

Vegetation Survey of 5 grasslands in Sullivan and Vigo Counties, Indiana



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October 2025

A vegetation survey of 5 grasslands that may be used for field competition exercises in the vicinity of Sullivan and Vigo counties in Indiana was performed by Christopher Benda and Abel Kinser on October 11th in 2025. The objective of the survey was to identify plant species present in the fields because some may be harmful to dogs. One resource chronicling such plants, often referred to as “mean seeds” is located at the URL <http://www.meanseeds.com/resources/the-bad-grass-list/>.

Per the protocols I developed (Protocols for Vegetation Surveys of Field Trials Sites, 2023), all vascular plant species encountered in the 5 grasslands were recorded and are listed by field in Table 1. Additionally, vegetation metrics for the entire survey, as well as the metrics for each individual plant species encountered along with their common names, comprise the Floristic Quality Analysis (FQA, universalfqa.org) and is provided in Table 2. A total of 155 species were observed within the 5 fields during fall surveys in 2025. Nomenclature follows Rothrock 2004 (with an update provided in 2019).

Figures 1-5 are maps that contain the tracks the two botanists followed in each field during the 2025 surveys. Each field was thoroughly investigated, and the vast majority of plants observed within them are not known to be problematic to dogs. However, *Elymus virginicus* (Virginia wild rye) was observed in Field 1. These locations are indicated on the maps provided and in Table 3. These species are highlighted in this report because they are on the list of mean seeds, but it should be stressed that there could be other plants present in the fields that might be harmful to dogs and this report does not suggest that any field is safe. Instead, the report provides an analysis of the plants that were observed in the fields so that each participant can make an informed decision about the safety of the fields for this competition.

Field 1 (formerly Field 1327) is located southeast of Pimento in Vigo County (39.288355, -87.359409). A total of 81 species were observed in this 79-acre field. This field is mostly *Solidago altissima* (tall goldenrod) with *Symphyotrichum pilosum* (hairy aster) and *Agrostis gigantea* (red top). We observed three small areas with *Elymus virginicus* (Virginia wild rye) in this field (Table 3.).

Field 2 is located a couple miles east of Field 1, also southeast of Pimento in Vigo County (39.291029, -87.335794). A total of 38 species were observed in this 14-acre field. This field is mainly *Lespedeza cuneata* (silky bush clover) and *Solidago altissima* (tall goldenrod).

Field 3 is located across the road from Field 2 and is adjacent to a small pond (39.288119, -87.333276). A total of 62 species were observed in this 1-acre field. This field is essentially roadside vegetation like *Paspalum setaceum* (hairy lens grass) that is periodically mowed.

Field 4 is located southeast of Farmersburg in Sullivan County (39.243681, -87.361295). A total of 82 species were observed in this 7-acre field. This field is mostly *Solidago altissima* (tall goldenrod) with *Desmodium paniculatum* (panicked tick trefoil).

Field 5 (formerly Field 1315) is located southeast of Farmersburg in Sullivan County (39.232508, -87.365304). A total of 99 species were observed in this 29-acre field. This field is variable in structure and diversity. The grassy groundlayer is mainly *Sorghastrum nutans* (indian grass), along with *Solidago altissima* (tall goldenrod), *Symphyotrichum pilosum* (hairy aster), and *Desmodium paniculatum* (panicked tick trefoil).

Other plants that inhabit the fields are listed in the tables and some may possibly be of concern to dog owners and their dogs. This report attempts to inform the reader so that each individual can make his

or her own decision regarding their participation in events held at the locations listed in the report. All dog owners, handlers, and participants should review the list of plants and endeavor to become educated with regard to “mean seeds” and make independent decisions regarding the safety of their animals. This report is descriptive in nature and neither its author nor the committee that commissioned it can guarantee the safety of any individual dog from harmful plants. It is impossible to certify any field as 100% clear of harmful plants; however, the providers of this report are confident that each field was surveyed intensively and pertinent information regarding harmless plants is provided.

Literature Cited

Rothrock, P.E. 2004. Floristic quality assessment in Indiana: The concept, use, and development of coefficients of conservatism. Final Report for ARN A305-4-53, EPA Wetland Program Development Grant CD975586-01.

Table 1. Plant Species List by Field for 5 Grasslands in Indiana.

Species	Field 1	Field 2	Field 3	Field 4	Field 5	
<i>Abutilon theophrasti</i>			x			1
<i>Acalypha rhomboidea</i>	x	x	x	x	x	5
<i>Acalypha virginica</i>			x	x	x	3
<i>Acer negundo</i>				x	x	2
<i>Acer rubrum</i>			x			1
<i>Ageratina altissima</i>					x	1
<i>Agrimonia parviflora</i>	x			x	x	3
<i>Agropyron repens</i>				x		1
<i>Agrostis gigantea</i>	x	x		x	x	4
<i>Allium vineale</i>	x					1
<i>Ambrosia artemisiifolia</i>	x		x	x	x	4
<i>Ambrosia trifida</i>					x	1
<i>Ammannia coccinea</i>	x					1
<i>Andropogon virginicus</i> var. <i>virginicus</i>	x	x	x	x	x	5
<i>Apocynum cannabinum</i>	x		x	x	x	4
<i>Aristida oligantha</i>			x	x	x	3
<i>Asclepias incarnata</i> subsp. <i>incarnata</i>	x			x		2
<i>Asclepias syriaca</i>	x	x	x	x	x	5
<i>Barbarea vulgaris</i>	x				x	2
<i>Bidens aristosa</i>				x	x	2
<i>Bidens polylepis</i>	x					1
<i>Boltonia asteroides</i>					x	1
<i>Bromus inermis</i>	x	x	x			3
<i>Bromus japonicus</i>	x				x	2
<i>Carex frankii</i>	x					1
<i>Carex normalis</i>	x					1
<i>Carex vulpinoidea</i>	x					1
<i>Carya illinoensis</i>	x					1
<i>Celtis occidentalis</i>					x	1
<i>Cercis canadensis</i>					x	1
<i>Chamaecrista fasciculata</i>					x	1
<i>Chenopodium album</i>			x			1
<i>Cichorium intybus</i>			x			1
<i>Cirsium arvense</i>	x		x	x	x	4
<i>Cirsium discolor</i>	x	x	x	x	x	5
<i>Cirsium vulgare</i>				x	x	2
<i>Conyza canadensis</i>	x		x	x	x	4
<i>Cornus obliqua</i>					x	1
<i>Crataegus</i> sp.					x	1
<i>Cyperus esculentus</i>	x					1

