

**POLLINATOR SCORECARD DATA
AT 2020 TOLLWAY MANAGEMENT AREA
POLLINATOR POINTS**



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EXECUTIVE SUMMARY

- ▷ Surveyed ISTHA roadside vegetation management areas at 29 points along I-90 and I-88
 - Most sites contained milkweed plants, usually Common Milkweed (*Asclepias syriaca*)
 - No Monarch adults or larvae observed during sampling
 - Other butterfly, beetle, bee, and wasp species were observed
 - The 5 sites with the highest overall scores were in the I-90 corridor
 - The I-90 corridor sites tended to have more nectar and invasive species than those in the I-88 corridor
 - Invasive species were a threat at all sites

INTRODUCTION

The Illinois State Toll Highway Authority (ISTHA) requested additional data from management areas where they collected pollinator data during the 2020 growing season. The work's goal was to contribute to the Pollinator Scorecard method (<http://rightofway.erc.uic.edu/pollinator-habitat-scorecard/>) for assessing pollinator habitat quality along roadside rights-of-way. The sites included 29 points within ISTHA roadside vegetation management areas, clustered in 2 groups along I-88 and I-90.

MATERIALS AND METHODS

We made 1 visit to each site between 18 and 28 August 2020. We used the Monarch Joint Venture (MJV) Integrated Monarch Monitoring Program (IMMP) sampling method (<https://monarchjointventure.org/>) to gather data. When possible, we used IMMP transect sampling, with segmented quadrats placed every 5 m along a transect tape. Segments A and B are each 0.5 m on the left side of the tape, and segment C is 0.5 x 2 m on the right side.

Sampling proceeds from left to right across the transect tape, segments A through C. Each nectar plant or milkweed species is recorded from the first segment of the transect where it is observed and assigned an estimate of

percent cover. We also collected data for invasive species. Milkweed plants were counted within the plots, and the method concludes with a meander survey throughout the site to record any additional species and milkweed plants. We calculated approximate percent cover values for the Pollinator Scorecard data as the overall average of nectar, native nectar, and invasive species across all plots at each site. We then used the Pollinator Scorecard method (Table 1) to assign scores to each site using the cover averages and the total number of milkweed plants per site.

In addition to quantitative sampling, we recorded qualitative observations at each site about adjacent land use, the presence of habitat resources, any pollinators observed, and threats to the site. We limited sampling to within the site boundaries in GIS data provided by ISTHA, but we noted nearby habitat resources and threats.

At some sites where transect sampling was not practical, but the site was accessible, we used the IMMP meander survey census method to count milkweed plants, compile nectar plant species lists, and record Pollinator Scorecard data. Some sites along I-90 could not be safely accessed due to the roadway being at a higher elevation than the ground. We recorded Pollinator Scorecard data at these sites while overlooking the site from the roadway above (Plate 1).

Table 1. Data fields requested for each Pollinator Scorecard monitoring site, showing point values assigned for milkweed counts and percent cover.

Metric	Criteria
Adjacent Land Use <i>Land use adjacent to the site nearest the plot location</i>	Cropland Developed Woodland Wetland Grassland (Diverse) Grassland (Non-Diverse) Other
Number of Milkweed Stems <i>Count the number of milkweed plants observed in the plot</i>	0 plants (0 Points) 1 plant (5 Points) 2-5 plants (9 Points) 6-10 plants (12 Points) 11-50 plants (17 Points) >50 plants (26 Points)
Tier 3: Percent Potentially Flowering Nectar Plant Cover <i>Estimate the percent cover of potentially flowering nectar plants (e.g., wildflowers and shrubs), whether flowering or not</i>	0% (0 Points) 1-5% (1 Point) 6-10% (6 Points) 11-25% (12 Points) 26-50% (18 Points) 51-75% (24 Points) 76-100% (30 Points)
Tier 3: Habitat Resources <i>Any habitat resources that are present</i>	Native bunch grasses Brush piles Undisturbed thatch Dead wood/snags Rock piles Bare ground Plants with hollow pithy stems Larval host plants (e.g. milkweed)
Habitat Resource Notes <i>Any habitat resources that are present</i>	
Number of Nectar Plant Species <i>Count the number of unique nectar plant species identified in the plot.</i>	0 species (0 Points) 1-5 species (3 Points) 6-10 species (6 Points) 11-20 species (8 Points) 21-35 species (11 Points) >35 species (17 Points)

