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INVASIVE PLANTS

NOXIOUS AND SELECTED INVASIVE PLANT POPULATIONS ALONG ILLINOIS TOLL HIGHWAY RIGHTS-OF-WAY

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ILLINOIS STATE TOLL HIGHWAY AUTHORITY

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Biological monitoring associated with Illinois tollway construction activities (2015–2019)

EXECUTIVE SUMMARY

- Repeated a 2010 survey for selected invasive species and listed noxious weeds throughout the ISTHA corridor.
- Mapped 1345 populations of invasive species.
- Found the ISTHA corridor to be heavily populated by invasive species throughout the length of each roadway.
- Most frequently found species were Canada Thistle (*Cirsium arvense*) and Cut-leaf Teasel (*Dipsacus laciniatus*).
- Recommend management specific to each of 8 species or groups of species found during the survey.

INTRODUCTION

The Illinois State Toll Highway Authority (ISTHA) requested a repeat survey during 2018 for noxious and selected invasive plant species established in ISTHA rights-of-way throughout the tollway system in northern and northeastern Illinois, following a survey originally completed in 2010 (Taft et al., 2011). The species of concern include all species on the Illinois Noxious Weeds List (Illinois Administrative Code, 2002) and selected invasive species recognized by the Illinois Invasive Plant Species Council (IIPSC). They comprise 15 species including annuals, biennials, and perennial forbs and grasses (Table 1). Ten species were found in the original survey (Table 2), and we recorded all but 1 of the same species in 2018 (Table 3). The survey goals were to update locations and approximate population sizes of these species within tollway rights-of-way with a focus on moderate to major concentrations to assist in targeted control efforts.

METHODS

We examined the ISTHA system for species listed in Table 1 with surveys on I-294/I-94, I-355, I-88, I-90, and I-390. We separated the Edens Spur section of I-294/I-94 so it can be treated as a separate management unit if desired. We traveled the entire tollway system once in late summer, at an optimal survey time for the selected species. We conducted surveys 24–26 July, 31 July–2 August, and 14–15 August, 2018. The dates met the phenological considerations for ease of locating flowering or other readily identifiable life stages for each species. *Melilotus alba* and *M. officinale* (White and Yellow Sweet Clover)

Table 1. Illinois Noxious Plants and selected invasive species requested by ISTHA in 2010 for surveys along tollway routes.

Scientific Name	Common Name	Life History/Growth Form
Illinois Noxious Weeds		
Ambrosia artemisiifolia	Common ragweed	Annual forb
Ambrosia trifida	Giant ragweed	Annual forb
Cannabis sativa	Marijuana	Annual forb
Carduus nutans	Musk thistle	Perennial forb
Cirsium arvense	Canada thistle	Perennial forb
Pueraria lobata	Kudzu	Woody vine
Sonchus arvensis	Perennial sow thistle	Perennial forb
Sorghum halepense	Johnson grass	Perennial C4 grass
Selected Other Invasive Species		
Alliaria petiolata	Garlic mustard	Biennial forb
Dipsacus laciniatus	Cut-leaf teasel	Biennial forb
Euphorbia esula	Leafy spurge	Perennial forb
Lythrum salicaria	Purple loosestrife	Perennial forb
Melilotus alba	White sweet clover	Biennial forb
Melilotus officinalis	Yellow sweet clover	Biennial forb
Phalaris arundinacea	Reed canary grass	Perennial C3 grass

Table 2. Invasive species occurrences recorded in the 2010 survey.

Species	I-294/94	Edens Spur	I-355	I-88	I-90	I-390	Species totals
Ambrosia trifida	0	N/A	1	1	1	N/A	**3**
Carduus nutans	11	N/A	2	5	23	N/A	**41**
Cirsium arvense	29	N/A	9	94	56	N/A	**188**
Dipsacus laciniatus	39	N/A	6	18	29	N/A	**92**
Euphorbia esula	1	N/A	0	0	3	N/A	**4**
Lythrum salicaria	17	N/A	1	7	20	N/A	**45**
Melilotus spp.	22	N/A	7	42	22	N/A	**93**
Phalaris arundinacea	14	N/A	1	56	57	N/A	**128**
Sonchus arvense	1	N/A	1	25	2	N/A	**29**
					Total occurrences		**623**

Table 3. Invasive species occurrences recorded in the 2018 survey.

Species	I-294/94	Edens Spur	I-355	I-88	I-90	I-390	Species totals
Ambrosia trifida	0		0	34	25	0	**59**
Carduus nutans	4		0	2	7	0	**13**
Cirsium arvense	42	5	9	88	128	4	**276**
Dipsacus laciniatus	142	14	47	111	82	12	**408**
Lythrum salicaria	10	2	4	2	27	0	**45**
Melilotus spp.	40		9	77	82	2	**210**
Phalaris arundinacea	7		1	61	41	0	**110**
Sonchus spp.	34		7	82	101	0	**224**
					Total occurrences		**1345**

were combined (*Melilotus spp*.) because it was not always possible to distinguish non-flowering plants to species. *Sonchus arvensis* and *Sonchus asper* were also combined into *Sonchus spp*. because they are difficult to tell apart at a distance.

We marked invasive plant colonies using a Geode GPS/GLONASS sub-meter receiver coupled to a Cedar CT5 android device with data points taken usually near the colony center for small populations, and at beginning and endpoints for larger populations. When possible, we identified corresponding roadside mile markers to the nearest decimal mile. We visually estimated the distance to colonies from the edge of the pavement, confirming distances initially with measurements for validation. Following the procedure for the original survey (Taft et al, 2011), we estimated colony size using a qualitative relative abundance scale: 1 = uncommon (local, small population), 2 = occasional (scattered, small to moderate population), 3 = common (moderately large population), 4 = abundant (widespread, numerous), and 5 = very abundant (widespread, numerous). In some local sections, particularly central portions of I-294, roadside sound barrier and elevated roadways limited visibility and access. Heavy traffic and construction also limited our ability to safely record data in some locations, particularly within the Chicago city limits and on I-88W between mileposts 130 and 139 (due to active construction). A section of I-88E approximately between mileposts 44 and 56 had recently been mowed at the time of our survey.

RESULTS AND DISCUSSION

We mapped 1,345 occurrences of invasive species populations throughout the ISTHA system (Table 3; Map 1; Appendix 1). The most commonly encountered species in rank order of frequency were Cut-leaf Teasel (*Dipsacus laciniatus*), Canada Thistle (*Cirsium canadense*), Sow Thistle (*Sonchus arvensis*), Yellow/White Sweet Clover (*Melilotus spp*.), Reed Canary Grass (*Phalaris arundinacea*), Giant Ragweed (*Ambrosia trifida*), Purple Loosestrife (*Lythrum salicaria*), and Musk Thistle (*Carduus nutans*).

Ecology and specific control recommendations for each species we mapped are discussed below.

