recovery (1) dike weir dredaina stormwater input Other: 6 24 Metric 4. Habitat Alteration and Development. 4a. Substrate disturbance. Score one or double check and average. max 20 pts subtotal None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6)

Check all disturbances observed

shrub/sapling removal

sedimentation

nutrient enrichment

dredging

farming

herbaceous/aquatic bed removal

mowing

clearcutting

selective cutting

toxic pollutants

woody debris removal

Х

X grazing

Х

ORAM-PJR-042517-6 | test\_Field

24

btotal this page ORAM v. 5.0 Field Form Quantitative Rating

None or none apparent (9)

Recent or no recovery (1)

Recovered (6)

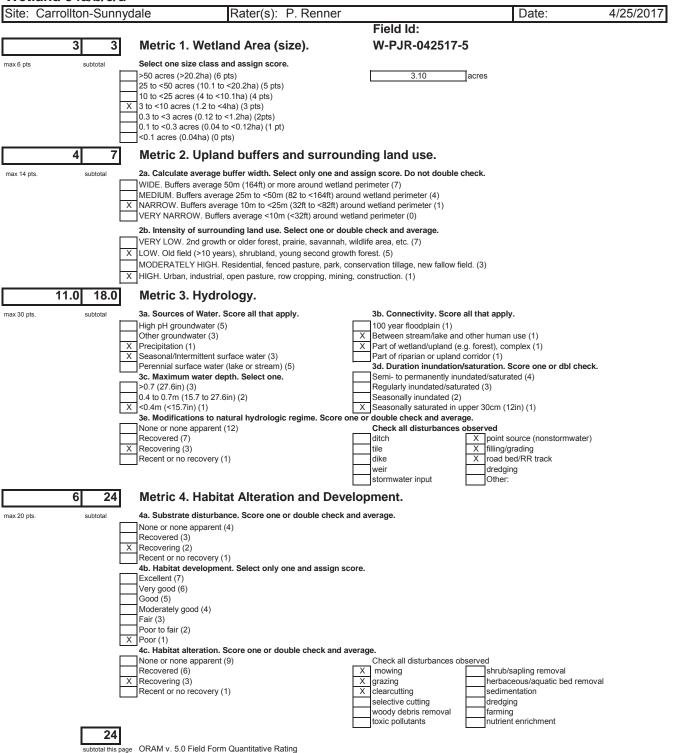
X Recovering (3)

4c. Habitat alteration. Score one or double check and average

Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1)

	on-Sunn	ydale	Rater(s): P. Renn	er		Date:	4/25/201
					Field Id:		
	24				W-PJR-042517-6		
	subtotal this pa	-					
0	) 24	Metric 5. Speci	al Wetlands.				
x 10 pts.	subtotal	Check all that app	ly and score as indica	ated.			
	Γ	Bog (10)					
		Fen (10)					
		Old growth forest (10)					
	L	Mature forested wetland					
	ŀ		ry wetland-unrestricted hydrol				
	-	Lake Plain Sand Prairies	ry wetland-restricted hydrolog	JY (5)			
		Relict Wet Praires (10)	(Oak Openings) (10)				
	F		/federal threatened or endang	ered speci	es (10)		
	-		gbird/water fowl habitat or us				
		• •	e Question 5 Qualitative Ratin				
4	28	Metric 6. Plant	communities, inte	rspersi	on, microtopography.		
20pts.	subtotal	•	ation Communities.		Vegetation Community C		
	F	Score all present using (	) to 3 scale.	0	Absent or comprises <0.1ha (0.247		
	ŀ	Aquatic bed		1	Present and either comprises smal		
	-	1 Emergent 1 Shrub			vegetation and is of moderate qual significant part but is of low quality	ity, or comprises a	
	-	0 Forest		2	Present and either comprises signi	ficant part of wetland's 2	
	-	Mudflats		2	vegetation and is of moderate qual		
	-	Open water			part and is of high quality		
	F	Other		3	Present and comprises significant	part, or more, of wetland's 3	
	-	6b. horizontal (plan vie	w) Interspersion.		vegetation and is of high quality		
	-	Select only one.					
	ŀ	High (5)			Narrative Description of Vegetati		
	-	Moderately high(4)			Low spp diversity and/or predomina		
	ŀ	Moderate (3) X Moderately low (2)			disturbance tolerant native species Native spp are dominant component		
		Low (1)			although nonnative and/or disturba		
	-	None (0)			can also be present, and species d		
	F	6c. Coverage of invasiv	e plants. Refer		moderately high, but generallyw/o	•	
		Table 1 ORAM long form			threatened or endangered spp to		
	-	or deduct points for cove			A predominance of native species,		
		Extensive >75% cover (-			and/or disturbance tolerant native s		
	-	X Moderate 25-75% cover			absent, and high spp diversity and		
	ŀ	Sparse 5-25% cover (-1) Nearly absent <5% cover			the presence of rare, threatened, o	r endangered spp	
		Absent (1)	a (0)		Mudflat and Open Water Class Q	uality	
	L	6d. Microtopography.		0	Absent <0.1ha (0.247 acres)		
		Score all present using (	) to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 acre	es)	
		0 Vegetated hummucks/tu	ssucks		Moderate 1 to <4ha (2.47 to 9.88 a	cres)	
		1 Coarse woody debris >1		3	High 4ha (9.88 acres) or more		
	Ļ	1 Standing dead >25cm (1					
	L	1 Amphibian breeding poo	IS	~	Microtopography Cover Scale		
				1	Absent Present very small amounts or if m		
				1	of marginal quality		
				2	Present in moderate amounts, but	not of highest	
tegory 1				2	Present in moderate amounts, but quality or in small amounts of higher	0	

#### Wetland 54a/b/c/d



# Wetland 54a/b/c/d

ile. Can	rollton-Sunnydale	Rater(s): P. Renne	r	Date:	4/25/201
		•	Field	ld:	
	24		W_D II	R-042517-5	
	24		W-F 31	11-042317-3	
	subtotal this page				
	0 24 Metric 5.	Special Wetlands.			
(10 pts.	subtotal Check all th	nat apply and score as indicat	ed		
10 pts.	Bog (10)	iat apply and score as maleat	cu.		
	Fen (10)				
	Old growth fore	st (10)			
	Mature forested				
		al/tributary wetland-unrestricted hydrolog			
		al/tributary wetland-restricted hydrology d Prairies (Oak Openings) (10)	(5)		
	Relict Wet Prai				
		nce state/federal threatened or endanger	ed species (10)		
		atory songbird/water fowl habitat or usag			
		tland. See Question 5 Qualitative Rating	. ,		
	4 28 Metric 6.	Plant communities, inters	spersion, mi	icrotopography.	
20pts.	subtotal 6a. Wetland	Vegetation Communities.	Vegeta	ation Community Cover Scale	
		nt using 0 to 3 scale.		r comprises <0.1ha (0.2471 acres) contiguou	
	Aquatic bed			and either comprises small part of wetland's 1	
	1 Emergent 1 Shrub			on and is of moderate quality, or comprises a nt part but is of low quality	
	0 Forest			and either comprises significant part of wetlar	id's 2
	Mudflats			on and is of moderate quality or comprises a s	
	Open water		part and i	is of high quality	
	Other			and comprises significant part, or more, of we	tland's 3
		(plan view) Interspersion.	vegetatio	on and is of high quality	
	Select only one High (5)		Narrative	e Description of Vegetation Quality	
	Moderately high	n(4)		diversity and/or predominance of nonnative of	or low
	Moderate (3)			nce tolerant native species	
	X Moderately low	(2)		op are dominant component of the vegetation	
	Low (1)			nonnative and/or disturbance tolerant native	
	None (0)	of invasive plants. Refer		be present, and species diversity moderate to ely high, but generallyw/o presence of rare	0
		long form for list. Add		ed or endangered spp to	
	or deduct points			ninance of native species, with nonnative spp	high
	Extensive >75%			sturbance tolerant native spp absent or virtua	
	X Moderate 25-75			and high spp diversity and often, but not alway	/S,
	Sparse 5-25% Nearly absent <		the prese	ence of rare, threatened, or endangered spp	
	Absent (1)		Mudflat a	and Open Water Class Quality	
	6d. Microtopo	graphy.		:0.1ha (0.247 acres)	
		nt using 0 to 3 scale.		to <1ha (0.247 to 2.47 acres)	
		mucks/tussucks		e 1 to <4ha (2.47 to 9.88 acres)	
		debris >15cm (6in) >25cm (10in) dbh	3 High 4ha	(9.88 acres) or more	
	1 Amphibian bree		Microtop	pography Cover Scale	
			0 Absent		
				very small amounts or if more common	
				nal quality	
tegory 1				in moderate amounts, but not of highest r in small amounts of highest quality	
egory I		0 (-)		<b>v</b>	
	28 GRAND TOTAL(max 10	IU D(S)	3 Present ir	in moderate or greater amounts	

#### Wetland 55 Site: Carrollton-Sunnydale Rater(s): P. Renner Date: 4/25/2017 Field Id: Metric 1. Wetland Area (size). W-PJR-042517-4 0 0 Select one size class and assign score. max 6 pts subtotal >50 acres (>20.2ha) (6 pts) 0.03 acres 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) X <0.1 acres (0.04ha) (0 pts) 4 4 Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double check. max 14 pts. subtotal WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) X NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) X LOW. Old field (>10 years), shrubland, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) X HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) 13.0 Metric 3. Hydrology. 17.0 3a. Sources of Water. Score all that apply. 3b. Connectivity. Score all that apply. max 30 pts. subtotal 100 year floodplain (1) High pH groundwater (5) Other groundwater (3) X Precipitation (1) Х Between stream/lake and other human use (1) Part of wetland/upland (e.g. forest), complex (1) Х X Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. 3c. Maximum water depth. Select one. Semi- to permanently inundated/saturated (4) >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) X <0.4m (<15.7in) (1) Х Seasonally saturated in upper 30cm (12in) (1) double check and average. 3e. Modifications to natural hydrologic regime. Score one o None or none apparent (12) Check all disturbances observed Х Recovered (7) ditch X point source (nonstormwater) Х Recovering (3) tile X filling/grading X road bed/RR track Recent or no recovery (1) dike weir dredaina stormwater input Other: 6 23 Metric 4. Habitat Alteration and Development. 4a. Substrate disturbance. Score one or double check and average. max 20 pts subtotal None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) 4c. Habitat alteration. Score one or double check and average None or none apparent (9) Check all disturbances observed Recovered (6) mowing shrub/sapling removal Х X Recovering (3) Х grazing herbaceous/aquatic bed removal Х clearcutting sedimentation Recent or no recovery (1) selective cutting dredging woody debris removal farming toxic pollutants nutrient enrichment



btotal this page ORAM v. 5.0 Field Form Quantitative Rating

Site: Carrollt	on-Sunn	ydale	Rater(s): P. Renn	er		Date:	4/25/201
					Field Id:		
	23				W-PJR-042517-4		
	20						
	subtotal this p	-					
(	) 23	Metric 5. Speci	al Wetlands.				
x 10 pts.	subtotal	Check all that app	ly and score as indica	ated.			
	1	Bog (10)	,				
	l l	Fen (10)					
		Old growth forest (10)					
		Mature forested wetland					
			y wetland-unrestricted hydrol	0, ( )			
	ŀ	Lake Plain Sand Prairies	y wetland-restricted hydrolog	y (5)			
	F	Relict Wet Praires (10)	(Oak Openings) (10)				
	F		federal threatened or endang	ered specie	es (10)		
	Ē		gbird/water fowl habitat or us				
			e Question 5 Qualitative Ratin	. ,			
2	2 25	Metric 6. Plant	communities, inte	rspersi	on, microtopography.		
20pts.	subtotal	•	ation Communities.		Vegetation Community Co		
	-	Score all present using (	to 3 scale.		Absent or comprises <0.1ha (0.2471		
		Aquatic bed		1	Present and either comprises small p		
	ŀ	0 Emergent 1 Shrub			vegetation and is of moderate quality, significant part but is of low quality	or comprises a	
	ŀ	Forest		2	Present and either comprises signification	ant part of wetland's 2	
	ŀ	Mudflats		-	vegetation and is of moderate quality		
	F	Open water			part and is of high quality		
	l l	Other		3	Present and comprises significant par	rt, or more, of wetland's 3	
	_	6b. horizontal (plan vie	w) Interspersion.		vegetation and is of high quality		
		Select only one.				0 11	
	ŀ	High (5) Moderately high(4)			Narrative Description of Vegetation Low spp diversity and/or predominant		
	F	Moderate (3)			disturbance tolerant native species		
	ŀ	Moderately low (2)			Native spp are dominant component	of the vegetation, mod	
	ľ	Low (1)			although nonnative and/or disturbanc		
		X None (0)			can also be present, and species dive	ersity moderate to	
	-	6c. Coverage of invasi			moderately high, but generallyw/o pre	esence of rare	
		Table 1 ORAM long form			threatened or endangered spp to		
	г	or deduct points for cove			A predominance of native species, wi		
	ŀ	Extensive >75% cover ( Moderate 25-75% cover			and/or disturbance tolerant native spp absent, and high spp diversity and oft		
	ŀ	Sparse 5-25% cover (-1			the presence of rare, threatened, or e		
	F	Nearly absent <5% cove					
	ľ	X Absent (1)			Mudflat and Open Water Class Qua	lity	
	-	6d. Microtopography.			Absent <0.1ha (0.247 acres)		
	-	Score all present using (			Low 0.1 to <1ha (0.247 to 2.47 acres)		
		0 Vegetated hummucks/tu			Moderate 1 to <4ha (2.47 to 9.88 acre	es)	
	ŀ	0 Coarse woody debris >1 0 Standing dead >25cm (1		3	High 4ha (9.88 acres) or more		
	ŀ	0 Amphibian breeding poo			Microtopography Cover Scale		
	L			0	Absent		
					Present very small amounts or if more	e common	
					of marginal quality		
				2	Present in moderate amounts, but no	0	
tegory 1	-				quality or in small amounts of highest	quality	
2	5 GRAND	TOTAL(max 100 pts)		3	Present in moderate or greater amound	nts	

#### Wetland 56 Site: Carrollton-Sunnydale Rater(s): P. Renner Date: 4/25/2017 Field Id: Metric 1. Wetland Area (size). W-PJR-042517-3 3 3 Select one size class and assign score. max 6 pts subtotal >50 acres (>20.2ha) (6 pts) 1.10 acres 25 to <50 acres (10.1 to <20.2ha) (5 pts) extends outside ROW 10 to <25 acres (4 to <10.1ha) (4 pts) X 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts) 4 7 Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double check. max 14 pts. subtotal WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) X NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) X LOW. Old field (>10 years), shrubland, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) X HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) 15.0 22.0 Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. 3b. Connectivity. Score all that apply. max 30 pts. subtotal 100 year floodplain (1) High pH groundwater (5) Other groundwater (3) X Precipitation (1) Х Between stream/lake and other human use (1) Part of wetland/upland (e.g. forest), complex (1) Х X Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. 3c. Maximum water depth. Select one. Semi- to permanently inundated/saturated (4) >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) X <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1) double check and average. 3e. Modifications to natural hydrologic regime. Score one of None or none apparent (12) Check all disturbances observed Х Recovered (7) ditch point source (nonstormwater) Х Recovering (3) tile X filling/grading X road bed/RR track Recent or no recovery (1) dike weir dredaina stormwater input Other: 6 28 Metric 4. Habitat Alteration and Development. 4a. Substrate disturbance. Score one or double check and average. max 20 pts subtotal None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) 4c. Habitat alteration. Score one or double check and average None or none apparent (9) Check all disturbances observed Recovered (6) mowing X shrub/sapling removal Х X Recovering (3) Х grazing herbaceous/aquatic bed removal Х clearcutting Recent or no recovery (1) sedimentation selective cutting dredging woody debris removal Х farming toxic pollutants nutrient enrichment 28