<i>Cyperus odoratus</i>					x	1
<i>Cyperus strigosus</i>	x			x	x	3
<i>Dactylis glomerata</i>	x	x	x	x	x	5
<i>Daucus carota</i>	x	x	x	x	x	5
<i>Desmodium paniculatum</i> var. <i>paniculatum</i>	x	x	x	x	x	5
<i>Dianthus armeria</i> subsp. <i>armeria</i>		x				1
<i>Dichanthelium acuminatum</i> subsp. <i>lindheimeri</i>				x		1
<i>Digitaria ischaemum</i>			x		x	2
<i>Diospyros virginiana</i>	x		x	x	x	4
<i>Echinochloa muricata</i>	x		x	x	x	4
<i>Elaeagnus umbellata</i>		x	x	x	x	4
<i>Eleocharis</i> sp.					x	1
<i>Elymus virginicus</i>	x					1
<i>Erechtites hieraciifolius</i> var. <i>hieraciifolius</i>	x					1
<i>Erigeron strigosus</i>	x					1
<i>Eupatorium altissimum</i>				x	x	2
<i>Eupatorium serotinum</i>	x	x	x	x	x	5
<i>Euphorbia nutans</i>	x		x			2
<i>Euthamia graminifolia</i>	x	x	x	x	x	5
<i>Fraxinus pennsylvanica</i>				x	x	2
<i>Geum canadense</i>					x	1
<i>Hedeoma pulegioides</i>					x	1
<i>Helianthus grosseserratus</i>				x	x	2
<i>Helianthus maximiliani</i>					x	1
<i>Hypericum punctatum</i>			x		x	2
<i>Ipomoea hederacea</i>			x			1
<i>Ipomoea lacunosa</i>	x					1
<i>Iva annua</i>	x					1
<i>Juglans nigra</i>	x			x	x	3
<i>Juncus dudleyi</i>	x			x	x	3
<i>Juncus marginatus</i>				x		1
<i>Juniperus virginiana</i> var. <i>virginiana</i>	x	x	x	x	x	5
<i>Kummerowia stipulacea</i>		x		x		2
<i>Lepidium campestre</i>	x					1
<i>Lespedeza cuneata</i>	x	x	x	x	x	5
<i>Liriodendron tulipifera</i>				x		1
<i>Lonicera japonica</i>		x	x			2
<i>Lonicera maackii</i>		x	x	x	x	4
<i>Lotus corniculatus</i>			x	x	x	3
<i>Medicago sativa</i>	x	x	x			3
<i>Melilotus officinalis</i>	x			x		2
<i>Microstegium vimineum</i>					x	1

<i>Morus alba</i>			x			1
<i>Oenothera biennis</i>			x	x		2
<i>Onoclea sensibilis</i>			x			1
<i>Panicum capillare subsp. capillare</i>			x	x	x	3
<i>Panicum dichotomiflorum</i>	x			x	x	3
<i>Panicum virgatum</i>				x		1
<i>Paspalum setaceum</i>			x			1
<i>Persicaria pensylvanica</i>	x					1
<i>Persicaria lapathifolia</i>					x	1
<i>Persicaria longiseta</i>	x					1
<i>Phalaris arundinacea</i>	x					1
<i>Phleum pratense</i>	x			x	x	3
<i>Phragmites australis subsp. australis</i>	x	x	x	x	x	5
<i>Physalis longifolia var. subglabrata</i>	x		x			2
<i>Pinus strobus</i>				x		1
<i>Plantago lanceolata</i>			x		x	2
<i>Plantago rugelii</i>				x	x	2
<i>Platanus occidentalis</i>	x		x	x	x	4
<i>Poa pratensis</i>	x	x		x	x	4
<i>Populus deltoides</i>	x	x	x	x	x	5
<i>Potamogeton nodosus</i>					x	1
<i>Prunella vulgaris subsp. lanceolata</i>				x		1
<i>Prunus americana</i>					x	1
<i>Pseudognaphalium obtusifolium</i>		x		x	x	3
<i>Pycnanthemum tenuifolium</i>		x		x	x	3
<i>Pyrus calleryana</i>	x	x	x	x	x	5
<i>Quercus alba</i>				x	x	2
<i>Quercus macrocarpa</i>	x			x	x	3
<i>Quercus muehlenbergii</i>				x	x	2
<i>Quercus palustris</i>	x			x		2
<i>Quercus rubra</i>					x	1
<i>Ratibida pinnata</i>	x					1
<i>Rhus copallinum</i>				x		1
<i>Robinia pseudoacacia</i>					x	1
<i>Rosa multiflora</i>	x	x		x	x	4
<i>Rubus allegheniensis</i>				x		1
<i>Rubus occidentalis</i>			x			1
<i>Rumex crispus</i>	x			x	x	3
<i>Salix interior</i>	x	x	x	x	x	5
<i>Salix nigra</i>			x		x	2
<i>Schedonorus pratensis</i>	x	x	x	x	x	5
<i>Schoenoplectus tabernaemontani</i>					x	1
<i>Scirpus cyperinus</i>	x				x	2