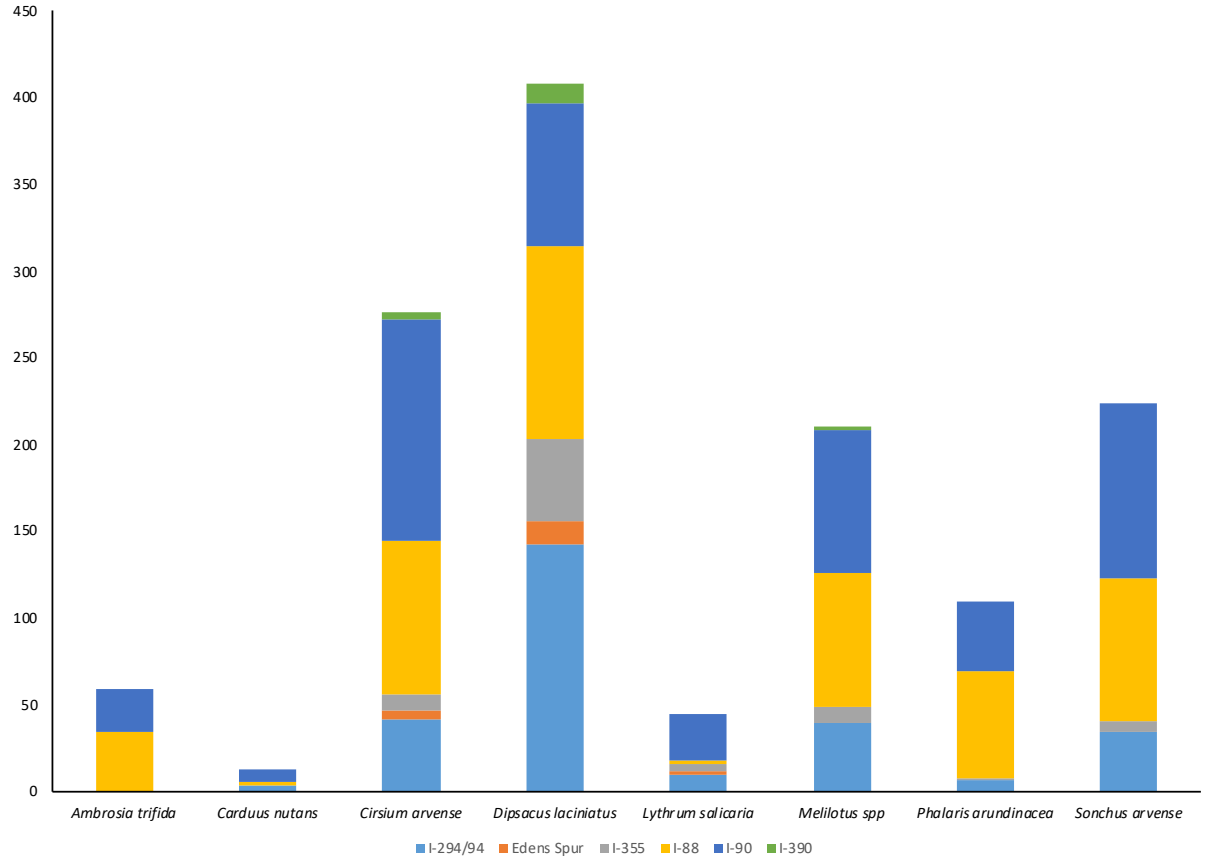

Figure 1. Sum occurrences of selected noxious and invasive species by location along each Illinois State Toll Highway route during 2018 surveys.

Giant Ragweed – *Ambrosia trifida*

Giant Ragweed, a listed Illinois noxious weed (Illinois Administrative Code, 2002), is a native annual. It often colonizes disturbed soil in agricultural land and along field edges and ditches and can form dense stands. It tolerates moist to moderately dry soil conditions in full sun to part shade. Along the tollway, it was found mostly along stream floodplains and in the rich soil adjacent to farm fields in the western portions of the corridor (Map 1). Plants were locally abundant, but populations were relatively uncommon in the tollway corridor (Fig. 1). Giant Ragweed seldom outcompetes other vegetation and has some ecological value to native insects and birds (Wilhelm and Rericha, 2017). We do not recommend the species be a focus of concern or control measures.

Plate 1. Stand of Giant Ragweed, *Ambrosia trifida.* Inset close-up of leaves.

Musk Thistle – *Carduus nutans*

Musk Thistle, a nonnative listed Illinois noxious weed (Illinois Administrative Code, 2002), is a variable annual, biennial, or short-lived perennial that dies after it produces seed, which can persist in the soil for 10 years or more (IDNR, 2017). It does not reproduce vegetatively. It tends to invade open upland habitats such as pastures and prairies, but it is adaptable to a wide variety of site conditions. In the tollway corridor, we found small, isolated populations (Map 1), but this species can produce large amounts of seed, which can allow small populations to grow rapidly. In large numbers this species can outcompete native vegetation (IDNR, 2017).

For small populations of Musk Thistle, we suggest clipping seed heads while the plant is in flower (June through October). Application of 2.0% glyphosate to rosettes prior to bolting, which can begin in April, might also be effective, but the rosettes might be difficult to find and identify. Triclopyr or 2,4-D are recommended for larger populations. If possible, intense prescribed fire can also be an effective control, but patchy burns can make the infestation worse. We also suggest seeding native grasses, as grass-dominated sites seem to be less susceptible to invasion by Musk Thistle (IDNR, 2017).

Plate 2. Musk Thistle, *Carduus nutans*. Photo by Connie Carroll-Cunningham.

Canada Thistle – *Cirsium arvense*

Canada Thistle, a noxious weed in Illinois (Illinois Administrative Code, 2002), is a dioecious non-native perennial which spreads both vegetatively and by seed. Its root system includes both a taproot and lateral roots that send up shoots. Vertical roots can reach depths of up to 22 feet (IDNR, 2017). It can grow in a wide range of soil and moisture conditions, but it won't tolerate shade. Seeds spread by wind and water. The seeds mature quickly and can germinate almost immediately after flowers begin to open in June and July. They can persist for many years if

buried deep in the soil. The plant produces basal leaves the first year and begins to flower the next. Canada Thistle is an aggressive invader that can outcompete native vegetation.

We found Canada Thistle very frequently within the tollway corridor, and often in large numbers (Fig. 1; Map 1). In areas with heavy infestations and no natural character, IDNR recommends mowing as close to the ground as possible shortly before flowering and application of Clopyralid plus 2,4-D at a concentration of 0.3% active ingredient. Canada Thistle is difficult to control and may require more than 1 method. Prescribed burning in the spring, followed by herbicide treatment with 2.5% glyphosate can be effective. Clopyralid (Transline) with surfactant can be very effective when applied to rosettes or bolting plants (IDNR, 2017). Mowing non-flowering plants in late July followed by glyphosate treatment about 4 weeks later can also be effective and complies with the Illinois Monarch Project mowing guidelines (Illinois Monarch Project, 2019).

Plate 3. Canada Thistle, *Cirsium arvense*. (Photo by Connie Carroll-Cunningham). Inset close-up of flower head.

Cut-leaf Teasel – *Dipsacus laciniatus*

Cut-leaf Teasel, an invasive species from Europe, is a biennial or short-lived perennial which dies after it flowers (July through September). It uses areas of bare ground for germination, often using the site of the parent plants as a nursery. Seeds are usually distributed locally from the parent plant, but in areas of high traffic or water flow, they can be dispersed further (IDNR, 2017). Common Teasel (*Dipsacus sylvestris*) is also invasive, but less aggressive than Cut-leaf Teasel. It has a longer bloom period (June through October) and usually has purple flowers while Cut-leaf Teasel has white flowers.

We found teasel present over long stretches of roadway and around every overpass and exit (Map 1; Appendix 1). Teasel is not listed as a noxious weed in Illinois but is in 4 other states (IDNR, 2017). It is an aggressive species lacking in natural enemies that can invade natural areas and exclude other vegetation. Flowering stems can be cut after flowering has begun to control teasel. The stems must be removed from the site because seeds can mature after cutting. Foliar application of herbicide can also be used. A 0.3% solution of clopyralid is reported to be the most effective chemical for this species, but 2,4-D and triclopyr can also be used (IDNR, 2017). Teasel is typically found on dry upland sites. In the tollway corridor, it is most common on slopes such as around overpasses. In the most urban portions of the tollway corridor, teasel was the most common invasive species we found (Fig. 1; Map 1).

Plate 4. Cut-leaf Teasel, *Dipascus laciniatus*.

Purple Loosestrife – *Lythrum salicaria*
Purple Loosestrife, an exotic weed under the Illinois Exotic Weed Control Act of 1987, is a non-native invasive species. It is found exclusively in wet areas, where it aggressively crowds out native species. It can tolerate partial shade and a wide range of soil types. Purple Loosestrife produces copious amounts of seed and can also spread vegetatively from the root and stem segments (IDNR, 2017).

In the tollway corridor, we found Purple Loosestrife in ditches and low spots and at the margins of streams and ponds (Map 1). Herbicide is the recommended control method for Purple Loosestrife, but a chemical labeled for use over standing water should be used in wetlands. A 0.6% solution of triclopyr (Garlon 3A, or Tahoe 3A if no standing water is present) with a 0.25% nonionic surfactant added has been reported to be effective. A 1.0% solution of glyphosate can also be used on monocultures in disturbed areas where a selective herbicide is not needed. This option is most effective when applied during late flowering stage (late summer), and then again 2 to 3 weeks later (IDNR, 2017).

White and Yellow Sweet Clovers – *Melilotus spp.* (*Melilotus alba* and *Melilotus officinalis*)
White and Yellow Sweet Clovers (*Melilotus alba* and *Melilotus officinalis,* combined as *Melilotus spp*.) are non-native annuals, biennials, or short-lived perennials colonizing disturbed ground and natural areas. Sweet Clover is intolerant of shade, but very drought tolerant, and frequently colonizes calcareous sites such as strip-mined land. It produces copious amounts of seed that can be dispersed by water and wildlife (IDNR, 2017).

In the tollway corridor, we found Sweet Clover most often on open slopes and gravelly embankments. It was particularly common in the western portion of the corridor (I-90 and I-88) and in the most urban portions (Map 1). We recommend treating large populations with a 1.0% solution of glyphosate. More selective herbicides such as clopyralid (in a 0.08% solution) and triclopyr (in a 0.4% solution with 0.5% non-ionic surfactant) can also be used. Cutting or mowing plants in late summer (early September) can kill the 1st-year plants in large numbers (IDNR, 2017).