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Site: Carrollton-Sunnyda	le R	ater(s): P. Renner			Date:	4/25/201
				Field Id:		
28				W-PJR-042517-3		
subtotal this page						
0 28	Metric 5. Special	Wetlands.				
x 10 pts. subtotal	Check all that apply	and score as indicated	ł.			
E	Bog (10)					
	Fen (10)					
	Old growth forest (10)					
	Mature forested wetland (5)					
		vetland-unrestricted hydrology				
	Lake Erie coastai/tributary v	vetland-restricted hydrology (5)				
	Relict Wet Praires (10)	ak Openings) (10)				
		eral threatened or endangered	specie	es (10)		
		rd/water fowl habitat or usage (				
	• ·	uestion 5 Qualitative Rating (-1	,			
1 29	Metric 6. Plant co	mmunities, intersp	oersi	on, microtopography.		
	6a. Wetland Vegetat			Vegetation Community Cove		
	Score all present using 0 to	3 scale.		Absent or comprises <0.1ha (0.2471 ac		
	Aquatic bed		1	Present and either comprises small par		
	Emergent			vegetation and is of moderate quality, or	r comprises a	
	Shrub Forest		2	significant part but is of low quality Present and either comprises significar	t part of wotland's 2	
	Mudflats		2	vegetation and is of moderate quality of		
	Open water			part and is of high quality	comprises a smail	
	Other		3	Present and comprises significant part,	or more, of wetland's 3	
e	6b. horizontal (plan view)	nterspersion.		vegetation and is of high quality		
	Select only one.					
	High (5)			Narrative Description of Vegetation (		
	Moderately high(4)			Low spp diversity and/or predominance	of nonnative or low	
	Moderate (3)			disturbance tolerant native species Native spp are dominant component of	the vegetation mod	
	Moderately low (2) Low (1)			although nonnative and/or disturbance		
	None (0)			can also be present, and species divers		
	6c. Coverage of invasive p	lants. Refer		moderately high, but generallyw/o prese	•	
	Table 1 ORAM long form fo			threatened or endangered spp to		
c	or deduct points for coverage	e		A predominance of native species, with	nonnative spp high	
	Extensive >75% cover (-5)			and/or disturbance tolerant native spp a		
	Moderate 25-75% cover (-3	)		absent, and high spp diversity and ofter		
	Sparse 5-25% cover (-1)	、 、		the presence of rare, threatened, or end	langered spp	
	Nearly absent <5% cover (0	)		Mudflet and Onen Water Class Quali		
	Absent (1) 6d. Microtopography.		0	Mudflat and Open Water Class Quality Absent <0.1ha (0.247 acres)	y	
	Score all present using 0 to	3 scale.		Low 0.1 to <1ha (0.247 to 2.47 acres)		
	Vegetated hummucks/tussu			Moderate 1 to <4ha (2.47 to 9.88 acres	)	
	Coarse woody debris >15cr			High 4ha (9.88 acres) or more		
0 5	Standing dead >25cm (10in			,		
0	Amphibian breeding pools			Microtopography Cover Scale		
				Absent		
			1	Present very small amounts or if more	common	
			- 2	of marginal quality Present in moderate amounts, but not o	fhighoat	
tegory 1			2	quality or in small amounts of highest q	0	
29 GRAND TOT	TAL(max 100 pts)		3	Present in moderate or greater amount	3	

#### Wetland 57 Site: Carrollton-Sunnydale Rater(s): P. Renner Date: 4/25/2017 Field Id: Metric 1. Wetland Area (size). W-PJR-042517-2 1 1 Select one size class and assign score. max 6 pts subtotal >50 acres (>20.2ha) (6 pts) 0.12 acres 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) X 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts) 1 2 Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double check. max 14 pts. subtotal WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrubland, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) X HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) 7.0 9.0 Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. 3b. Connectivity. Score all that apply. max 30 pts. subtotal 100 year floodplain (1) High pH groundwater (5) Other groundwater (3) Between stream/lake and other human use (1) X Precipitation (1) Part of wetland/upland (e.g. forest), complex (1) Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. 3c. Maximum water depth. Select one. Semi- to permanently inundated/saturated (4) >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) Х X <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1) double check and average. 3e. Modifications to natural hydrologic regime. Score one o None or none apparent (12) Check all disturbances observed Recovered (7) ditch point source (nonstormwater) Х Recovering (3) tile X filling/grading X road bed/RR track Recent or no recovery (1) dike weir dredaina stormwater input Other: 5 14 Metric 4. Habitat Alteration and Development. 4a. Substrate disturbance. Score one or double check and average. max 20 pts subtotal None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) 4c. Habitat alteration. Score one or double check and average None or none apparent (9) Check all disturbances observed Recovered (6) mowing X shrub/sapling removal Х X Recovering (3) grazing herbaceous/aquatic bed removal clearcutting sedimentation Recent or no recovery (1) Х selective cutting dredging woody debris removal Х farming toxic pollutants nutrient enrichment 14



Site: Carro	ollton-Sunnydale	Rater(s): P. Renne	er		Date:	4/25/2017
				Field Id:		
	14			W-PJR-042517-2		
	subtotal this page					
	0 14 Metric 5. S	Special Wetlands.				
x 10 pts.	subtotal Check all the	at apply and score as indicat	ted.			
	Bog (10)	,				
	Fen (10)					
	Old growth fores					
	Mature forested					
		I/tributary wetland-unrestricted hydrolo				
		I/tributary wetland-restricted hydrology	(5)			
	Relict Wet Praire	Prairies (Oak Openings) (10)				
		ce state/federal threatened or endange	ered speci	es (10)		
		tory songbird/water fowl habitat or usa				
		and. See Question 5 Qualitative Rating				
	-2 12 Metric 6. F	Plant communities, inter	spersi	on, microtopography.		
20pts.	subtotal 6a. Wetland	Vegetation Communities.		Vegetation Community Cov		
		t using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 a		
	Aquatic bed		1	Present and either comprises small pa		
	1 Emergent			vegetation and is of moderate quality,	or comprises a	
	0 Shrub		2	significant part but is of low quality Present and either comprises signification	ant part of watlandla 0	
	Forest Mudflats		2	vegetation and is of moderate quality		
	Open water			part and is of high quality	or comprises a small	
	Other		3	Present and comprises significant par	t. or more, of wetland's 3	
		plan view) Interspersion.	-	vegetation and is of high quality	.,	
	Select only one.					
	High (5)			Narrative Description of Vegetation		
	Moderately high	4)		Low spp diversity and/or predominance	ce of nonnative or low	
	Moderate (3)	2)		disturbance tolerant native species	- f 41	
	Moderately low (	2)		Native spp are dominant component of		
	X Low (1) None (0)			although nonnative and/or disturbance can also be present, and species dive		
		invasive plants. Refer		moderately high, but generallyw/o pre	•	
		ong form for list. Add		threatened or endangered spp to		
	or deduct points			A predominance of native species, with	th nonnative spp high	
	X Extensive >75%			and/or disturbance tolerant native spp		
	Moderate 25-75			absent, and high spp diversity and often		
	Sparse 5-25% co			the presence of rare, threatened, or e	ndangered spp	
	Nearly absent <	5% cover (0)		Muddlet and Onen Water Olars Over	84	
	Absent (1) 6d. Microtopog	ranhy	0	Mudflat and Open Water Class Qua Absent <0.1ha (0.247 acres)	lity	
		t using 0 to 3 scale.	1			
	0 Vegetated humn			Moderate 1 to <4ha (2.47 to 9.88 acre		
		ebris >15cm (6in)		High 4ha (9.88 acres) or more	)	
	0 Standing dead >			, , .		
	1 Amphibian breed	ling pools		Microtopography Cover Scale		
				Absent		
			1	Present very small amounts or if more	e common	
				of marginal quality	of high oot	
togory 1			2	Present in moderate amounts, but not quality or in small amounts of highest	0	
tegory 1						
	12 GRAND TOTAL(max 10	) pts)	3	Present in moderate or greater amour	nts	

#### Wetland 58 Site: Carrollton-Sunnydale Rater(s): P. Renner Date: 4/25/2017 Field Id: Metric 1. Wetland Area (size). W-PJR-042517-1 0 0 Select one size class and assign score. max 6 pts subtotal >50 acres (>20.2ha) (6 pts) 0.04 acres 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) X <0.1 acres (0.04ha) (0 pts) 1 1 Metric 2. Upland buffers and surrounding land use. 2a. Calculate average buffer width. Select only one and assign score. Do not double check. max 14 pts. subtotal WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrubland, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) X HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) 7.0 8.0 Metric 3. Hydrology. 3a. Sources of Water. Score all that apply. 3b. Connectivity. Score all that apply. max 30 pts. subtotal 100 year floodplain (1) High pH groundwater (5) Other groundwater (3) Between stream/lake and other human use (1) X Precipitation (1) Part of wetland/upland (e.g. forest), complex (1) Seasonal/Intermittent surface water (3) Part of riparian or upland corridor (1) Perennial surface water (lake or stream) (5) 3d. Duration inundation/saturation. Score one or dbl check. 3c. Maximum water depth. Select one. Semi- to permanently inundated/saturated (4) >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) Х X <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1) double check and average. 3e. Modifications to natural hydrologic regime. Score one o None or none apparent (12) Check all disturbances observed Recovered (7) ditch point source (nonstormwater) Х Recovering (3) tile X filling/grading X road bed/RR track Recent or no recovery (1) dike weir dredaina stormwater input Other: 5 13 Metric 4. Habitat Alteration and Development. 4a. Substrate disturbance. Score one or double check and average. max 20 pts subtotal None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) 4c. Habitat alteration. Score one or double check and average None or none apparent (9) Check all disturbances observed Recovered (6) mowing X shrub/sapling removal Х X Recovering (3) grazing herbaceous/aquatic bed removal clearcutting sedimentation Recent or no recovery (1) Х selective cutting dredging woody debris removal Х farming toxic pollutants nutrient enrichment 13

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

e: Carrollton-Sunnydale Rater(s): P. Renr		Date:	4/25/201
	Field	l ld:	
13	W-PJ	JR-042517-1	
subtotal this page			
0 13 Metric 5. Special Wetlands.			
10 pts. subtotal Check all that apply and score as indic	ated.		
Bog (10)			
Fen (10)			
Old growth forest (10) Mature forested wetland (5)			
Lake Erie coastal/tributary wetland-unrestricted hydro	loav (10)		
Lake Erie coastal/tributary wetland-restricted hydrolog			
Lake Plain Sand Prairies (Oak Openings) (10)			
Relict Wet Praires (10)			
Known occurrence state/federal threatened or endang Significant migratory songbird/water fowl habitat or us			
Category 1 Wetland. See Question 5 Qualitative Rati			
-3 10 Metric 6. Plant communities, inte	• • •	nicrotopography.	
20pts. subtotal 6a. Wetland Vegetation Communities.	Veget	tation Community Cover Scale	
Score all present using 0 to 3 scale.		or comprises <0.1ha (0.2471 acres) contiguo	
Aquatic bed		and either comprises small part of wetland's	
1 Emergent Shrub		ion and is of moderate quality, or comprises a ant part but is of low quality	
Forest		and either comprises significant part of wetla	ind's 2
Mudflats		ion and is of moderate quality or comprises a	
Open water		t is of high quality	
Other		and comprises significant part, or more, of w	etland's 3
6b. horizontal (plan view) Interspersion.	vegetatio	ion and is of high quality	
Select only one. High (5)	Narrativ	ve Description of Vegetation Quality	
Moderately high(4)		o diversity and/or predominance of nonnative	or low
Moderate (3)		ince tolerant native species	
Moderately low (2)		spp are dominant component of the vegetation	
Low (1)		h nonnative and/or disturbance tolerant native	
X None (0) 6c. Coverage of invasive plants. Refer		b be present, and species diversity moderate tely high, but generallyw/o presence of rare	to
Table 1 ORAM long form for list. Add		ned or endangered spp to	
or deduct points for coverage		minance of native species, with nonnative sp	p high
X Extensive >75% cover (-5)		listurbance tolerant native spp absent or virtu	
Moderate 25-75% cover (-3)		and high spp diversity and often, but not alwa	
Sparse 5-25% cover (-1) Nearly absent <5% cover (0)	the pres	sence of rare, threatened, or endangered spp	
Absent (1)	Mudflat	and Open Water Class Quality	
6d. Microtopography.		<0.1ha (0.247 acres)	
Score all present using 0 to 3 scale.		to <1ha (0.247 to 2.47 acres)	
0 Vegetated hummucks/tussucks		te 1 to <4ha (2.47 to 9.88 acres)	
0 Coarse woody debris >15cm (6in)	3 High 4ha	a (9.88 acres) or more	
0 Standing dead >25cm (10in) dbh 1 Amphibian breeding pools	Microto	ppography Cover Scale	
	0 Absent		
		very small amounts or if more common	
		· · · · · · · · · · · · · · · · · · ·	
	of margi		
egory 1	of margi 2 Present	inal quality in moderate amounts, but not of highest or in small amounts of highest quality	

APPENDIX C

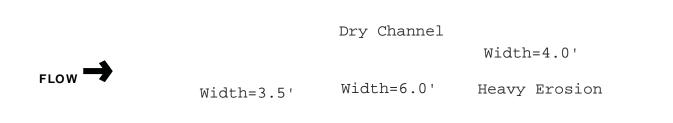
**OEPA QHEI & HHEI STREAM FORMS** 

Stream 01 **Modified Class 2** Primary Headwater Habitat Evaluation Form 34 HHEI Score (sum of metrics 1, 2, 3) Carrollton-Sunnyside SITE NAME/LOCATION SITE NUMBER **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) LENGTH OF STREAM REACH (ft) LAT. **RIVER CODE** LONG. **RIVER MILE** DATE 04/27/17 SCORER P. Renner **COMMENTS** Ephemeral Stream NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric TYPE PERCENT PERCENT TYPF Points BLDR SLABS [16 pts] SILT [3 pt] 5% 0% 5% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 0% Substrate 2% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 408% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 45% 0% 1 GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 19 5% 30%  $\overline{}$ SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] (B) Total of Percentages of (A) 10.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 12 TOTAL NUMBER OF SUBSTRATE TYPES: 7 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 0 0.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 15 COMMENTS AVERAGE BANKFULL WIDTH 4.50 (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop  $\checkmark$ Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Moderate to Severe Flat to Moderate Moderate (2 ft/100 ft) Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must	Also be Completed):	
QHEI PERFORMED? - Yes 🗸 No QHEI Score	(If Yes, Attach Completed QHEI Form)	)
DOWNSTREAM DESIGNATED USE(S)		
WWH Name:	Distance from Evaluated	d Stream
CWH Name:	Distance from Evaluated	Stream
EWH Name:	Distance from Evaluated	Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING TH	E <u>ENTIRE</u> WATERSHED AREA. CLEARLY MARK	THE SITE LOCATION
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil N	/lap Stream Order
County: T	ownship / City:	
MISCELLANEOUS		
Base Flow Conditions? (Y/N):Y Date of last precipitation:	Quantity: 0.00	
Photograph Information:		
Elevated Turbidity? (Y/N): N Canopy (% open):	85%	
Were samples collected for water chemistry? (Y/N): N (No	e lab sample no. or id. and attach results) Lab Nur	nber:
Field Measures:     Temp (°C)     Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmh	os/cm)
Is the sampling reach representative of the stream (Y/N)	not, please explain:	
Additional comments/description of pollution impacts:		
BIOTIC EVALUATION		
	cher collections optional. NOTE: all voucher sample data sheets from the Primary Headwater Habitat Ass	
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanda	rs Observed? (Y/N) N Voucher? (Y/N)	Ν
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N	quatic Macroinvertebrates Observed? (Y/N) N	Voucher? (Y/N)
Comments Regarding Biology:		
	· · · · · · · · · · · · · · · · · · ·	
		a completed)

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Save as pdf

Stream 02 **Modified Class 2** Primary Headwater Habitat Evaluation Form 48 HHEI Score (sum of metrics 1, 2, 3): Carrollton-Sunnyside SITE NAME/LOCATION SITE NUMBER **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) LENGTH OF STREAM REACH (ft) LAT. **RIVER CODE** LONG. **RIVER MILE** DATE 04/27/17 SCORER P. Renner **COMMENTS** Perennial Stream NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric TYPE PERCENT PERCENT TYPF Points BLDR SLABS [16 pts] SILT [3 pt] 5% 0% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 0% Substrate 0% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 403% 77% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 15% 0% 1 GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 13 0% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] (B) Total of Percentages of (A) 3.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 9 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: 4 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 20 24.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 4.00 15 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop  $\checkmark$ Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Moderate to Severe Flat to Moderate Moderate (2 ft/100 ft) Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open): 100%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit
ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)       N
Comments Regarding Biology:

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

Mowed	Lawn	Pool=24"
-------	------	----------

Width=4.0'

Save as pdf

Width=3.0'

Width=5.0'

Bridge

PHWH Form Page - 2

Stream 03 **Modified Class 2** Primary Headwater Habitat Evaluation Form 32 HHEI Score (sum of metrics 1, 2, 3): Carrollton-Sunnyside SITE NAME/LOCATION SITE NUMBER **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) LENGTH OF STREAM REACH (ft) LAT. **RIVER CODE** LONG. **RIVER MILE** DATE 04/27/17 SCORER P. Renner **COMMENTS** Intermittent Stream NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric TYPE PERCENT PERCENT TYPF Points BLDR SLABS [16 pts] SILT [3 pt] 5% 0% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 0% Substrate 0% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 400% 80% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 15% 0% 1 GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 12 0% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (A) (B) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 9 TOTAL NUMBER OF SUBSTRATE TYPES: 3 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] 1 > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 15 4.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 5 2.00 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m  $\checkmark$ Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open): 75%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