Metric	Criteria
Number of Native Nectar Plant Species <i>Count the number of unique native nectar plant species identified in the plot.</i>	0 species (0 Points) 1-5 species (1 Point) 6-10 species (2 Points) 11-15 species (3 Points) 16-20 species (5 Points) >20 species (7 Points)
Invasive Species & Noxious Weed Percent Cover <i>Estimate the percent cover of invasive species and noxious weeds in the plot.</i>	0% (6 Points) 1-5% (5 Points) 6-10% (4 Points) 11-25% (3 Points) 26-50% (2 Points) 51-75% (1 Point) 76-100% (0 Points)
Pollinators Observed <i>Check for any pollinators observed while surveying the plot. Pollinators need not be located within the plot to be counted.</i>	Honey Bees Other Bees Monarch Butterflies Other Butterflies Beetles on Flowers Wasps on Flowers Moths Flies on Flowers Other Pollinators
Threats <i>Check for any habitat threats identified on or adjacent to the plot within the site/area.</i>	Woody Encroachment Invasive Species Frequent Grazing, Mowing or Herbicide Adjacent Land Use Encroachment Adjacent Land Use Impacts Other Threats
Any additional notes.	

RESULTS

We recorded both quantitative data (Table 2) and qualitative data (Table 3) for each of the 29 points (Maps 1, 1A-1E, and 2), and we compiled species lists for each site, including nectar, host, and invasive plants (Appendix 1). Species nomenclature follows Wilhelm and Rericha (2017).

We observed milkweed plants within 19 of the 29 sites. Three additional sites had nearby populations of Common Milkweed (*Asclepias syriaca*), usually along the ROW fence. The 5 sites with the highest overall scores were in the I-90 corridor, where roadside vegetation was relatively species-rich. In the I-90 corridor, sites tended to have more nectar and invasive species than those in the I-88 corridor, which were often dominated by Tall Fescue (*Schedonorus arundinaceus*).

CONCLUSIONS

We found most sites in both corridors contained milkweed plants, usually Common Milkweed (*Asclepias syriaca*). We did not observe any Monarch adults or larvae during sampling, but we found other butterfly, beetle, bee, and wasp species. The sites can host many pollinator species from their larval to adult stages. This benefit can be enhanced with improved seed mixes (Sivicek, 2021) and habitat management such as appropriately timed mowing and control of invasive and less desirable species. We did observe planted native nectar species and bunch grasses in many of the sites. We also observed other habitat resources such as bare ground (for ground nesting bees) and flowering plant species with hollow pithy stems (for stem-nesting bees).

We recorded invasive species as a threat at all roadside sites (Table 3), even when present in low abundance, due to the high density of invasive species throughout



Plate 1. Overlooking I-90 site 19-09787.

Table 2. Quantitative Pollinator Scorecard data, showing the number of milkweed plants counted at each site, percent cover of nectar and invasive species, number of nectar and native nectar species, and total score for each site.

Site	Date	# Milkweed	% Cover Nectar Spp	# Nectar Spp	# Native Nectar Spp	% Cover Invasive Spp	Site Score
19-09764	8/19/2020	9	18	8	2	3	40
19-09762	8/19/2020	0	6	6	1	3	16
19-09756	8/19/2020	0	12	6	1	3	22
19-09754	8/19/2020	0	6	3	1	3	13
19-09753	8/20/2020	9	1	8	2	5	25
19-09752	8/20/2020	0	1	6	2	3	12
19-09751	8/20/2020	0	12	6	1	5	24
19-09750	8/20/2020	12	18	8	2	5	45
19-09736	8/20/2020	0	1	3	0	5	9
19-09729	8/20/2020	0	1	3	0	0	4
19-09724	8/20/2020	17	1	3	1	5	27
19-09728	8/20/2020	12	1	6	1	5	25
19-09737	8/20/2020	17	1	3	1	5	27
19-09766	8/20/2020	9	1	6	2	5	23
19-09769	8/21/2020	9	12	6	2	2	31
19-09775	8/25/2020	9	18	8	3	2	40
19-09777	8/25/2020	9	18	8	3	2	40
19-09781	8/25/2020	9	18	8	3	2	40
19-09800	8/25/2020	26	12	8	2	2	50
19-09801	8/26/2020	17	12	6	1	4	40
19-09794	8/26/2020	17	24	8	1	5	55
19-09787	8/26/2020	9	18	8	1	4	40
19-09780	8/26/2020	0	30	6	1	3	40
19-09779	8/26/2020	12	24	8	2	3	49
19-09778	8/26/2020	12	24	8	2	3	49
19-09776	8/26/2020	17	18	6	2	2	45
19-09774	8/26/2020	5	12	8	1	2	28
19-09773	8/27/2020	0	6	8	3	3	20
19-09772	8/27/2020	17	18	11	2	3	51

