Pollinator Habitat Assessment Instrument

Data collection

Descriptions

Layer (General Name)	ShapeFile File Name	Layer Type	Field Category	General Field Name	Database Field Name	Field Type	Entity/Attribute Name	Entity/Attribute Code/Score	Attribute Definition / Examples	Image Reference	Instrument	Citation for Instrument
Pollinator habitat data collection	Pollinator_data_your initials	Vector - polygon	General data collection information	Parcel id	ParcelUWID	Double	Data collection specific parcel id number		The parcel id number for our data collection efforts was generated by using the row id #+1.			
				Name	Name	String/Text	Your name		Please type your full, legally given first and last name.			
				Day of the week	Day	String/Text	Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, or Saturday.		Please type the day of the week you collected your data.			
				Date	Date	Date	Date		Please fill out the date you collected your data.			
				Time	Time	Time	Time		Please fill out the time of day you collected your data.			
				Weather	Weather	String/Text	Weather options include: sunny, partly cloudy, cloudy, raining, wintery mix (i.e. snow, sleet, and/or freezing rain).		Please fill out the weather for the day and time you collected your data. Options include: sunny, partly cloudy, cloudy, raining, wintery mix (i.e. snow, sleet, and/or freezing rain).			
				Temperature	Temp	Double	Temperature in Farenheit		Please fill out the temperature in farenheit for the day and time you collected data.			

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			Landscape features	Non-crop vegetation	NCVeg	Double	> 30%	1	Percent of natural or semi-natural vegetation within ½ mile of project area (whether on or off the parcel/site). This land use cover includes, prairie, shrub lands, woodlands or old fields, riparian habitat and wetlands, suburban wooded areas, non-invasive weedy areas. It does NOT include lawn grass, or over-grazed pasture.		Pollinator Habitat Assessment Form and Guide	Xerces Society for Invertebrate Conservation. (2014). Pennsylvania pollinator habitat assessment form and guide. Portland, OR. Retrieved from www.xerces.org
							20-29.9%	0.7				
							5-19.9%	0.3				

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							<4.9%	0				
				Dominant vegetation type	DomVegT	Double	Native plants	1	Dominant vegetation in non-cropped area within ½ mile of project area (whether on or off the parcel/site).			
							Mix of native and naturalized (non-invasive) plants	0.7				
							Naturalized flowering species (e.g. alfalfa	0.5				
							Invasive flowering plants	0				
							Sod-forming grasses	0				
			Parcel/site features	Natural to semi-natural habitat	Habitat	Double	> 10%	1	Percentage of parcel/site that is in natural or semi-natural habitat. This land use cover includes, prairie, shrub lands, woodlands or old fields, riparian habitat and wetlands, suburban wooded areas, non-invasive weedy areas. It does NOT include lawn grass, or over-grazed pasture.			
							6-9%	0.7				
							3-5%	0.5				
							1-2%	0.3				
							0%	0				
				Additional parcel/site features	FeatMe	Double	Permanent meadows with diverse wildflowers	1	Additional parcel/site features.			
					FeatB	Double	Buffers: 0.1 point for every 20% of area within 25 feet of water features (e.g. stream, irrigation ditch, pond, etc.) that is vegetated,	0-0.5				

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							ideally including preferred pollinator plants					
					FeatH	Double	Hedgerows, windbreaks, or fencerows of diverse tree/shrub species for pollinators	0.5				
					FeatFC	Double	Annual flowering cover crops allowed to bloom, annual bee pasture, bolting crops, etc.	0.5				
					FeatW	Double	Source of clean surface water (non-contaminated) during growing season	0.5				
			Foraging habitat	Non-crop forage	NCForage	Double	>85%	1	Percentage of vegetative cover (non-crop area) that is forbs or flowering shrubs on parcel/site. Excluding invasive and noxious species (e.g. knapweed, purple loosestrife, yellow star thistle).			
							45-84.9%	0.7				
							30-44.9%	0.5				
							20-29.9%	0.3				
							<19.9%	0.1				
				Spring bloom pollinator friendly plants	SpBloom	Double	5+ species	1	Number of species of pollinator-friendly forbs, shrubs or trees on parcel/site that bloom in spring and support bees. This includes some crops and cover crops. Excluding invasive and noxious species (e.g. knapweed, purple loosestrife, yellow star thistle).			
							2-4 species	0.5				
							1-2 species	0.3				
							0 species	0				
				Summer bloom pollinator friendly plants	SuBloom	Double	5+ species	1	Number of species of pollinator-friendly forbs, shrubs or trees on parcel/site that bloom in summer and support bees. This includes some crops and cover crops. Excluding invasive and noxious species (e.g. knapweed, purple			
							2-4 species	0.5				
							1-2 species	0.3				
							0 species	0				