Reed Canary Grass – *Phalaris arundinacea*
Reed Canary Grass is a non-native perennial grass typically found in and adjacent to wet areas. It can reproduce both by seed and vegetatively by rhizomes. Its growth peaks in mid-June and its seeds ripen by late June (IDNR, 2017).

Plate 5. Purple Loosestrife, *Lythrum salicaria*.

Plate 6. Stand of Sweet Clovers, *Melilotus spp.* Inset closeup of *Melilotus officinalis* (Photo by Paul Marcum).

In the tollway corridor, we found Reed Canary Grass in low-lying wet areas and ditch slopes that receive seepage and occasional flooding (Map 1). Annual prescribed fire for several seasons, followed by herbicide application can be an effective method for controlling Reed Canary Grass, but this might not be possible in tollway corridors. Herbicide alone can also be effective. We recommend a 2.5% foliar spray solution of a glyphosate formula that is labeled for use in wetlands with standing water. The herbicide should be applied in early spring and again in late summer. Dalapon, a selective herbicide that is labeled for wetland use, can also be used (IDNR, 2017).

Perennial and Spiny Sow Thistle – *Sonchus spp. (Sonchus arvensis and Sonchus asper)*

Perennial and Spiny Sow Thistle, both introduced from Europe, are difficult to identify at a distance, so we have lumped them into *Sonchus spp*. for this survey. The original survey might have confused the 2, as it found *Sonchus arvensis* in 3 counties from which it is not apparently known (Taft et al., 2011; Wilhelm and Rericha, 2017). An author of the 2011 report expressed a low degree of confidence the species had been correctly identified (William C. Handel, pers. comm.).

In the tollway corridor, we found Sow Thistles frequently (Map 1). These species have readily colonized disturbed ground. Perennial Sow Thistle spreads by rhizomes to form colonies, while Spiny Sow Thistle is an annual. Perennial Sow Thistle is listed as a noxious weed in Illinois (Illinois Administrative Code, 2002), but is less common than the annual species (Wilhelm and Rericha, 2017). Neither species has been known to pose an invasive threat to natural areas. We suggest that they not be targeted by control measures, but since they were usually found growing with more concerning invasive species, they can be treated along with those species using mowing and/or herbicides such as 2,4-D, clopyralid, or glyphosate (Graham and Johnson, 2003).

SUMMARY AND CONCLUSION

We recorded more than twice as many occurrences overall as in 2010 (Table 2). The difference in results between the 2010 and current surveys might be due to an increased abundance of invasive species, differences in mapping techniques across personnel, or a combination of the 2. GPS accuracy might have differed between the surveys, and due to inherent subjectivity in the method, population size or starting and ending points could have been assessed differently during the 2010 survey.

Plate 7. Stand of Reed Canary Grass, *Phalaris arundinacea*. Photo by Josh Sherwood. Inset close-up of seed head. Photo by Michael Murphy.

Plate 8. Sow Thistle, *Sonchus spp.* Photo by Josh Sherwood. Inset close-up of *Sonchus asper.* Photo by Michael Murphy.

We found that most of the populations mapped during the original survey were still present (Map 2); however, we did not find any Flowering Spurge (*Euphorbia esula*) populations, which were observed in small numbers during the 2010 survey. We found a decline in Musk Thistle from the 2010 survey, but we found more occurrences of Giant Ragweed, Sow Thistle, Sweet Clover, and teasel. Giant Ragweed and Sow Thistle might be taking advantage of recent soil disturbance, as they are agricultural weeds often colonizing bare, fertile ground, whereas Sweet Clover and teasel might be expanding existing populations. It is possible past management of certain invasive species has reduced cover and increased disturbance to the benefit of other invasive plants.

Most of the species found during our survey are best controlled with a combination of herbicide application and cutting stems to prevent seed spread. Prescribed fire can also be useful but might be impractical along busy roadways. Because of their annual and biennial life histories, Giant Ragweed, Sweet Clover, and teasel can be effectively controlled with mowing/cutting if the mechanical control is timed correctly and repeated as necessary. Large populations of perennial invasive species such as Purple Loosestrife, Reed Canary Grass, and Canada Thistle will require herbicide treatment in addition to or instead of mechanical control.

We found the right-of-way corridors throughout the ISTHA system consisted almost entirely of invasive species. Other weedy non-native species were present where the target species were not, and we seldom noticed native species. This is not a surprising finding, given the disturbed nature of the road corridor. Weeds will be present even if more desirable species are seeded in addition to control of invasive species, and their seeds will persist in the soil. If a more ecologically valuable landscape is the goal, we suggest strong control measures to eliminate all or most the existing vegetation, followed by native seed application and then mowing timed to inhibit the invasive species. We suggest ISTHA adopt a pollinator-friendly seasonal mowing plan recommended by the Illinois Monarch Project (2019) to promote the native species used by insects such as Monarch Butterflies while keeping invasive vegetation in check.