Pool=4"

Width=3.0'

Save as pdf

Width=1.5'

Stream 04	Modif	ied Class 1
<b>ChioEPA</b> Primary Headwate	er Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3) :	23
SITE NAME/LOCATION Carrollton-Sunnyside		
1		a;2)
	RIVER BASIN DRAINAGE AREA (m	
LENGTH OF STREAM REACH (ft) LAT DATE 04/27/17 SCORER P. Renner COMME		
NOTE: Complete All Items On This Form - Refer to "F	ield Evaluation Manual for Ohio's PHWH Streams" for	Instructions
	EL RECOVERED RECOVERING RECENT OR NO	RECOVERY
MODIFICATIONS:		
1. SUBSTRATE (Estimate percent of every type of subst	trate present. Check ONLY two predominant substrate TYPE box	xes
(Max of 32). Add total number of significant substrate typ	es found (Max of 8). Final metric score is sum of boxes A & B.	HHEI   Metric
TYPE PERCENT BLDR SLABS [16 pts] 0%	TYPE         PERCENT           SILT [3 pt]         10%	Points
BOULDER (>256 mm) [16 pts]	LEAF PACK/WOODY DEBRIS [3 pts]	
BEDROCK [16 pt]	FINE DETRITUS [3 pts]	Substrate Max = 40
COBBLE (65-256 mm) [12 pts] 5%	CLAY or HARDPAN [0 pt] 70%	
	MUCK [0 pts]         0%           ARTIFICIAL [3 pts]         0%	13
Total of Percentages of <b>5.00%</b> (A) Bldr Slabs, Boulder, Cobble, Bedrock	100% <b>(B)</b>	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:	<b>9</b> TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool de	epth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or store	m water pipes) (Check ONLY one box):	Max = 30
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts]	> 5 cm - 10 cm [15 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS	MAXIMUM POOL DEPTH (Inches): 1.	00
3. BANK FULL WIDTH (Measured as the average of 3-4		Bankfull
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
COMMENTS	AVERAGE BANKFULL WIDTH (Feet): 1.	50 5
This in	formation <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN	☆NOTE: River Left (L) and Right (R) as looking downstream	<b>公</b>
	ost Predominant per Bank) <u>L R</u>	
Wide >10m Ma	ture Forest, Wetland Conservation Tilla	age
Moderate 5-10m	nature Forest, Shrub or Old Urban or Industria	al
	sidential, Park, New Field 🛛 🔽 Open Pasture, Ro	ow Crop
	nced Pasture Mining or Constru	uction
FLOW REGIME (At Time of Evaluation) (Check	ONLY one box):	
Stream Flowing	Moist Channel, isolated pools, no flow (Interm	littent)
Subsurface flow with isolated pools (Interstitial) COMMENTS	Dry channel, no water (Ephemeral)	
_		<u>.</u>
SINUOSITY (Number of bends per 61 m (200 ft) None 1.0	of channel) (Check ONLY one box):	
	2.5	
STREAM GRADIENT ESTIMATE	(2 ft/100 ft) Moderate to Severe	(10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be	Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	_ Distance from Evaluated Stream
CWH Name:	
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIR	E WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Nł	RCS Soil Map Page: NRCS Soil Map Stream Order
County: Township	/ City:
MISCELLANEOUS	
Base Flow Conditions? (Y/N):_Y Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 100%	
Were samples collected for water chemistry? (Y/N): N (Note lab sa	mple no. or id. and attach results) Lab Number:
Field Measures:     Temp (°C)     Dissolved Oxygen (mg/l)	
Is the sampling reach representative of the stream $(Y/N)$ If not, ple	ase explain:
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
N	llections optional. NOTE: all voucher samples must be labeled with the site
	eets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) Aquatic N	vrved? (Y/N) N Voucher? (Y/N) N Nacroinvertebrates Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	(, <b>N</b>
<u>.</u>	
DRAWING AND NARRATIVE DESCRIPTION OF	<sup>5</sup> STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for sit	e evaluation and a narrative description of the stream's location
Unifo	orm Depth=1" Hay Field
PEM Wetland	
	Width=1.5'
FLOW	

Width=1.5'

PHWH Form Page - 2

Save as pdf

Stream 05 **Modified Class 2** Primary Headwater Habitat Evaluation Form 38 HHEI Score (sum of metrics 1, 2, 3): Carrollton-Sunnyside SITE NAME/LOCATION SITE NUMBER 5 **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) LENGTH OF STREAM REACH (ft) LAT. **RIVER CODE** LONG. **RIVER MILE** DATE 04/27/17 SCORER P. Renner **COMMENTS** Perennial Stream NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric TYPE PERCENT PERCENT TYPF Points BLDR SLABS [16 pts] SILT [3 pt] 10% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 0% 0% Substrate 0% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 405% 70% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 15% 0% 1 GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 13 0% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) (A) 5.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 9 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: 4 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 20 13.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 5 3.00 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop  $\overline{}$ Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box) Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Moderate to Severe Flat to Moderate Moderate (2 ft/100 ft) Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed)	<u>r</u>
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, A	ttach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	_ Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSH	ED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Mag	Page: NRCS Soil Map Stream Order
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open): 100%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id	d. and attach results) Lab Number:
Field Measures:     Temp (°C)     Dissolved Oxygen (mg/l)     pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
ID number. Include appropriate field data sheets from the         Fish Observed? (Y/N)         N         Voucher? (Y/N)         Salamanders Observed? (Y/N)	
DRAWING AND NARRATIVE DESCRIPTION OF STREAM	
Include important landmarks and other features of interest for site evaluation	and a narrative description of the stream's location
Pool=13"	Hay Field
FLOW Width=3.5'	Width=3.0'
Width=2.5	

PHWH Form Page - 2

Save as pdf

Stream 06 Modified Cla	ass 1
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form	23
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER_05 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE DATE 04/27/17 SCORER bcr/mdt COMMENTS intermittent	
DATE 04/27/17 SCORER bcr/mdt COMMENTS Intermittent NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECOVERING RECOVERING RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECENT OR NO RECOVERING RECENT OR NO RECOVERING RECOVE	VERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric
TYPE         PERCENT         TYPE         PERCENT           BLDR SLABS [16 pts]         0%         I         SILT [3 pt]         50%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         10%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate
COBBLE (65-256 mm) [12 pts]	Max = 40
□       GRAVEL (2-64 mm) [9 pts]       10%       □       MUCK [0 pts]       0%         □       ✓       SAND (<2 mm) [6 pts]	13
Total of Percentages of a conv (A) (B)	
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft</i> ) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check <i>ONLY</i> one box):	Pool Depth Max = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       ✓	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY	
RIPARIAN WIDTH         FLOODPLAIN QUALITY           L_R         (Per Bank)         L_R         (Most Predominant per Bank)         L_R	
Wide >10m      Mature Forest, Wetland      Conservation Tillage      Immature Forest, Shrub or Old	
Moderate 5-10m	
	)
None  Fenced Pasture    COMMENTS	
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         1.0         2.0         3.0           0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE	) ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 3 photos
Elevated Turbidity? (Y/N): Canopy (% open): 10%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 07 Modified Class	s 2
ChieFPA Primary Headwater Habitat Evaluation Form 49	
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER 06 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE	
DATE 04/27/17 SCORER bcr/mdt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructi	ions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER MODIFICATIONS:	ERY
I-Line NOW construction and maintenance	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE PERCENT TYPE PERCENT N	letric Points
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 10%	
BEDROCK [16 pt] FINE DETRITOS [3 pts]	ubstrate Iax = 40
COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       30%       MUCK [0 pts]       0%	4.0
Image: Solution of the second secon	19
Total of Percentages of 0.00% (A) 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock Total NUMBER OF SUBSTRATE TYPES: 15	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Po	ool Depti
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Max = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	25
COMMENTS MAXIMUM POOL DEPTH (Inches): 7.00	
	Bankfull
= 3.0  m - 4.0  m (> 9' 7'' - 13') [25  pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	_
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.50	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L R (Per Bank)     L R (Most Predominant per Bank)     L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial Field	
Narrow <5m         Residential, Park, New Field         Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS	
SINUOSITY (Number of ben <u>ds per 61 m (200 ft) of channel) (Check ONLY one box)</u>	
None         1.0         2.0         3.0           0.5         1.5         2.5         7         >3	
STREAM GRADIENT ESTIMATE	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N):Y Date of last precipitation: Quantity:Quantity:Q
Photograph Information: 3 photos
Elevated Turbidity? (Y/N): Canopy (% open): 50%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) PH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION         Performed? (Y/N):       N         (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N         Salamanders Observed? (Y/N)       N         Fish Observed? (Y/N)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 08 Modified Cla	ss 2
<b>ChiefPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	0
AEP Carrollton-Sunnyside T-line         SITE NUMBER       07       RIVER BASIN         LENGTH OF STREAM REACH (ft)       200       LAT.       LONG.       RIVER CODE       RIVER MILE         DATE       04/27/17       SCORER       bcr/mdt       COMMENTS       intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING MODIFICATIONS: T-Line ROW construction and maintenance	
BLDR SLABS [16 pts]       0%       SILT [3 pt]       25%         BOULDER (>256 mm) [16 pts]       0%       EAF PACK/WOODY DEBRIS [3 pts]       10%         BEDROCK [16 pt]       0%       EINE DETRITUS [3 pts]       0%	HHEI Metric Points Substrate Max = 40 20
	A + B Pool Depth Max = 30
COMMENTS       MAXIMUM POOL DEPTH       (Inches):       1.00         3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       > 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30
This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY       NOTE: River Left (L) and Right (R) as looking downstream *         RIPARIAN WIDTH       FLOODPLAIN QUALITY       NOTE: River Left (L) and Right (R) as looking downstream *         L       R       (Per Bank)       L       R         ✓       Wide >10m       L       R       (Most Predominant per Bank)       L       R         ✓       Wide >10m       Mature Forest, Wetland       Conservation Tillage         Immature Forest, Shrub or Old       Introductrial       Urban or Industrial         Nore       Residential, Park, New Field       Open Pasture, Row Crop         None       Fenced Pasture       Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):       Moist Channel, isolated pools, no flow (Intermittent)         Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)         COMMENTS       SINUOSITY (Number of bends per 61 m (200 ft) of channel)       (Check ONLY one box):         None       1.0       2.0       3.0         0.5       1.5       2.5       7       >3         STREAM GRADIENT ESTIMATE       Moderate (2 ft/100 ft)       Moderate to Severe       Severe (10 ft/100 ft)	ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N):Y Date of last precipitation: Quantity:Quantity:Q
Photograph Information: 3 photos
Elevated Turbidity? (Y/N): Canopy (% open): 50%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) PH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION         Performed? (Y/N):       N         (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N)       N         Voucher? (Y/N)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 09 **Modified Class 1** Primary Headwater Habitat Evaluation Form 17 HHEI Score (sum of metrics 1, 2, 3) SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line SITE NUMBER 01 **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) 200 LENGTH OF STREAM REACH (ft) LAT. **RIVER CODE** LONG. **RIVER MILE** DATE 04/26/17 SCORER bcr/mdt COMMENTS intermittent NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** farm lane SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. HHEI Metric TYPE PERCENT TYPE PERCENT Points BLDR SLABS [16 pts] SILT [3 pt] 100% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 0% 0% Substrate 0% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 400% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 0% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 7 0% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) (A) 0.00% 100% A + B Bldr Slabs, Boulder, Cobble, Bedrock 6 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: 1 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 5 1.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 1.00 5 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop 1 Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Moderate to Severe Flat to Moderate Moderate (2 ft/100 ft) Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Co	ompleted QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Dis	stance from Evaluated Stream
CWH Name: Dis	tance from Evaluated Stream
EWH Name: Dis	tance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED ARE	A. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page:	NRCS Soil Map Stream Order
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00
Photograph Information: 3 photos	
Elevated Turbidity? (Y/N): Canopy (% open): 100%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and a	ttach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	· · · · · · · · · · · · · · · · · · ·
BIOTIC EVALUATION         Performed? (Y/N):       N       (If Yes, Record all observations. Voucher collections optional. NO ID number. Include appropriate field data sheets from the Primary         Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed	Headwater Habitat Assessment Manual) /oucher? (Y/N)
Comments Regarding Biology:	

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 10 Modified Cla	iss 1
ChieFPA Primary Headwater Habitat Evaluation Form	7
HHEI Score (sum of metrics 1, 2, 3):	1
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER 01 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE	
DATE 04/26/17 SCORER bcr/mdt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	ctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	VERY
Septic dramage	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE         PERCENT         TYPE         PERCENT           BLDR SLABS [16 pts]         0%         I         SILT [3 pt]         15%	Metric Points
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 0%	
BEDROCK [16 pt]         0%         Image: Fine detribution of the second	Substrate Max = 40
GRAVEL (2-64 mm) [9 pts]	7
SAND (<2 mm) [6 pts]         10%         ARTIFICIAL [3 pts]         0%	
Total of Percentages of 0.00% (A) 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
	5
	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00	
3.         BANK FULL WIDTH (Measured as the average of 3-4 measurements)         (Check ONLY one box):           > 4.0 meters (> 13') [30 pts]         > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts]	Max=30
4.50	5
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.50	
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
	,
Image: Narrow <5m	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
STREAM GRADIENT ESTIMATE	ft)

QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 3 photos
Elevated Turbidity? (Y/N): Canopy (% open):70%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) PH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)       N
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Save as pdf

Stream 11 Modified Class	s 1
<b>ChioEPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	, '
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE	
DATE 04/26/17 SCORER bcr/mdt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructi	ions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVE	
MODIFICATIONS: filling and grading	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
	letric oints
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 0%	
BEDROCK [16 pt]	ubstrate ax = 40
COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPAN [0 pt]       5%         GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%	
SAND (<2 mm) [6 pts]	8
Total of Percentages of 0.00% (A) (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock  SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
	ol Depth ax = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]       ✓       < 5 cm [5 pts]	5
COMMENTSMAXIMUM POOL DEPTH (Inches): 2.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): B	ankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
$ \begin{array}{ c c c c c } \hline & > 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7'' - 13') [25 \text{ pts}] \\ \hline & > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7'' - 4' 8'') [20 \text{ pts}] \end{array} $	lax=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00	5
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Field	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	
None     Fenced Pasture     Mining or Construction     COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Image: Stream Flowing       Image: Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
0.5 1.5 2.5 >3	
STREAM GRADIENT ESTIMATE	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 3 photos
Elevated Turbidity? (Y/N): Canopy (% open): 90%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Save as pdf



Stream 12 Modified Class 1	
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form 17	
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
LENGTH OF STREAM REACH (ft) LAT LONG RIVER CODE RIVER MILE	_
DATE 04/27/17 SCORER bcr/mdt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	S
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY	
chamenzation, originates non pond outlet pipe	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	EI
TYPE     PERCENT     TYPE     PERCENT     Met       BLDR SLABS [16 pts]     0%     III     100%     Point	
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 0%	
BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%         Subst           COBBLE (65-256 mm) [12 pts]         0%         CLAY or HARDPAN [0 pt]         0%         Max =	
SAND (<2 mm) [6 pts]	
Total of Percentages of 0.00% (A) 100% (B) A + I	В
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 1	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft</i> ) evaluation reach at the time of Pool D	Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	= 30
> 10 - 22.5 cm [25 pts]	
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00	
3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):       Bank         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       Wid	
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.50	
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m       Mature Forest, Wetland       Conservation Tillage         Moderate 5-10m       Immature Forest, Shrub or Old       Urban or Industrial	
Narrow <5m     Residential, Park, New Field     Open value, New Cop       Image: None     Image: Fenced Pasture     Image: Mining or Construction	
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):	
<ul> <li>Stream Flowing</li> <li>Subsurface flow with isolated pools (Interstitial)</li> <li>Moist Channel, isolated pools, no flow (Intermittent)</li> <li>Dry channel, no water (Ephemeral)</li> </ul>	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         1.0         2.0         3.0           ✓         0.5         1.5         2.5         >3	
Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Co	ompleted QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Dis	stance from Evaluated Stream
CWH Name: Dis	tance from Evaluated Stream
EWH Name: Dis	tance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED ARE	A. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page:	NRCS Soil Map Stream Order
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00
Photograph Information: 3 photos	
Elevated Turbidity? (Y/N): Canopy (% open): 100%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and a	ttach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	· · · · · · · · · · · · · · · · · · ·
BIOTIC EVALUATION         Performed? (Y/N):       N       (If Yes, Record all observations. Voucher collections optional. NO ID number. Include appropriate field data sheets from the Primary         Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed	Headwater Habitat Assessment Manual) /oucher? (Y/N)
Comments Regarding Biology:	

