Site: Not	tingham	Solar Site Rater	(s): P. Renne	er	Date: 1/13/2021
Oite: Not	ungnam	Trate i	(3): 111101111	<u></u>	Date: 1/10/2021
	19				
sub	total first pa	l ge			
		Metric 5. Special Wetlan	de		
0	19	Process of the state of the sta	u3.		
max 10 pts.	subtotal	Check all that apply and score as indicated.			
		Bog (10)			
		Fen (10)			
		Old growth forest (10)			
		Mature forested wetland (5)			
		Lake Erie coastal/tributary wetland-u	•	. ,	
		Lake Plain Sand Prairies (Oak Open		logy (3)	
		Relict Wet Prairies (10)	95) (15)		
		Known occurrence state/federal thre	atened or enda	angered species (10)	
		Significant migratory songbird/water		5 ()	
		Category 1 Wetland. See Question			
1	20	Metric 6. Plant communi	ities, int	erspersion, microto	opography.
ı	20				
max 20 pts.	subtotal	6a. Wetland Vegetation Communities.		Community Cover Scale	
		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2	, ,
		Aquatic bed 1 Emergent	1	Present and either comprises sm vegetation and is of moderate of	
		Shrub		significant part but is of low qua	
		Forest	2	Present and either comprises sig	•
		Mudflats		vegetation and is of moderate of	quality or comprises a small
		Open water		part and is of high quality	
		Other 6b. horizontal (plan view) Interspersion.	3	Present and comprises significan	
		Select only one.	-	vegetation and is of high quality	<u>/</u>
		High (5)	Narrative D	escription of Vegetation Quality	
		Moderately high(4)	low	Low spp diversity and/or predomi	inance of nonnative or
		Moderate (3)		disturbance tolerant native spec	
		Moderately low (2)	mod	Native spp are dominant compon	
		Low (1) None (0)		although nonnative and/or distuction also be present, and species	
		6c. Coverage of invasive plants. Refer		moderately high, but generally	
		to Table 1 ORAM long form for list. Add		threatened or endangered spp	
		or deduct points for coverage	high	A predominance of native species	
		Extensive >75% cover (-5)		and/or disturbance tolerant nati	
		Moderate 25-75% cover (-3)		absent, and high spp diversity a the presence of rare, threatene	
		Sparse 5-25% cover (-1) Nearly absent <5% cover (0)		the presence of fare, threatene	u, or endangered spp
		Absent (1)	Mudflat and	d Open Water Class Quality	
		6d Microtopography.	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 ac	
		0 Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88	3 acres)
		O Coarse woody debris >15cm (6in) Standing dead >25cm (10in) dbh	3	High 4ha (9.88 acres) or more	
		o Standing dead >25cm (10in) dbh 1 Amphibian breeding pools	Microtopog	raphy Cover Scale	
			0	Absent	
			1	Present very small amounts or if	more common
				of marginal quality	
			2	Present in moderate amounts, bu quality or in small amounts of h	
			3	Present in moderate or greater a	
			3	and of highest quality	531.10

Site: Nottingham	Solar Site	Rater(s): P. Renner		Date: 1/13/2021
2 2	Metric 1. Wetland A	rea (size).		: W-PJR-20210113-5 ID: Wetland NS-20
max 6 pts. subtotal	Select one size class and assign sco >50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pts)) (0.2ha) (5 pts) ha) (4 pts) (3 pts) 2ha) (2pts) (0.12ha) (1 pt)		
6 8	Metric 2. Upland bu	ffers and surroundi	ing land use.	
max 14 pts. subtotal	MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers Intensity of surrounding land use VERY LOW. 2nd growth of LOW. Old field (>10 years MODERATELY HIGH. Re	m (164ft) or more around wetland pe 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) aroun average <10m (<32ft) around wetlan	erimeter (7) wetland perimeter (4) d wetland perimeter (1) d perimeter (0) verage. llife area, etc. (7) forest. (5) ervation tillage, new fallo	ow field. (3)
12 20	Metric 3. Hydrology	.		
max 30 pts. subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la 3c. Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) V <0.4m (<15.7in) (1) 3e. Modifications to natural hydrolog	ce water (3) ke or stream) (5) 3d. nly one and assign score.	Part of wetland/up Part of riparian or Duration inundation/sate Semi- to permane Regularly inundation Seasonally inundation	iin (1) lake and other human use (1) pland (e.g. forest), complex (1) r upland corridor (1) uration. Score one or dbl check. ently inundated/saturated (4) ted/saturated (3)
	None or none apparent (12 Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (non filling/grading road bed/RR trac dredging other	,
4 24	Metric 4. Habitat Al	teration and Develo	pment.	
max 20 pts. subtotal	4a. Substrate disturbance. Score or None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	y one and assign score.		
	4c. Habitat alteration. Score one or None or none apparent (9)			
24 subtotal this pa last revised 1 Februa	•	mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	✓ shrub/sapling ren herbaceous/aqua ✓ sedimentation ✓ dredging farming nutrient enrichme	ttic bed removal

Site: Nottingham Solar Site		Ra	ter(s): P. Renne	Date: 1/13/2021		
su 0	24 btotal first pa 24	1	ic 5. Special Wetl	ands.		
max 10 pts.	subtotal		that apply and score as indicate Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetla Lake Erie coastal/tributary wetla Lake Plain Sand Prairies (Oak of Relict Wet Prairies (10) Known occurrence state/federal Significant migratory songbird/we Category 1 Wetland. See Ques	and-unrestricted hydrolo and-restricted hydrolo Openings) (10) threatened or endar vater fowl habitat or u stion 1 Qualitative Ra	ngered species (10) usage (10) uting (-10)	
-1	23				erspersion, microto	pography.
max 20 pts.	subtotal		and Vegetation Communities.	Vegetation C	Community Cover Scale	
		Score all	present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	
			Aquatic bed	1	Present and either comprises sma	
		1	Emergent		vegetation and is of moderate qu	-
			Shrub		significant part but is of low qual	
			Forest	2	Present and either comprises sign	ificant part of wetland's
			Mudflats		vegetation and is of moderate qu	uality or comprises a small
		0	Open water		part and is of high quality	
			Other	3	Present and comprises significant	part, or more, of wetland's
		6b horiz	ontal (plan view) Interspersion.		vegetation and is of high quality	
		Select on	, ,			
		00,000,000	High (5)	Narrative De	scription of Vegetation Quality	
			Moderately high(4)	low	Low spp diversity and/or predomin	nance of nonnative or
			Moderate (3)	IOW	disturbance tolerant native speci	
			Moderate (3) Moderately low (2)	mod	Native spp are dominant compone	
			Low (1)	mod	although nonnative and/or distur	=
		<u> </u>			_	
		60 Cove	None (0)		can also be present, and species	
			erage of invasive plants. Refer		moderately high, but generally w	no presence or rare
			1 ORAM long form for list. Add		threatened or endangered spp	
		or deduct	points for coverage	high	A predominance of native species	
			Extensive >75% cover (-5)		and/or disturbance tolerant nativ	• • • • • • • • • • • • • • • • • • • •
			Moderate 25-75% cover (-3)		absent, and high spp diversity a	
			Sparse 5-25% cover (-1)		the presence of rare, threatened	, or endangered spp
			Nearly absent <5% cover (0)			
			Absent (1)		Open Water Class Quality	
			otopography.	0	Absent <0.1ha (0.247 acres)	
			present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 ac	
		0	Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88	acres)
		0	Coarse woody debris >15cm (6	· ·	High 4ha (9.88 acres) or more	
		0	Standing dead >25cm (10in) db			
		0	Amphibian breeding pools		aphy Cover Scale	
				0	Absent	
				1	Present very small amounts or if n	nore common
					of marginal quality	<u></u> _
				2	Present in moderate amounts, but quality or in small amounts of high	=
				3	Present in moderate or greater an	nounts
					and of highest quality	