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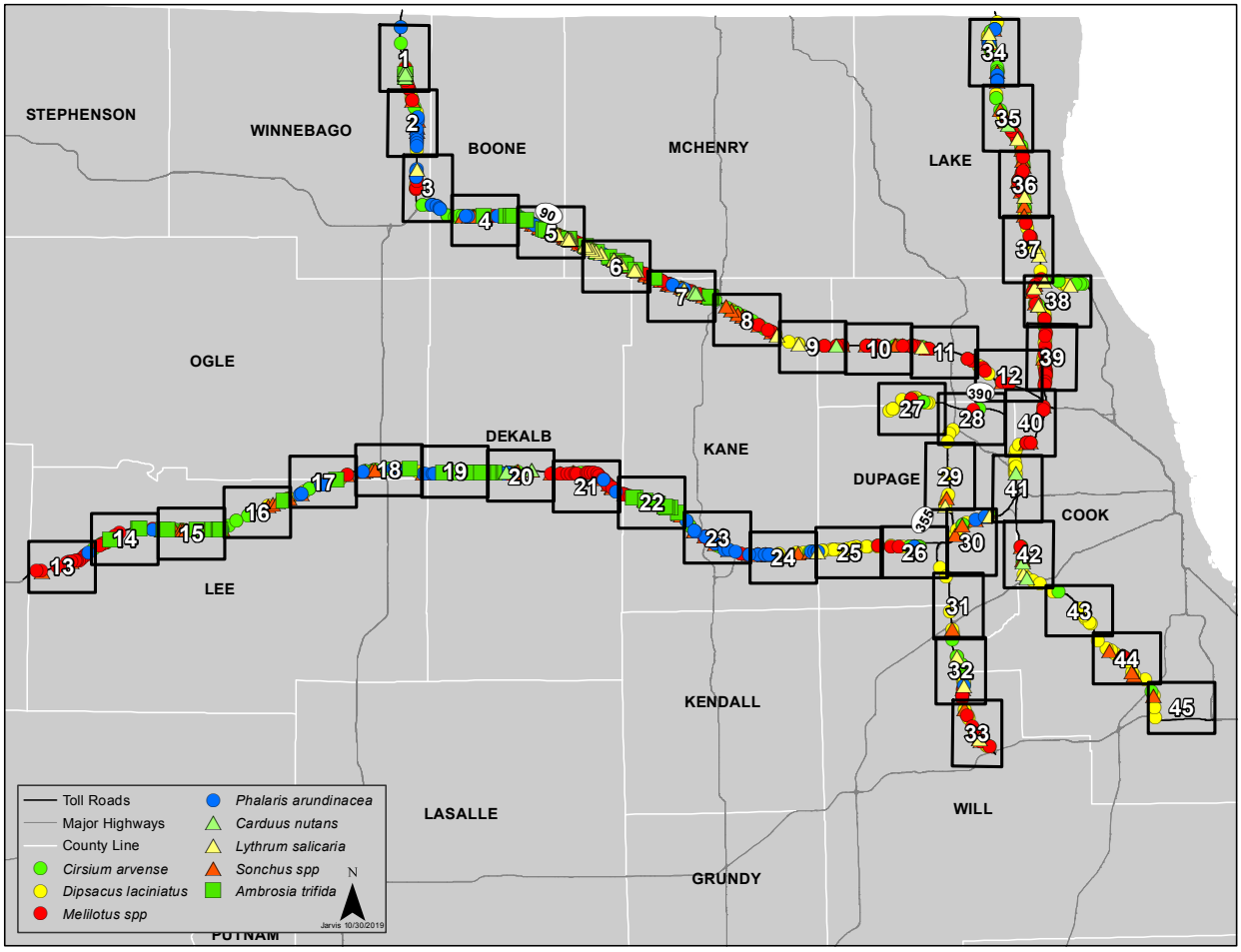
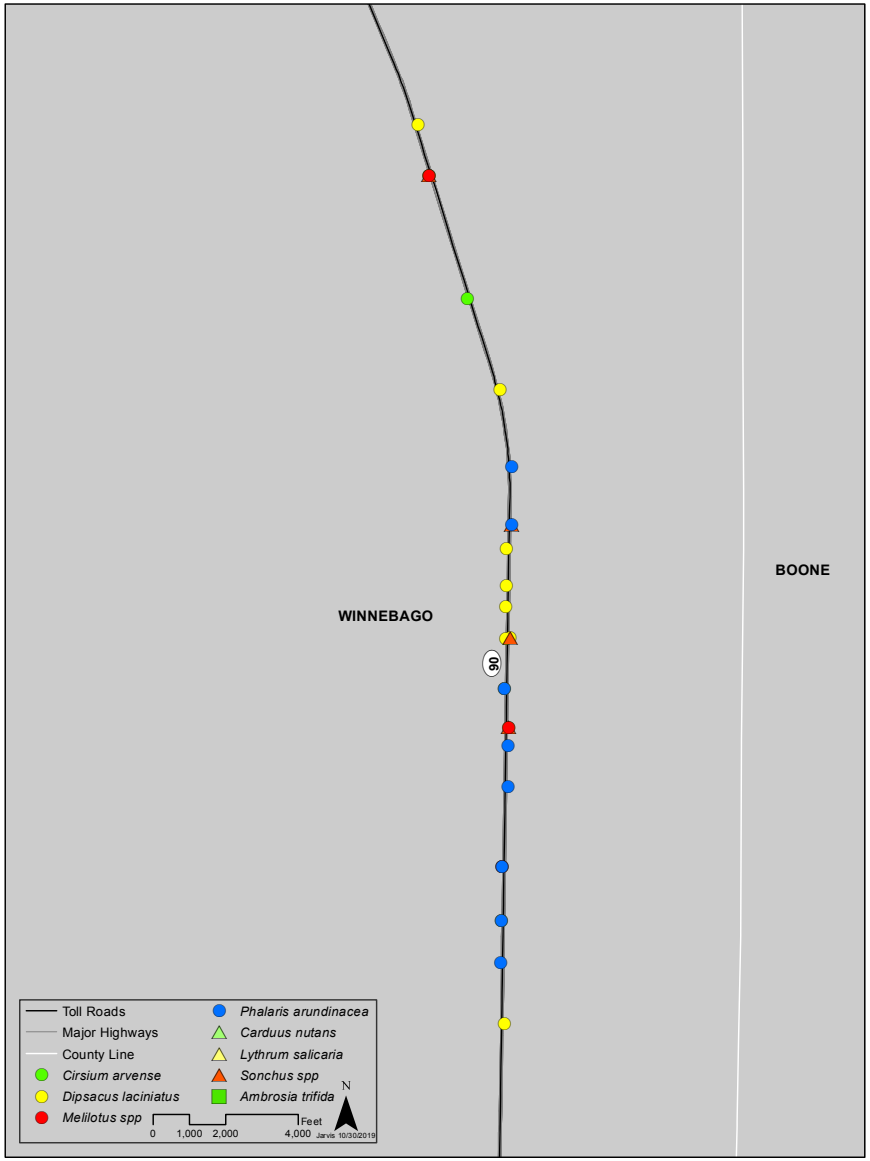
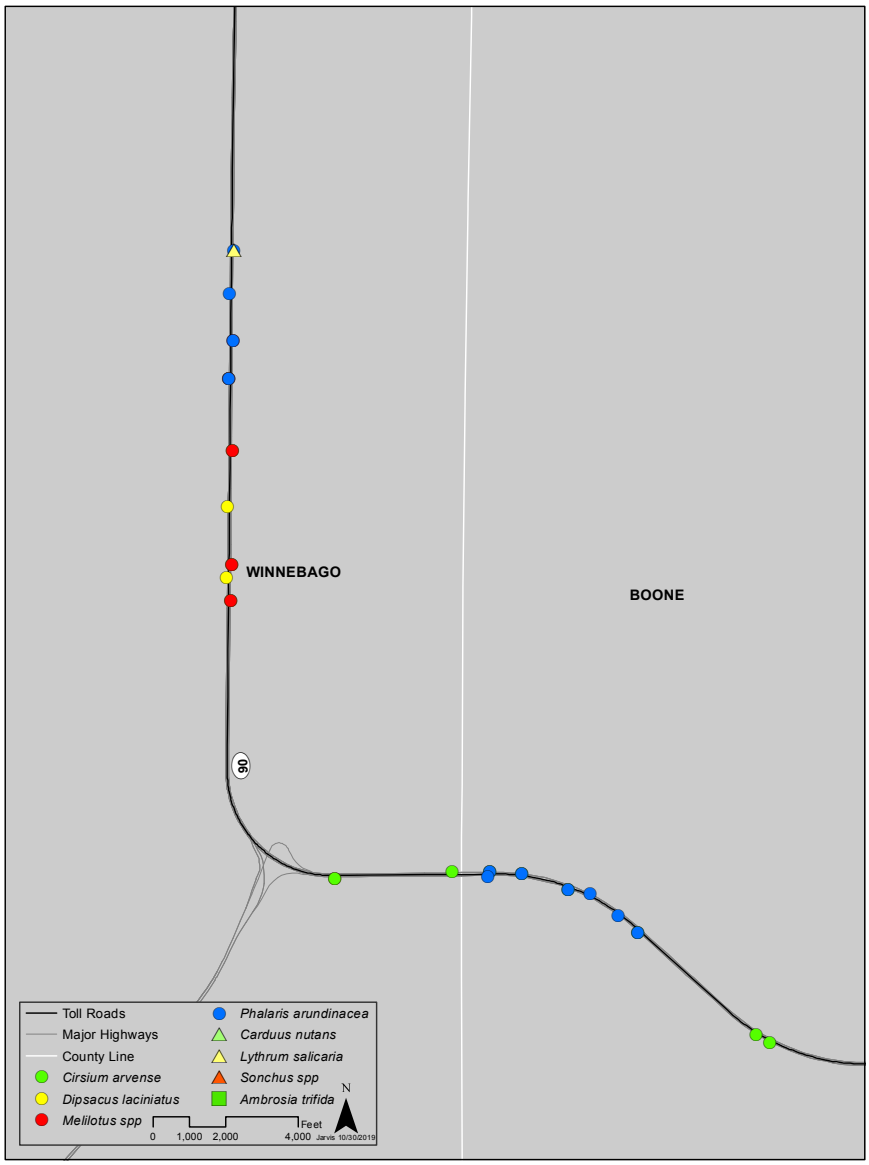


Map 1. Overview map of the distribution of noxious and invasive species throughout the ISTHA system. Numbered rectangles identify the regional orientation of enlargement maps 1.1–1.45.

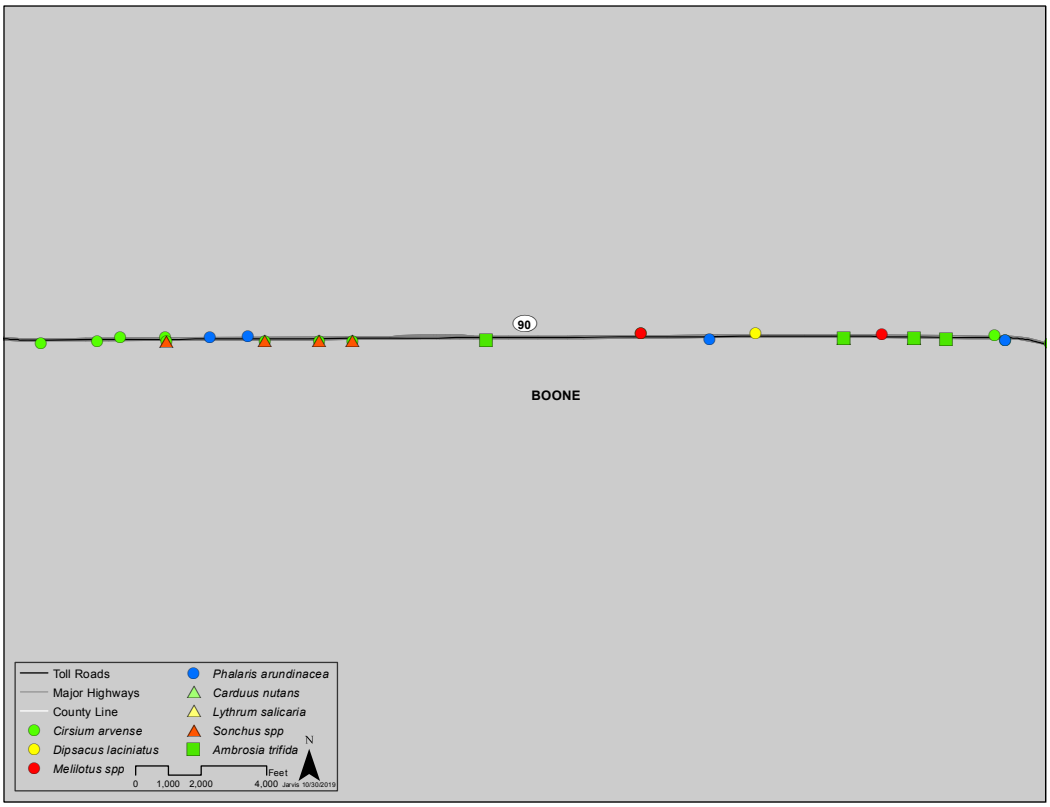
Map 1.1 Enlargement of section 1 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