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 13 Modified Class	ss 2	
<b>ChioEPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	2	
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line		
SITE NUMBER 12 RIVER BASIN DRAINAGE AREA (mi²)		
LENGTH OF STREAM REACH (ft) 0 LAT. LONG. RIVER CODE RIVER MILE		
DATE 04/26/17 SCORER bcr/mdt COMMENTS intermittent		
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions	
	,110115	
STREAM CHANNEL INONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOV	/ERY	
MODIFICATIONS: fence installations		
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes		
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric	
	Points	
BOULDER (>256 mm) [16 pts]	Substrate	
BEDROCK [16 pt]	Max = 40	
COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       0%       0%       0%       0%		
SAND (<2 mm) [6 pts]	7	
Total of Percentages of 0.00% (A) 100% (B)	A + B	
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 1		
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth	
· · · · · · · · · · · · · · · · ·	Max = 30	
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         ✓       > 22.5 - 30 cm [30 pts]		
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	30	
COMMENTS MAXIMUM POOL DEPTH (Inches): 10.00		
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):       Bankfull         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       Width		
> $3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}]$ > $1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}]$	Max=30	
	_	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.50	5	
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream☆		
RIPARIAN WIDTH     FLOODPLAIN QUALITY		
L R (Per Bank) L R (Most Predominant per Bank) L R		
Wide >10m Mature Forest, Wetland Conservation Tillage		
Field Field		
Narrow <5m     Residential, Park, New Field     Open Pasture, Row Crop		
None Fenced Pasture Mining or Construction		
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):		
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)		
COMMENTS		
<b>SINUOSITY</b> (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):		
None 1.0 2.0 3.0		
0.5 1.5 2.5 >3		
STREAM GRADIENT ESTIMATE	ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Co	ompleted QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Dis	stance from Evaluated Stream
CWH Name: Dis	tance from Evaluated Stream
EWH Name: Dis	tance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED ARE	A. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page:	NRCS Soil Map Stream Order
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00
Photograph Information: 3 photos	
Elevated Turbidity? (Y/N): Canopy (% open): 100%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and a	ttach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	· · · · · · · · · · · · · · · · · · ·
BIOTIC EVALUATION         Performed? (Y/N):       N       (If Yes, Record all observations. Voucher collections optional. NO ID number. Include appropriate field data sheets from the Primary         Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed	Headwater Habitat Assessment Manual) /oucher? (Y/N)
Comments Regarding Biology:	

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 14	Modified Cl	ass 2
<b>ChieEPA</b> Primary Headwater Ha	abitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3) :	50
HHEI SCORE (sum of metrics 1, 2, 3) :         HHEI SCORE (sum of metrics 1, 2, 3) :         SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line         SITE NUMBER 09         RIVER BASIN         DRAINAGE AREA (mi²)         LENGTH OF STREAM REACH (ft)         0       LAT.       LONG.       RIVER CODE       RIVER MILE         DATE       04/26/17       SCORER       bcr/mdt       COMMENTS       perennial         NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions         STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING       RECENT OR NO RECOVERY         MODIFICATIONS:       fence installations       fence installations       Stream of metrics 1, 2, 3)       Stream of metrics 1, 2, 3)       Stream of metrics 1, 2, 3)		
1. SUBSTRATE (Estimate percent of every type of substrate pre	sent. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found          TYPE       PERCENT       TYPE         BLDR SLABS [16 pts]       0%       1         BOULDER (>256 mm) [16 pts]       0%       1		HHEI Metric Points
BEDROCK [16 pt] 0%	FINE DETRITUS [3 pts]	Substrate Max = 40
✓         COBBLE (65-256 mm) [12 pts]         30%           ✓         GRAVEL (2-64 mm) [9 pts]         40%	CLAY or HARDPAN [0 pt]         0%           MUCK [0 pts]         0%	25
SAND (<2 mm) [6 pts]	ARTIFICIAL [3 pts] 0%	25
Total of Percentages of <b>30.00%</b> (A) Bldr Slabs, Boulder, Cobble, Bedrock	100% <b>(B)</b>	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21	TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth with		Pool Depth
<ul> <li>evaluation. Avoid plunge pools from road culverts or storm water</li> <li>&gt; 30 centimeters [20 pts]</li> </ul>	> 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]	< 5 cm [5 pts] NO WATER OR MOIST CHANNEL [0 pts]	20
COMMENTS	MAXIMUM POOL DEPTH (Inches): 12.00	
		Bankfull
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
COMMENTS	AVERAGE BANKFULL WIDTH (Feet): 3.00	5
RIPARIAN ZONE AND FLOODPLAIN QUALITY         RIPARIAN WIDTH       FLOODPLAIN QUALI         L       R       (Per Bank)       L       R       (Most Predo         Image: Colspan="2">Image: Colspan="2" Colspan="2">Image: Colspan="2" Colspa="2" Colspan="2" Colspa="2" Colspa="2" Colspa="2" Colspan="2" Colspan="2" Colspan="2" Col	Deminant per Bank)       L R         Dest, Wetland       Conservation Tillage         Orest, Shrub or Old       Urban or Industrial         Park, New Field       Open Pasture, Row Croper         Sture       Mining or Construction	ρ
FLOW REGIME (At Time of Evaluation) (Check ONLY of Stream Flowing         Subsurface flow with isolated pools (Interstitial)         COMMENTS	ne box): Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of chann None 1.0 0.5 1.5	el) (Check <i>ONLY</i> one box): 2.0 2.5 3.0 >3	
STREAM GRADIENT ESTIMATE	Moderate to Severe Severe (10 ft/10	0 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 3 photos
Elevated Turbidity? (Y/N): Canopy (% open): 100%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 15 Modified Cla	ass 1
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form	27
HHEI Score (sum of metrics 1, 2, 3) :	- /
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER 11 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) LAT LONG RIVER CODE RIVER MILE	
DATE 04/26/17 SCORER bcr/mdt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	VERY
MODIFICATIONS: stream crossing, culvert appears to have washed out	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE     PERCENT     TYPE	Metric
BLDR SLABS [16 pts]         0%         ✓         SILT [3 pt]         100%           BOULDER (>256 mm) [16 pts]         0%         EAF PACK/WOODY DEBRIS [3 pts]         0%	Points
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%	
GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	7
Total of Percentages of (A) (B)	
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft</i> ) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check <i>ONLY</i> one box):	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]         < 5 cm [5 pts]	15
COMMENTS MAXIMUM POOL DEPTH (Inches): 4.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
RIPARIAN ZONE AND FLOODPLAIN QUALITY SNOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old	
	C
Narrow <5m	
COMMENTS	
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         1.0         2.0         3.0           ✓         0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE	
☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate	D ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Co	ompleted QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Dis	stance from Evaluated Stream
CWH Name: Dis	tance from Evaluated Stream
EWH Name: Dis	tance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED ARE	A. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page:	NRCS Soil Map Stream Order
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00
Photograph Information: 3 photos	
Elevated Turbidity? (Y/N): Canopy (% open): 100%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and a	ttach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	· · · · · · · · · · · · · · · · · · ·
BIOTIC EVALUATION         Performed? (Y/N):       N       (If Yes, Record all observations. Voucher collections optional. NO ID number. Include appropriate field data sheets from the Primary         Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed	Headwater Habitat Assessment Manual) /oucher? (Y/N)
Comments Regarding Biology:	

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 16 Modified Cl	ass 1	
<b>ChioEPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	23	
SITE NAME/LOCATION       AEP Carrollton-Sunnyside T-line		
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING Fence installations	JVERT	
1.       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.         TYPE       PERCENT         BLDR SLABS [16 pts]       0%	HHEI Metric Points	
BOULDER (>256 mm) [16 pts]       0%       LEAF PACK/WOODY DEBRIS [3 pts]       0%         BEDROCK [16 pt]       0%       FINE DETRITUS [3 pts]       0%         COBBLE (65-256 mm) [12 pts]       10%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       10%       MUCK [0 pts]       0%	Substrate Max = 40	
SAND (<2 mm) [6 pts]         40%         ARTIFICIAL [3 pts]         0%           Total of Percentages of         40 000/         (A)         (B)	<b>13</b>	
Bldr Slabs, Boulder, Cobble, Bedrock Y S SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 4	A + D	
<ul> <li>Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):</li> <li>&gt; 30 centimeters [20 pts]</li> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>&gt; 10 - 22.5 cm [25 pts]</li> <li>COMMENTS</li> </ul>	Pool Depth Max = 30	
3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       ✓         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Bankfull Width Max=30	
COMMENTSAVERAGE BANKFULL WIDTH (Feet): 1.00	5	
This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY       ''' NOTE: River Left (L) and Right (R) as looking downstream ''''''''''''''''''''''''''''''''''''	p	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing         Subsurface flow with isolated pools (Interstitial)         COMMENTS_		
SINUOSITY (Number of bends per 61 m (200 ft) of channel)       (Check ONLY one box):         None       1.0       2.0       3.0         0.5       1.5       2.5       3.0		
STREAM GRADIENT ESTIMATE	0 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 3 photos
Elevated Turbidity? (Y/N): Canopy (% open): 100%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 17	Class 2
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	57
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NAME/LOCATION ALP CATOMON Sum Vide 1-inte	
LENGTH OF STREAM REACH (ft) <b>0</b> LAT. LONG. RIVER CODE RIVER MILE	
DATE 04/26/17 SCORER bcr/mdt COMMENTS perennial	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Ins	structions
STREAM CHANNEL       Image: None / Natural Channel       Image: Recovering       Image: Recovering	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI   Metric
TYPE         PERCENT         TYPE         PERCENT           BLDR SLABS [16 pts]         0%         Image: SILT [3 pt]         20%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate
COBBLE (65-256 mm) [12 pts] 25% CLAY or HARDPAN [0 pt] 35%	Max = 40
GRAVEL (2-64 mm) [9 pts]       10%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	17
Total of Percentages of 25.00% (A) 100% (B)	A + B
Bidr Slabs, Boulder, Cobble, Bedrock TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	20
COMMENTS MAXIMUM POOL DEPTH (Inches): 12.00	
3.         BANK FULL WIDTH (Measured as the average of 3-4 measurements)         (Check ONL Y one box):           > 4.0 meters (> 13') [30 pts]         > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] $\leq 1.0 m (<=3' 3") [5 pts]$ > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Max=30
	20
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 5.00	20
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         RIPARIAN WIDTH       FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
Image: Wide >10m       Image: Mature Forest, Wetland       Image: Conservation Tillage         Image: Moderate 5-10m       Image: Conservation Tillage       Image: Conservation Tillage	
	Crop
Narrow <5m	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermitte         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)	nt)
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
□ 0.5	

STREAM GRADIENT ESTIMATE

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N):Y Date of last precipitation: Quantity:Quantity:Q
Photograph Information: 3 photos
Elevated Turbidity? (Y/N): Canopy (% open): 50%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) PH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION         Performed? (Y/N):       N         (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N)       N         Voucher? (Y/N)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 18		Class 2
<b>ChieEPA</b> Primary Headwater Ha	bitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3) :	36
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line		
SITE NUMBER 07 RIVER BA		
		=
DATE 04/26/17 SCORER bcr/mdt COMMENTS int		
NOTE: Complete All Items On This Form - Refer to "Field Eval	uation Manual for Ohio's PHWH Streams" for In	structions
STREAM CHANNEL IN NONE / NATURAL CHANNEL REMODIFICATIONS:	COVERED RECOVERING RECENT OR NO R	RECOVERY
1. SUBSTRATE (Estimate percent of every type of substrate pres	ent. Check ON/ Ytwo predominant substrate TYPE boxe	s
(Max of 32). Add total number of significant substrate types found (		I HHEI
TYPE PERCENT TYPE	PERCENT	Metric Points
BOULDER (>256 mm) [16 pts] 0%	SILT [3 pt]         10%           LEAF PACK/WOODY DEBRIS [3 pts]         10%	
$\square \square BEDROCK [16 pt] 0\% \square$	FINE DETRITUS [3 pts]	Substrate
COBBLE (65-256 mm) [12 pts] 30%	CLAY or HARDPAN [0 pt]	Max = 40
GRAVEL (2-64 mm) [9 pts] 30%	MUCK [0 pts]	26
SAND (<2 mm) [6 pts]	ARTIFICIAL [3 pts]	20
Total of Percentages of <b>30.00%</b> (A)	100% (B)	A + B
Bidr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21	TOTAL NUMBER OF SUBSTRATE TYPES: 5	
SCORE OF TWO MOST FREDOMINATE SUBSTRATE TIPES.	TOTAL NUMBER OF SUBSTRATE TIPES.	
2. Maximum Pool Depth (Measure the maximum pool depth withi		Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pi > 30 centimeters [20 pts]	pes) (Check ONLY one box): > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts]	< 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS	MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measuren	, , , ,	Bankfull
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	· · · · · · · · · · · · · · · · · · ·	
COMMENTS	AVERAGE BANKFULL WIDTH (Feet): 2.00	5
	must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NO RIPARIAN WIDTH FLOODPLAIN QUALIT	TE: River Left (L) and Right (R) as looking downstream	•
	<u> </u>	
Wide >10m Mature Fores		e
Moderate 5-10m Immature For Field	rest, Shrub or Old Urban or Industrial	
	Datk Now Field Open Pasture, Row	Crop
COMMENTS	ure Mining or Constructi	ion
FLOW REGIME (At Time of Evaluation) (Check ONLY one Stream Flowing	e box): Moist Channel, isolated pools, no flow (Intermitte	ent)
Subsurface flow with isolated pools (Interstitial)	Dry channel, no water (Ephemeral)	5.ity
COMMENTS		
SINUOSITY (Number of ben <u>ds</u> per 61 m (200 ft) of channel	) <u>(Check ONLY one box):</u>	
None         1.0           0.5         ✓	2.0 3.0 2.5 >3	

STREAM GRAD	DIENT ESTIMATE
Flat (0.5 ft/100 ft)	Flat to Moderate

October 24, 2002 Revision

Moderate to Severe

Severe (10 ft/100 ft)

Moderate (2 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 3 photos
Elevated Turbidity? (Y/N): Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION         Performed? (Y/N):       N       (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 19 C	lass 2
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form	36
HHEI Score (sum of metrics 1, 2, 3) :	30
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER 06 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE	
DATE 04/26/17 SCORER bcr/mdt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	uctions
STREAM CHANNEL IN NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC MODIFICATIONS:	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	I HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 10%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         10%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate
COBBLE (65-256 mm) [12 pts] 30% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts]       30%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	26
Total of Percentages of <b>30.00%</b> (A) (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Max = 30
<ul> <li>&gt; 30 centimeters [20 pts]</li> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>&gt; 5 cm - 10 cm [15 pts]</li> <li>&lt; 5 cm [5 pts]</li> </ul>	
> 10 - 22.5 cm [25 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3.         BANK FULL WIDTH (Measured as the average of 3-4 measurements)         (Check ONLY one box):           > 4.0 meters (> 13') [30 pts]         > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
= 3.0  m - 4.0  m (> 9' 7" - 13') [25  pts] = 1.0  m (<=3' 3") [5  pts]	Max=30
	5
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 4.00	
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Field	
Narrow <5m	
None     Fenced Pasture     Mining or Construction       COMMENTS	L
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermitten) Dry channel, no water (Ephemeral)	.)
COMMENTS_	1
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         1.0         2.0         3.0           0.5         1.5         2.5         >3	

STREAM GRAD	IENT ESTIMATE
Flat (0.5 ft/100 ft)	Flat to Moderate

October 24, 2002 Revision

Moderate to Severe

Severe (10 ft/100 ft)