Site: Nottingham	Solar Site	Rater(s): P. Renner		Date: 3/16/2021
1 1	Metric 1. Wetland A	rea (size).		: W-PJR-20210316-3 ID: Wetland NS-21
max 6 pts. subtotal	Select one size class and assign scolors (>20.2ha) (6 pts)) 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
4 5	Metric 2. Upland bu	ffers and surroundi	ing land use.	
max 14 pts. subtotal	MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2b. Intensity of surrounding land use VERY LOW. 2nd growth o LOW. Old field (>10 years) MODERATELY HIGH. Res	m (164ft) or more around wetland pe 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) aroun average <10m (<32ft) around wetlan	erimeter (7) wetland perimeter (4) d wetland perimeter (1) d perimeter (0) verage. life area, etc. (7) forest. (5) ervation tillage, new fallo	ow field. (3)
10 15	Metric 3. Hydrology		()	
max 30 pts. subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la 3c. Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrological surface water (la) All to 0.7m (15.7 to 27.6in) Modifications to natural hydrological surface water (la) 3a. Sources of Water. Score all that the province water (la) All the pH groundwater (5) All the pH groundwater (5) Seasonal/Intermittent surface water (la) Seasonal/Intermitent surface water (la) Seasonal/Intermittent surface water (la)	ce water (3) ke or stream) (5) 3d. nly one and assign score.	Part of wetland/u Part of riparian or Duration inundation/sat Semi- to permand Regularly inunda Seasonally inund Seasonally satura	iin (1) lake and other human use (1) pland (e.g. forest), complex (1) r upland corridor (1) uration. Score one or dbl check. ently inundated/saturated (4) ted/saturated (3)
	None or none apparent (12 Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (nor filling/grading road bed/RR tracd dredging other	,
5 20	Metric 4. Habitat Al	teration and Develo	pment.	
max 20 pts. subtotal	 4a. Substrate disturbance. Score on None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 	y one and assign score.		
	4c. Habitat alteration. Score one or of None or none apparent (9)	double check and average. Check all disturbances observed		
20 subtotal this pa last revised 1 Februa	Recovered (6) Recovering (3) Recent or no recovery (1)	mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling ren herbaceous/aqua sedimentation dredging farming nutrient enrichme	ttic bed removal

Site: Nottingham Solar Site		Rate	er(s): P. Renne	Date: 3/16/2021		
O max 10 pts.	20 btotal first pa 20 subtotal	Metr	that apply and score as indicated. Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland Lake Plain Sand Prairies (Oak Op Relict Wet Prairies (10) Known occurrence state/federal th Significant migratory songbird/wat	d-unrestricted hyd d-restricted hydro penings) (10) nreatened or enda	angered species (10)	
		, 🗀	Category 1 Wetland. See Questic			
1	21	Metr	ic 6. Plant commu	nities, int	erspersion, microto	opography.
,]				
max 20 pts.	subtotal		and Vegetation Communities.		Community Cover Scale	471 cares) continuous area
		Score all	present using 0 to 3 scale. Aquatic bed	<u>0</u>	Absent or comprises <0.1ha (0.2d) Present and either comprises sm	
		0	Emergent	·	vegetation and is of moderate of	
		1	Shrub		significant part but is of low qua	
			Forest	2	Present and either comprises sig	
			Mudflats		vegetation and is of moderate of	quality or comprises a small
			Open water		part and is of high quality	
			Other	3	Present and comprises significan	t part, or more, of wetland's
		6b. horiz	ontal (plan view) Interspersion.		vegetation and is of high quality	/
		Select on	ly one.	'-		
			High (5)	Narrative D	escription of Vegetation Quality	
			Moderately high(4)	low	Low spp diversity and/or predom	
			Moderate (3)		disturbance tolerant native spec	
			Moderately low (2)	mod	Native spp are dominant compon	=
		<u> </u>	Low (1)		although nonnative and/or distu	
		<u>ــــــــــــــــــــــــــــــــــــ</u>	None (0)		can also be present, and specie	•
			erage of invasive plants. Refer 1 ORAM long form for list. Add		moderately high, but generally threatened or endangered spp	w/o presence or rare
			t points for coverage	high	A predominance of native species	e with nonnative enn
		or deduct	Extensive >75% cover (-5)	riigii	and/or disturbance tolerant nati	
		_	Moderate 25-75% cover (-3)		absent, and high spp diversity a	
		1/	Sparse 5-25% cover (-1)		the presence of rare, threatene	
		–	Nearly absent <5% cover (0)		and processes of fare, unleaters	a, or oridarigerod opp
			Absent (1)	Mudflat and	l Open Water Class Quality	
		6d. Micro	otopography.	0	Absent <0.1ha (0.247 acres)	
			present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 ac	cres)
		0	Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88	3 acres)
		0	Coarse woody debris >15cm (6in)	3	High 4ha (9.88 acres) or more	<u>:</u>
		0	Standing dead >25cm (10in) dbh			
		0	Amphibian breeding pools	Microtopog	raphy Cover Scale	
				0	Absent	
				1	Present very small amounts or if of marginal quality	more common
				2	Present in moderate amounts, bu	
					quality or in small amounts of h	<u> </u>
·				3	Present in moderate or greater a	mounts
					and of highest quality	

Site: Nottingham	Solar Site	Rater(s): P. Renner		Date: 3/16/2021
2 2	Metric 1. Wetland A	area (size).		: W-PJR-20210316-2 ID: Wetland NS-22
max 6 pts. subtotal	Select one size class and assign sco >50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pts)) 20.2ha) (5 pts) ha) (4 pts) n) (3 pts) .2ha) (2pts) :0.12ha) (1 pt)		
8 10	Metric 2. Upland bu	iffers and surroundi	ng land use.	
max 14 pts. subtotal	MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2b. Intensity of surrounding land use VERY LOW. 2nd growth of LOW. Old field (>10 years MODERATELY HIGH. Re	m (164ft) or more around wetland pe 25m to <50m (82 to <164ft) around 1e 10m to <25m (32ft to <82ft) around 1e average <10m (<32ft) around wetlan	rimeter (7) wetland perimeter (4) d wetland perimeter (1) d perimeter (0) verage. life area, etc. (7) orest. (5) ervation tillage, new fallo	ow field. (3)
18 28	Metric 3. Hydrology			
max 30 pts. subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la 3c. Maximum water depth. Select of 0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) 3e. Modifications to natural hydrolog	ice water (3) ke or stream) (5) 3d. nly one and assign score.) (2) ic regime. Score one or double chec	Part of wetland/u Part of riparian or Duration inundation/sat Semi- to permane Regularly inunda Seasonally inunda Seasonally satura	iin (1) lake and other human use (1) pland (e.g. forest), complex (1) r upland corridor (1) uration. Score one or dbl check. ently inundated/saturated (4) ted/saturated (3)
	None or none apparent (12 Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (nor filling/grading road bed/RR trac dredging other	,
5 33	Metric 4. Habitat Al	teration and Develo	pment.	
max 20 pts. subtotal	4a. Substrate disturbance. Score or None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	y one and assign score.		
	4c. Habitat alteration. Score one or None or none apparent (9)			
33 subtotal this pa	Recovered (6) Recovering (3) Recent or no recovery (1)	mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling ren herbaceous/aqua sedimentation dredging farming nutrient enrichme	ttic bed removal

Site: No	ottingham	Solar Site	Rate	er(s): P. Renne	er er	Date: 3/16/2021
O max 10 pts.	33 btotal first pa 33 subtotal	Metri	that apply and score as indicated. Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetlan Lake Plain Sand Prairies (Oak Operation Relict Wet Prairies (10) Known occurrence state/federal to Significant migratory songbird/wa	d-unrestricted hyd d-restricted hydrol penings) (10) hreatened or enda	logy (5)	
		, , , 🖵	Category 1 Wetland. See Questi	on 1 Qualitative R	ating (-10)	
-4	29	Metri	ic 6. Plant commu	nities, int	erspersion, microto	pography.
max 20 pts.	subtotal] -6a Wetla	and Vegetation Communities.	Vegetation	Community Cover Scale	
			present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	471 acres) contiguous area
			Aquatic bed	1	Present and either comprises sm	
		1	Emergent		vegetation and is of moderate of	juality, or comprises a
			Shrub		significant part but is of low qua	
			Forest	2	Present and either comprises sig	
			Mudflats		vegetation and is of moderate of	luality or comprises a small
			Open water		part and is of high quality	
			Other	3	Present and comprises significan	
			ontal (plan view) Interspersion.	-	vegetation and is of high quality	<u> </u>
		Select on		Newstive D	acceletion of Variation Ovality	
			High (5)	-	escription of Vegetation Quality	names of namestive or
			Moderately high(4) Moderate (3)	low	Low spp diversity and/or predomi disturbance tolerant native spec	
		-	Moderately low (2)	mod	Native spp are dominant compon	
			Low (1)	mod	although nonnative and/or distu	-
		- -	None (0)		can also be present, and specie	
			rage of invasive plants. Refer		moderately high, but generally	
			1 ORAM long form for list. Add		threatened or endangered spp	me presentes er rare
			points for coverage	high	A predominance of native species	s. with nonnative spp
			Extensive >75% cover (-5)	J	and/or disturbance tolerant nati	
			Moderate 25-75% cover (-3)		absent, and high spp diversity a	and often, but not always,
			Sparse 5-25% cover (-1)		the presence of rare, threatene	d, or endangered spp
			Nearly absent <5% cover (0)		<u> </u>	
			Absent (1)	Mudflat and	l Open Water Class Quality	
		6d. Micro	otopography.	0	Absent <0.1ha (0.247 acres)	
		Score all	present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 ac	cres)
		0	Vegetated hummucks/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88	3 acres)
		0	Coarse woody debris >15cm (6in	·	High 4ha (9.88 acres) or more	
		0	Standing dead >25cm (10in) dbh			
		0	Amphibian breeding pools		raphy Cover Scale	
				0	Absent	
				1	Present very small amounts or if	more common
					of marginal quality	4 - 4 - 4 - 4 - 4 - 4 - 4
				2	Present in moderate amounts, bu quality or in small amounts of h	=
				3	Present in moderate or greater a	mounts
					and of highest quality	