<i>Securigera varia</i>			x			1
<i>Setaria faberi</i>	x	x	x	x	x	5
<i>Setaria pumila subsp. pumila</i>	x	x	x	x	x	5
<i>Sida spinosa</i>	x					1
<i>Solanum carolinense var. carolinense</i>	x		x	x	x	4
<i>Solidago altissima</i>	x	x	x	x	x	5
<i>Sorghastrum nutans</i>	x	x	x	x	x	5
<i>Sorghum bicolor</i>			x			1
<i>Sporobolus vaginiflorus</i>					x	1
<i>Strophostyles helvola</i>				x	x	2
<i>Symphyotrichum lateriflorum</i>	x					1
<i>Symphyotrichum novae-angliae</i>	x			x	x	3
<i>Symphyotrichum pilosum var. pilosum</i>	x	x	x	x	x	5
<i>Symphyotrichum praealtum</i>	x	x		x	x	4
<i>Taraxacum officinale</i>	x					1
<i>Taxodium distichum var. distichum</i>					x	1
<i>Thuja occidentalis</i>					x	1
<i>Tragopogon pratensis</i>			x			1
<i>Tridens flavus var. flavus</i>	x	x	x	x	x	5
<i>Trifolium campestre</i>		x				1
<i>Trifolium hybridum</i>	x	x		x	x	4
<i>Trifolium pratense</i>	x	x	x	x	x	5
<i>Typha angustifolia</i>				x	x	2
<i>Ulmus pumila</i>				x		1
<i>Verbascum blattaria</i>	x		x			2
<i>Verbascum thapsus</i>					x	1
<i>Verbena hastata</i>	x			x	x	3
<i>Verbena urticifolia</i>	x			x		2
<i>Vernonia missurica</i>	x		x	x	x	4
<i>Wisteria sinensis</i>					x	1
<i>Xanthium strumarium</i>	x		x		x	3
totals	81	38	62	82	99	362

Table 2. Floristic Quality Analysis for 5 Grasslands in Indiana.

IN Field Trial Surveys 2025
10/11/2025

FQA DB Region: Indiana
 FQA DB Publication Year: 2019
 FQA DB Description: Update of 2004 Indiana database
 Practitioner: Chris Benda

Conservatism-Based Metrics:

Total Mean C:	1.5
Native Mean C:	2.4
Total FQI:	18.7
Native FQI:	24.2
Adjusted FQI:	19.5
% C value 0:	47.7
% C value 1-3:	34.8
% C value 4-6:	16.1
% C value 7-10:	1.3
Native Tree Mean C:	3.8
Native Shrub Mean C:	2.3
Native Herbaceous Mean C:	1.9

Species Richness:

Total Species:	155	
Native Species:	102	65.80%
Non-native Species:	53	34.20%

Species Wetness:

Mean Wetness:	0.9
Native Mean Wetness:	0

Physiognomy Metrics:

Tree:	25	16.10%
Shrub:	9	5.80%
Vine:	5	3.20%
Forb:	77	49.70%
Grass:	27	17.40%
Sedge:	9	5.80%
Rush:	2	1.30%
Fern:	1	0.60%
Bryophyte:	0	0%

Duration Metrics:

Annual:	38	24.50%
Perennial:	106	68.40%
Biennial:	11	7.10%
Native Annual:	24	15.50%
Native Perennial:	75	48.40%
Native Biennial:	3	1.90%

Species:

Scientific Name	Family	Native?	C	W	Physiognomy	Duration	Common Name
<i>Abutilon theophrasti</i>	Malvaceae	non-native	0	3	forb	annual	buttonweed common three-seeded
<i>Acalypha rhomboidea</i>	Euphorbiaceae	native	0	3	forb	annual	mercury virginia three-seeded
<i>Acalypha virginica</i>	Euphorbiaceae	native	0	3	forb	annual	mercury
<i>Acer negundo</i>	Sapindaceae	native	1	0	tree	perennial	boxelder
<i>Acer rubrum</i>	Sapindaceae	native	5	0	tree	perennial	red maple
<i>Ageratina altissima var. altissima</i>	Asteraceae	native	2	3	forb	perennial	white snakeroot
<i>Agrimonia parviflora</i>	Rosaceae	native	4	-3	forb	perennial	swamp agrimony
<i>Agrostis gigantea</i>	Poaceae	non-native	0	-3	grass	perennial	red top