the Tollway corridor (Sivicek et al., 2019). Although some of these species provide nectar resources for pollinators, the number of pollinator species they host is limited, and they can out compete more ecologically valuable native species. Existing populations of invasive species along ISTHA roadways create a seed source and a connected network in which the species can easily spread. Teasel, Canada Thistle, Sweet Clover, and Reed Canary Grass were common within and adjacent to our sampled sites (Plate 2; Appendix 1). We suggest increasing invasive species management to improve the habitat quality at all pollinator sites. Specific recommendations for invasive species control can be found in Sivicek et al. (2019) and within the Illinois Department of Natural Resources

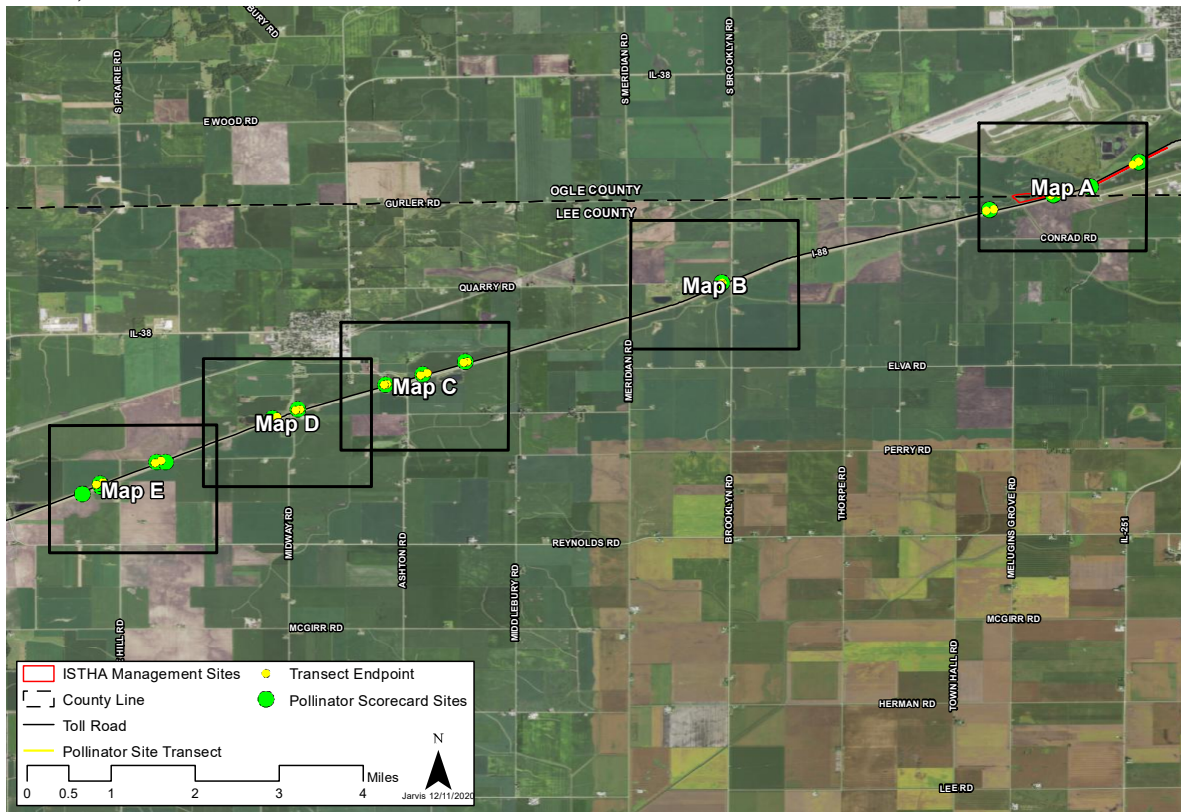
Illinois Nature Preserves invasive species management guidelines (IDNR, 2017).