Site: Nottingham	Solar Site	Rater(s): P. Renner		Date: 3/16/2021
0 0	Metric 1. Wetland A	rea (size).		: W-PJR-20210316-1 ID: Wetland NS-23
max 6 pts. subtotal	Select one size class and assign sco >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1. 0.1 to <0.3 acres (0.04 to < <1.0 to <0.1 acres (0.04ha) (0 pts)) (0.2ha) (5 pts) ha) (4 pts) (3 pts) 2ha) (2pts) (0.12ha) (1 pt)		
8 8	Metric 2. Upland bu	ffers and surroundi	ing land use.	
max 14 pts. subtotal	MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2b. Intensity of surrounding land use VERY LOW. 2nd growth o LOW. Old field (>10 years MODERATELY HIGH. Res	m (164ft) or more around wetland pe 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) aroun average <10m (<32ft) around wetlan	erimeter (7) wetland perimeter (4) d wetland perimeter (1) d perimeter (0) verage. life area, etc. (7) forest. (5) ervation tillage, new fallo	ow field. (3)
13 21	Metric 3. Hydrology	.		
max 30 pts. subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la 3c. Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) 3e. Modifications to natural hydrolog	ce water (3) ke or stream) (5) 3d. nly one and assign score. (2)	Part of wetland/u Part of riparian or Duration inundation/sat Semi- to permand Regularly inunda Seasonally inund Seasonally satura	iin (1) lake and other human use (1) pland (e.g. forest), complex (1) r upland corridor (1) uration. Score one or dbl check. ently inundated/saturated (4) ted/saturated (3)
	None or none apparent (12 Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (nor filling/grading road bed/RR trac dredging other	,
5 26	Metric 4. Habitat Al	teration and Develo	pment.	
max 20 pts. subtotal	 4a. Substrate disturbance. Score on None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select onlessed (6) Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 	y one and assign score.		
	4c. Habitat alteration. Score one or None or none apparent (9)			
26 subtotal this pa last revised 1 Februa	Recovered (6) Recovering (3) Recent or no recovery (1)	mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling ren herbaceous/aqua sedimentation dredging farming nutrient enrichme	ttic bed removal

Site: Nottingham Solar Site		Rater(s): P. Renner		Date: 3/16/2021	
O max 10 pts.	26 btotal first pa 26 subtotal	Metric 5. Special W Check all that apply and score as inc Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (! Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (Relict Wet Prairies (10) Known occurrence state/fe Significant migratory song	dicated. 5) wetland-unrestricted hydrological wetland-restricted hydrological (10) Oak Openings) (10) ederal threatened or endabird/water fowl habitat or	angered species (10) usage (10)	
-1	25	Category 1 Wetland. See Metric 6. Plant con			pography.
max 20 pts.	subtotal		venetation	Community Cover Scale	
		Score all present using 0 to 3 scale.	os. <u>Vegetation</u>	Absent or comprises <0.1ha (0.24	171 acres) contiguous area
		Aquatic bed		Present and either comprises small	
		1 Emergent	•	vegetation and is of moderate of	
		Shrub		significant part but is of low qua	
		Forest	2	Present and either comprises sign	
		Mudflats	2	vegetation and is of moderate of	
		Open water		part and is of high quality	danty of comprises a small
		Other	3		t part or more of wetland's
				Present and comprises significan	
		6b. horizontal (plan view) Interspers	<u> </u>	vegetation and is of high quality	
		Select only one.	Namatina D	inting of Vanatation Overlite	
		High (5)		escription of Vegetation Quality	
		Moderately high(4)	low	Low spp diversity and/or predomi	
		Moderate (3)		disturbance tolerant native spec	
		Moderately low (2)	mod	Native spp are dominant compon	_
		Low (1)		although nonnative and/or distu	
		✓ None (0)		can also be present, and specie	<u> </u>
		6c. Coverage of invasive plants. Re	efer	moderately high, but generally v	v/o presence of rare
		to Table 1 ORAM long form for list.	Add	threatened or endangered spp	
		or deduct points for coverage	high	A predominance of native species	s, with nonnative spp
		Extensive >75% cover (-5))	and/or disturbance tolerant nati	ve spp absent or virtually
		✓ Moderate 25-75% cover (-	3)	absent, and high spp diversity a	ind often, but not always,
		Sparse 5-25% cover (-1)		the presence of rare, threatened	d, or endangered spp
		Nearly absent <5% cover	(0)		
		Absent (1)	Mudflat and	l Open Water Class Quality	
		6d Microtopography	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 ac	cres)
		0 Vegetated hummucks/tuss	sucks 2	Moderate 1 to <4ha (2.47 to 9.88	
		0 Coarse woody debris >150		High 4ha (9.88 acres) or more	
		0 Standing dead >25cm (10	, ,	,	
		1 Amphibian breeding pools	•	raphy Cover Scale	
			0	Absent	
			1	Present very small amounts or if i	more common
			2	Present in moderate amounts, bu quality or in small amounts of hi	——————————————————————————————————————
			3	Present in moderate or greater ar	<u> </u>
			J	and of highest quality	nounta

Site: Nottingham	Solar Site	Rater(s): P. Renner		Date: 1/13/2021
	Metric 1. Wetland A	rea (size).	Report !	ID: Wetland WL-19
3 3 max 6 pts. subtotal	Select one size class and assign sco >50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 10 to <25 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pts)) 20.2ha) (5 pts) ha) (4 pts) n) (3 pts) .2ha) (2pts) :0.12ha) (1 pt)		
6 9	Metric 2. Upland bu	iffers and surroundi	ng land use.	
max 14 pts. subtotal	MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers Intensity of surrounding land use VERY LOW. 2nd growth of LOW. Old field (>10 years MODERATELY HIGH. Re	m (164ft) or more around wetland pe 25m to <50m (82 to <164ft) around 1e 10m to <25m (32ft to <82ft) around 1e average <10m (<32ft) around wetlan	erimeter (7) wetland perimeter (4) d wetland perimeter (1) d perimeter (0) verage. life area, etc. (7) forest. (5) ervation tillage, new fallo	ow field. (3)
12 21	Metric 3. Hydrology			
max 30 pts. subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la 3c. Maximum water depth. Select or >0.7 (27.6in) (3) ✓ 0.4 to 0.7m (15.7 to 27.6in) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrolog	nce water (3) ke or stream) (5) 3d. nly one and assign score.	Part of wetland/up Part of riparian or Duration inundation/sate Semi- to permane Regularly inundation Seasonally inundation Seasonally saturation	iin (1) lake and other human use (1) pland (e.g. forest), complex (1) r upland corridor (1) uration. Score one or dbl check. ently inundated/saturated (4) ted/saturated (3)
	None or none apparent (12 Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (non filling/grading road bed/RR trac dredging other_	,
4 25	Metric 4. Habitat Al	teration and Develo	pment.	
max 20 pts. subtotal	4a. Substrate disturbance. Score or None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	y one and assign score.		
	4c. Habitat alteration. Score one or None or none apparent (9)			
25 subtotal this pa last revised 1 Februa	Recovered (6) Recovering (3) Recent or no recovery (1)	mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling ren herbaceous/aqua sedimentation dredging farming nutrient enrichme	ttic bed removal