Moderate (2 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 3 photos
Elevated Turbidity? (Y/N): Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION         Performed? (Y/N):       N       (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 20 Cla	ass 1
<b>OhioEPA</b> Primary Headwater Habitat Evaluation Form	25
HHEI Score (sum of metrics 1, 2, 3) :	23
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER 04 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft)       200       LAT.       LONG.       RIVER CODE       RIVER MILE         DATE       04/26/17       SCORER       bcr/mdt       COMMENTS       ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL INONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC	OVERY
MODIFICATIONS:	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE PERCENT TYPE PERCENT	Metric Points
BLDR SLABS [16 pts]         0%         SILT [3 pt]         10%           BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         10%	
BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%           COBBLE (65-256 mm) [12 pts]         20%         CLAY or HARDPAN [0 pt]         0%	Substrate Max = 40
$ \square \square$	20
SAND (<2 mm) [6 pts]         30%         ARTIFICIAL [3 pts]         0%	20
Total of Percentages of 20.00% (A) 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
<ol> <li>Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):</li> </ol>	Pool Depth Max = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]         NO WATER OR MOIST CHANNEL [0 pts]	0
COMMENTSMAXIMUM POOL DEPTH (Inches): 0.00	╎└╼╼╼╼┛╝
3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
$ \boxed{\checkmark} > 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7'' - 13') [25 \text{ pts}] \qquad \boxed{\checkmark} \le 1.0 \text{ m} (<=3' 3'') [5 \text{ pts}] $	Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	5
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.50	5
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY       ☆NOTE: River Left (L) and Right (R) as looking downstream ☆         RIPARIAN WIDTH       FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Image     Image     Image       Moderate 5-10m     Image     Image	
Narrow <5m Residential, Park, New Field Open Pasture, Row Cro	qc
None Fenced Pasture Mining or Construction	
	-
FLOW REGIME (At Time of Evaluation)       (Check ONLY one box):         Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)	)
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	L
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         1.0         2.0         3.0           0.5         1.5         2.5         >3	

Severe (10 ft/100 ft)

	D <u>IEN</u> T ESTIMATE
Flat (0.5 ft/100 ft)	Flat to Moderate

Moderate to Severe

Moderate (2 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 3 photos
Elevated Turbidity? (Y/N): Canopy (% open): 20%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION         Performed? (Y/N):       N         (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N         Solution       Observed? (Y/N)
Frogs or Ladpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Save as pdf



Stream 21 Cl	ass 1
ChieEPA Primary Headwater Habitat Evaluation Form	25
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER_05 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE	
DATE 04/26/17 SCORER bcr/mdt COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	uctions
STREAM CHANNEL IN NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 10%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         10%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate
COBBLE (65-256 mm) [12 pts] 20% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts] 30% MUCK [0 pts] 0%	20
SAND (<2 mm) [6 pts]	
Total of Percentages of 20.00% (A) 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
▶ 10 - 22.5 cm [25 pts]         ✓         NO WATER OR MOIST CHANNEL [0 pts]	0
COMMENTS       MAXIMUM POOL DEPTH       (Inches):       0.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull Width
> 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       ≤ 1.0 m (<=3' 3") [5 pts]	Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00	5
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH     FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m       Mature Forest, Wetland       Conservation Tillage         Moderate 5-10m       Immature Forest, Shrub or Old       Urban or Industrial	
Field	20
Narrow <5m Residential, Park, New Field Open Pasture, Row Cr	ም የ
L None Fenced Pasture Mining or Construction	
	-
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent	)
Subsurface flow with isolated pools (Interstitial)  Dry channel, no water (Ephemeral)	
	-
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
0.5 1.5 2.5 >3	

Severe (10 ft/100 ft)

TIMATE		
o Moderate	Moderate (2 ft/100 ft)	Moderate to Severe
o Moderate	Moderate (2 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 3 photos
Elevated Turbidity? (Y/N): Canopy (% open): 20%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION         Performed? (Y/N):       N         (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N         Solution       Observed? (Y/N)
Frogs or Ladpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Save as pdf



Stream 22 Modified Cla	iss 2
<b>ChiefPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	67
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER 03 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE	
DATE 04/26/17 SCORER bcr/mdt COMMENTS perennial	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru-	ctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	VERY
MODIFICATIONS: T-line construction, mining (historic), ford	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE     PERCENT     TYPE     PERCENT	Metric
BLDR SLABS [16 pts]         0%         ✓         SILT [3 pt]         20%           BOULDER (>256 mm) [16 pts]         5%         LEAF PACK/WOODY DEBRIS [3 pts]         10%	Points
BEDROCK [16 pt] 5% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]       30%       CLAY or HARDPAN [0 pt]       0%         CRAVEL (2-64 mm) [0 pts]       10%       MUCK [0 pts]       0%	
GRAVEL (2-64 mm) [9 pts]       10%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	22
Total of Percentages of (A) (B)	
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 7	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
<ul> <li>≥ 22.5 - 30 cm [30 pts]</li> <li>≤ 10 - 22.5 cm [25 pts]</li> <li>NO WATER OR MOIST CHANNEL [0 pts]</li> </ul>	25
COMMENTS MAXIMUM POOL DEPTH (Inches): 12.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
= > 4.0  meters (> 13') [30  pts] > 1.0  m - 1.5  m (> 3' 3" - 4' 8") [15  pts] = > 3.0  m - 4.0  m (> 9' 7" - 13') [25  pts] = 1.0  m (<=3' 3") [5  pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 5.00	20
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L R (Per Bank)     L R (Most Predominant per Bank)     L R	
Wide >10m     Mature Forest, Wetland     Conservation Tillage       Immature Forest, Shrub or Old     Immature Forest, Shrub or Old     Immature Forest, Shrub or Old	
Field	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
0.5 1.5 2.5 >3	
STREAM GRADIENT ESTIMATE	ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 4 photos
Elevated Turbidity? (Y/N): Canopy (% open): 40%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) PH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION         Performed? (Y/N):       N         (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sill ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N         Salamanders Observed? (Y/N)       N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 23 Modified Class 1	
<b>ChiefPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3): 28	
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER 01 RIVER BASIN DRAINAGE AREA (mi²)	<u> </u>
LENGTH OF STREAM REACH (ft) LAT LONG RIVER CODE RIVER MILE	_
DATE 04/26/17 SCORER bcr/mdt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions	5
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY MODIFICATIONS: T-line construction, mining (historic)	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	
TYPE     PERCENT     TYPE     PERCENT     PERCENT       BLDR SLABS [16 pts]     0%     SILT [3 pt]     20%	
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 0%	rate
D         BEDROCK [16 pt]         0%         Image: Substrained and the second	
Image: Server (2-of min) [9 pts]     Image: Server (9 pts] </td <td>•</td>	•
Total of Percentages of 0.00% (A) 100% (B) A + E	B
Bldr Slabs, Boulder, Cobble, Bedrock	_
<ol> <li>Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):</li> <li>Max =</li> </ol>	-
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]       ✓       < 5 cm [5 pts]	
3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):       Bank         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]       Width	
= 3.0  m (4.0  m (> 9' 7" - 13') [25  pts]	
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00 5	
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY 화NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH     FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Field Copen Pasture, Row Crop	
None     Fenced Pasture     Mining or Construction     COMMENTS	
<ul> <li>FLOW REGIME (At Time of Evaluation) (Check ONLY one box):</li> <li>Stream Flowing</li> <li>Moist Channel, isolated pools, no flow (Intermittent)</li> </ul>	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
1.0 $2.0$ $3.0$ $3.0$	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Co	ompleted QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Dis	stance from Evaluated Stream
CWH Name: Dis	tance from Evaluated Stream
EWH Name: Dis	tance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED ARE	A. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page:	NRCS Soil Map Stream Order
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00
Photograph Information: 3 photos	
Elevated Turbidity? (Y/N): Canopy (% open): 100%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and a	ttach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	· · · · · · · · · · · · · · · · · · ·
BIOTIC EVALUATION         Performed? (Y/N):       N       (If Yes, Record all observations. Voucher collections optional. NO ID number. Include appropriate field data sheets from the Primary         Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed	Headwater Habitat Assessment Manual) /oucher? (Y/N)
Comments Regarding Biology:	

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 24 Modified Class 1	
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form 28	1
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER 01 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE	
DATE 04/26/17 SCORER bcr/mdt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	าร
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY	Y
MODIFICATIONS: T-line construction, mining (historic)	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HEI
	etric
BLDR SLABS [16 pts]         0%         SILT [3 pt]         20%         POI           BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         0% </td <td>ints</td>	ints
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0% Subs	strate x = 40
COBBLE (65-256 mm) [12 pts]	. = 40
✓       GRAVEL (2-64 mm) [9 pts]       40%       □       MUCK [0 pts]       0%         ✓       SAND (<2 mm) [6 pts]	8
Bldr Slabs, Boulder, Cobble, Bedrock	·В
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
	Depth ( = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]        < 5 cm [5 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Ban	nkfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] With	dth
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       ✓       ≤ 1.0 m (<=3' 3") [5 pts]	x=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00 5	5
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m Mature Forest, Wetland Conservation Tillage Urban or Industrial	
Image: Nore     Image: Nore    Image: Nore    Image: Nore    Image: Nore    Image: Nore    Image: Nore    Image: Nore    Image: Nore    Image: Nore    Image: Nore    Image: Nore    Image: Nore    Image: Nore         <	
COMMENTS	
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):	
<ul> <li>Stream Flowing</li> <li>Subsurface flow with isolated pools (Interstitial)</li> <li>Moist Channel, isolated pools, no flow (Intermittent)</li> <li>Dry channel, no water (Ephemeral)</li> </ul>	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         1.0         2.0         3.0           0.5         ✓         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Co	ompleted QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Dis	stance from Evaluated Stream
CWH Name: Dis	tance from Evaluated Stream
EWH Name: Dis	tance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED ARE	A. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page:	NRCS Soil Map Stream Order
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00
Photograph Information: 3 photos	
Elevated Turbidity? (Y/N): Canopy (% open): 100%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and a	ttach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	· · · · · · · · · · · · · · · · · · ·
BIOTIC EVALUATION         Performed? (Y/N):       N       (If Yes, Record all observations. Voucher collections optional. NO ID number. Include appropriate field data sheets from the Primary         Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed	Headwater Habitat Assessment Manual) /oucher? (Y/N)
Comments Regarding Biology:	

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 25 **Modified Class 2** Primary Headwater Habitat Evaluation Form 36 HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line SITE NUMBER 05 **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) 200 LENGTH OF STREAM REACH (ft) LAT. LONG. **RIVER CODE RIVER MILE** DATE 04/25/17 COMMENTS perennial SCORER bcr/mdt NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** channelized, cleared riparian SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. HHEI Metric TYPE PERCENT PERCENT TYPF Points BLDR SLABS [16 pts] SILT [3 pt] 20% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 0% 0% Substrate 0% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 4070% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 0% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 6 10% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) (A) 0.00% 100% A + B Bldr Slabs, Boulder, Cobble, Bedrock 3 TOTAL NUMBER OF SUBSTRATE TYPES: 3 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 25 5.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 5 3.00 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop  $\checkmark$ Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 2 photos
Elevated Turbidity? (Y/N): Canopy (% open): 1
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION         Performed? (Y/N):       N         (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N         Salamanders Observed? (Y/N)       N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 26 Modified C	lass 1
<b>ChioEPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	27
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER 04 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft)       200       LAT.       LONG.       RIVER CODE       RIVER MILE         DATE       04/25/17       SCORER       bcr/mdt       COMMENTS       ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.          TYPE       PERCENT       TYPE       PERCENT         BLDR SLABS [16 pts]       0%       SILT [3 pt]       0%	HHEI Metric Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         20%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]       30%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       10%       MUCK [0 pts]       0%	
SAND (<2 mm) [6 pts]	22
Total of Percentages of 30.00% (A) 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 18 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft</i> ) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]         NO WATER OR MOIST CHANNEL [0 pts]           COMMENTS         MAXIMUM POOL DEPTH         (Inches):         0.00	0
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY 차NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Cro	p p
None Fenced Pasture Mining or Construction	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing         Subsurface flow with isolated pools (Interstitial)         COMMENTS	-
SINUOSITY (Number of bends per 61 m (200 ft) of channel)       (Check ONLY one box):         None       1.0       2.0       3.0         0.5       1.5       2.5       3.0	
STREAM GRADIENT ESTIMATE	)0 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 2 photos
Elevated Turbidity? (Y/N): Canopy (% open): 0%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION         Performed? (Y/N):       N         (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N         Aquatic Macroinvertebrates Observed? (Y/N)       N         Voucher? (Y/N)       N
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 27 Modified Cla	ass 1
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	29
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER 03 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE	
DATE 04/25/17 SCORER bcr/mdt COMMENTS intermittent seep origin	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING	WERY
MODIFICATIONS: T-line construction, mining (historic)	
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE         PERCENT         TYPE         PERCENT           BLDR SLABS [16 pts]         0%         SILT [3 pt]         0%	Metric Points
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 10%	
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts] 10% CLAY or HARDPAN [0 pt] 0%	
✓       GRAVEL (2-64 mm) [9 pts]       40%       ■       MUCK [0 pts]       0%         ✓       SAND (<2 mm) [6 pts]	19
Total of Percentages of 10.00% (A) 100% (B) Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.0 m (&gt; 3' 3" - 4' 8") [15 pts]</li> <li>≤ 1.0 m (&lt;=3' 3") [5 pts]</li> </ul>	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTSAVERAGE BANKFULL WIDTH (Feet): 2.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
<u>L R</u> (Per Bank) <u>L R</u> (Most Predominant per Bank) <u>L R</u>	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	)
None Fenced Pasture Mining or Construction	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS_	
SINUOSITY (Number of ben <u>ds per 61 m (200 ft) of channel) (Check ONLY one box)</u>	
None 1.0 2.0 3.0	
0.5 1.5 2.5 >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Information Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100	) ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 2 photos
Elevated Turbidity? (Y/N): Canopy (% open): 70%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) PH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 28 Modified C	lass 1
<b>ChiefPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	28
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER 02 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE	
DATE 04/25/17 SCORER bcr/mdt COMMENTS intermittent seep origin	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
·	
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC MODIFICATIONS: T-line construction, mining (historic)	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 20%	Points
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         0%           BEDROCK [16 pt]         0%         Image: Structure of the structure	Substrate
BEDROCK         [16 pt]         0%         Image: Second	Max = 40
GRAVEL (2-64 mm) [9 pts] 40% MUCK [0 pts] 0%	18
SAND (<2 mm) [6 pts]	10
Total of Percentages of 0.00% (A) (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft)</i> evaluation reach at the time of our state of the s	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts]	
> 10 - 22.5 cm [25 pts]	5
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width Max=30
= 3.0  m - 4.0  m (> 9' 7" - 13') [25  pts] $ = 1.5  m - 3.0  m (> 9' 7" - 4' 8") [20  pts]$	Wax=50
	5
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L_R     (Per Bank)     L_R     (Most Predominant per Bank)     L_R	
Image: Second se	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Sesidential, Park, New Field Open Pasture, Row Cro	p
None     Fenced Pasture     Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None     1.0     2.0     3.0       0.5     1.5     2.5     >3	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe (10 ft/10	00 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 2 photos
Elevated Turbidity? (Y/N): Canopy (% open): 70%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 29 Modified Clas	ss 2
<b>ChiefPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	5
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER 01 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE	
DATE 04/25/17 SCORER bcr/mdt COMMENTS perennial	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECOVERING RECENT OR NO RECENT OR NO RECENT OR NO RECOVERING RECOVE	/ERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric
	Points
BOULDER (>256 mm) [16 pts]	Substrate
BEDROCK [16 pt]	Max = 40
COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPAN [0 pt]       30%         GRAVEL (2-64 mm) [9 pts]       10%       MUCK [0 pts]       0%	40
SAND (<2 mm) [6 pts]	10
Total of Percentages of 0.00% (A) 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock 6 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
	Pool Depti Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]         < 5 cm [5 pts]	20
COMMENTS MAXIMUM POOL DEPTH (Inches): 13.00	
3BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.0 m (&lt;=3' 3") [5 pts]</li> </ul>	Width Max=30
> 1.5 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTSAVERAGE BANKFULL WIDTH (Feet): 2.00	5
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R V Wide >10m V Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Image: All of the second of	
None     Image: Presidential, Park, New Field     Image: Presidential, Park, New Field       Image: Presidential, Park, New Field     Image: Presidential, Park, New Field       Image: Presidential, Park, New Field     Image: Presidential, Park, New Field       Image: Presidential, Park, New Field     Image: Presidential, Park, New Field       Image: Presidential, Park, New Field     Image: Presidential, Park, New Field       Image: Presidential, Park, New Field     Image: Presidential, Park, New Field       Image: Presidential, Park, New Field     Image: Presidential, Park, New Field       Image: Presidential, Park, New Field     Image: Presidential, Park, New Field       Image: Presidential, Park, New Field     Image: Presidential, Park, New Field       Image: Presidential, Park, New Field     Image: Park, New Field       Image: Park, New Field     Image: Park, New Field       Image	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
<ul> <li>Stream Flowing</li> <li>Subsurface flow with isolated pools (Interstitial)</li> <li>Moist Channel, isolated pools, no flow (Intermittent)</li> <li>Dry channel, no water (Ephemeral)</li> </ul>	
COMMENTS	
SINUOSITY (Number of ben <u>ds per 61 m (200 ft) of channel) (Check ONLY one box)</u> :	
None 1.0 2.0 3.0 0.5 1.5 2.5 >3	
STREAM GRADIENT ESTIMATE	ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Comp	eted QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Distan	ce from Evaluated Stream
CWH Name: Distance	e from Evaluated Stream
EWH Name: Distance	e from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA.	CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page:	NRCS Soil Map Stream Order
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation: Qua	ntity: 0.00
Photograph Information: 2 photos	
Elevated Turbidity? (Y/N): Canopy (% open):	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach	results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) PH (S.U.) C	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION         Performed? (Y/N):       N       (If Yes, Record all observations. Voucher collections optional. NOTE: a ID number. Include appropriate field data sheets from the Primary Head         Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher?         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed?	dwater Habitat Assessment Manual) her? (Y/N)
Comments Regarding Biology:	