<i>Allium vineale</i>	Amaryllidaceae	non-native	0	3	forb	perennial	field garlic
<i>Ambrosia artemisiifolia</i>	Asteraceae	native	0	3	forb	annual	common ragweed
<i>Ambrosia trifida</i>	Asteraceae	native	0	0	forb	annual	giant ragweed
<i>Ammannia coccinea</i>	Lythraceae	native	2	-5	forb	annual	long-leaved ammannia
<i>Andropogon virginicus</i> var. <i>virginicus</i>	Poaceae	native	1	3	grass	perennial	broom sedge
<i>Apocynum cannabinum</i>	Apocynaceae	native	2	0	forb	perennial	dogbane
<i>Aristida oligantha</i>	Poaceae	native	2	5	grass	annual	plains three awn grass
<i>Asclepias incarnata</i> subsp. <i>incarnata</i>	Apocynaceae	native	4	-5	forb	perennial	swamp milkweed
<i>Asclepias syriaca</i>	Apocynaceae	native	1	3	forb	perennial	common milkweed
<i>Barbarea vulgaris</i>	Brassicaceae	non-native	0	0	forb	biennial	yellow rocket
<i>Bidens aristosa</i>	Asteraceae	native	1	-3	forb	annual	swamp marigold
<i>Bidens polylepis</i>	Asteraceae	native	1	-3	forb	annual	bearded beggarticks
<i>Boltonia asteroides</i> var. <i>recognita</i>	Asteraceae	native	5	-5	forb	perennial	false aster
<i>Bromus inermis</i>	Poaceae	non-native	0	3	grass	perennial	hungarian brome
<i>Bromus japonicus</i>	Poaceae	non-native	0	3	grass	annual	japanese chess
<i>Carex frankii</i>	Cyperaceae	native	2	-5	sedge	perennial	bristly cattail sedge
<i>Carex normalis</i>	Cyperaceae	native	3	-3	sedge	perennial	spreading oval sedge
<i>Carex vulpinoidea</i>	Cyperaceae	native	2	-5	sedge	perennial	brown fox sedge
<i>Carya illinoensis</i>	Juglandaceae	native	4	-3	tree	perennial	pecan
<i>Celtis occidentalis</i>	Cannabaceae	native	3	0	tree	perennial	hackberry
<i>Cercis canadensis</i> var. <i>canadensis</i>	Fabaceae	native	3	3	tree	perennial	eastern redbud
<i>Chamaecrista fasciculata</i> var. <i>fasciculata</i>	Fabaceae	native	2	3	forb	annual	golden cassia
<i>Chenopodium album</i>	Amaranthaceae	non-native	0	3	forb	annual	lambs quarters
<i>Cichorium intybus</i>	Asteraceae	non-native	0	3	forb	perennial	chickory
<i>Cirsium arvense</i>	Asteraceae	non-native	0	3	forb	perennial	field thistle
<i>Cirsium discolor</i>	Asteraceae	native	3	3	forb	biennial	pasture thistle
<i>Cirsium vulgare</i>	Asteraceae	non-native	0	3	forb	biennial	bull thistle
<i>Conyza canadensis</i>	Asteraceae	native	0	3	forb	annual	horseweed
<i>Cornus obliqua</i>	Cornaceae	native	5	-3	shrub	perennial	pale dogwood

<i>Cyperus esculentus</i> var. <i>leptostachyus</i>	Cyperaceae	native	0	-3	sedge	perennial	field nut sedge
<i>Cyperus odoratus</i>	Cyperaceae	native	1	-3	sedge	annual	common rusty nut sedge
<i>Cyperus strigosus</i>	Cyperaceae	native	0	-3	sedge	perennial	long-scaled nut sedge
<i>Dactylis glomerata</i>	Poaceae	non-native	0	3	grass	perennial	orchard grass
<i>Daucus carota</i>	Apiaceae	non-native	0	5	forb	biennial	queen annes lace
<i>Desmodium paniculatum</i> var. <i>paniculatum</i>	Fabaceae	native	2	3	forb	perennial	panicked tick trefoil
<i>Dianthus armeria</i> subsp. <i>armeria</i>	Caryophyllaceae	non-native	0	5	forb	annual	deptford pink
<i>Dichanthelium acuminatum</i> subsp. <i>lindheimeri</i>	Poaceae	native	5	0	grass	perennial	lindheimers witch grass
<i>Digitaria ischaemum</i>	Poaceae	non-native	0	3	grass	annual	smooth crab grass
<i>Diospyros virginiana</i>	Ebenaceae	native	2	0	tree	perennial	persimmon
<i>Echinochloa muricata</i>	Poaceae	native	1	-5	grass	annual	rough barnyard grass
<i>Elaeagnus umbellata</i>	Elaeagnaceae	non-native	0	3	shrub	perennial	autumn olive
<i>Eleocharis obtusa</i>	Cyperaceae	native	1	-5	sedge	perennial	blunt spike rush
<i>Elymus repens</i>	Poaceae	non-native	0	3	grass	perennial	quack grass
<i>Elymus virginicus</i>	Poaceae	native	3	-3	grass	perennial	virginia wild rye
<i>Erechtites hieraciifolius</i> var. <i>hieraciifolius</i>	Asteraceae	native	2	3	forb	annual	fireweed
<i>Erigeron strigosus</i> var. <i>strigosus</i>	Asteraceae	native	2	3	forb	perennial	daisy fleabane
<i>Eupatorium altissimum</i>	Asteraceae	native	1	5	forb	perennial	tall boneset
<i>Eupatorium serotinum</i>	Asteraceae	native	0	0	forb	perennial	late boneset
<i>Euphorbia nutans</i>	Euphorbiaceae	native	0	3	forb	annual	nodding spurge
<i>Euthamia graminifolia</i>	Asteraceae	native	3	-3	forb	perennial	grass-leaved goldenrod
<i>Fraxinus pennsylvanica</i>	Oleaceae	native	2	-3	tree	perennial	green ash
<i>Geum canadense</i>	Rosaceae	native	1	0	forb	perennial	white avens
<i>Hedeoma pulegioides</i>	Lamiaceae	native	3	5	forb	annual	american pennyroyal
<i>Helianthus grosseserratus</i>	Asteraceae	native	3	-3	forb	perennial	sawtooth sunflower
<i>Helianthus maximilianii</i>	Asteraceae	non-native	0	5	forb	perennial	maximilians sunflower
<i>Hypericum punctatum</i>	Hypericaceae	native	3	0	forb	perennial	spotted st. johns wort
<i>Ipomoea hederacea</i>	Convolvulaceae	non-native	0	0	vine	annual	ivy-leaved morning glory
<i>Ipomoea lacunosa</i>	Convolvulaceae	native	2	-3	vine	annual	small morning glory