Site: Nottingham Solar Site		Rat	Rater(s): P. Renner		Date: 1/13/2021	
O max 10 pts.	25 btotal first pa 25 subtotal	Metri	that apply and score as indicated Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetlant Lake Erie coastal/tributary wetlant Lake Plain Sand Prairies (Oak O Relict Wet Prairies (10) Known occurrence (10) Known occurrence (10)	il. nd-unrestricted hyd nd-restricted hydrol penings) (10) threatened or enda	ogy (5)	
		\vdash	Significant migratory songbird/wa Category 1 Wetland. See Quest			
-1	24	Metri			erspersion, microto	pography.
max 20 pts.	subtotal	J 6a. Wetla	and Vegetation Communities.	Vegetation (Community Cover Scale	
			present using 0 to 3 scale. Aquatic bed Emergent	0	Absent or comprises <0.1ha (0.24) Present and either comprises small vegetation and is of moderate of	all part of wetland's
			Shrub		significant part but is of low qua	
		0	Forest Mudflats Open water	2	Present and either comprises sign vegetation and is of moderate of part and is of high quality	
			Other	3	Present and comprises significan	
			ontal (plan view) Interspersion.		vegetation and is of high quality	1
		Select on	ıy one. High (5)	Narrative De	escription of Vegetation Quality	
			Moderately high(4)	low	Low spp diversity and/or predomi	nance of nonnative or
			Moderate (3)		disturbance tolerant native spec	
			Moderately low (2)	mod	Native spp are dominant compon	_
		<u> </u>	Low (1)		although nonnative and/or distu	
			None (0) rage of invasive plants. Refer 1 ORAM long form for list. Add		can also be present, and species moderately high, but generally we threatened or endangered spp	•
		or deduct	points for coverage	high	A predominance of native species	· ·
			Extensive >75% cover (-5)		and/or disturbance tolerant nation	,
		<u> </u>	Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)		absent, and high spp diversity a the presence of rare, threatener	
			Nearly absent <5% cover (0)		the presence of rare, inteateries	a, or endangered spp
			Absent (1)	Mudflat and	Open Water Class Quality	
			otopography.	0	Absent <0.1ha (0.247 acres)	
			present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 ac	
		0	Vegetated hummucks/tussucks Coarse woody debris >15cm (6ir	n) <u>2</u>	Moderate 1 to <4ha (2.47 to 9.88 High 4ha (9.88 acres) or more	acres)
		0	Standing dead >25cm (10in) dbh	<i>'</i>	Thigh that (5.00 acres) of more	
		0	Amphibian breeding pools		raphy Cover Scale	
				0	Absent	
				1	Present very small amounts or if roof marginal quality	
				2	Present in moderate amounts, bu quality or in small amounts of his	ighest quality
1				3	Present in moderate or greater ar and of highest quality	nounts

Site: Nottingham	Solar Site	Rater(s): P. Renner		Date: 1/13/2021
	Metric 1. Wetland A	rea (size).	Report [ID: Wetland WL-133
3 3	Would II Would I'd 7		Поролг	Di Wallana WE 100
max 6 pts. subtotal	Select one size class and assign sco) 20.2ha) (5 pts) Iha) (4 pts) a) (3 pts) .2ha) (2pts) <0.12ha) (1 pt)		
6 9	Metric 2. Upland bu	iffers and surround	ing land use.	
max 14 pts. subtotal	MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2b. Intensity of surrounding land use	om (164ft) or more around wetland per 225m to <50m (82 to <164ft) around 3e 10m to <25m (32ft to <82ft) around 3e average <10m (<32ft) around wetlan 4. Select one or double check and a	erimeter (7) wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) verage.	
	LOW. Old field (>10 years MODERATELY HIGH. Re	or older forest, prairie, savannah, wild b), shrub land, young second growth to sidential, fenced pasture, park, cons	forest. (5) ervation tillage, new fallo	ow field. (3)
	Metric 3. Hydrology	pen pasture, row cropping, mining, c	onstruction. (1)	
12 21				
max 30 pts. subtotal	 3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfate Perennial surface water (late 1) 3c. Maximum water depth. Select of 20.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (-0.4m (-15.7in) (1) 3e. Modifications to natural hydrology 	ace water (3) ske or stream) (5) only one and assign score.	Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundat Seasonally inund Seasonally satura	nin (1) lake and other human use (1) pland (e.g. forest), complex (1) r upland corridor (1) uration. Score one or dbl check. ently inundated/saturated (4) ted/saturated (3)
	None or none apparent (12 Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (non filling/grading road bed/RR trac dredging other	·
4 25	Metric 4. Habitat Al	teration and Develo	pment.	
max 20 pts. subtotal	4a. Substrate disturbance. Score or None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)	,		
	4b. Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)			
	4c. Habitat alteration. Score one or None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observed mowing grazing clearcutting selective cutting	shrub/sapling rem herbaceous/aqua sedimentation dredging	
25 subtotal this pa	line.	✓ woody debris removal toxic pollutants	farming nutrient enrichme	ent
last revised 1 Februa	=			

Site: No	ttingham	Solar Site	Rat	er(s): P. Renne	er	Date: 1/13/2021
O max 10 pts.	25 btotal first pa 25 subtotal	Metri	that apply and score as indicated Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetlant Lake Erie coastal/tributary wetlant Lake Plain Sand Prairies (Oak O Relict Wet Prairies (10) Known occurrence (10) Known occurrence (10)	il. nd-unrestricted hyd nd-restricted hydrol penings) (10) threatened or enda	ogy (5)	
		\vdash	Significant migratory songbird/wa Category 1 Wetland. See Quest			
-1	24	Metri			erspersion, microto	pography.
max 20 pts.	subtotal	J 6a. Wetla	and Vegetation Communities.	Vegetation (Community Cover Scale	
			present using 0 to 3 scale. Aquatic bed Emergent	0	Absent or comprises <0.1ha (0.24) Present and either comprises small vegetation and is of moderate of	all part of wetland's
			Shrub		significant part but is of low qua	
		0	Forest Mudflats Open water	2	Present and either comprises sign vegetation and is of moderate of part and is of high quality	
			Other	3	Present and comprises significan	
			ontal (plan view) Interspersion.		vegetation and is of high quality	1
		Select on	ıy one. High (5)	Narrative De	escription of Vegetation Quality	
			Moderately high(4)	low	Low spp diversity and/or predomi	nance of nonnative or
			Moderate (3)		disturbance tolerant native spec	
			Moderately low (2)	mod	Native spp are dominant compon	_
		<u> </u>	Low (1)		although nonnative and/or distu	
			None (0) rage of invasive plants. Refer 1 ORAM long form for list. Add		can also be present, and species moderately high, but generally we threatened or endangered spp	•
		or deduct	points for coverage	high	A predominance of native species	· ·
			Extensive >75% cover (-5)		and/or disturbance tolerant nation	,
		<u> </u>	Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)		absent, and high spp diversity a the presence of rare, threatener	
			Nearly absent <5% cover (0)		the presence of rare, inteateries	a, or endangered spp
			Absent (1)	Mudflat and	Open Water Class Quality	
			otopography.	0	Absent <0.1ha (0.247 acres)	
			present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 ac	
		0	Vegetated hummucks/tussucks Coarse woody debris >15cm (6ir	n) <u>2</u>	Moderate 1 to <4ha (2.47 to 9.88 High 4ha (9.88 acres) or more	acres)
		0	Standing dead >25cm (10in) dbh	<i>'</i>	Thigh that (5.00 acres) of more	
		0	Amphibian breeding pools		raphy Cover Scale	
				0	Absent	
				1	Present very small amounts or if roof marginal quality	
				2	Present in moderate amounts, bu quality or in small amounts of his	ighest quality
1				3	Present in moderate or greater ar and of highest quality	nounts