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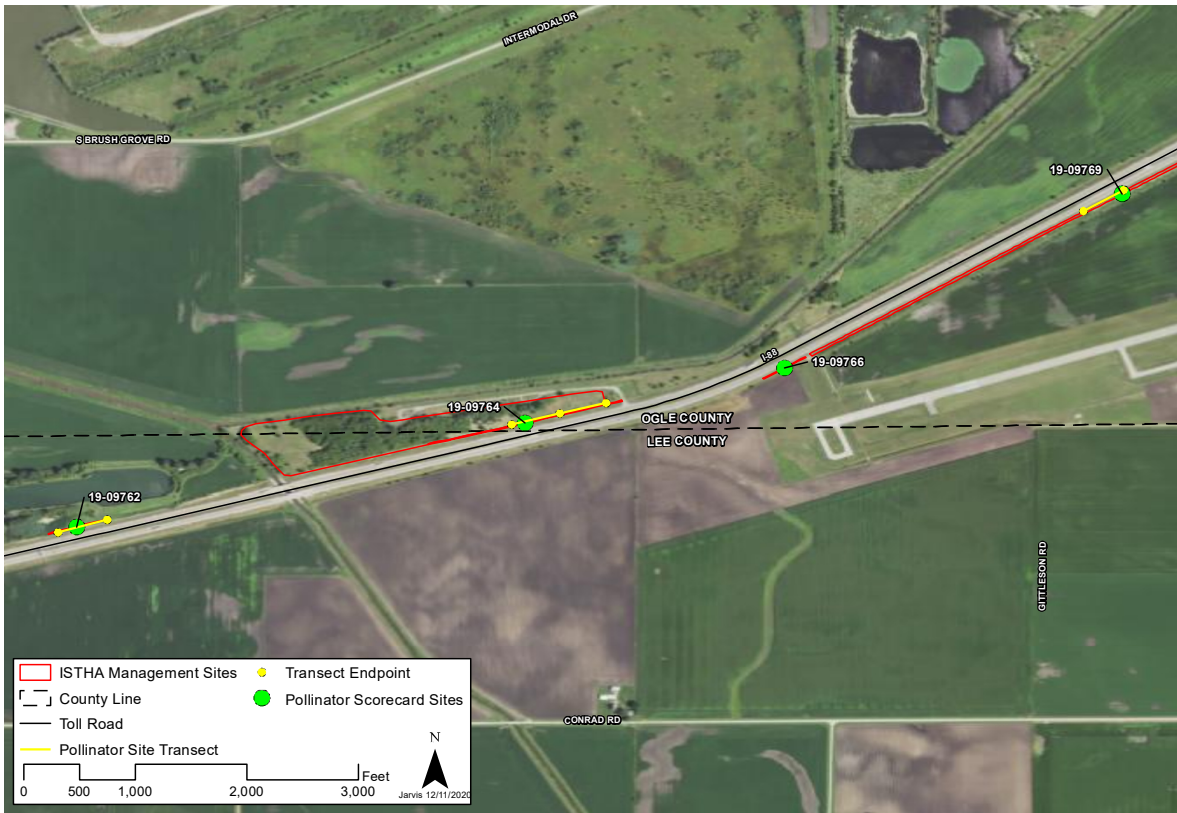
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Plate 2. Teasel along the edge of I-90 site 19-09794, with planted native bunch grasses (Indian Grass, *Sorghastrum nutans*).



Map 1. Map showing locations along I-88 that were scored.



Map 1A. Map showing enlargement of section A from Map 1.



Map 1B. Map showing enlargement of section B from Map 1.