<i>Iva annua</i>	Asteraceae	native	0	0	forb	annual	marsh elder
<i>Juglans nigra</i>	Juglandaceae	native	2	3	tree	perennial	black walnut
<i>Juncus dudleyi</i>	Juncaceae	native	2	-3	rush	perennial	dudleys rush
<i>Juncus marginatus</i>	Juncaceae	native	4	0	rush	perennial	bog rush
<i>Juniperus virginiana var. virginiana</i>	2-cupressaceae	native	2	3	shrub	perennial	eastern red cedar
<i>Kummerowia stipulacea</i>	Fabaceae	non-native	0	3	forb	annual	korean clover
<i>Lepidium campestre</i>	Brassicaceae	non-native	0	5	forb	biennial	field cress
<i>Lespedeza cuneata</i>	Fabaceae	non-native	0	5	forb	perennial	silky bush clover
<i>Liriodendron tulipifera</i>	Magnoliaceae	native	4	3	tree	perennial	tulip poplar
<i>Lonicera japonica</i>	Caprifoliaceae	non-native	0	3	vine	perennial	japanese honeysuckle
<i>Lonicera maackii</i>	Caprifoliaceae	non-native	0	5	shrub	perennial	amur honeysuckle
<i>Lotus corniculatus</i>	Fabaceae	non-native	0	3	forb	perennial	birdsfoot trefoil
<i>Medicago sativa</i>	Fabaceae	non-native	0	3	forb	perennial	alfalfa
<i>Melilotus officinalis</i>	Fabaceae	non-native	0	3	forb	biennial	yellow sweet clover
<i>Microstegium vimineum</i>	Poaceae	non-native	0	0	grass	annual	nepalese browntop
<i>Morus alba</i>	Moraceae	non-native	0	0	tree	perennial	white mulberry
<i>Oenothera biennis</i>	Onagraceae	native	0	3	forb	biennial	common evening primrose
<i>Onoclea sensibilis</i>	1-onocleaceae	native	4	-3	fern	perennial	sensitive fern
<i>Panicum capillare subsp. capillare</i>	Poaceae	native	0	0	grass	annual	old witch grass
<i>Panicum dichotomiflorum</i>	Poaceae	native	0	-3	grass	annual	fall panicum
<i>Panicum virgatum</i>	Poaceae	native	4	0	grass	perennial	prairie switch grass
<i>Paspalum setaceum</i>	Poaceae	native	3	3	grass	perennial	hairy lens grass
<i>Persicaria lapathifolia</i>	Polygonaceae	native	0	-3	forb	annual	curlytop ladys thumb
<i>Persicaria longiseta</i>	Polygonaceae	non-native	0	0	forb	annual	bristly ladys-thumb
<i>Persicaria pensylvanica</i>	Polygonaceae	native	0	-3	forb	annual	pinkweed
<i>Phalaris arundinacea</i>	Poaceae	non-native	0	-3	grass	perennial	reed canary grass
<i>Phleum pratense</i>	Poaceae	non-native	0	3	grass	perennial	timothy grass
<i>Phragmites australis subsp. australis</i>	Poaceae	non-native	0	-3	grass	perennial	introduced common reed
<i>Physalis longifolia var. subglabrata</i>	Solanaceae	native	0	5	forb	perennial	long-leaf ground cherry
<i>Pinus strobus</i>	2-pinaceae	native	5	3	tree	perennial	eastern white pine
<i>Plantago lanceolata</i>	Plantaginaceae	non-native	0	3	forb	perennial	english plantain
<i>Plantago rugelii</i>	Plantaginaceae	native	0	0	forb	perennial	red-stalked plantain

<i>Platanus occidentalis</i>	Platanaceae	native	3	-3	tree	perennial	american sycamore
<i>Poa pratensis</i>	Poaceae	non-native	0	0	grass	perennial	kentucky blue grass
<i>Populus deltoides</i>	Salicaceae	native	1	0	tree	perennial	eastern cottonwood
<i>Potamogeton nodosus</i>	Potamogetonaceae	native	4	-5	forb	perennial	american pondweed
<i>Prunella vulgaris subsp. lanceolata</i>	Lamiaceae	native	1	0	forb	perennial	self heal
<i>Prunus americana</i>	Rosaceae	native	4	5	tree	perennial	american plum
<i>Pseudognaphalium obtusifolium</i>	Asteraceae	native	2	5	forb	biennial	old-field balsam
<i>Pycnanthemum tenuifolium</i>	Lamiaceae	native	4	0	forb	perennial	slender mountain-mint
<i>Pyrus calleryana</i>	Rosaceae	non-native	0	5	tree	perennial	bradford pear
<i>Quercus alba</i>	Fagaceae	native	5	3	tree	perennial	white oak
<i>Quercus macrocarpa</i>	Fagaceae	native	5	0	tree	perennial	burr oak
<i>Quercus muehlenbergii</i>	Fagaceae	native	4	3	tree	perennial	chinkapin oak
<i>Quercus palustris</i>	Fagaceae	native	3	-3	tree	perennial	pin oak
<i>Quercus rubra</i>	Fagaceae	native	4	3	tree	perennial	northern red oak
<i>Ratibida pinnata</i>	Asteraceae	native	5	5	forb	perennial	yellow coneflower
<i>Rhus copallinum</i>	Anacardiaceae	native	3	5	shrub	perennial	dwarf sumac
<i>Robinia pseudoacacia</i>	Fabaceae	native	1	3	tree	perennial	black locust
<i>Rosa multiflora</i>	Rosaceae	non-native	0	3	shrub	perennial	japanese rose
<i>Rubus allegheniensis</i>	Rosaceae	native	2	3	shrub	perennial	common blackberry
<i>Rubus occidentalis</i>	Rosaceae	native	1	5	shrub	perennial	black raspberry
<i>Rumex crispus</i>	Polygonaceae	non-native	0	0	forb	perennial	curly dock
<i>Salix interior</i>	Salicaceae	native	1	-3	shrub	perennial	sandbar willow
<i>Salix nigra</i>	Salicaceae	native	3	-5	tree	perennial	black willow
<i>Schedonorus pratensis</i>	Poaceae	non-native	0	3	grass	perennial	meadow fescue
<i>Schoenoplectus tabernaemontani</i>	Cyperaceae	native	4	-5	sedge	perennial	great bulrush
<i>Scirpus cyperinus</i>	Cyperaceae	native	4	-5	sedge	perennial	wool grass
<i>Securigera varia</i>	Fabaceae	non-native	0	5	forb	perennial	crown vetch
<i>Setaria faberi</i>	Poaceae	non-native	0	3	grass	annual	giant foxtail grass
<i>Setaria pumila subsp. pumila</i>	Poaceae	non-native	0	3	grass	annual	pigeon grass
<i>Sida spinosa</i>	Malvaceae	non-native	0	3	forb	annual	prickly sida
<i>Solanum carolinense var. carolinense</i>	Solanaceae	native	0	3	forb	perennial	horse nettle