APPENDIX E OEPA HHEI DATA SHEETS



ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION Nottingham Solar Site	
OTE NAME/ECOATION	0.10
LENGTH OF STREAM REACH (ft) 100 LAT. 40.19858 LONG. 81.06727 RIVER CODE RIVER MILE	
DATE 01/12/21 SCORER PJR/MDT COMMENTS Ephemeral Stream	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC	
MODIFICATIONS:	COVERT
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.	ı HHEI
TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts] 0% SILT [3 pt] 75% BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 0%	Points
BEDROCK [16 pt] BEDROCK [16 pt] O% O% O% O% O% O% O% O% O% O	Substrat Max = 4
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	Iviax = 4
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ ☐ MUCK [0 pts] ☐ ☐ O% ☐ ☐ ARTIFICIAL [3 pts] ☐ O% ☐ ☐ O% ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	14
T-1-1/D	1
Bldr Slabs, Boulder, Cobble, Bedrock Check	A+B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
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 Dep Max = 3
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Widx = 3
> 22.5 - 30 cm [30 pts]	5
COMMENTS MAXIMUM POOL DEPTH (centimeters): 4	
	I ——
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]	
> 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
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 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]	Bankful Width Max=30
> 4.0 meters (> 13') [30 pts] > 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 (meters):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 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] > 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 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 (meters): ### AVERAGE BANKFULL WIDTH (meters): 0.30 This information must also be completed ### RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts] > 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 (meters): ### AVERAGE BANKFULL WIDTH (meters): ### 0.30 This information must also be completed ### RIPARIAN ZONE AND FLOODPLAIN QUALITY **\text{NOTE: River Left (L) and Right (R) as looking downstream*}	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Wide > 10m Mature Forest, Wetland Moderate 5-10m Noderate 5-10m	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 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] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 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 (meters): O.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 Wide >10 m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Completed Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30
A.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS 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 ↑ (Most Predominant per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m None None Residential, Park, New Field Prenced Pasture COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Noist Channel, isolated pools, no flow (Intermitten)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Created Pasture Flood 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): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10 m Wide >10 m Mature Forest, Wetland Moderate 5-10 m Mature Forest, Shrub or Old Field Narrow <5 m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS None water (Ephemeral) COMMENTS	Width Max=30
AVERAGE BANKFULL WIDTH (meters): AVERAGE BANKFULL WIDTH (meters):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream Another LP Riparian Width RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10m Mature Forest, Wetland Moderate 5-10m Mature Forest, Wetland Narrow <5m Narrow <5m Residential, Park, New Field Penced Pasture Floow 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 SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: N/A 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: Flushing NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Harrison Township / City: Athens Township
MISCELLANEOUS
Base Flow Conditions? (Y/N):_Y Date of last precipitation: Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 100%
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) 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 Vouci (Y/N) N Sal ers Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/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
ATV Trail ————
Oil/Gas Access Road
Stream NS-1 PEM Wetland
·



Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

	HHEI Score (s	um of metrics 1, 2, 3).
SITE NAME/LOCATION Nottingham Solar Site		
	ream NS-2 RIVER BASIN Tuscarawas	DRAINAGE AREA (mi²) 0.10
LENGTH OF STREAM REACH (ft) 200	10.10000	R CODE RIVER MILE
DATE 01/12/21 SCORER PJR/MDT	COMMENTS Ephemeral Stream	
00011E11	<u> </u>	
NOTE: Complete All Items On This For	n - Refer to "Field Evaluation Manual for O	nio's PHWH Streams" for Instructions
STREAM CHANNEL NONE / NA' MODIFICATIONS:	TURAL CHANNEL RECOVERED RECO	VERING RECENT OR NO RECOVERY
. SUBSTRATE (Estimate percent of eve	ry type of substrate present. Check ONLY two pr	redominant substrate <i>TYPE</i> boxes
, , ,	ant substrate types found (Max of 8). Final metric s	I Mai
TYPE P BLDR SLABS [16 pts]	ERCENT	PERCENT NICE NO.
BOULDER (>256 mm) [16 pts]	0% LEAF PACK/WOODY I	0070
BEDROCK [16 pt]	0% FINE DETRITUS [3 pts	Subs
COBBLE (65-256 mm) [12 pts]	5% CLAY or HARDPAN [0	0 pt] 20% Max
GRAVEL (2-64 mm) [9 pts]	25% MUCK [0 pts]	0% 16
SAND (<2 mm) [6 pts]	0% ARTIFICIAL [3 pts]	0%
Total of Percentages of	.00% (A) Substrate Percentage	(B) A+
Bldr Slabs, Boulder, Cobble, Bedrock _	Check	
CORE OF TWO MOST PREDOMINATE SUBS	TRATE TYPES: 12 TOTAL NUMBER	OF SUBSTRATE TYPES: 4
Maximum Pool Depth (Measure the n	aximum pool depth within the 61 meter (200 ft)	evaluation reach at the time of Pool I
	d culverts or storm water pipes) (Check ONLY or	·
> 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 MOIS	ST CHANNEL [0 pts]
COMMENTO	MA WINGLINA DO	
COMMENTS	MAXIMUM POC	DL DEPTH (centimeters): 7
BANK FULL WIDTH (Measured as the		ONLY one box): Bank
> 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' ≤ 1.0 m (<=3' 3") [5 pts	,
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Σ 1.0 III (~-3-3-) [3 μts	S WAA
COMMENTS	AVERAGE BAN	NKFULL WIDTH (meters): 0.60 5
DIDADIAN ZONE AND EL CODE	This information must also be complet	
RIPARIAN ZONE AND FLOODF RIPARIAN WIDTH	FLOODPLAIN QUALITY	tight (R) as looking downstream☆
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	Open Pasture, Row Crop
∠ ∠ Narrow <5m	Residential, Park, New Field	
LL None COMMENTS	Fenced Pasture	Mining or Construction
COMMENTS		
	luation) (Check ONLY one box):	
Stream Flowing Subsurface flow with isolated poor		l, isolated pools, no flow (Intermittent) no water (Ephemeral)
COMMENTS_	is (interstitial) Dry Chairnel, in	water (Ephemera)
SINUOSITY (Number of bends processed in the state of the	er 61 m (200 ft) of channel) (Check <i>ONLY</i> one bo	ox):
0.5	1.5	>3.0
_	<u>—</u>	
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)
□ i iai (0.5 π/100 π) □ Fiai to ivioderate	i woderate (2 π/100 π)	Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Atta	ch Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: N/A CWH Name: EWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED	AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Flushing NRCS Soil Map P	age: NRCS Soil Map Stream Order
County: Harrison Township / City: Athens	Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):100%	
Were samples collected for water chemistry? (Y/N): Note lab sample no. or id. a	nd attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	
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 optional. ID number. Include appropriate field data sheets from the Prince Fish Observed? (Y/N) N	mary Headwater Habitat Assessment Manual) Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM R Include important landmarks and other features of interest for site evaluation an Reclaimed strip mine (grassland)	·
Stream NS-2	PEM Wetland/Pond



ChieFP Primary Headwater Habitat Evaluation Form

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SITE NAME/LOCATION Nottingham Solar Site	
0, 10,0	.10
LENGTH OF STREAM REACH (ft) 200 LAT. 40.19703 LONG81.06213 RIVER CODE RIVER MILE	
DATE 01/12/21 SCORER PJR/MDT COMMENTS Ephemeral Stream	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	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 BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock O.00% ARTIFICIAL [3 pts] Substrate Percentage (B)	HHEI Metric Points Substrate Max = 40
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
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] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	Pool Depth Max = 30
COMMENTS MAXIMUM POOL DEPTH (centimeters): 2	
COMMENTS MAXIMUM POOL DEPTH (centimeters): 2	
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]	Bankfull Width 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]	Width
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts]	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 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 (meters): O.04 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10 m Mature Forest, Wetland Wide >10 m Mature Forest, Wetland Moderate 5-10 m Wide Narrow <5m Residential, Park, New Field Open Pasture, Row Cr	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream: RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m Mature Forest, Wetland Wide > 10 m Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field None COMMENTS 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))	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Als	so be Completed):
QHEI PERFORMED? - Yes V No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: N/A	
CWH Name:EWH Name:	
_	NTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Flushing	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Harrison Town	nship / City: Athens Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 100	0%
Were samples collected for water chemistry? (Y/N): N (Note la	ab 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) Y If no	t, please explain:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field da Fish Observed? (Y/N) N Sala ers	er collections optional. NOTE: all voucher samples must be labeled with the site ta sheets from the Primary Headwater Habitat Assessment Manual) Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION	OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for	or site evaluation and a narrative description of the stream's location
Oil/gas well	pad
FLOW Width=2.5'	PSS Wetland
Pool depth=1"	



ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION Nottingham Solar Site	
SITE NAME/LOCATION Nottingham Solar Site SITE NUMBER Stream NS-4 RIVER BASIN Tuscarawas DRAINAGE AREA (mi²) 0.0)5
LENGTH OF STREAM REACH (ft) 150 LAT. 40.19763 LONG81.06128 RIVER CODE RIVER MILE	
DATE 01/12/21 SCORER PJR/MDT COMMENTS Ephemeral Stream	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ctions
STREAM CHANNEL	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. TYPE PERCENT BLDR SLABS [16 pts] 0% SILT [3 pt] BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 0%	HHEI Metric Points
□ □ BEDROCK [16 pt] □ □ FINE DETRITUS [3 pts] □ □ 0% □ □ □ CLAY or HARDPAN [0 pt] □ 0% □<	Substrate Max = 40
GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] O% O% OM ARTIFICIAL [3 pts] O%	15
Total of Percentages of 1.00% (A) Bldr Slabs, Boulder, Cobble, Bedrock (B) SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 Substrate Percentage (Check TOTAL NUMBER OF SUBSTRATE TYPES: 3	A + B
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]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters):	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts]	Bankfull Width Max=30
> 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
> 4.0 meters (> 13') [30 pts] > 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 (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆	Width Max=30
> 4.0 meters (> 13') [30 pts] > 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 (meters): This information must also be completed	Width Max=30
> 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] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10 m Mature Forest, Wetland Wide >10 m Moderate 5-10 m Moderate 5-10 m None None COMMENTS Fenced Pasture Mining or Construction Fenced Pasture Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Subsurface flow with isolated pools (Interstitial) Nor water (Ephemeral)	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must A	Also be Completed):
QHEI PERFORMED? - Yes ✓ No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: N/A CWH Name:	
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE	E ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Flushing	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Harrison To	wnship / City: Athens Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:_	Quantity:
Photograph Information:	
Canopy (% open).	100%
Were samples collected for water chemistry? (Y/N): N (Note	e 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) Y If	not, please explain:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field Fish Observed? (Y/N) N Sal el	archer collections optional. NOTE: all voucher samples must be labeled with the site data sheets from the Primary Headwater Habitat Assessment Manual) The street of the Primary Headwater Habitat Assessment Manual) The street of the street
DRAWING AND NARRATIVE DESCRIPTION	ON OF STREAM REACH (This <u>must</u> be completed):
	t for site evaluation and a narrative description of the stream's location
Stream NS-3	



ChieFP Primary Headwater Habitat Evaluation Form

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SITE NAME/LOCATION Nottingham Solar Site	
0. 110 5	15
LENGTH OF STREAM REACH (ft) 200 LAT. 40.19032 LONG81.06877 RIVER CODE RIVER MILE	
DATE 01/13/21 SCORER PJR/MDT COMMENTS Intermittent Stream	
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 RECOVERING RECENT OR NO RECOVERED RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVERE	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 BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock TOTAL of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 10.00% ARTIFICIAL [3 pts] Substrate Percentage (B)	HHEI Metric Points Substrate Max = 40 16
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 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): > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	Pool Depth Max = 30
COMMENTS MAXIMUM POOL DEPTH (centimeters): 2	
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. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 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 (meters): AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field Open Pasture, Row Cr None Mining or Construction	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Wide > 10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field None COMMENTS 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))	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes ✓ No QHEI Score (If Yes, Attac	ch Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: N/A CWH Name: EWH Name:	_ Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED	-
Fluching	
	age: NRCS Soil Map Stream Order Township
MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity:
Photograph Information: _	
Elevated Turbidity? (Y/N):N Canopy (% open):100%	
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. a	and attach results) Lab Number:
	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain: Additional comments/description of pollution impacts:	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. ID number. Include appropriate field data sheets from the Prir Fish Observed? (Y/N) N Voucher? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrate Comments Regarding Biology:	mary Headwater Habitat Assessment Manual) Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM R Include important landmarks and other features of interest for site evaluation and Stream NS-6a Width=1.0' Stream NS-5 Uniform Depth=1"	,





Primary Headwater Habitat Evaluation Form

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HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION Nottingham Solar Site SITE NUMBER Stream NS-6a RIVER BASIN Tuscarawas DRAINAGE AREA (mi²) 0.10 LAT 40 19413 LONG. -81.06630 LENGTH OF STREAM REACH (ft) RIVER CODE RIVER MILE

DATE 01/13/21 SCORER PJR/MDT COMMENTS Ephemeral Stream	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	actions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RE	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 BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 PERCENT TYPE SILT [3 pt] SILT [3 pt] SILT [3 pt] CLAY or HARDPAN [0 pt] MUCK [0 pts] ARTIFICIAL [3 pts] Substrate Percentage (B) TOTAL NUMBER OF SUBSTRATE TYPES: 3	HHEI Metric Points Substrate Max = 40 15
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]	Pool Depth Max = 30
COMMENTS MAXIMUM POOL DEPTH (centimeters):	
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] ≤ 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Bankfull Width Max=30
COMMENTSAVERAGE BANKFULL WIDTH (meters): 0.35	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) Wide >10m Moderate 5-10m L R (Most Predominant per Bank) Mature Forest, Wetland D Conservation Tillage Immature Forest, Shrub or Old Field Urban or Industrial	
None Residential, Park, New Field Open Pasture, Row Cro Fenced Pasture Mining or Construction COMMENTS	p

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 0.5 1.5 2.5 >3 STREAM GRADIENT ESTIMATE Moderate (2 ft/100 ft) Severe (10 ft/100 ft) Flat to Moderate

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: N/A 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: Flushing NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Harrison Township / City: Athens Township
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):100%
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:
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) Voucher? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/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
Stream NS-6a Pool Depth=0.5"
Width=1.0' Width=2.5' Width=1.0' Stream NS-7
Dirt Road



ChieFP Primary Headwater Habitat Evaluation Form

25

SITE NAME/LOCATION Nottingham Solar Site	
0. 110.41	.15
LENGTH OF STREAM REACH (ft) 200 LAT. 40.19244 LONG81.06818 RIVER CODE RIVER MILE	
DATE 01/13/21 SCORER PJR/MDT COMMENTS Ephemeral Stream	
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 RECOVERING RECENT OR NO RECOVERED RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVERED RECOVERING RECENT OR NO RECOVERED RECO	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 BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock O.00% (A) Substrate Percentage Check ONLY two predominant substrate TYPE boxes Final metric score is sum of boxes A & B. PERCENT 40% SILT [3 pt] 40% CLAY or HARDPAN [0 pt] MUCK [0 pts] O% ARTIFICIAL [3 pts] (B)	HHEI Metric Points Substrate Max = 40 15
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
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] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	Pool Depth Max = 30
COMMENTS MAXIMUM POOL DEPTH (centimeters): 1	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Bankfull Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 4.0 meters (> 13') [30 pts] > 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 - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Wide >10m Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m None Penced Pasture None None S1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (> 10 m (<=3' 4') 8") [15 pts] > 1.0 m (> 10 m (<=3' 4') 8") [15 pts] > 1.0 m (> 10 m (<=3' 4') 8") [15 pts] > 1.0 m (> 10 m (<=3' 4') 8") [15 pts] 1.0 m (> 10 m (<=3' 4') 8") [15 pts] 2 m (> 10 m (<=3' 4') 8") [15 pts] 3.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] 4 m (> 10 m (<=3' 3") [5 pts] 5 m (> 10 m (<=3' 3") [5 pts] 5 m (> 10 m (<=3' 3") [5 pts] 6 m (> 10 m (<=3' 4') 8") [15 pts] 6 m (<=3' 4') 8") [15 pts] 7 m (<=3' 4') 8") [15 pts] 8 m (<=3' 4') 8") [15 pts] 9 m (<=3' 4') 8" [15 pts] 9 m (<	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS 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 ↑ RIPARIAN WIDTH FLOODPLAIN QUALITY ↓ R (Most Predominant per Bank) ↓ R (Most Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral)	Width Max=30

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: N/A	Distance from Evaluated Stream
CWH Name:EWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream
	-
WAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHEI USGS Quadrangle Name: Flushing NRCS Soil Map F	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 100%	
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): N (If Yes, Record all observations. Voucher collections optional	INOTE: all your her eamnles must be labeled with the site
ID number. Include appropriate field data sheets from the Pr	imary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Sale ers Observed? (Y/N) N Aquatic Macroinvertebra	Voucher? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology:	
DRAWING AND NADDATIVE DECORIDATION OF OTREAM	DEAOU (This most be seen but 1)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM F Include important landmarks and other features of interest for site evaluation ar	
include important fandinaries and other reactives of interest for site evaluation an	a namative description of the stream s location
Stream NS-6a	
₩idth=2.0' Pool Depth=0.5"	
FLOW — (
* *	PSS Wetland
Stream NS-7 Stream NS-6b	
Dirt Road	