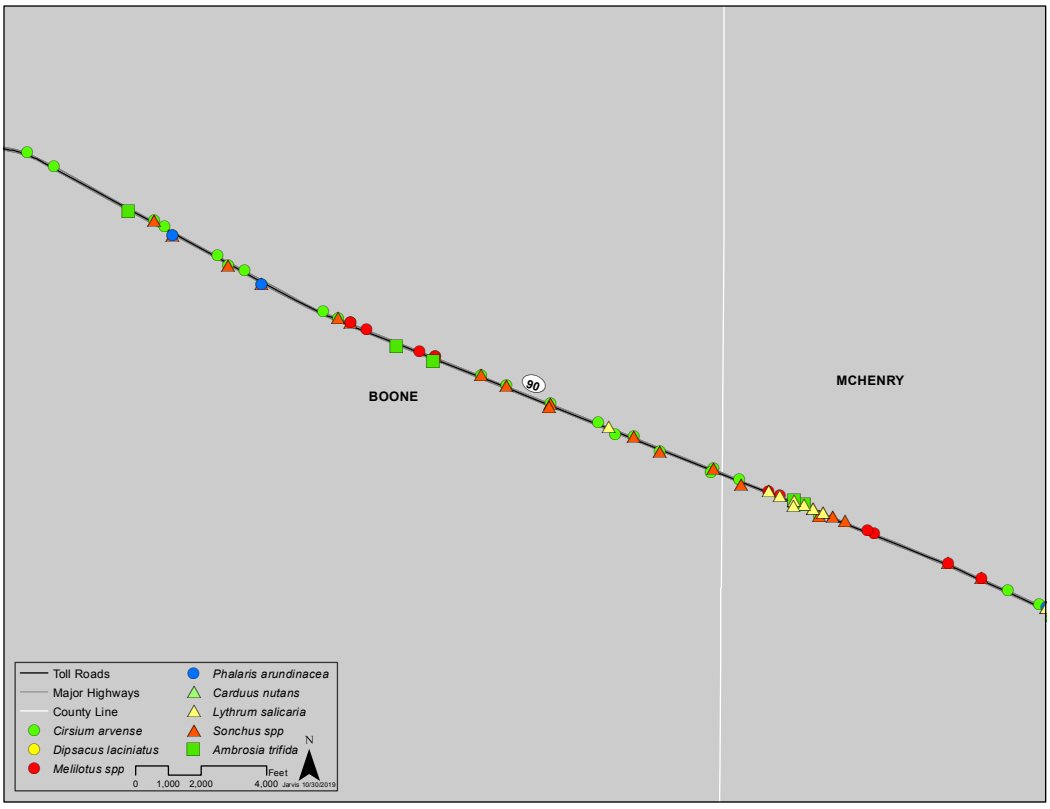
Map 1.2 Enlargement of section 2 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



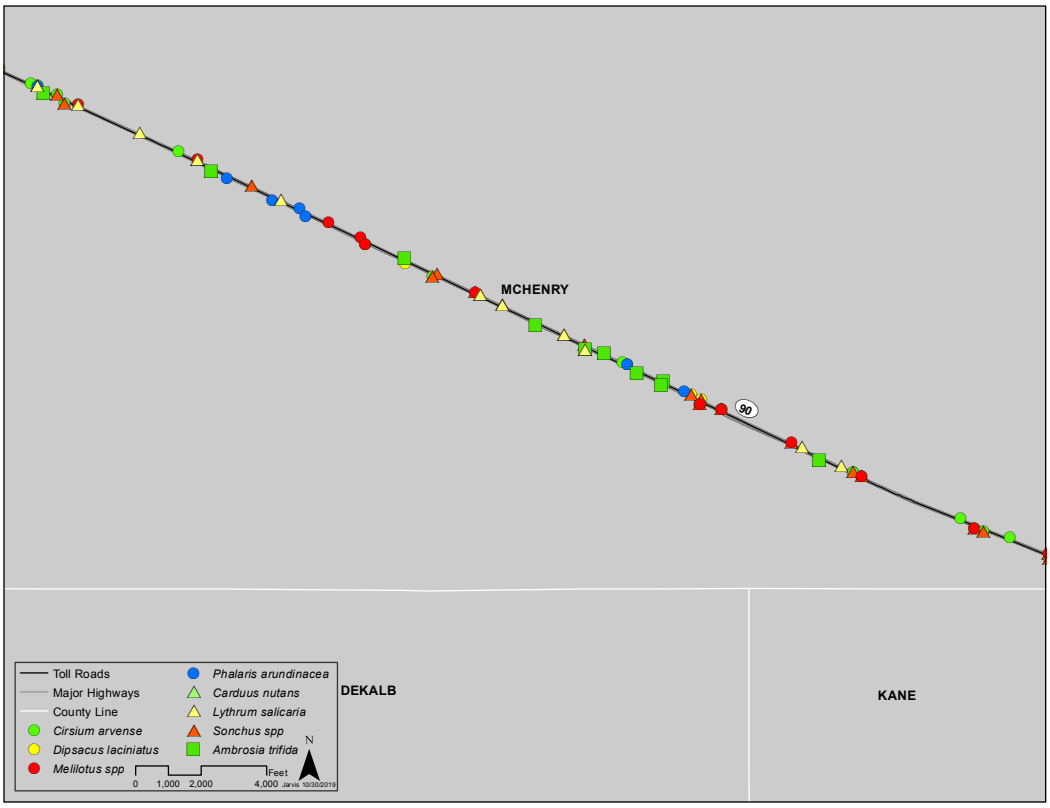
Map 1.3 Enlargement of section 3 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



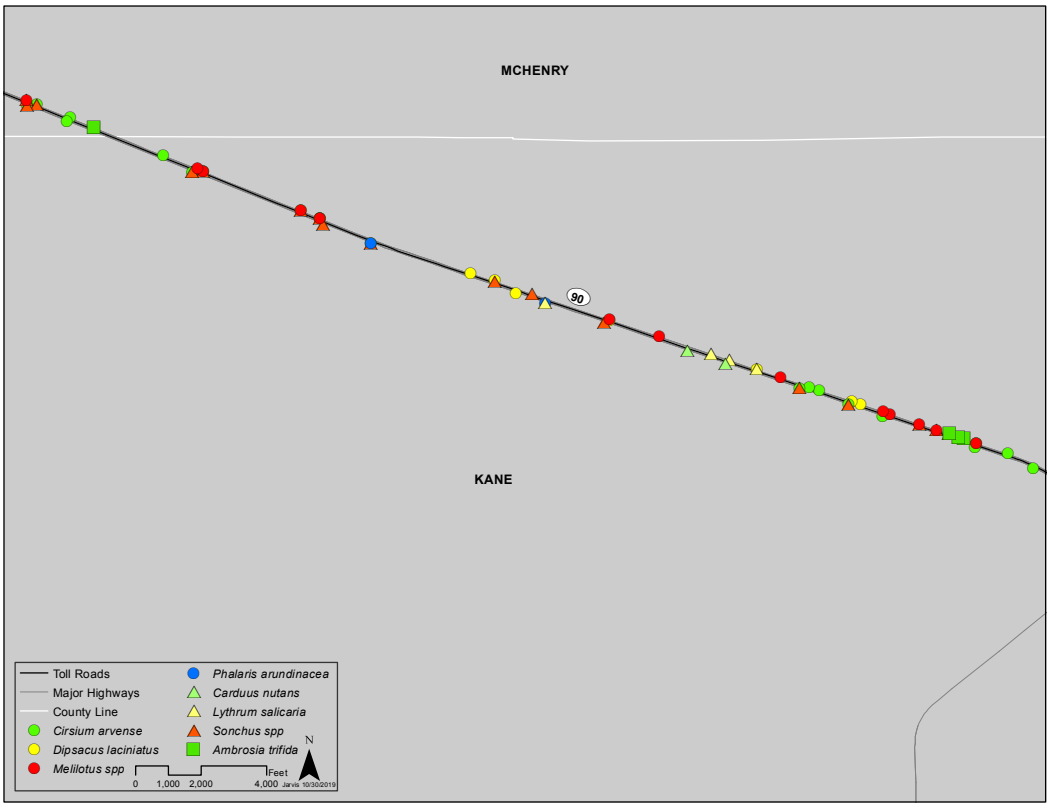
Map 1.4 Enlargement of section 4 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