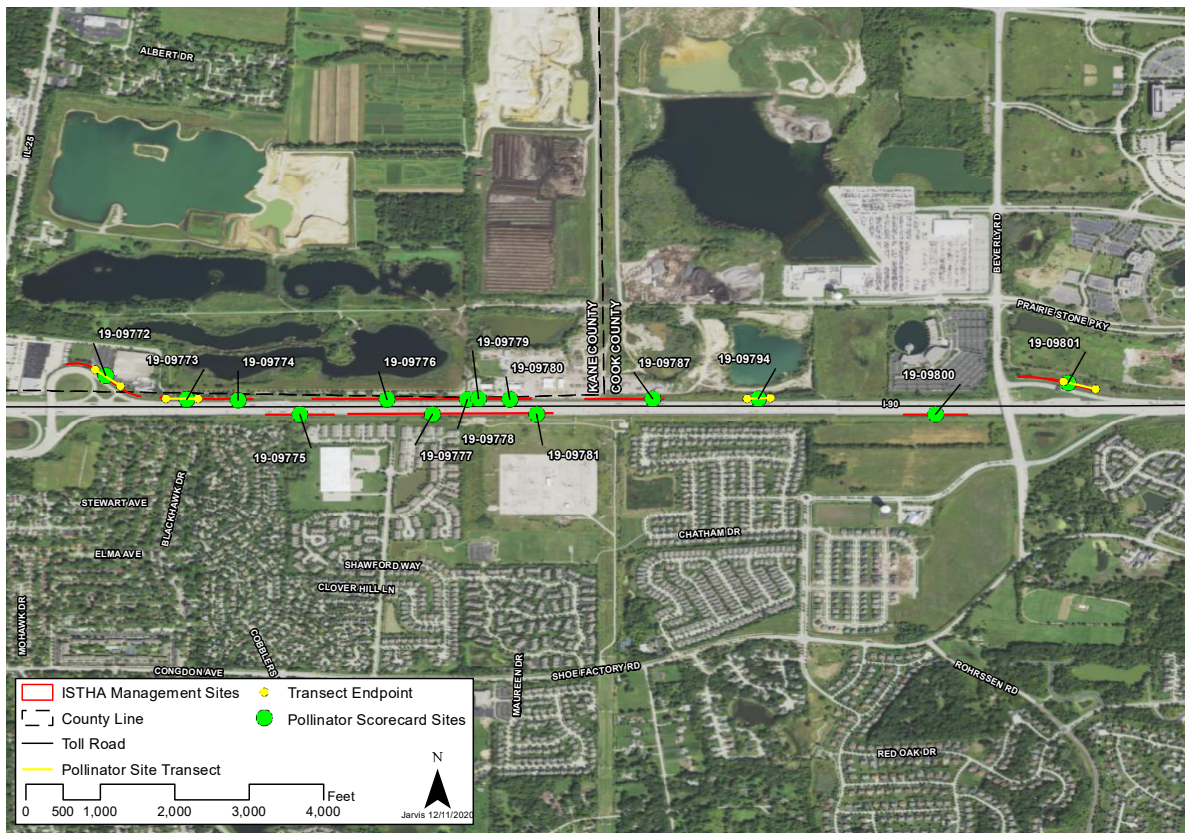
Map 1C. Map showing enlargement of section C from Map 1.



Map 1D. Map showing enlargement of section D from Map 1.



Map 1E. Map showing enlargement of section E from Map 1.



Map 2. Map showing locations along I-90 that were scored.

Table 3. Qualitative Pollinator Scorecard data.

Site	Date	Adjacent Land Use	Habitat Resources	Habitat Resource Notes	Pollinators Observed	Threats	Notes
19-09764	8/19/20	Cropland, Grassland (non-diverse)	Plants with hollow pithy stems, Larval host plants		Other butterflies	Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	Pollinators observed on <i>Dipsacus laciniatus</i> . Woody plants along fence.
19-09762	8/19/20	Cropland	Plants with hollow pithy stems			Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	
19-09756	8/19/20	Cropland, Wetland, Grassland (non-diverse)	Bare ground, plants with hollow pithy stems			Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	
19-09754	8/19/20	Cropland, Wetland			Other bees	Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	Pollinators observed on <i>Melilotus alba</i> . Large colony of <i>Asclepias syriaca</i> outside project area.
19-09753	8/20/20	Cropland				Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	
19-09752	8/20/20	Woodland, Grassland (non-diverse)	Plants with hollow pithy stems			Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	
19-09751	8/20/20	Cropland	Native bunch grasses	Native bunch grasses: <i>Schizachyrium scoparium</i>	Other butterflies, Beetles on flowers	Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	Recent mowing. Pollinators observed on <i>Medicago sativa</i> , <i>Melilotus alba</i> , and <i>Trifolium hybridum</i> .
19-09750	8/20/20	Cropland, Woodland, and Grassland (non-diverse)	Larval host plants			Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	
19-09736	8/20/20	Cropland, Grassland (non-diverse)	Native bunch grasses	Native bunch grasses: <i>Schizachyrium scoparium</i>		Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	Milkweed (<i>Asclepias syriaca</i>) present outside project area, near culvert. Invasive <i>Melilotus alba</i> abundant near project area.
19-09729	8/20/20	Cropland, Grassland (non-diverse)		Although not present within the site, larval host plants (<i>Asclepias syriaca</i>), plants with hollow stems (<i>Solidago canadensis</i>), and native bunch grasses (<i>Bouteloua curtipendula</i> and little bluestem) are present between the site and the fence.	Other butterflies, Flies on flowers	Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	A number of native nectar species and <i>Asclepias syriaca</i> are present between the site and the fence.
19-09724	8/20/20	Cropland	Larval host plants			Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	
19-09728	8/20/20	Cropland	Plants with hollow pithy stems, Larval host plants			Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	No transect. Recently mowed. Census/meander method along fence.
19-09737	8/20/20	Cropland	Larval host plants			Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	No transect. Recently mowed. Census/meander method along fence.
19-09766	8/20/20	Cropland	Plants with hollow pithy stems, Larval host plants			Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	No transect. Recently mowed. Census/meander method along fence.
19-09769	8/21/20	Cropland	Larval host plants		Other butterflies	Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	