ChieFPA Primary Headwater Habitat Evaluation Form

SITE NAME/LOCATION Nottingham Solar Site SITE NUMBER Stream NS-7 RIVER BASIN Tuscarawas DRAINAGE AREA (mi²) 0.05 LENGTH OF STREAM REACH (ft) 200 LAT. 40.19270 LONG81.06808 RIVER CODE RIVER MILE DATE 01/13/21 SCORER PJR/MDT COMMENTS Ephemeral Stream NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions	-1
DATE 01/13/21 SCORER PJR/MDT COMMENTS Ephemeral Stream]
	_
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:	
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.	 =1
TYPE PERCENT TYPE PERCENT Metr	ric
BLDR SLABS [16 pts] 0% SILT [3 pt] 10% Poin BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 0%	เร
BEDROCK [16 pt] 0% Substr Max =	
☐ COBBLE (65-256 mm) [12 pts] 0% ☐ CLAY or HARDPAN [0 pt] 0% ☑ GRAVEL (2-64 mm) [9 pts] 90% ☐ MUCK [0 pts] 0%	Ť
SAND (<2 mm) [6 pts] MOCK [7 pts] MOCK [7 pts] 14	
Total of Percentages of 0.00% (A) Substrate Percentage (B) A + B	
Bldr Slabs, Boulder, Cobble, Bedrock	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	onth
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] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	\neg
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Banki	full
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts] Width Max=:	
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTSAVERAGE BANKFULL WIDTH (meters): 0.35 5	
	╝
This information must also be completed	
RIDARIAN ZONE AND ELOODDI AIN OHALITY 32NOTE: River Lett /L) and Right (R) as looking downstream 32	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R	
RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m FLOODPLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland I Mature Forest, Shrub or Old Urban or Industrial	
RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Image Image	
RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m FLOODPLAIN QUALITY L R (Most Predominant per Bank) Mature Forest, Wetland Urban or Industrial Open Pasture, Row Crop	
RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Image Image	
RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m None FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R (Most Pred	
RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Immature Forest, Shrub or	
RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Moderate 5-10m None COMMENTS FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R (Description of Section 1) Mature Forest, Wetland Wide >10m Mature Forest, Shrub or Old Field Open Pasture, Row Crop Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
RIPARIAN WIDTH (Per Bank) Wide >10m Mature Forest, Wetland Immature Forest, Wetland Woderate 5-10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Crop None 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): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Immature Forest, Shrub or Old V Narrow <5m Residential, Park, New Field Open Pasture, Row Crop None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS FLOODPLAIN QUALITY Most Predominant per Bank) L R (Most Predominant per Bank) L R (Per Bank) L R (Most Predominant per Bank) L R (Per Bank) L R (Most Predominant per Bank) L R (Per Bank) L R (Most Predominant per Bank) L R (Per Bank) L R (Most Predominant per Bank) L R (Per Bank) L R (Per Bank) L R (Most Predominant per Bank) L R (Per Bank) Urban or Industrial Open Pasture, Row Crop Mining or Construction Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Immature Forest, Shrub or Old V Narrow <5m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 3.0	

Photograph Information: Elevated Turbidity? (Y/N): N	ADDITIONAL STREAM INFORMATION (This Informa	ation Must Also be Completed):
Distance from Evaluated Stream	QHEI PERFORMED? - Yes V No QH	HEI Score(If Yes, Attach Completed QHEI Form)
Distance from Evaluated Stream EWH Name: EWH Name: Distance from Evaluated Stream		
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION USGS Quadrangle Name: Flushing NRGS Soil Map Page: NRGS Soil Map Stream Order County. Harrison Township / City: Athers Township MISCELLANEOUS Base Flow Conditions? (YN); Y Date of last precipitation: Quantity: Photograph Information: Elevated Turbidity? (YN); N Cancpy (% open): 100% Were samples collected for water chemistry? (YN); N (Note lab sample no. or id. and attach results) Lab Number: Field Measures: Temp (°C): Dissolved Oxygen (mgr): PH (S.U.) Conductivity (µmhos/cm) Is the sampling reach representative of the stream (YN) If not, please explain: BIOTIC EVALUATION Performed? (YN); N (If Yes, Record all observations, Voucher collections optional, NOTE; at voucher samples must be labeled with the site of Dissolved? (YN), N (Voucher? (YN)) N (Voucher? (YN))		
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION USGS Quadrangle Name. Flushing NRCS Soll Map Page: NRCS Soll Map Stream Order County: Harrison Township / City: Athens Township MISCELLANEOUS Base Flow Conditions? (Y/N): Date of last precipitation: Quantity: Photograph Information: Canopy (% open): 100% Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id, and attach results) Lab Number: Flidd Measures: Temp (**C) Dissolved Oxygen (mgl) pH (S.U.) Conductivity (umhos/cm) Is the sampling reach representative of the stream (Y/N) If not, please explain: BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be table led with the site of the observed? (Y/N) N (Noucher? (Y/N)) N (Youcher? (Y/N)) N (Y/N) N (Y		
USGS Quadrangle Name: Flushing NRCS Soil Map Page: NRCS Soil Map Stream Order County: Harrison Township / City: Athens Township MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: Photograph Information: Elevated Turbidity? (Y/N): N Canopy (% open): 190% 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) If not, please explain: BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. You cher collections optional. NOTE: all voucher samples must be labeled with the site in notice propriets field dish shelss from the Primary Headwater Habitar Assassment Manual) Fish 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 must be completed): Include important landmarks and other features of Interest for site evaluation and a narrative description of the stream's location Stream NS-6a Stream NS-6a Stream NS-6a Stream emerges from		
County: Harrison Township / City: Aftens Township MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: Photograph Information: Elevated Turbidity? (Y/N): N Canopy (% open): 100% Were samples collected for water chemistry? (Y/N): N (Mote lab sample no. or id. and attach results) Lab Number: Field Measures: Temp (*C): Dissolved Oxygen (mot): PH (S.U.): Conductivity (µmhos/cm): Is the sampling reach representative of the stream (Y/N): 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 of the stream of the primary Headwater Habitat Assessment Manual; Progs or Tadpoles Observed? (Y/N): N Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): Include Important Landmarks and other features of Interest for site evaluation and a narrative description of the stream's location of the stream's		
MiSCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: Photograph Information: Elevated Turbidity? (Y/N): N Canopy (% open): 100% 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 (mgt) PH (S.U.) Conductivity (jumhos/cm) PH (S.U.) Is the sampling reach representative of the stream (Y/N) PH (If not, please explain: BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations, Voucher collections aplienal, NO TE: 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 Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Omments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location Stream NS-6a Stream NS-6a Stream in S-7 (Dry Channel)		
Base Flow Conditions? (V/N): V Date of last precipitation: Quantity: Photograph Information: Elevated Turbidity? (Y/N): N Canopy (% open): 100% 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/h) pH (S.U.) Conductivity (µmhos/cm) Is the sampling reach representative of the stream (Y/N) If not, please explain: BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations, Voucher collections appional, NOTE: all voucher samples must be labeled with the site of the primary Headwarer Habitat Assessment Manual) Fish Observed? (Y/N): N Voucher? (Y/N) N Sall ers Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates 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 Stream NS-8a Stream NS-6b Stream emerges from	County: Harrison	Township / City: Athens Township
Photograph Information: Elevated Turbidity? (Y/N): N	MISCELLANEOUS	
Elevated Turbidity? (Y/N): N Canopy (% open): 100% 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) If not, please explain: 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 Aquatic Macroinvertebrates 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 DIR Road Stream NS-6a Stream NS-7 (Dry Channel) Dirt Road	Base Flow Conditions? (Y/N):Y Date of last pro	ecipitation:Quantity:
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 (mq/l) pH (S.U.) Conductivity (µmhos/cm) Is the sampling reach representative of the stream (Y/N) If not, please explain: BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations, Voucher collections optional. NOTE: all voucher samples must be labeled with the site 1D number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salt Pers Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N V	Photograph Information:	
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 in D number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Outher? (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 Stream NS-6a Stream NS-6a Stream NS-6b Stream emerges from	Elevated Turbidity? (Y/N): N Canopy (% c	ppen): 100%
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 in D number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N Outher? (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 Stream NS-6a Stream NS-6a Stream NS-6b Stream emerges from	Were samples collected for water chemistry? (Y/N):	Note lab sample no. or id. and attach results) Lab Number:
Additional comments/description of pollution impacts: BIOTIC EVALUATION		
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 Sala ers Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates 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 Stream NS-6a Stream NS-6b Dirt Road Stream emerges from	Is the sampling reach representative of the stream (Y/N	N) Y If not, please explain:
Performed? (Y/N): Note that the site of the stream NS-6a (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site of the stream that th	Additional comments/description of pollution impacts:_	
Stream NS-6a Stream NS-7 (Dry Channel) Dirt Road Stream emerges from	Performed? (Y/N): N (If Yes, Record all observed ID number. Include approximately Includ	ropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Sali ers Observed? (Y/N) N
Width=1.5' Stream NS-7 (Dry Channel) Dirt Road Stream emerges from		
Width=1.5' Stream NS-7 (Dry Channel) Dirt Road Stream emerges from	Stream NS-6a	Stream NS-6b
Dirt Road Stream emerges from	FLOW →	
Stream emerges from		(Dry Channel)
		Stream emerges from



ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION Nottingham Solar Site	
SITE NUMBER Stream NS-8 RIVER BASIN Tuscarawas DRAINAGE AREA (mi²) 0.	05
LENGTH OF STREAM REACH (ft) 200 LAT. 40.19458 LONG81.06611 RIVER CODE RIVER MILE	
DATE 01/13/21 SCORER PJR/MDT COMMENTS Ephemeral Stream	
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	UUEI
(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	HHEI Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 60%	Points
BOULDER (>256 mm) [16 pts]	Substrate
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt]	Max = 40
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0	14
ONTO (AZ IIIII) [O PIO]	
Total of Percentages of 0.00% (A) Substrate Percentage (B) Substrate Percentage (Check	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 2	
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]	
> 22.5 - 30 cm [30 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
	Ponkfull
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. 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]	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width 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]	Width
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): > 4.0 meters (> 13') [30 pts] > 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 (meters): 0.30 This information must also be completed	Width Max=30
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] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS AVERAGE BANKFULL WIDTH (meters): 0.30	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 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 (meters): O.30 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: RIPARIAN WIDTH RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH RIPARIAN WIDTH FLOODPLAIN QUALITY (Per Bank) L R (Most Predominant per Bank) L R (Conservation Tillage) Mature Forest, Wetland	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Conservation Tillage Immature Forest, Shrub or Old Field Conservation Forest, Shrub or Old Field Conservation Forest, Shrub or Old Field Conservation Forest, Shrub or Old Conservation Field Conservation Field	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS 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 >10 m Mature Forest, Wetland Conservation Tillage Moderate 5-10m Mature Forest, Shrub or Old Urban or Industrial Narrow <5m Residential, Park, New Field Open Pasture, Row Cro	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONL Y one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Conservation Tillage Immature Forest, Shrub or Old Field Conservation Forest, Shrub or Old Field Conservation Forest, Shrub or Old Field Conservation Forest, Shrub or Old Conservation Field Conservation Field	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 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 (meters): O.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 RIPARIAN WIDTH L R (Most Predominant per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field Open Pasture, Row Cro None COMMENTS Mining or Construction COMMENTS	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 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 (meters): 0.30 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 R	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 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 (meters): O.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 □ RIPARIAN WIDTH □ (Per Bank) □ Mature Forest, Wetland □ Conservation Tillage □ Moderate 5-10m □ Mature Forest, Wetland □ Conservation Tillage □ Moderate 5-10m □ Residential, Park, New Field □ Open Pasture, Row Crown None □ Fenced Pasture □ Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Wide > 10 m	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS 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 ↑ RIPARIAN WIDTH FLOODPLAIN QUALITY Mide > 10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Wide > 10m None Residential, Park, New Field Open Pasture, Row Crown None 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 3.0	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 13') [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream Note 1 minuted (Per Bank) Wide > 10 m	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS 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 ↑ RIPARIAN WIDTH FLOODPLAIN QUALITY Mide > 10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Wide > 10m None Residential, Park, New Field Open Pasture, Row Crown None 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 3.0	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	<u>:</u>
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, A	ttach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: N/A	Distance from Evaluated Stream
CWH Name:	
EWH Name: _	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHI	ED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Flushing NRCS Soil Map	
County: Harrison Township / City: Ather	ns Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation:	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 100%	
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id	I. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) PH (S.U.)	
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
· , ———— ·	nal. NOTE: all voucher samples must be labeled with the sit
ID number. Include appropriate field data sheets from the F	
Fish Observed? (Y/N) Vouc Y/N) Sal ers Observed? (Y/N)	Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	
DRAWING AND NARRATIVE RECORDED OF CEREAM	DEAOU (This must be so my lets d):
DRAWING AND NARRATIVE DESCRIPTION OF STREAM Include important landmarks and other features of interest for site evaluation a	,
include important fandmands and other readines of interest for site evaluation.	and a name we description of the sheam's location
ME III . A O	Width=1.5'
Stream NS-8 Width=1.0'	/ /
FLOW Dry Channel	
FLOW \$	Stream NS-6a
/ Width=0.5'	





Primary Headwater Habitat Evaluation Form 19 HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION Nottingham Solar Site SITE NUMBER Stream NS-9 RIVER BASIN Tuscarawas DRAINAGE AREA (mi²) 0.05 LAT 40.18848 LONG -81.03872 LENGTH OF STREAM REACH (ft) _ RIVER CODE RIVER MILE DATE 03/16/21 COMMENTS | Ephemeral Stream SCORER 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 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 **PERCENT PERCENT Points** BLDR SLABS [16 pts] SILT [3 pt] 90% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 0% 0% Substrate 0% 0% FINE DETRITUS [3 pts] BEDROCK [16 pt] Max = 400% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 10% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 14 0% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) (A) Substrate Percentage 0.00% A + BBldr Slabs, Boulder, Cobble, Bedrock TOTAL NUMBER OF SUBSTRATE TYPES: 2 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 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 COMMENTS **MAXIMUM POOL DEPTH (centimeters):** 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] ≤ 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] 5 0.80 COMMENTS **AVERAGE BANKFULL WIDTH (meters):** 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 (Most Predominant per Bank) (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 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

✓ Moderate to Severe

>3

Severe (10 ft/100 ft)

2.5

PHWH Form Page - 1

1.5

Moderate (2 ft/100 ft)

Flat (0.5 ft/100 ft)

0.5

STREAM GRADIENT ESTIMATE

Flat to Moderate

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: N/A	_ Distance from Evaluated Stream
CWH Name:EWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHEE	D AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Flushing NRCS Soil Map F	
County: Harrison Township / City: Athens	s Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N):N Canopy (% open):40%	
Were samples collected for water chemistry? (Y/N): 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) Y If not, please explain:	
Additional comments/description of pollution impacts:	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional ID number. Include appropriate field data sheets from the Pri Fish Observed? (Y/N) N Voucher? (Y/N) N Salar (Y/N) N Aquatic Macroinvertebrate Comments Regarding Biology:	imary Headwater Habitat Assessment Manual) Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM F Include important landmarks and other features of interest for site evaluation an	
Stream emerges from culvert Dry Channel Width=2.5'	Stream drains into Wetland NS-23





ChieFP Primary Headwater Habitat Evaluation Form

25

SITE NAME/LOCATION Nottingham Solar Site	
SITE NUMBER Stream NS-10 RIVER BASIN Tuscarawas DRAINAGE AREA (mi²)	.05
LENGTH OF STREAM REACH (ft) 140 LAT. 40.18799 LONG81.03790 RIVER CODE RIVER MILE	
DATE 03/16/21 SCORER PJR COMMENTS Ephemeral Stream	
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 RECOVERING RECENT OR NO RECOVERED RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVERE	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 BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 3	HHEI Metric Points Substrate Max = 40 15
 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] > 22.5 - 30 cm [30 pts] 	Pool Depth Max = 30
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (centimeters): 2	
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): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	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]	Width
> 4.0 meters (> 13') [30 pts] > 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 - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=10 minututututututututu	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 0.80 AVERAGE BANKFULL WIDTH (meters): 0.80 AVERAGE BANKFULL WIDTH (meters): (0.80 (0.80 AVERAGE BANKFULL WIDTH (meters): (0.80 (0.80 AVERAGE BANKFULL WIDTH (meters): (0.80 (0.8	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)
WWH Name: N/A 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: Flushing NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Harrison Township / City: Athens Township
MISCELLANEOUS
Base Flow Conditions? (Y/N):_Y Date of last precipitation: Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 40%
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) 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 ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Sale ers Observed? (Y/N) N Voucher? (Y/N) N Voucher
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must 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'
Width=2.5'
Stream drains into
Wetland NS-23
FLOW /
Width=2.5'



APPENDIX F REPRESENTATIVE PHOTOGRAPHS

Wetland NS-1 (PFO) facing north on January 13, 2021.



Wetland NS-1 (PEM) facing west on January 13, 2021.



Wetland NS-2 (PEM) facing north on January 13, 2021.



Wetland NS-2 (PEM) facing south on January 13, 2021.



Wetland NS-3 (PEM) facing south on January 13, 2021.



Wetland NS-3 (PEM) facing east on January 13, 2021.



Wetland NS-4 (PEM) facing north on January 12, 2021.



Wetland NS-4 (PEM) facing east on January 12, 2021.



Wetland NS5 (PEM) facing north on January 12, 2021.



Wetland NS-5 (PEM) facing south on January 12, 2021.