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 30 Class 2	
<b>ChioEPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	39
AEP Carrollton-Sunnyside T-line         SITE NUMBER       06       RIVER BASIN       DRAINAGE AREA (mi²)         LENGTH OF STREAM REACH (ft)       200       LAT.       LONG.       RIVER CODE       RIVER MILE         DATE       04/25/17       SCORER       bcr/mdt       COMMENTS       perennial	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru STREAM CHANNEL  NONE / NATURAL CHANNEL  RECOVERED  RECOVERING  RECENT OR NO RECO MODIFICATIONS:	
1.       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.         TYPE       BLDR SLABS [16 pts]       0%       SILT [3 pt]       10%         BUDR SLABS [16 pts]       0%       ELEAF PACK/WOODY DEBRIS [3 pts]       10%         BEDROCK [16 pt]       0%       CLAY or HARDPAN [0 pt]       0%         COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       30%       MUCK [0 pts]       0%         MUCK [0 pts]       0%       0%       0%       0%	HHEI Metric Points Substrate Max = 40
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock       0.00%       (A)       100%       (B)         SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:       15       TOTAL NUMBER OF SUBSTRATE TYPES:       4         2.       Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       > 5 cm - 10 cm [15 pts]         > 30 centimeters [20 pts]       > 5 cm [5 pts]       > 5 cm [5 pts]         > 10 - 22.5 cm [25 pts]       NO WATER OR MOIST CHANNEL [0 pts]	A + B Pool Depth Max = 30
COMMENTS       MAXIMUM POOL DEPTH       (Inches):       7.00         3.       BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONL Y one box):         > 4.0 meters (> 13') [30 pts]       > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]         > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]       Image: Comments in the	Bankfull Width Max=30
This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY       NOTE: River Left (L) and Right (R) as looking downstream is not conservation downstream is not conservation and per Bank)         L       R       (Per Bank)       L       R       (Most Predominant per Bank)       L       R         Image: This information must also be completed       Mature Forest, Wetland       Conservation Tillage         Image: The state of the st	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing         Subsurface flow with isolated pools (Interstitial)         COMMENTS         SINUOSITY (Number of bends per 61 m (200 ft) of channel)         None         0.5         1.0         2.0         2.5         3.0         >3         STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft) I Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100	) ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 2 photos
Elevated Turbidity? (Y/N): Canopy (% open): 1
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION         Performed? (Y/N):       N         (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N         Salamanders Observed? (Y/N)       N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 31 Modified Class	1
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form 18	1
HHEI Score (sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION AEP Carrollton-Sunnyside T-line	
SITE NUMBER 07 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) 200 LAT. LONG. RIVER CODE RIVER MILE	
DATE 04/25/17 SCORER bcr/mdt COMMENTS intermittent	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructio	ons
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVER MODIFICATIONS: atv/foot bridge installed over	۲Y
	HEI
	etric bints
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 10%	
ILL BEDROCK 116 01 V <sup>70</sup> LILL FINE DETRITUS 13 01SI V <sup>70</sup>	bstrate x = 40
	3
SAND (<2 mm) [6 pts]         40%         ARTIFICIAL [3 pts]         0%	13
Total of Percentages of 0.00% (A) 100% (B) A	+ B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft</i> ) evaluation reach at the time of Poo	ol Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Ma > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	ix = 30
	0
COMMENTS MAXIMUM POOL DEPTH (Inches): 1.00	
······································	ankfull /idth
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]         > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	ax=30
	5
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00	5
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
LR (Per Bank) LR (Most Predominant per Bank) LR	
✓       Wide >10m       Mature Forest, Wetland       Conservation Tillage         Moderate 5-10m       ✓       Immature Forest, Shrub or Old       Urban or Industrial	
Field Field	
None  Fenced Pasture    COMMENTS	
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):	
<ul> <li>Stream Flowing</li> <li>Subsurface flow with isolated pools (Interstitial)</li> <li>Moist Channel, isolated pools, no flow (Intermittent)</li> <li>Dry channel, no water (Ephemeral)</li> </ul>	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None       1.0       ✓       2.0       3.0         0.5       1.5       2.5       >3	
STREAM GRADIENT ESTIMATE	

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information: 2 photos
Elevated Turbidity? (Y/N): Canopy (% open): 1
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION         Performed? (Y/N):       N         (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N)       N         Salamanders Observed? (Y/N)       N         Voucher? (Y/N)       N         Salamanders Observed? (Y/N)       N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Stream 32 **Modified Class 2** Primary Headwater Habitat Evaluation Form 51 HHEI Score (sum of metrics 1, 2, 3) Carrollton-Sunnyside SITE NAME/LOCATION SITE NUMBER **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) LENGTH OF STREAM REACH (ft) LAT. **RIVER CODE** LONG. **RIVER MILE** DATE 04/28/17 SCORER P. Renner **COMMENTS** Perennial Stream NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric TYPE PERCENT PERCENT TYPF Points BLDR SLABS [16 pts] SILT [3 pt] 90% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 2% 0% Substrate 0% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 403% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 5% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 16 0% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] (B) Total of Percentages of (A) 3.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 12 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: 4 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 20 12.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 3.50 15 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** R (Per Bank) R (Most Predominant per Bank) Wide >10m  $\checkmark$ Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 70%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION         Performed? (Y/N):       N       (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)         Fish Observed? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N) <t< td=""></t<>
·

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

PEM Wetland
Width=3.0'
Width=3.0 10" Pool 12" Pool

Width=4.5'

Save as pdf

Stream 33 Modified Cla	iss 2
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	7
SITE NAME/LOCATION Carrollton-Sunnyside	
LENGTH OF STREAM REACH (ft) LAT. LONG. RIVER CODE RIVER MILE	
DATE 04/28/17 SCORER P. Renner COMMENTS Intermittent Stream	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	ctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING	VERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
	Metric Points
BLDR SLABS [16 pts]         0%         I         SILT [3 pt]         15%           BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         5%	i onto
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]	
GRAVEL (2-64 mm) [9 pts]       5%       MUCK [0 pts]       0%         SAND (<2 mm) [6 pts]	7
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
	Pool Depth Max = 30
So centimeters [20 pts] So centimeters [20 pts]	Max = 50
<ul> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>&gt; 10 - 22.5 cm [25 pts]</li> <li>NO WATER OR MOIST CHANNEL [0 pts]</li> </ul>	25
COMMENTS MAXIMUM POOL DEPTH (Inches): 8.00	23
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
S 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] S 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] S 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Max=30
	5
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY	
RIPARIAN WIDTH     FLOODPLAIN QUALITY       L R (Per Bank)     L R (Most Predominant per Bank)     L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial Field	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing       Moist Channel, isolated pools, no flow (Intermittent)         Subsurface flow with isolated pools (Interstitial)       Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None         ✓         1.0         2.0         3.0           0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe	ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Atta	ach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	_ Distance from Evaluated Stream
CWH Name:	_ Distance from Evaluated Stream
EWH Name:	_ Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHEI	
USGS Quadrangle Name: NRCS Soil Map F	Page: NRCS Soil Map Stream Order
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 15%	
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id.	and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optiona ID number. Include appropriate field data sheets from the Pr Fish Observed? (Y/N) N Salamanders Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebra Comments Regarding Biology:	imary Headwater Habitat Assessment Manual)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM F	REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation ar	nd a narrative description of the stream's location
Width=2.0'	Width=3.0'
	HH-PJR-042817-2
Pool=8"	
FLOW -	
Width=1.0'	PFO Wetland Boundary
PHWH Form Page - 2	
October 24, 2002 Revision	Save as pdf Reset Form

Stream 34 **Modified Class 2** Primary Headwater Habitat Evaluation Form 48 HHEI Score (sum of metrics 1, 2, 3) SITE NAME/LOCATION AEP -Sunnyside Carrollton SITE NUMBER **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) 200 LAT. 40.69287 LONG. -81.25096 RIVER CODE LENGTH OF STREAM REACH (ft) **RIVER MILE** DATE 05/01/17 COMMENTS intermittent SCORER jbl, jtt NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL CRECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** farming SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. HHEI Metric TYPE PERCENT PERCENT TYPE Points BLDR SLABS [16 pts] SILT [3 pt] 50% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 10% 0% Substrate 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 4010% 5% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 15% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 1 18 10% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) (A) 5.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 12 TOTAL NUMBER OF SUBSTRATE TYPES: 6 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 15 heavy rain lat several days 4.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 3.50 15 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m  $\checkmark$ Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS rain earlier SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Stark Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/01/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N):Y Canopy (% open):15%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Primary Headwater Habitat Evaluation Form 41 HHEI Score (sum of metrics 1, 2, 3) SITE NAME/LOCATION AEP -Sunnyside Carrollton SITE NUMBER 2 **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) 200 LAT. 40.69687 LONG. -81.25517 RIVER CODE LENGTH OF STREAM REACH (ft) **RIVER MILE** DATE 05/01/17 COMMENTS intermittent SCORER jbl, jtt NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL CRECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** culvert, channelized SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. HHEI Metric TYPE PERCENT PERCENT TYPF Points BLDR SLABS [16 pts] SILT [3 pt] 20% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 15% 0% Substrate 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 4010% 5% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 25% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 1 21 25% 0%  $\overline{\mathbf{A}}$ SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) (A) 5.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 15 TOTAL NUMBER OF SUBSTRATE TYPES: 6 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] 1 > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 15 heavy rain lat several days 3.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 5 3.00 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m  $\checkmark$ Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS rain earlier SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

**Modified Class 2** 

Stream 36

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Stark Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/01/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

**Modified Class 2** Primary Headwater Habitat Evaluation Form 34 HHEI Score (sum of metrics 1, 2, 3) SITE NAME/LOCATION AEP -Sunnyside Carrollton SITE NUMBER 2 **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) 200 LAT. 40.69708 LONG. -81.25533 RIVER CODE LENGTH OF STREAM REACH (ft) **RIVER MILE** DATE 05/02/17 COMMENTS ephemeral SCORER jbl, jtt NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL CRECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** channelized SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. HHEI Metric TYPE PERCENT PERCENT TYPF Points BLDR SLABS [16 pts] SILT [3 pt] 45% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 5% 0% Substrate 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 400% 20% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 5% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 14 25% 0%  $\overline{\mathbf{A}}$ SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) (A) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 9 TOTAL NUMBER OF SUBSTRATE TYPES: 5 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 15 heavy rain lat several days 2.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 5 2.00 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop  $\checkmark$ Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS rain earlier SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 0.5 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

Stream 37

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Stark Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/02/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):50%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Save as pdf



Stream 38 Modified Class	ss 1
<b>ChioEPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	9
SITE NAME/LOCATION AEP -Sunnyside Carrollton         SITE NUMBER       I       RIVER BASIN       DRAINAGE AREA (mi²)         LENGTH OF STREAM REACH (ft)       200       LAT.       40.69711       LONG.       -81.25605       RIVER CODE       RIVER MILE         DATE       05/02/17       SCORER       jbl, jtt       COMMENTS       ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	ctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING CHANNEL CHANNEL CHANNEL CHANNEL NO RECOVERED	
	HHEI Metric Points
BEDROCK [16 pt]       0%       Image: Fine Del Rillos [3 pts]       0%         COBBLE (65-256 mm) [12 pts]       0%       Image: Fine Del Rillos [3 pts]       10%         CLAY or HARDPAN [0 pt]       10%       Image: Fine Del Rillos [3 pts]       10%	Substrate Max = 40
GRAVEL (2-64 mm) [9 pts]         0%         MUCK [0 pts]         0%           SAND (<2 mm) [6 pts]	9
Total of Percentages of 0.00% (A) 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
	Pool Depth Max = 30
<ul> <li>&gt; 30 centimeters [20 pts]</li> <li>&gt; 22.5 - 30 cm [30 pts]</li> <li>&gt; 5 cm - 10 cm [15 pts]</li> <li>&lt; 5 cm [5 pts]</li> </ul>	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	15
COMMENTS heavy rain lat several days MAXIMUM POOL DEPTH (Inches): 2.00	
3.         BANK FULL WIDTH (Measured as the average of 3-4 measurements)         (Check ONLY one box):           > 4.0 meters (> 13') [30 pts]         > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
$ \begin{array}{ c c c c c } > 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \end{array} $	Max=30
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 3.00	5
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY 국어NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH       FLOODPLAIN QUALITY         L R       (Per Bank)       L R         (Most Predominant per Bank)       L R	
Wide >10m       Mature Forest, Wetland       Conservation Tillage         Moderate 5-10m       Immature Forest, Shrub or Old       Urban or Industrial	
Field    Image: State of Solution in Addition    Image: State of Solution	
None Fenced Pasture Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing         Subsurface flow with isolated pools (Interstitial)         COMMENTS_rain earlier	
SINUOSITY (Number of bends per 61 m (200 ft) of channel)       (Check ONLY one box):         None       1.0       2.0       3.0         0.5       1.5       2.5       >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Stark Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/02/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):50%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)       N
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Save as pdf



Stream 39 Modified 0	lass 1
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	21
SITE NAME/LOCATION       AEP -Sunnyside Carrollton         SITE NUMBER       I RIVER BASIN       DRAINAGE AREA (mi <sup>2</sup> )         LENGTH OF STREAM REACH (ft)       200       LAT. 40.69830       LONG81.25734       RIVER CODE       RIVER MILE         DATE       05/02/17       SCORER       jbl, jtt       COMMENTS       ephemeral         NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Insta         STREAM CHANNEL       NONE / NATURAL CHANNEL       RECOVERED       RECOVERING	
MODIFICATIONS: Channelized, culvert	
1.       SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.         TYPE       BLDR SLABS [16 pts]       0%       Image: Complex type of substrate types found (Max of 8). Final metric score is sum of boxes A & B.         BLDR SLABS [16 pts]       0%       Image: Complex type of substrate types found (Max of 8). Final metric score is sum of boxes A & B.         BUDR SLABS [16 pts]       0%       Image: Complex type of substrate types found (Max of 8). Final metric score is sum of boxes A & B.         BUDR SLABS [16 pts]       0%       Image: Complex type of substrate types found (Max of 8). Final metric score is sum of boxes A & B.         BUDR SLABS [16 pts]       0%       Image: Complex type of substrate types found (Max of 8). Final metric score is sum of boxes A & B.         BUDR SLABS [16 pts]       0%       Image: Complex type of substrate types found (Max of 8). Final metric score is sum of boxes A & B.         BUDR SLABS [16 pts]       0%       Image: Complex type of substrate types found (Max of 8). Final metric score is sum of boxes A & B.         SUBD CK [16 pt]       0%       Image: Complex type of substrate types found (Max of 8). Final metric score is sum of boxes A & B.         GRAVEL (2-64 mm) [9 pts]       5%       Image: Complex type of sum of boxes found (Max of 8). Final metric score is sum of boxes found (Max of 8). Final metric score is sum of boxes found (Max of 8). Final me	HHEI Metric Points Substrate Max = 40
Total of Percentages of 0.00% (A) 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:       6       TOTAL NUMBER OF SUBSTRATE TYPES:       5         2.       Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes)       (Check ONLY one box):       > 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]       > 5 cm [5 pts]       > 0 WATER OR MOIST CHANNEL [0 pts]       > 1.00         Source is a store average of 3-4 measurements)       MAXIMUM POOL DEPTH       (Inches): 1.00       3.         BANK FULL WIDTH (Measured as the average of 3-4 measurements)       (Check ONLY one box):       > 1.0 m (<=3' 3") [15 pts]	Pool Depth Max = 30 5 Bankfull Width Max=30
This information must also be completed         RIPARIAN ZONE AND FLOODPLAIN QUALITY       NOTE: River Left (L) and Right (R) as looking downstream & RIPARIAN WIDTH         RIPARIAN WIDTH       FLOODPLAIN QUALITY       Conservation Tillage         Wide >10m       Mature Forest, Wetland       Conservation Tillage         Moderate 5-10m       Immature Forest, Shrub or Old       Urban or Industrial         Immature Forest, New Field       Open Pasture, Row Cr         None       Fenced Pasture       Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing         Subsurface flow with isolated pools (Interstitial)         COMMENTS_rain earlier	)
SINUOSITY (Number of bends per 61 m (200 ft) of channel)       (Check ONLY one box):         None       1.0       2.0       3.0         0.5       1.5       2.5       3.0	
STREAM GRADIENT ESTIMATE	00 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Stark Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/02/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):50%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)       N
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Save as pdf