Site	Date	Adjacent Land Use	Habitat Resources	Habitat Resource Notes	Pollinators Observed	Threats	Notes
19-09775	8/25/20	Developed	Native bunch grasses, Plants with hollow pithy stems, Larval host plants	Native bunch grasses: <i>Andropogon gerardii</i>	Other butterflies	Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	No transect. Difficult access. Abundant invasive species cover.
19-09777	8/25/20	Developed	Native bunch grasses, Plants with hollow pithy stems, Larval host plants	Native bunch grasses: <i>Andropogon gerardii</i>	Other butterflies	Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	No transect. Difficult access. Abundant invasive species cover.
19-09781	8/25/20	Developed	Native bunch grasses, Plants with hollow pithy stems, Larval host plants	Native bunch grasses: <i>Andropogon gerardii</i>	Other butterflies	Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	No transect. Difficult access. Abundant invasive species cover.
19-09800	8/25/20	Grassland (non-diverse)	Larval host plants			Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	No transect. Recently mowed. Census/meander method along fence.
19-09801	8/26/20	Woodland, Grassland (non-diverse)	Larval host plants			Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	Herbicide damage on some milkweed plants near ditch and broadly across site.
19-09794	8/26/20	Woodland (fencerow)	Native bunch grasses, Plants with hollow pithy stems, Larval host plants	Native bunch grasses: <i>Andropogon gerardii</i> and <i>Sorghastrum nutans</i>	Beetles on flowers, Wasps on flowers	Woody encroachment, Invasive species, Frequent grazing, mowing or herbicide, Adjacent land use impacts	<i>Populus deltoides</i> and <i>Salix exigua</i> colonizing site. Wasps on <i>Melilotus alba</i> and beetles on <i>Euthamia graminifolia</i> .
19-09787	8/26/20	Developed, Woodland, Grassland (non-diverse)	Native bunch grasses		Other butterflies	Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	No transect. Not accessible due to high wall along roadway.
19-09780	8/26/20	Developed	Native bunch grasses	Native bunch grasses: <i>Andropogon gerardii</i> and <i>Sorghastrum nutans</i>		Woody encroachment, Invasive species, Frequent grazing, mowing or herbicide, Adjacent land use impacts	No transect. Not accessible due to high wall along roadway. <i>Populus deltoides</i> encroaching.
19-09779	8/26/20	Developed, Woodland	Native bunch grasses, Plants with hollow pithy stems, Larval host plants	Native bunch grasses: <i>Sorghastrum nutans</i>	Other bees, Frequent grazing, mowing or herbicide, Adjacent land use impacts	Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	No transect. Not accessible due to high wall along roadway. Pollinators observed on <i>Eupatorium serotinum</i> .
19-09778	8/26/20	Developed, Woodland	Native bunch grasses, Plants with hollow pithy stems, Larval host plants	Native bunch grasses: <i>Sorghastrum nutans</i>	Other bees, Frequent grazing, mowing or herbicide, Adjacent land use impacts	Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	No transect. Not accessible due to high wall along roadway. Pollinators observed on <i>Eupatorium serotinum</i> .
19-09776	8/26/20	Woodland, Grassland (non-diverse)	Native bunch grasses, Plants with hollow pithy stems, Larval host plants	Native bunch grasses: <i>Andropogon gerardii</i> , <i>Sorghastrum nutans</i> , and <i>Bouteloua curtipendula</i>		Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	No transect. Not accessible due to high wall along roadway.
19-09774	8/26/20	Woodland	Plants with hollow pithy stems, Larval host plants			Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	No transect. Not accessible due to high wall along roadway.
19-09773	8/27/20	Woodland	Native bunch grasses	Native bunch grasses: <i>Bouteloua curtipendula</i>		Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	Milkweed (<i>Asclepias syriaca</i>) present in small numbers outside site along roadway.
19-09772	8/27/20	Developed, Woodland	Native bunch grasses, Plants with hollow pithy stems, Larval host plants	Native bunch grasses: <i>Bouteloua curtipendula</i>	Other butterflies, Beetles on flowers	Invasive species, Frequent Grazing, Mowing, or Herbicide, Aja cent Land Use Impacts	Pollinators observed on <i>Lythrum salicaria</i> and <i>Dipsacus laciniatus</i> .

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Appendix I.

Species list for all sites, including only species used by pollinators for forage and host plants for larvae, or are invasive.