<i>Solidago altissima</i> subsp. <i>altissima</i>	Asteraceae	native	0	3	forb	perennial	tall goldenrod
<i>Sorghastrum nutans</i>	Poaceae	native	4	3	grass	perennial	indian grass
<i>Sorghum bicolor</i>	Poaceae	non-native	0	5	grass	annual	sorghum
<i>Sporobolus vaginiflorus</i>	Poaceae	native	1	5	grass	annual	northern rush grass
<i>Strophostyles helvola</i>	Fabaceae	native	3	0	vine	annual	trailing wild bean
<i>Symphotrichum lateriflorum</i>	Asteraceae	native	3	-3	forb	perennial	side-flowering aster
<i>Symphotrichum novae-angliae</i>	Asteraceae	native	3	-3	forb	perennial	new england aster
<i>Symphotrichum pilosum</i> var. <i>pilosum</i>	Asteraceae	native	0	3	forb	perennial	hairy aster
<i>Symphotrichum praealtum</i>	Asteraceae	native	6	-3	forb	perennial	willow aster
<i>Taraxacum officinale</i>	Asteraceae	non-native	0	3	forb	perennial	common dandelion
<i>Taxodium distichum</i> var. <i>distichum</i>	2-taxodiaceae	native	10	-5	tree	perennial	bald cypress
<i>Thuja occidentalis</i>	2-cupressaceae	native	10	-3	tree	perennial	arbor vitae
<i>Tragopogon pratensis</i>	Asteraceae	non-native	0	5	forb	biennial	common goats beard
<i>Tridens flavus</i> var. <i>flavus</i>	Poaceae	native	1	5	grass	perennial	common purpletop
<i>Trifolium campestre</i>	Fabaceae	non-native	0	5	forb	annual	low hop clover
<i>Trifolium hybridum</i>	Fabaceae	non-native	0	3	forb	perennial	alsike clover
<i>Trifolium pratense</i>	Fabaceae	non-native	0	3	forb	perennial	red clover
<i>Typha angustifolia</i>	Typhaceae	non-native	0	-5	forb	perennial	narrow-leaved cattail
<i>Ulmus pumila</i>	Ulmaceae	non-native	0	5	tree	perennial	siberian elm
<i>Verbascum blattaria</i>	Scrophulariaceae	non-native	0	3	forb	biennial	moth mullein
<i>Verbascum thapsus</i>	Scrophulariaceae	non-native	0	5	forb	biennial	woolly mullein
<i>Verbena hastata</i>	Verbenaceae	native	3	-3	forb	perennial	blue vervain
<i>Verbena urticifolia</i>	Verbenaceae	native	3	0	forb	perennial	white vervian
<i>Vernonia missurica</i>	Asteraceae	native	4	0	forb	perennial	missouri ironweed
<i>Wisteria sinensis</i>	Fabaceae	non-native	0	5	vine	perennial	chinese wisteria
<i>Xanthium strumarium</i>	Asteraceae	native	0	0	forb	annual	cocklebur

Table 3. Locations of Virginia Wild Rye (*Elymus virginicus*) with WGS 1984 coordinate system.

Species	Latitude	Longitude
<i>Elymus virginicus</i>	39.294091	-87.357260
<i>Elymus virginicus</i>	39.294928	-87.357293
<i>Elymus virginicus</i>	39.295001	-87.357498
<i>Elymus virginicus</i>	39.295153	-87.357359
<i>Elymus virginicus</i>	39.294520	-87.358859
<i>Elymus virginicus</i>	39.294590	-87.358796

Figure 1. Map of Field 1.