Primary Headwater Habitat Evaluation Form 21 HHEI Score (sum of metrics 1, 2, 3) SITE NAME/LOCATION AEP -Sunnyside Carrollton SITE NUMBER 2 **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) 200 LAT. 40.70519 LONG. -81.26562 RIVER CODE LENGTH OF STREAM REACH (ft) **RIVER MILE** DATE 05/03/17 COMMENTS ephemeral SCORER **jbl**, jtt NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** former mining, driven through SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. HHEI Metric TYPE PERCENT PERCENT ΤΥΡΕ Points BLDR SLABS [16 pts] SILT [3 pt] 50% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 30% 0% Substrate 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 400% 5% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 5% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 11 10% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (A) (B) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 6 TOTAL NUMBER OF SUBSTRATE TYPES: 5 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 5 heavy rain last several days 1.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 5 1.50 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop  $\checkmark$ Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS rain earlier SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

**Modified Class 1** 

Stream 40

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Stark Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/02/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):10%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Vouc
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

**Modified Class 1** Primary Headwater Habitat Evaluation Form 21 HHEI Score (sum of metrics 1, 2, 3) SITE NAME/LOCATION AEP -Sunnyside Carrollton SITE NUMBER **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) 200 LAT. 40.70539 LONG. -81.26514 RIVER CODE LENGTH OF STREAM REACH (ft) **RIVER MILE** DATE 05/03/17 COMMENTS ephemeral SCORER **jbl**, jtt NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL MODIFICATIONS: |former mining SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. HHEI Metric TYPE PERCENT PERCENT ΤΥΡΕ Points BLDR SLABS [16 pts] SILT [3 pt] 50% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 30% 0% Substrate 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 400% 5% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 5% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 11 10% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (A) (B) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 6 TOTAL NUMBER OF SUBSTRATE TYPES: 5 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 5 heavy rain lat several days 1.50 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 1.00 5 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop  $\checkmark$ Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS rain earlier SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

Stream 41

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Stark Township / City:
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/02/17 Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):10%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Vouc
Comments Regarding Biology:

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Primary Headwater Habitat Evaluation Form 31 HHEI Score (sum of metrics 1, 2, 3) SITE NAME/LOCATION AEP -Sunnyside Carrollton SITE NUMBER 3 **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) 200 LAT. 40.70579 LONG. -81.26605 RIVER CODE LENGTH OF STREAM REACH (ft) **RIVER MILE** DATE 05/03/17 COMMENTS ephemeral SCORER **jbl**, jtt NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** former mining, driven through SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. HHEI Metric TYPE PERCENT PERCENT ΤΥΡΕ Points BLDR SLABS [16 pts] SILT [3 pt] 45% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 20% 0% Substrate 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 4010% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 15% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 11 10% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) (A) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 6 TOTAL NUMBER OF SUBSTRATE TYPES: 5 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 15 heavy rain lat several days 2.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 5 1.50 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m  $\checkmark$ Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

**Modified Class 2** 

Stream 42

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):			
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)			
DOWNSTREAM DESIGNATED USE(S)			
WWH Name: Distance from Evaluated Stream			
CWH Name: Distance from Evaluated Stream			
EWH Name: Distance from Evaluated Stream			
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION			
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order			
County: Stark Township / City:			
MISCELLANEOUS			
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/02/17 Quantity:			
Photograph Information:			
Elevated Turbidity? (Y/N): Canopy (% open):10%			
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:			
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)			
Is the sampling reach representative of the stream (Y/N) If not, please explain:			
Additional comments/description of pollution impacts:			
BIOTIC EVALUATION			
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)			
Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)			
Comments Regarding Biology:			

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Save as pdf Reset Form

Primary Headwater Habitat Evaluation Form 39 HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION AEP -Sunnyside Carrollton SITE NUMBER **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) 200 LAT. 40.71098 LONG. -81.27081 RIVER CODE LENGTH OF STREAM REACH (ft) **RIVER MILE** DATE 05/03/17 COMMENTS intermittent SCORER **jbl**, jtt NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL CRECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** clearing earthwork SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. HHEI Metric TYPE PERCENT PERCENT TYPF Points BLDR SLABS [16 pts] SILT [3 pt] 40% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 5% 0% Substrate 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 4025% 5% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 15% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 9 10% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) (A) 5.00% 100% A + B Bldr Slabs, Boulder, Cobble, Bedrock 3 TOTAL NUMBER OF SUBSTRATE TYPES: 6 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 25 heavy rain lat several days 5.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 5 2.00 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** R (Per Bank) (Most Predominant per Bank) R Wide >10m  $\checkmark$ Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

**Modified Class 2** 

Stream 43

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):			
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)			
DOWNSTREAM DESIGNATED USE(S)			
WWH Name: Distance from Evaluated Stream			
CWH Name: Distance from Evaluated Stream			
EWH Name: Distance from Evaluated Stream			
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION			
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order			
County: Stark Township / City:			
MISCELLANEOUS			
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/02/17 Quantity:			
Photograph Information:			
Elevated Turbidity? (Y/N): Canopy (% open):70%			
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:			
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)			
Is the sampling reach representative of the stream (Y/N) If not, please explain:			
Additional comments/description of pollution impacts:			
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)			
N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N       Voucher? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrates Observed? (Y/N)       N       Voucher? (Y/N)       N			
Comments Regarding Biology:			

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

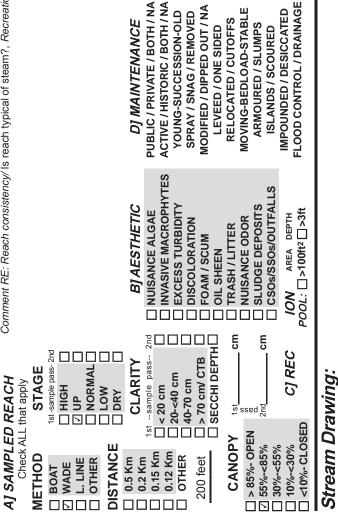


PHWH Form Page - 2



Stream 44		Fair Warmwater
<b>ChieEPA</b>	Qualitative Habitat Evaluation and Use Assessment Field S	
Stream & Location: qh-jbl-	050317-01 Indian Run	<b>RM:Date:</b> 05/03/2010
River Code:	Scorers Full Name & Aft STORET #:(NAD 83 - decimal °) 40	filiation: JBL, jtt aecom 0.711195, -81.271322 Office verified 1.0cation
	note every type present	Check ONE (Or 2 & average)
Comments	HARDPAN [4]       HARDPAN [4]         DETRITUS [3]       TILLS [7]         MUCK [2]       WETLA         SILT [2]       20         ARTIFICIAL [0]       SANDS         (Score natural substrates; ignore       RIP/RAI         4 or more [2]       Sludge from point-sources)       LACUS         3 or less [0]       COAL F	1]SILTMODERATE [-1]SubstrateINDS [0] $\square$ NORMAL [0] $\square$ FREE [1] $\boxed{7}$ AN [0] $\square$ FREE [1] $\boxed{7}$ TONE [0] $\square$ MODERATE [-1] $\boxed{7}$ P [0] $\square$ MODERATE [-1] $\boxed{20}$ TURINE [0] $\square$ NONE [1] $\boxed{11}$ INES [-2] $\square$
quality: <b>3</b> -Highest guality in modera		an amounts of nignest       Check ONE (Or 2 & average)         r fast water, large       EXTENSIVE >75% [11]         , functional pools.       EXTENSIVE >75% [11]         ACKWATERS [1]       MODERATE 25-75% [7]         ACROPHYTES [1]       SPARSE 5-<25% [3]
· · ·		20
3] CHANNEL MORPHOLOG SINUOSITY       DEVELOPI         □ HIGH [4]       □ EXCELLE         □ MODERATE [3]       □ GOOD [5]         □ LOW [2]       □ FAIR [3]         □ NONE [1]       □ POOR [1]         Comments       □	NT [7] 🔲 NONE [6] 🗌 HIGH	ERATE [2]
	PARIAN ZONE Check ONE in each category for EAC	
EROSION       R         NONE / LITTLE [3]       C         MODERATE [2]       C         HEAVY / SEVERE [1]       C	RIPARIAN WIDTH       FLOOD PLAIN         WIDE > 50m [4]       Image: Constant of the second sec	CONSERVATION TILLAGE [1] D [2]
5] POOL / GLIDE AND RIFF	I F / RUN QUALITY	
MAXIMUM DEPTH           Check ONE (ONLY!)         Cl           □ > 1m [6]         □ POO           □ 0.7-<1m [4]	CHANNEL WIDTH       CURRENT VE         neck ONE (Or 2 & average)       Check ALL that         L WIDTH > RIFFLE WIDTH [2]       TORRENTIAL [-1]       Image: Check ALL that         L WIDTH = RIFFLE WIDTH [1]       VERY FAST [1]       Image: Check ALL that         L WIDTH = RIFFLE WIDTH [2]       TORRENTIAL [-1]       Image: Check ALL that         L WIDTH = RIFFLE WIDTH [2]       TORRENTIAL [-1]       Image: Check ALL that         L WIDTH = RIFFLE WIDTH [2]       TORRENTIAL [-1]       Image: Check ALL that         L WIDTH = RIFFLE WIDTH [2]       TORRENTIAL [-1]       Image: Check ALL that         L WIDTH = RIFFLE WIDTH [2]       TORRENTIAL [-1]       Image: Check ALL that	At apply SLOW [1] INTERSTITIAL [-1] INTERMITTENT [-2] EDDIES [1] pools and riffles. Primary Contact Secondary Contact Circle one and comment on back) Pool / Current Maximum
	iffles; Best areas must be large enough to s	support a population
of riffle-obligate specie RIFFLE DEPTH I □ BEST AREAS > 10cm [2] □ M/		Image: With State Stat
6] GRADIENT ( 17 ft/mi)	□ VERY LOW - LOW [2-4] %POOL:	25 %GLIDE: 75 Gradient 8
DRAINAGE AREA ( 4.95 mi <sup>2</sup> )	□ MODERATE [6-10] ☑ HIGH - VERY HIGH [10-6] %RUN:	%RIFFLE: Maximum 10
EPA 4520		06/16/06

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



YOUNG-SUCCESSION-OLD SPRAY / SNAG / REMOVED

**RELOCATED / CUTOFFS ARMOURED / SLUMPS** 

**ISLANDS / SCOURED** 

**LEVEED / ONE SIDED** 

FI MEASUREMENTS

X width 12

x depth

HARDENED / URBAN / DIRT&GRIME BMPs-CONSTRUCTION-SEDIMENT LOGGING / IRRIGATION / COOLING FALSE BANK / MANURE / LAGOON

**CONTAMINATED / LANDFILL** 

WWTP / CSO / NPDES / INDUSTRY

El ISSUES

Circle some & COMMENT

**DI MAINTENANCE** 

bankfull max. depth floodprone x<sup>2</sup> width

W/D ratio

**BANK / EROSION / SURFACE** 

entrench. ratio

NATURAL / WETLAND / STAGNANT WASH H<sub>2</sub>0 / TILE / H<sub>2</sub>0 TABLE ACID / MINE / QUARRY / FLOW

ATMOSPHERE / DATA PAUCITY

PARK / GOLF / LAWN / HOME

Tree:

Le

**X** bankfull width zu bankfull x depth

max. depth 24

Stream 45 Modified Cla	ass 1		
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	23		
SITE NAME/LOCATION AEP -Sunnyside Carrollton SITE NUMBER 5 RIVER BASIN DRAINAGE AREA (mi²) LENGTH OF STREAM REACH (ft) LAT. 40.71351 LONG81.27292 RIVER CODE RIVER MILE			
DATE 05/03/17 SCORER jbl, jtt COMMENTS ephemeral			
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions		
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY MODIFICATIONS: mining (historic)			
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI		
TYPE         PERCENT         TYPE         PERCENT           BLDR SLABS [16 pts]         0%         I         SILT [3 pt]         70%	Metric Points		
BOULDER (>256 mm) [16 pts]         0%         LEAF PACK/WOODY DEBRIS [3 pts]         4%           BEDROCK [16 pt]         0%         FINE DETRITUS [3 pts]         0%	Substrate Max = 40		
COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       6%       MUCK [0 pts]       0%			
□ □         SAND (<2 mm) [6 pts]	13		
Total of Percentages of 0.00% (A) 100% (B)	A + B		
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 4			
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Depth Max = 30		
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]			
> 10 - 22.5 cm [25 pts]       NO WATER OR MOIST CHANNEL [0 pts]         COMMENTS       heavy rain lat several days         MAXIMUM POOL DEPTH       (Inches):	5		
Same and the second of the second o	Bankfull Width		
$ = 3.0 \text{ m} - 4.0 \text{ m} (> 9' 7" - 13') [25 \text{ pts}] \\ > 1.5 \text{ m} - 3.0 \text{ m} (> 9' 7" - 4' 8") [20 \text{ pts}] \\ = 4.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5 \text{ pts}] \\ = 5.0 \text{ m} (<=3' 3") [5  $	Max=30		
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 1.00	5		
This information must also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆           RIPARIAN WIDTH         FLOODPLAIN QUALITY			
L R (Per Bank) L R (Most Predominant per Bank) L R V Wide >10m V Mature Forest, Wetland Conservation Tillage			
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial			
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	)		
None Fenced Pasture Mining or Construction			
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):         Stream Flowing         Subsurface flow with isolated pools (Interstitial)         COMMENTS			
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):None1.02.03.00.51.52.533			
STREAM GRADIENT ESTIMATE	) ft)		

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):			
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)			
DOWNSTREAM DESIGNATED USE(S)			
WWH Name: Distance from Evaluated Stream			
CWH Name: Distance from Evaluated Stream			
EWH Name: Distance from Evaluated Stream			
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION			
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order			
County: Stark Township / City:			
MISCELLANEOUS			
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/02/17 Quantity:			
Photograph Information:			
Elevated Turbidity? (Y/N): Canopy (% open):85%			
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:			
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)			
Is the sampling reach representative of the stream (Y/N) If not, please explain:			
Additional comments/description of pollution impacts:			
BIOTIC EVALUATION			
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)			
Fish Observed? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N			
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)			
Comments Regarding Biology:			

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Save as pdf Reset Form

Stream 46 Modified C	lass 1
<b>ChieFPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	22
SITE NAME/LOCATION AEP -Sunnyside Carrollton	
SITE NUMBER 6 RIVER BASIN DRAINAGE AREA (mi²)	
LENGTH OF STREAM REACH (ft) LAT. 40.71362 LONG81.27297 RIVER CODE RIVER MILE	
DATE 05/03/17 SCORER jbl, jtt COMMENTS ephemeral	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	uctions
STREAM CHANNEL	OVERY
MODIFICATIONS: mining (historic)	OVER
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI Metric
TYPE         PERCENT         TYPE         PERCENT           BLDR SLABS [16 pts]         0%         ✓         SILT [3 pt]         70%	Points
BOULDER (>256 mm) [16 pts]	Substrate
BEDROCK         [16 pt]         0%         FINE DETRITUS         [3 pts]         0%           COBBLE         (65-256 mm)         [12 pts]         0%         CLAY or HARDPAN         [0 pt]         0%	Max = 40
COBBLE (65-256 mm) [12 pts]       0%       CLAY or HARDPAN [0 pt]       0%         GRAVEL (2-64 mm) [9 pts]       5%       MUCK [0 pts]       0%	
SAND (<2 mm) [6 pts]	12
Total of Percentages of 0.00% (A) 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
	-
<ol> <li>Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):</li> </ol>	Pool Depth Max = 30
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       ✓	
> 10 - 22.5 cm [25 pts]         NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS heavy rain lat several days MAXIMUM POOL DEPTH (Inches): 1.00	
3 BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.0 m (&lt;=3' 3") [5 pts]</li> </ul>	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTSAVERAGE BANKFULL WIDTH (Feet): 1.00	5
This information <u>must</u> also be completed           RIPARIAN ZONE AND FLOODPLAIN QUALITY         ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R V Wide >10m V Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Irban or Industrial	
	ор
Narrow <5m	
	L
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Subsurface flow with isolated pools (Interstitial) Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral)	)
COMMENTS_	L
SINUOSITY (Number of ben <u>ds per 61 m (200 ft) of channel) (Check ONLY one box)</u>	
None         1.0         2.0         3.0           ✓         0.5         1.5         2.5         >3	
STREAM GRADIENT ESTIMATE         Flat (0.5 ft/100 ft)         Flat to Moderate         Moderate (2 ft/100 ft)         Moderate to Severe	00 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):			
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)			
DOWNSTREAM DESIGNATED USE(S)			
WWH Name: Distance from Evaluated Stream			
CWH Name: Distance from Evaluated Stream			
EWH Name: Distance from Evaluated Stream			
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION			
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order			
County: Stark Township / City:			
MISCELLANEOUS			
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/02/17 Quantity:			
Photograph Information:			
Elevated Turbidity? (Y/N): Canopy (% open):85%			
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:			
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (µmhos/cm)			
Is the sampling reach representative of the stream (Y/N) If not, please explain:			
Additional comments/description of pollution impacts:			
BIOTIC EVALUATION			
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)			
Fish Observed? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N			
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)			
Comments Regarding Biology:			