Species	Common Name	Nectar Plant?	Host Plant?	Native?	Invasive?	Sites
<i>Abutilon theophrasti</i>	Velvetleaf	Y	N	N	N	9773, 9772
<i>Alisma subcordatum</i>	Common Water Plantain	Y	N	Y	N	9753, 9752, 9769
<i>Apocynum sibiricum</i>	Smooth Indian Hemp	Y	N	Y	N	9764, 9752, 9775, 9777, 9781, 9800, 9787, 9780, 9776, 9773, 9772
<i>Arctium minus</i>	Common Burdock	Y	N	N	N	9779, 9778, 9776, 9772
<i>Asclepias incarnata</i>	Swamp Milkweed	Y	Y	Y	N	9769
<i>Asclepias syriaca</i>	Common Milkweed	Y	Y	Y	N	9764, 9753, 9750, 9724, 9728, 9737, 9766, 9775, 9777, 9781, 9800, 9801, 9794, 9787, 9779, 9778, 9776, 9774, 9772
<i>Asclepias verticillata</i>	Whorled Milkweed	Y	Y	Y	N	9764
<i>Bidens frondosa</i>	Common Beggar's Ticks	Y	N	Y	N	9779, 9778, 9773
<i>Boltonia asteroides</i>	False Aster	Y	N	Y	N	9800
<i>Calystegia sepium</i>	Hedge Bindweed	Y	N	Y	N	9764, 9754, 9753, 9752, 9750, 9724, 9728, 9737, 9801, 9794, 9773, 9772
<i>Carduus nutans</i>	Musk Thistle	Y	N	N	Y	9787
<i>Cichorium intybus</i>	Chicory	Y	N	N	N	9751, 9774, 9772
<i>Cirsium arvense</i>	Canada Thistle	Y	N	N	Y	9764, 9762, 9754, 9753, 9752, 9751, 9750, 9724, 9728, 9737, 9766, 9769, 9775, 9777, 9781, 9800, 9801, 9794, 9780, 9779, 9778, 9774, 9773, 9772
<i>Conyza canadensis</i>	Tall Horseweed	Y	N	Y	N	9775, 9777, 9781
<i>Daucus carota</i>	Queen Anne's Lace	Y	N	N	N	9762, 9753, 9752, 9751, 9750, 9775, 9777, 9781, 9800, 9801, 9794, 9787, 9780, 9779, 9778, 9776, 9772
<i>Desmanthus illinoensis</i>	Illinois Bundleflower	Y	N	Y	N	9762
<i>Dipsacus laciniatus</i>	Cut-leaved Teasel	Y	N	N	Y	9753, 9775, 9777, 9781, 9800, 9801, 9794, 9787, 9780, 9779, 9778, 9776, 9774, 9773, 9772
<i>Eupatorium serotinum</i>	Late Boneset	Y	N	Y	N	9779, 9778, 9774
<i>Euthamia graminifolia</i>	Smooth Grass-leaved Goldenrod	Y	N	Y	N	9775, 9777, 9781, 9794
<i>Helianthus annuus</i>	Garden Sunflower	Y	N	N	N	9779, 9778
<i>Helianthus groseseratus</i>	Sawtooth Sunflower	Y	N	Y	N	9787
<i>Heliopsis helianthoides</i>	False Sunflower	Y	N	Y	N	9801
<i>Hibiscus laevis</i>	Halberd-leaved Rose Mallow	Y	N	Y	N	9753, 9769
<i>Hibiscus palustris</i>	Northern Rlose Mallow	Y	N	Y	N	9753, 9769
<i>Iris virginica var. shrevei</i>	Blue Flag	Y	N	Y	N	9753, 9766
<i>Lactuca serriola</i>	Prickly Lettuce	Y	N	N	N	9750, 9775, 9777, 9781, 9800, 9787, 9780, 9774
<i>Lotus corniculatus</i>	Bird's Foot Trefoil	Y	N	N	N	9751, 9800, 9801, 9779, 9778, 9773, 9772
<i>Lycopus americanus</i>	Common Water Horehound	Y	N	Y	N	9756, 9753, 9766
<i>Lythrum salicaria</i>	Purple Loosestrife	Y	N	N	Y	9800, 9779, 9778, 9774, 9773
<i>Medicago sativa</i>	Alfalfa	Y	N	N	N	9751
<i>Melilotus alba</i>	White Sweet Clover	Y	N	N	Y	9762, 9751, 9736, 9728, 9775, 9777, 9781, 9794, 9774, 9773
<i>Melilotus sp.</i>	Sweet Clover	Y	N	N	Y	9756, 9800, 9801, 9787
<i>Mentha canadensis</i>	Wild Mint	Y	N	Y	N	9769