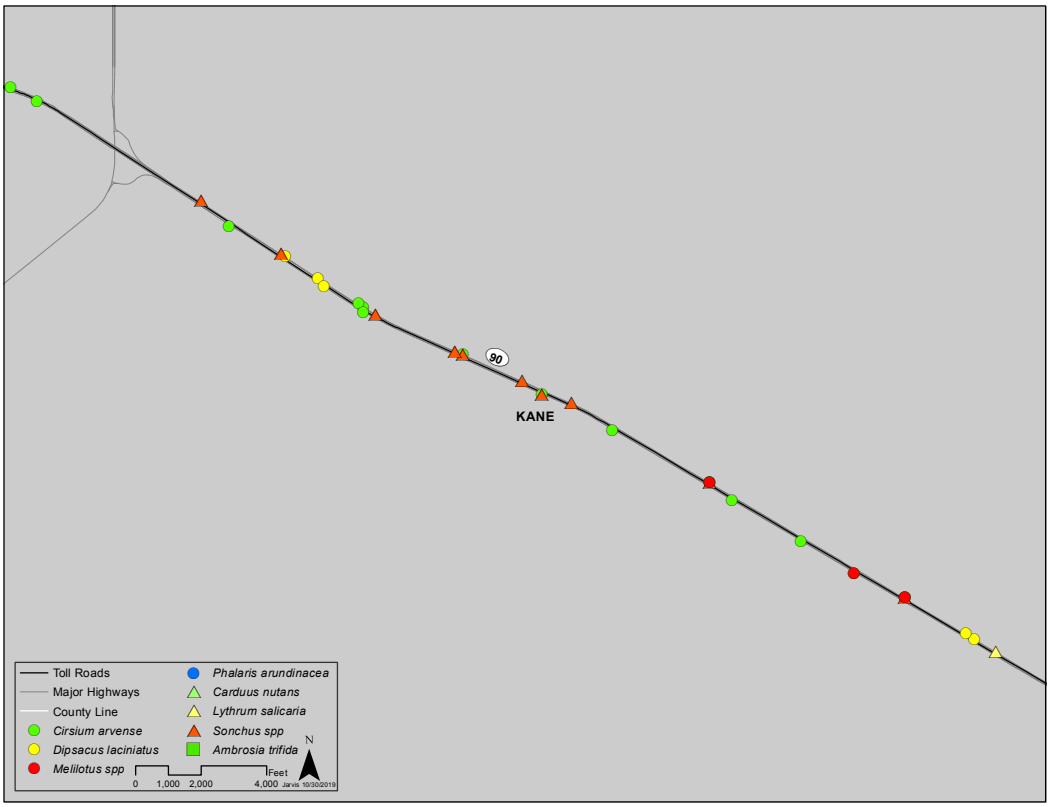
Map 1.5 Enlargement of section 5 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



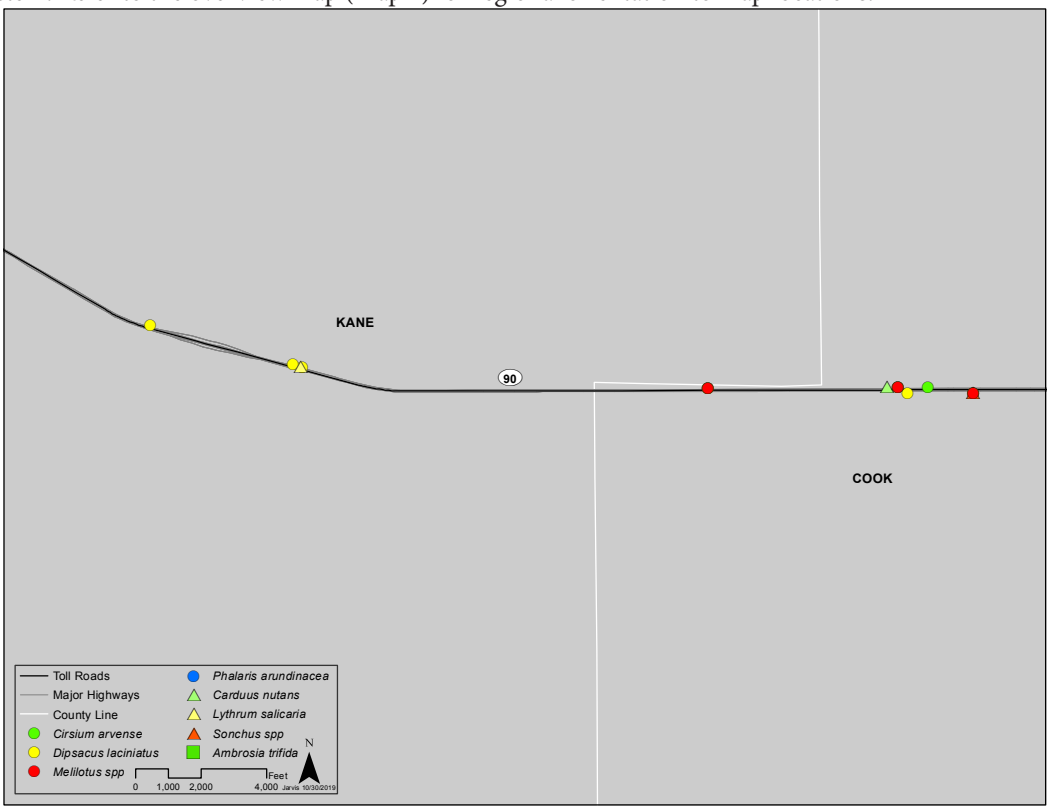
Map 1.6 Enlargement of section 6 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



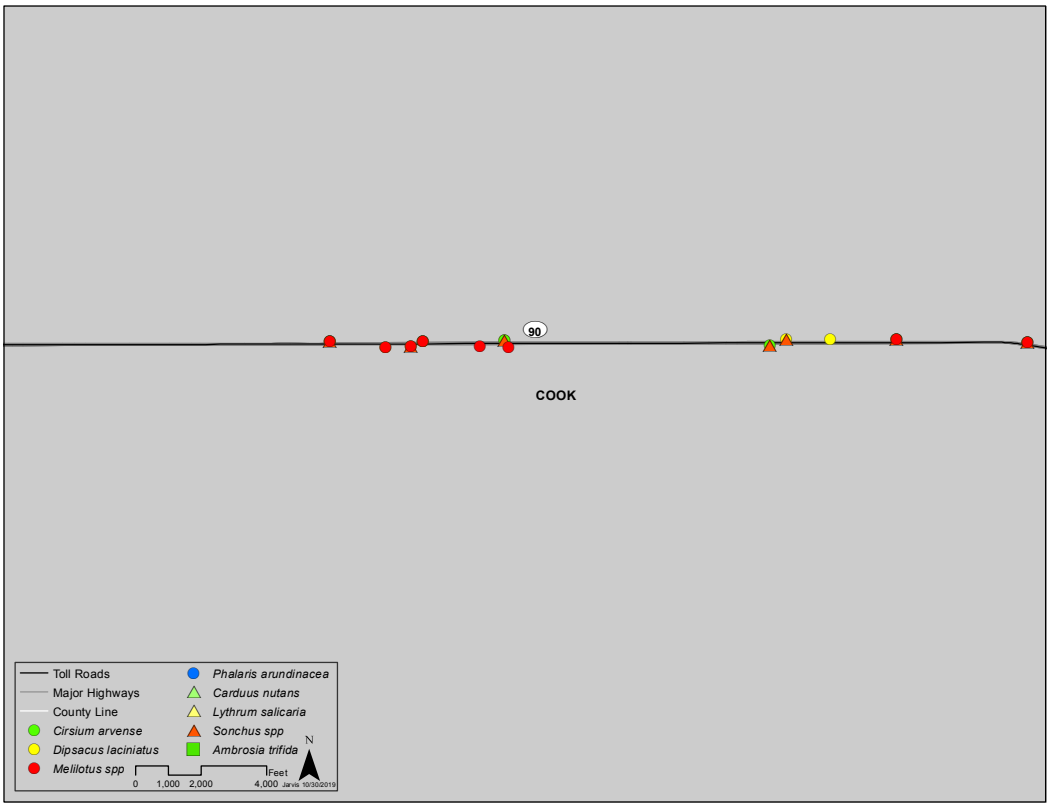
Map 1.7 Enlargement of section 7 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



Map 1.8 Enlargement of section 8 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.