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									loosestrife, yellow star thistle).			
				Fall bloom pollinator friendly plants	FaBloom	Double	5+ species	1	Number of species of pollinator-friendly forbs, shrubs or trees on parcel/site that bloom in fall and support bees. This includes some crops and cover crops. Excluding invasive and noxious species (e.g. knapweed, purple loosestrife, yellow star thistle).			
							2-4 species	0.5				
							1-2 species	0.3				
							0 species	0				
			Nesting habitat	Sites for ground nesting bees soils	SGNBS	Double	> 20% of parcel/site with untilled, well-drained bare ground, or with sparse vegetation.	0.5	Ground nests are often marked by a small mound of excavated soil, but may also be nothing more than a small hole in the ground. Nests may be dug in bare soil, areas of patchy vegetation, or hidden among plants, including at the base of crop plants such as squash. They are usually in marginal areas such as ditch banks or track sides, and frequently can be found close to buildings or other structures.			
							5-19.9% of parcel/site with untilled, well-drained bare ground, or with sparse vegetation.	0.3				
							< 5% of parcel/site with untilled, well-drained bare ground, or with sparse vegetation.	0.1				
				Sites for ground nesting bees with sandy soil	SGNBSandy	Double	> 20% of parcel/site with sandy to sandy loam soil	0.5				
							5-19.9% of parcel/site with sandy to sandy loam soil	0.3				
							< 5% of parcel/site with sandy to sandy loam soil	0.1				
				Untilled sites for ground nesting bees	USGNB	Double	0.1 point for every 10% of area untilled on parcel/site or ranch	0-1.0				
				Non-compacted or excavated soil	NcES	Double	Areas with bare but compacted soil, or excavated soil (absent = 0, present = 0.3)	0 or 0.3				
				Dead nesting habitat	DNH	Double	5+ dead wood, brush piles, snags present, or piles of field stones	0.5	The great majority of wood- or cavity-nesting bees do not excavate their own nest; they occupy pre-existing tunnels			
							2 - 4 dead wood, brush piles, snags present, or piles of field stones	0.3				

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							0 - 1 dead wood, brush piles, snags present, or piles of field stones	0	or cavities in snags, the center of pithy-stemmed shrubs, and in brush piles. Bumble bees frequently nest in abandoned rodent burrows or under clump-forming bunch grasses.			
				Pithy twigs	PT	Double	>20 plants that are shrubs or trees with pithy twigs (elderberry, cane fruit, sumac, etc.)	0.5				
							5 - 20 plants that are shrubs or trees with pithy twigs (elderberry, cane fruit, sumac, etc.)	0.3				
							<5 plants that are shrubs or trees with pithy twigs (elderberry, cane fruit, sumac, etc.)	0				
				Undisturbed native bunch grasses	UNBG	Double	>20% area of undisturbed native bunch grasses (clump-forming)	0.5				
							5-19.9% area of undisturbed native bunch grasses (clump-forming)	0.3				
							<5% area of undisturbed native bunch grasses (clump-forming)	0				
				Artificial nesting sites	ANSites	Double	The site contains beehives or butterfly boxes (absent = 0, present = 1.0)	0 or 1	Additional man-made pollinator nesting habitat.			
			Management practices	Pesticide and insecticide use	PestIn	Double	No use of pesticides and insecticides. Buffer composed of trees and/or shrubs de- signed to capture drift and not pollinator attractive	4	Management practices should not include heavy uses of chemical pesticides, insecticides, herbicides, etc.			
							Use of organic pesticides and insecticides. Buffer composed of trees and/or shrubs de- signed to capture drift and not pollinator attractive	3				
							Moderate use of pesticides and insecticides (no greater than 10% of crop area). Buffer composed of trees and/or shrubs de- signed to capture drift and not pollinator	2				

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							attractive. Sprayed only at night					
							Moderate use of pesticides and insecticides (no greater than 10% of crop area). No buffer composed of trees and/or shrubs designed to capture drift and not pollinator attractive. Sprayed only at night.	1				
							None of the above are in place	0				

ParcelUWID	Name	Day	Date	Time	Weather	Temp	NCVeg	DomVegT	Habitat	FeatMe	FeatB	FeatH	FeatFC	FeatW	NCForage	SpBloom	SuBloom	FaBloom	SGNBS	SGNBSandy	USGNB	NcES	DNH	PT	UNBG	ANSites	PestIn