Field 1 US Army Corps

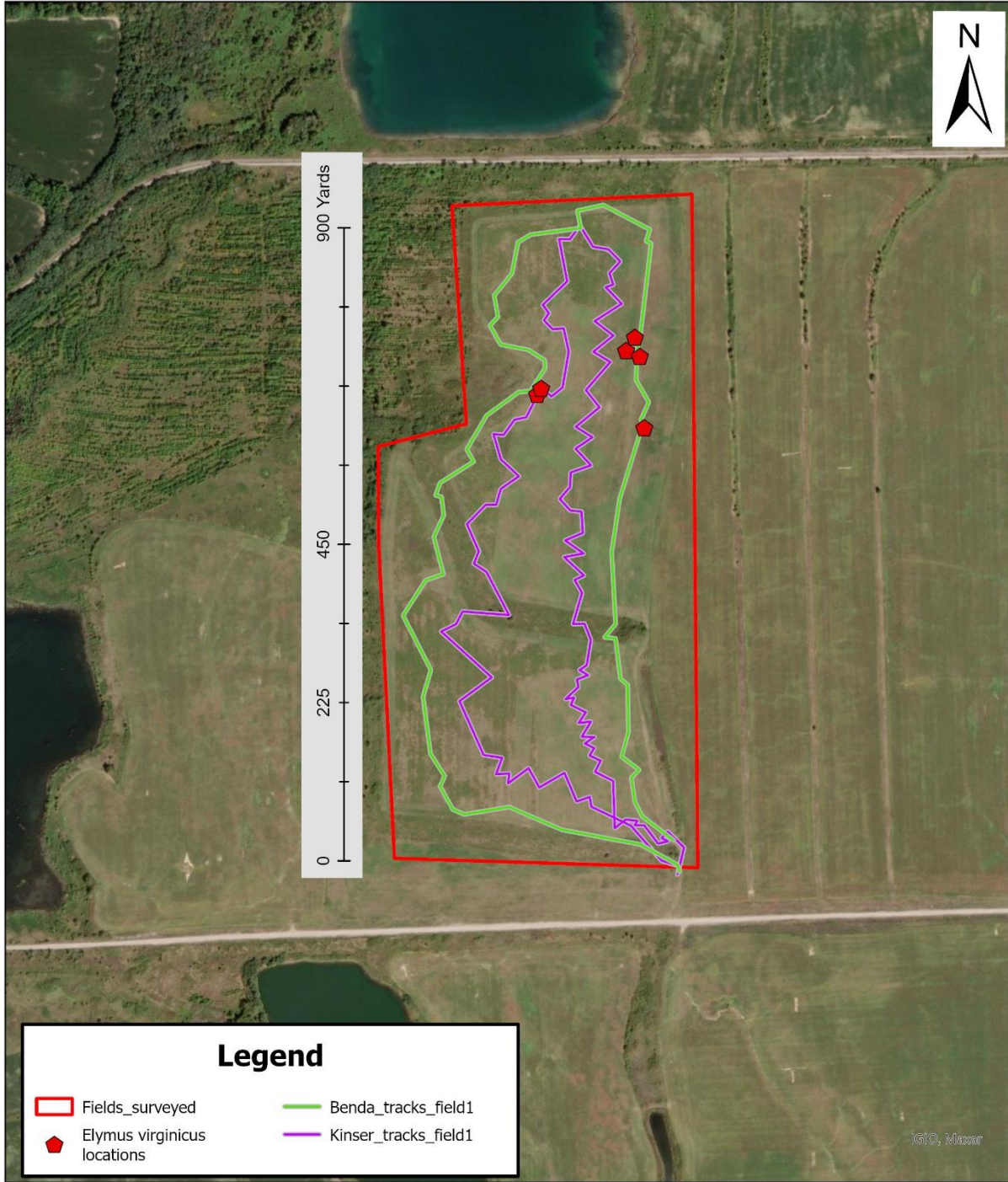
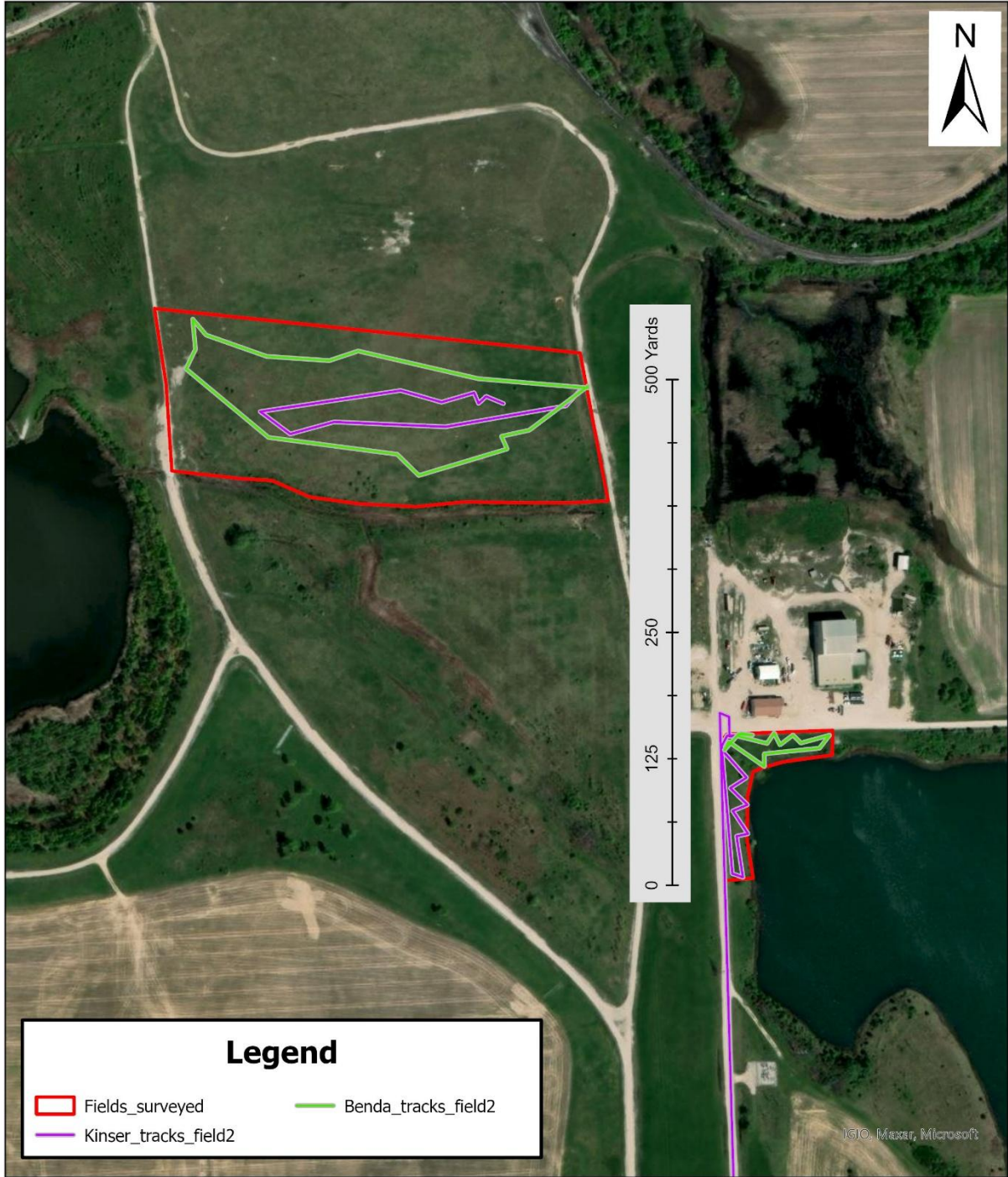