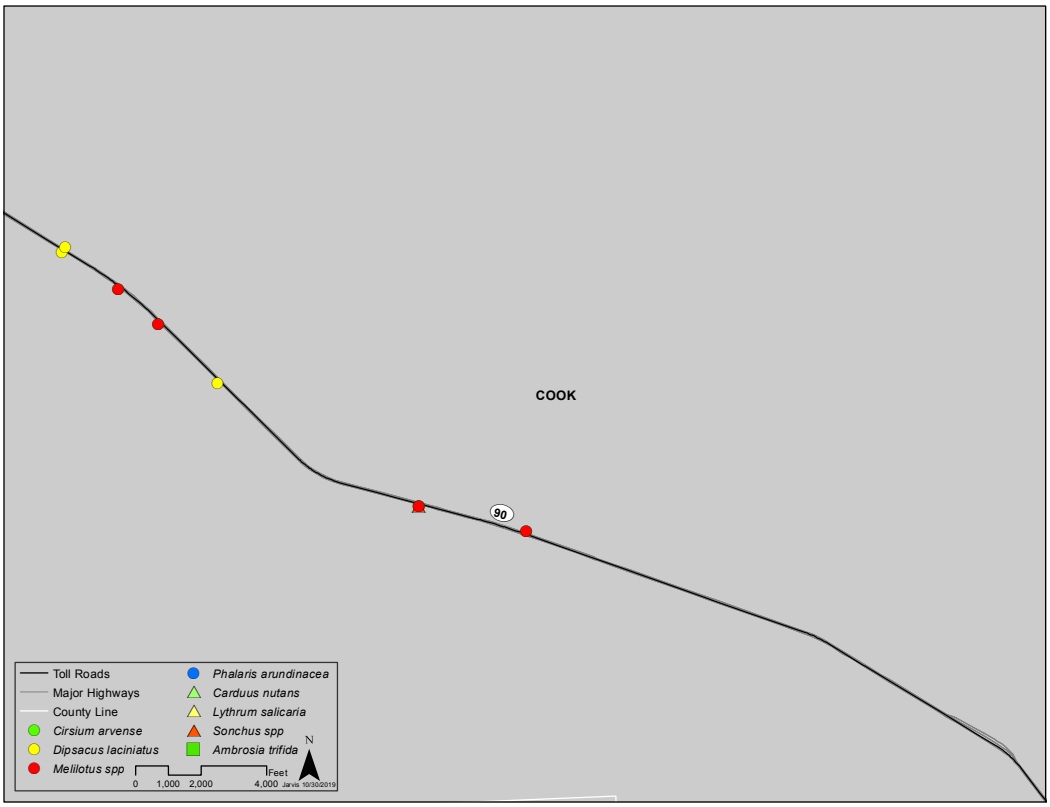


Map 1.9 Enlargement of section 9 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.

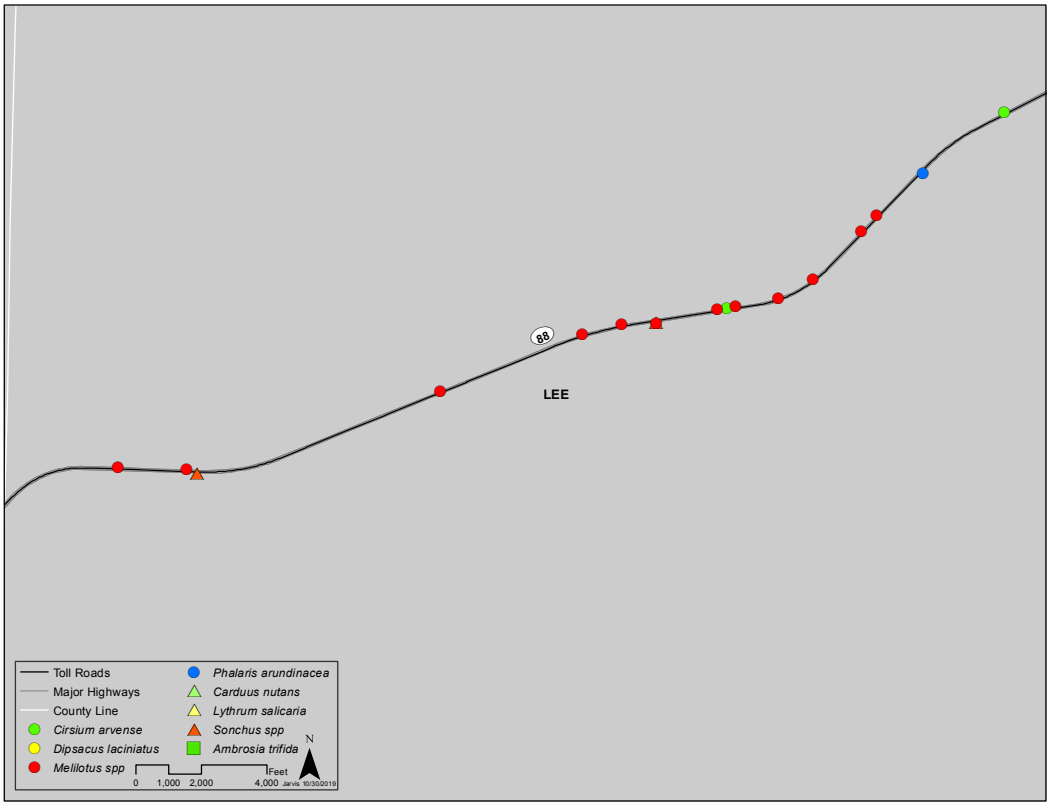


Map 1.10 Enlargement of section 10 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.

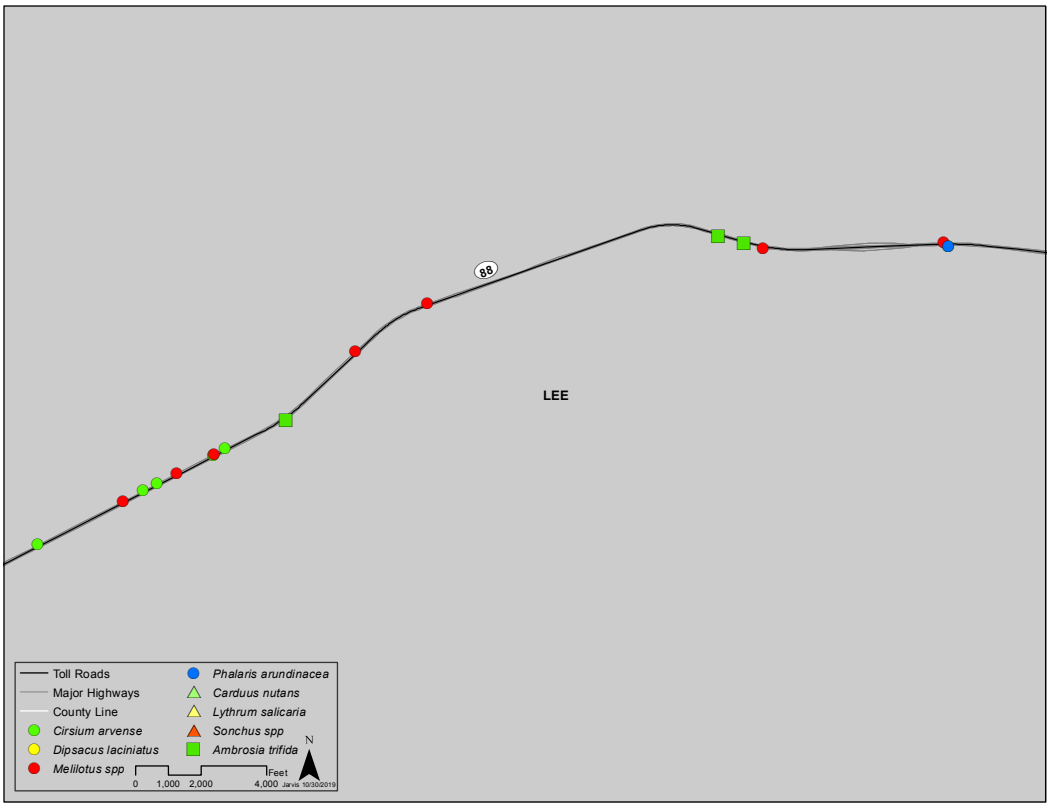
Map 1.11 Enlargement of section 11 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