Species	Common Name	Nectar Plant?	Host Plant?	Native?	Invasive?	Sites
<i>Oenothera biennis</i>	Common Evening Primrose	Y	N	Y	N	9775, 9777, 9781
<i>Oligoneuron rigidum</i>	Stiff Goldenrod	Y	N	Y	N	9762
<i>Oxalis stricta</i>	Tall Wood Sorrel	Y	N	Y	N	9772
<i>Pastinaca sativa</i>	Wild Parsnip	Y	N	N	N	9764, 9756
<i>Persicaria amphibia</i> var. <i>stipulacea</i>	Marsh Smartweed	Y	N	Y	N	9764, 9737, 9766, 9775, 9777, 9781
<i>Persicaria longiseta</i>	Creeping Smartweed	Y	N	N	N	9750, 9736
<i>Persicaria lapathifolia</i>	Pale Pinkweed	Y	N	Y	N	9752, 9800, 9773
<i>Persicaria pensylvanica</i>	Pinkweed	Y	N	Y	N	9800, 9779, 9778, 9773
<i>Persicaria maculosa</i>	Lady's Thumb	Y	N	N	N	9773
<i>Phalaris arundinacea</i>	Reed Canary Grass	N	N	N	Y	9764, 9756, 9754, 9753, 9752, 9751, 9750, 9769, 9775, 9777, 9781, 9801, 9787, 9779, 9778, 9773, 9772
<i>Phragmites australis</i>	Common Reed	N	N	N	Y	9764, 9762, 9754, 9769, 9775, 9777, 9781
<i>Physalis longifolia</i>	Tall Ground Cherry	Y	N	Y	N	9764, 9753, 9750, 9724, 9728, 9737, 9769, 9775, 9777, 9781, 9773
<i>Pycnanthemum tenuifolium</i>	Slender Mountain Mint	Y	N	Y	N	9775, 9777, 9781
<i>Ratibida pinnata</i>	Yellow Coneflower	Y	N	Y	N	9775, 9777, 9781
<i>Sambucus canadensis</i>	Elderberry	Y	N	Y	N	9766, 9800
<i>Securigera varia</i>	Crown Vetch	Y	N	N	Y	9762, 9800, 9774, 9772
<i>Solanum dulcamara</i>	Deadly Nightshade	Y	N	N	N	9724, 9737, 9775, 9777, 9781, 9800, 9794
<i>Solidago canadensis</i>	Canada Goldenrod	Y	N	Y	N	9764, 9756, 9752, 9728, 9766, 9775, 9777, 9781, 9801, 9794, 9787, 9780, 9779, 9778, 9776, 9774, 9773, 9772
<i>Solidago gigantea</i>	Late Goldenrod	Y	N	Y	N	9764, 9762, 9776
<i>Solidago nemoralis</i>	Old-field Goldenrod	Y	N	Y	N	9776
<i>Sonchus asper</i>	Spiny Sow Thistle	Y	N	N	N	9764, 9762, 9754, 9753, 9752, 9751, 9750, 9729, 9766, 9775, 9777, 9781, 9800, 9794, 9787, 9780, 9779, 9778, 9774, 9773, 9772
<i>Symphiotrichum ericoides</i>	Heath Aster	Y	N	Y	N	9750
<i>Symphiotrichum lanceolatum</i>	Panicled Aster	Y	N	Y	N	9764, 9752, 9766, 9775, 9777, 9781, 9773, 9772
<i>Symphiotrichum novae-angliae</i>	New England Aster	Y	N	Y	N	9800, 9801
<i>Symphiotrichum pilosum</i>	Hairy Aster	Y	N	Y	N	9764, 9762, 9753, 9751, 9750, 9728, 9775, 9777, 9781, 9800, 9801, 9794, 9780, 9779, 9778, 9776, 9774, 9773, 9772
<i>Symphiotrichum subulatum</i>	Expressway Aster	Y	N	N	N	9750, 9766, 9769, 9787, 9779, 9778, 9776, 9773
<i>Taraxicum officianale</i>	Common Dandelion	Y	N	N	N	9794, 9772
<i>Trifolium hybridum</i>	Alsike Clover	Y	N	N	N	9762, 9756, 9753, 9751, 9736, 9800, 9794, 9774, 9772
<i>Verbena hastata</i>	Blue Vervain	Y	N	Y	N	9756, 9773
<i>Verbena urticifolia</i>	Hairy White Vervain	Y	N	Y	N	9772