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



PHWH Form Page - 2

Save as pdf Reset Form

Stream 47 **Modified Class 2** Primary Headwater Habitat Evaluation Form 53 HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION Sunnyside-Carrollton SITE NUMBER 5 **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) LENGTH OF STREAM REACH (ft) LAT. **RIVER CODE** LONG. **RIVER MILE** DATE 05/02/17 SCORER P. Renner **COMMENTS** Intermittent Stream NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL CRECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric TYPE PERCENT PERCENT TYPF Points BLDR SLABS [16 pts] SILT [3 pt] 22% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 7% 0% Substrate 0% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 400% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 1% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 13 70% 0%  $\overline{\mathbf{A}}$ SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) (A) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 9 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: 4 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 25 8.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 3.50 15 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop  $\overline{}$ Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft)

Flat to Moderate

Moderate to Severe

Severe (10 ft/100 ft)

Moderate (2 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):			
QHEI PERFORMED? - Yes 🗸 No QHEI Score	(If Yes, Attach Completed QHEI Form)		
DOWNSTREAM DESIGNATED USE(S)			
WWH Name:			
CWH Name:			
EWH Name:			
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE <u>EN</u>	TIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION		
USGS Quadrangle Name:	NRCS Soil Map Page: NRCS Soil Map Stream Order		
County: Townsh	ip / City:		
MISCELLANEOUS			
Base Flow Conditions? (Y/N):Y Date of last precipitation:	Quantity:0.00		
Photograph Information:			
Elevated Turbidity? (Y/N): N Canopy (% open): 95%			
Were samples collected for water chemistry? (Y/N): (Note lab	sample no. or id. and attach results) Lab Number:		
	pH (S.U.) Conductivity (µmhos/cm)		
Is the sampling reach representative of the stream $(Y/N)$ If not, p	please explain:		
	······		
Additional comments/description of pollution impacts:	<u> </u>		
ID number. Include appropriate field data         Fish Observed? (Y/N)         N         Voucher? (Y/N)         Salamanders Ob	collections optional. NOTE: all voucher samples must be labeled with the site sheets from the Primary Headwater Habitat Assessment Manual) served? (Y/N) N Voucher? (Y/N) N c Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N)		
DRAWING AND NARRATIVE DESCRIPTION	DF STREAM REACH (This <u>must</u> be completed):		
Include important landmarks and other features of interest for	site evaluation and a narrative description of the stream's location		
Width=2.5' Wid	lth=4.5' Width=3.5'		
-			
Pool	=8 "		

PHWH Form Page - 2

Stream 48 **Modified Class 2** Primary Headwater Habitat Evaluation Form 43 HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION Sunnyside-Carrollton SITE NUMBER **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) LENGTH OF STREAM REACH (ft) LAT. **RIVER CODE** LONG. **RIVER MILE** DATE 05/02/17 SCORER P. Renner **COMMENTS** Intermittent Stream NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL CRECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric TYPE PERCENT PERCENT TYPF Points BLDR SLABS [16 pts] SILT [3 pt] 30% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 5% 0% Substrate 0% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 400% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 5% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 13 60% 0%  $\overline{\mathbf{A}}$ SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) (A) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 9 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: 4 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] 1 > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 15 4.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 3.50 15 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop  $\overline{}$ Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

QHEI PERFORMED? - Yes V No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	
	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE V	VATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS	S Soil Map Page: NRCS Soil Map Stream Order
County: Township / C	ity:
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):95%	
Were samples collected for water chemistry? (Y/N): (Note lab samples	le no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream $(Y/N)$ If not, please	explain:
Additional comments/description of pollution impacts:	
ID number.         Include appropriate field data sheets           Fish Observed? (Y/N)         N         Salamanders Observe	tions optional. NOTE: all voucher samples must be labeled with the site s from the Primary Headwater Habitat Assessment Manual) d? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N roinvertebrates Observed? (Y/N) N Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF S Include important landmarks and other features of interest for site e	
Pasture	
Width=2.5'	PEM Wetland
	Width=3.0'
	dth=5.0'
Pool=8"	
PHWH Form P	
October 24, 2002 Revision	Save as pdf Reset Form

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

Stream 50 **Modified Class 1** Primary Headwater Habitat Evaluation Form 20 HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION Sunnyside-Carrollton SITE NUMBER 3 **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) LENGTH OF STREAM REACH (ft) LAT. **RIVER CODE** LONG. **RIVER MILE** DATE 05/02/17 SCORER P. Renner **COMMENTS** Ephemeral Stream NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL CRECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric TYPE PERCENT PERCENT TYPE Points BLDR SLABS [16 pts] SILT [3 pt] 75% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 15% 0% Substrate 0% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 400% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 5% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 10 5% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (A) (B) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 6 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: 4 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 5 2.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 5 2.00 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m  $\checkmark$ Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box) Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Moderate to Severe Flat to Moderate Moderate (2 ft/100 ft) Severe (10 ft/100 ft)

EWH Name:			stance from Evaluated stance from Evaluated	_
	ATTACH COPIES OF MAPS, INCLUDING TH			
JSGS Quadrangle Na		NRCS Soil Map Page:		
-		ownship / City:		
MISCELLA			Quantity: 0.00	1
Base Flow Conditions			Quantity: <b>0.00</b>	<u></u>
hotograph Informatio				
levated Turbidity? (Y		55%		
Vere samples collect	ed for water chemistry? (Y/N): (No	te lab sample no. or id. and a	ttach results) Lab Num	ber:
ield Measures: Te	emp (°C) Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µmho	s/cm)
the sampling reach	representative of the stream (Y/N)	f not, please explain:		
dditional comments/	description of pollution impacts:			
erformed? (Y/N): sh Observed? (Y/N) rogs or Tadpoles Ob omments Regarding	(If Yes, Record all observations. Volume         ID number. Include appropriate field         N         Voucher? (Y/N)         N         Served? (Y/N)         N	d data sheets from the Primary	Headwater Habitat Asse /oucher? (Y/N)	
				······································
	ING AND NARRATIVE DESCRIPT			
	ant landmarks and other features of intere Widt			
	ant landmarks and other features of intere	est for site evaluation and a r		f the stream's location
	ant landmarks and other features of intere Widt	est for site evaluation and a r	arrative description o	f the stream's location
	ant landmarks and other features of intere Widt	est for site evaluation and a r	arrative description o	f the stream's location

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

**Reset Form** 

Stream 49 **Modified Class 2** Primary Headwater Habitat Evaluation Form 55 HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION Sunnyside-Carrollton SITE NUMBER 2 **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) LENGTH OF STREAM REACH (ft) LAT. **RIVER CODE** LONG. **RIVER MILE** DATE 05/02/17 SCORER P. Renner **COMMENTS** Intermittent Stream NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric TYPE PERCENT PERCENT TYPF Points BLDR SLABS [16 pts] SILT [3 pt] 0% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 25% 0% Substrate 0% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 400% 10% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 65% 0% 1 GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 15 0% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) (A) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 12 TOTAL NUMBER OF SUBSTRATE TYPES: 3 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 25 8.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 3.50 15 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m  $\checkmark$ Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box) Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):			
QHEI PERFORMED? - Yes 🖌 No QHEI Score (If Yes, Attach Completed QHEI Form)			
DOWNSTREAM DESIGNATED USE(S)			
WWH Name: Distance from Evaluated Stream			
CWH Name: Distance from Evaluated Stream			
EWH Name: Distance from Evaluated Stream			
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION			
USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order			
County: Township / City:			
MISCELLANEOUS			
Base Flow Conditions? (Y/N):Y Date of last precipitation: Quantity:Quantity:Q			
Photograph Information:			
Elevated Turbidity? (Y/N): Canopy (% open): 85%			
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:			
Field Measures:       Temp (°C)       Dissolved Oxygen (mg/l)       pH (S.U.)       Conductivity (μmhos/cm)			
Is the sampling reach representative of the stream (Y/N) If not, please explain:			
Additional comments/description of pollution impacts:			
BIOTIC EVALUATION			
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site			
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)			
Fish Observed? (Y/N) N Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) N Voucher?			
Comments Regarding Biology:			
<u></u>			

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

Width=3.5' Width=4.5'

Width=2.5'

Save as pdf

Pool=8"

PEM Wetland Boundary

PHWH Form Page - 2

Stream 51 **Modified Class 1** Primary Headwater Habitat Evaluation Form 25 HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION Sunnyside-Carrollton SITE NUMBER **RIVER BASIN** DRAINAGE AREA (mi<sup>2</sup>) LENGTH OF STREAM REACH (ft) LAT. **RIVER CODE** LONG. **RIVER MILE** DATE 05/02/17 **COMMENTS** Ephemeral Stream SCORER P. Renner NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes 1. HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric TYPE PERCENT PERCENT TYPF Points BLDR SLABS [16 pts] SILT [3 pt] 0% 5% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 30% 0% Substrate 0% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 400% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 65% 0% 1 GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 15 0% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) (A) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 12 TOTAL NUMBER OF SUBSTRATE TYPES: 3 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth 2. evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 5 1.00 COMMENTS MAXIMUM POOL DEPTH (Inches): BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull 3 (Check ONLY one box): Width > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] 1.0 m (<=3' 3") [5 pts]
</p> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 1.00 5 COMMENTS AVERAGE BANKFULL WIDTH (Feet): This information must also be completed ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY** (Per Bank) (Most Predominant per Bank) R R Wide >10m Mature Forest, Wetland **Conservation Tillage** Immature Forest, Shrub or Old Moderate 5-10m  $\checkmark$ Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box) Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 05 15 25 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Moderate to Severe Flat to Moderate Moderate (2 ft/100 ft) Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Compl	leted):		
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Y	es, Attach Completed QHEI Form)		
DOWNSTREAM DESIGNATED USE(S)			
WWH Name:	_ Distance from Evaluated Stream		
CWH Name:	_ Distance from Evaluated Stream _		
EWH Name:	Distance from Evaluated Stream		
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WAT	ERSHED AREA. CLEARLY MARK THE SITE LOCATION		
USGS Quadrangle Name: NRCS So	il Map Page: NRCS Soil Map Stream Order		
County: Township / City:			
MISCELLANEOUS			
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity: 0.00		
Photograph Information:			
Elevated Turbidity? (Y/N): Canopy (% open): 95%			
Were samples collected for water chemistry? (Y/N): (Note lab sample no	b. or id. and attach results) Lab Number:		
	S.U.) Conductivity (µmhos/cm)		
Is the sampling reach representative of the stream (Y/N) If not, please exp	lain:		
Additional comments/description of pollution impacts:	· · · · · · · · · · · · · · · · · · ·		
ID number. Include appropriate field data sheets from	s optional. NOTE: all voucher samples must be labeled with the site n the Primary Headwater Habitat Assessment Manual)		
Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? ('Frogs or Tadpoles Observed? (Y/N)         N       Voucher? (Y/N)       N       Voucher? (Y/N)       Aquatic Macroin	Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N		
Comments Regarding Biology:			
l			
DRAWING AND NARRATIVE DESCRIPTION OF STR	EAM REACH (This <u>must</u> be completed):		
Include important landmarks and other features of interest for site evalu	ation and a narrative description of the stream's location		
Pool=1"			
FLOW →	idth=1.0' Width=1.0'		

PEM Wetland

Width=1.0'

PHWH Form Page - 2

Stream 52 Modified Clas	tream 52 Modified Class 1				
<b>ChieEPA</b> Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):	3				
SITE NAME/LOCATION Sunnyside-Carrollton					
SITE NUMBER 12 RIVER BASIN DRAINAGE AREA (mi²)					
LENGTH OF STREAM REACH (ft) LAT LONG RIVER CODE RIVER MILE					
DATE 05/01/17 SCORER P. Renner COMMENTS Intermittent Stream					
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	tions				
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOV	ERY				
	HHEI				
	Metric Points				
□         BLDR SLABS [16 pts]         0%         ✓         SILT [3 pt]         100%           □         BOULDER (>256 mm) [16 pts]         0%         □         LEAF PACK/WOODY DEBRIS [3 pts]         0%	onits				
BEDROCK [16 pt] 0% S	Substrate				
COBBLE (65-256 mm) [12 pts]	Max = 40				
GRAVEL (2-64 mm) [9 pts]       0%       MUCK [0 pts]       0%         SAND (c2 mm) [6 pts]       0%       O%       0%	8				
SAND (<2 mm) [6 pts]         0%         ARTIFICIAL [3 pts]         0%					
Total of Percentages of 0.00% (A) 100% (B)	A + B				
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 2					
2. Maximum Pool Depth ( <i>Measure the maximum pool depth within the 61 meter (200 ft</i> ) evaluation reach at the time of Po	ool Depth				
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Max = 30				
> 30 centimeters [20 pts]       > 5 cm - 10 cm [15 pts]         > 22.5 - 30 cm [30 pts]       < 5 cm [5 pts]					
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5				
COMMENTS MAXIMUM POOL DEPTH (Inches): 2.00					
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull				
<ul> <li>&gt; 4.0 meters (&gt; 13') [30 pts]</li> <li>&gt; 3.0 m - 4.0 m (&gt; 9' 7" - 13') [25 pts]</li> <li>&gt; 1.0 m (&lt; 3' 3") [5 pts]</li> </ul>	Width Max=30				
= 1.5  m - 3.0  m (> 9' 7" - 4' 8") [20  pts]					
COMMENTS AVERAGE BANKFULL WIDTH (Feet): 2.00	5				
This information <u>must</u> also be completed					
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY					
<u>L R</u> (Per Bank) <u>L R</u> (Most Predominant per Bank) <u>L R</u>					
Wide >10m Mature Forest, Wetland Conservation Tillage					
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial Field					
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop					
None Fenced Pasture Mining or Construction					
COMMENTS					
<b>FLOW REGIME</b> (At Time of Evaluation) (Check ONLY one box):					
<ul> <li>Stream Flowing</li> <li>Subsurface flow with isolated pools (Interstitial)</li> <li>Moist Channel, isolated pools, no flow (Intermittent)</li> <li>Dry channel, no water (Ephemeral)</li> </ul>					
COMMENTS					
SINUOSITY (Number of ben <u>ds per 61 m (200 ft) of channel) (Check ONLY one box)</u>					
None I.0 2.0 3.0					
0.5 1.5 2.5 >3					
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	)				

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes ✓ No QHEI Score (If Yes, Atta	ach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name:	_ Distance from Evaluated Stream
CWH Name:	_ Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED	O AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: NRCS Soil Map P	Page: NRCS Soil Map Stream Order
County: Township / City:	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): N Date of last precipitation: 05/01/17	Quantity: <b>0.00</b>
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):100%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. a	and attach results) Lab Number:
Field Measures:     Temp (°C)     Dissolved Oxygen (mg/l)     pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional ID number. Include appropriate field data sheets from the Pri	imary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N)       N       Voucher? (Y/N)       N       Salamanders Observed? (Y/N)       N         Frogs or Tadpoles Observed? (Y/N)       N       Voucher? (Y/N)       N       Aquatic Macroinvertebrat	Voucher? (Y/N) N tes Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

ı.

Uniform	Depth=	2.	0 '	
Uniform	Width	=	2.	0



This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

6/26/2017 4:56:36 PM

in

Case No(s). 17-1318-EL-BLN

Summary: Letter of Notification electronically filed by Mr. Ryan F.M. Aguiar on behalf of AEP Ohio Transmission Company, Inc.