Figure 2. Map of Fields 2 and 3.

Fields 2 & 3

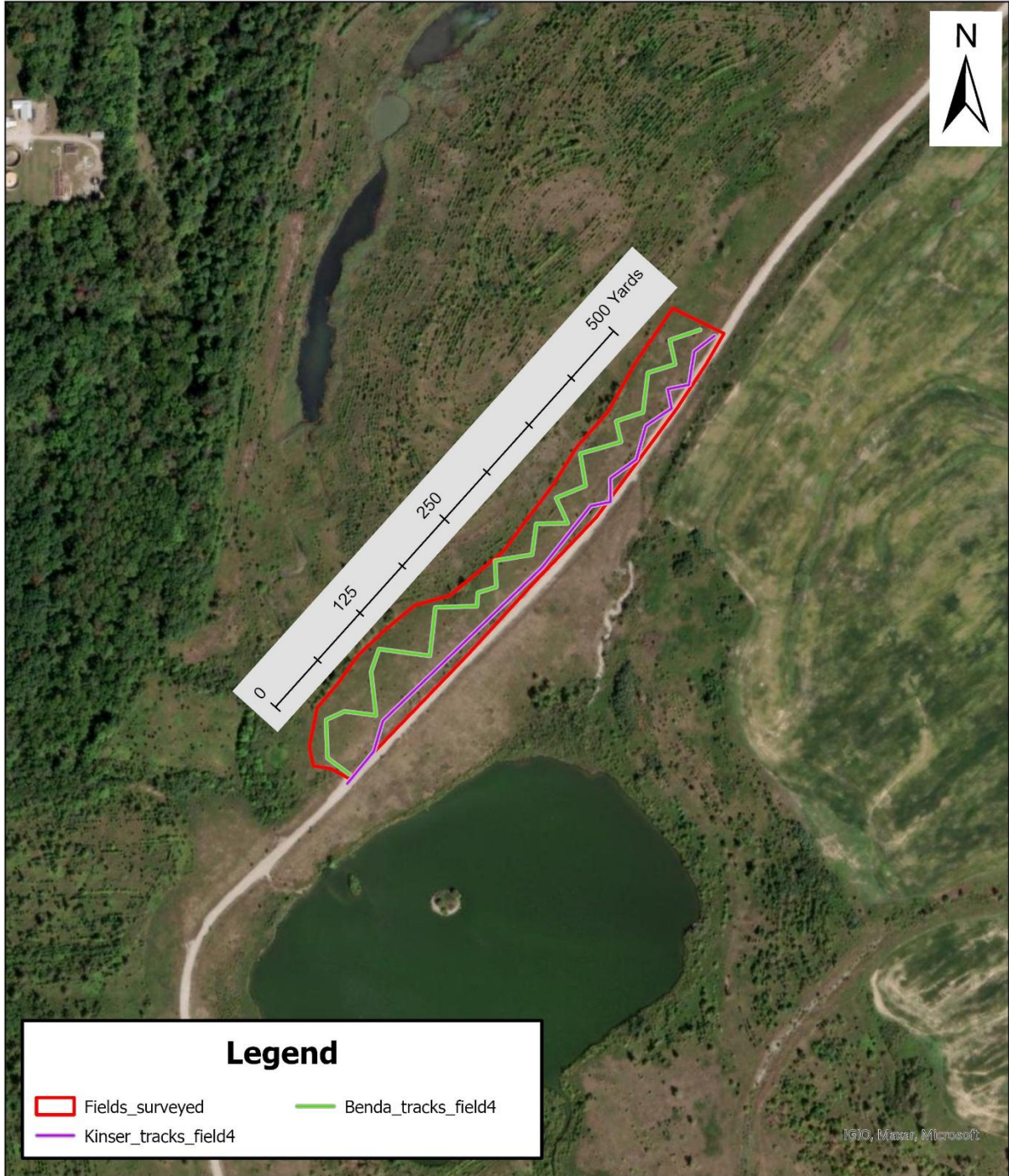


0 0.03 0.05 0.1 0.15 0.2 0.25 Miles

Map created by
Chris Benda 2025

Figure 3. Field 4.

Field 4



0 0.03 0.05 0.1 0.15 0.2 0.25 Miles

Map created by
Chris Benda 2025

Figure 4. Field 5.

Field 5 Valley Field & Stream Conservation Club