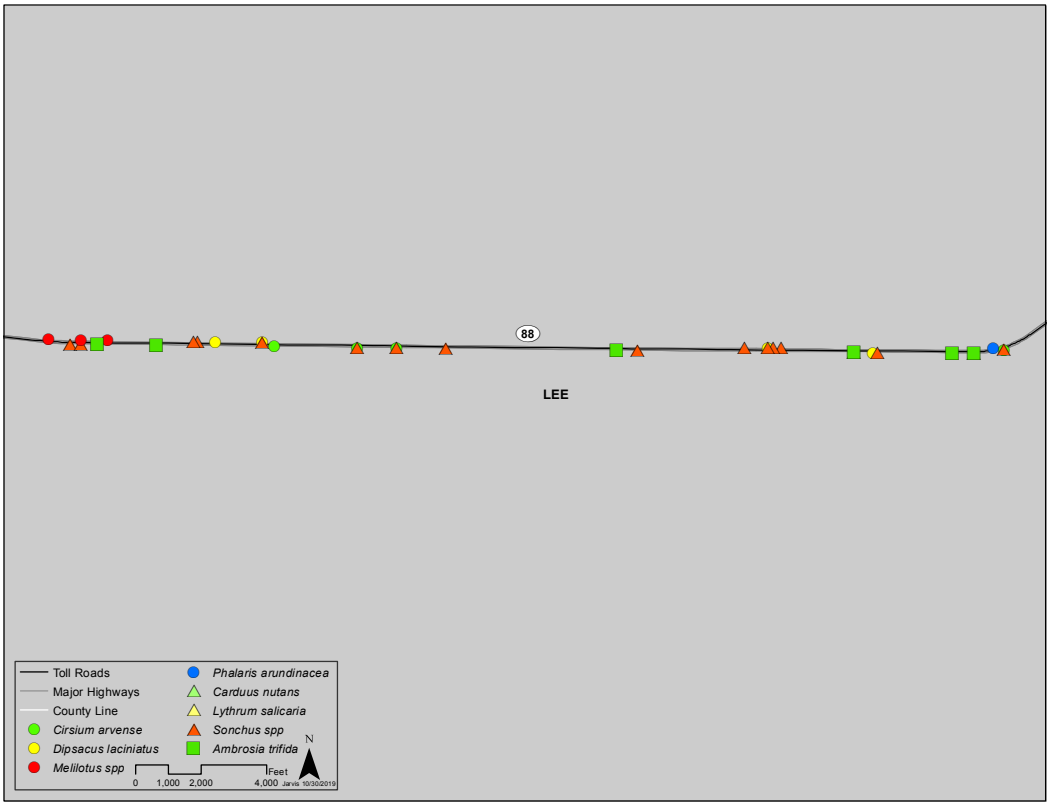
Map 1.12 Enlargement of section 12 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



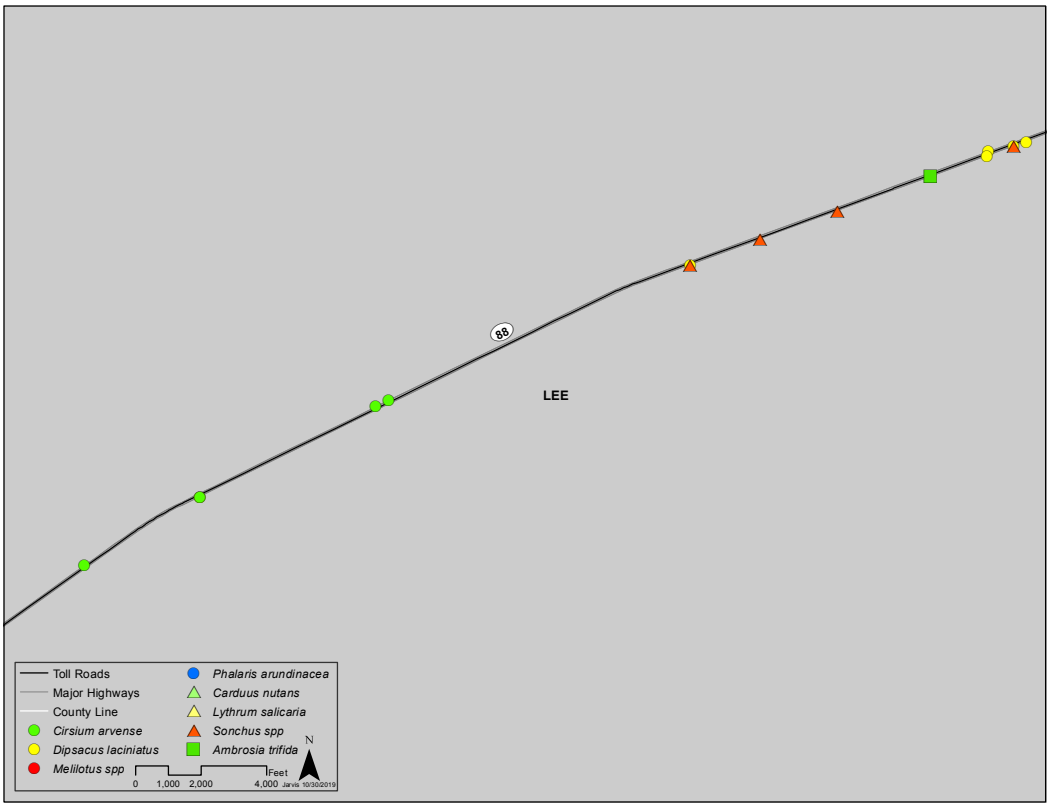
Map 1.13 Enlargement of section 13 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



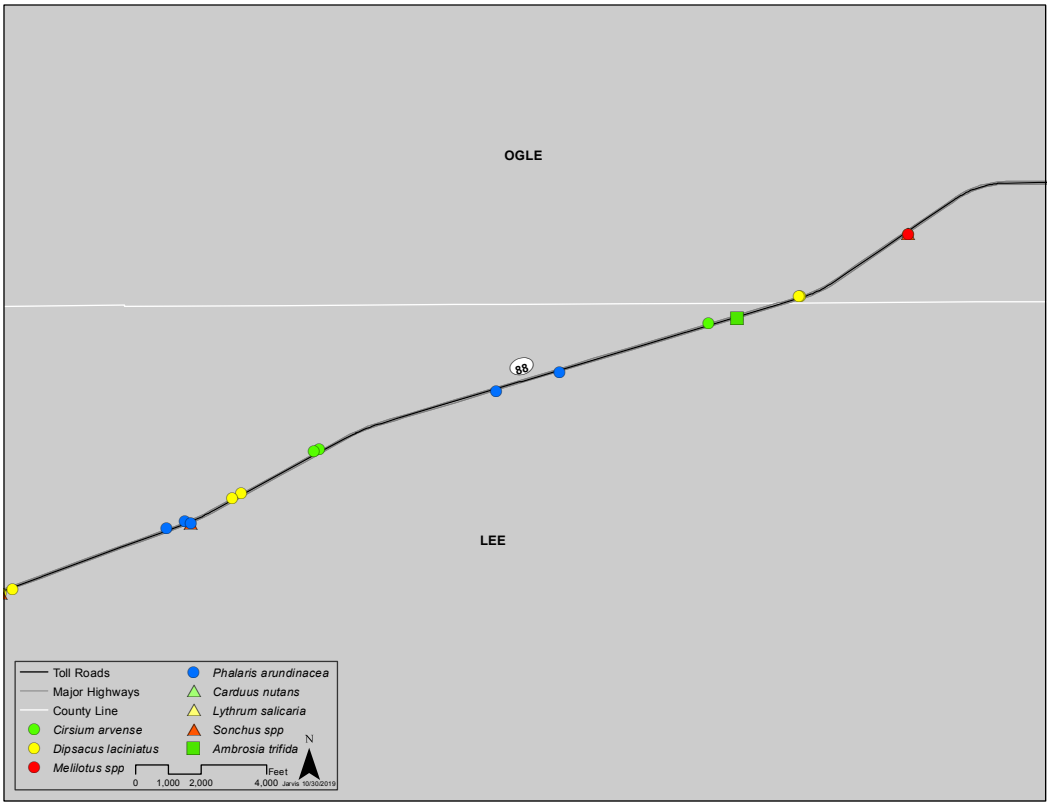
Map 1.14 Enlargement of section 14 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



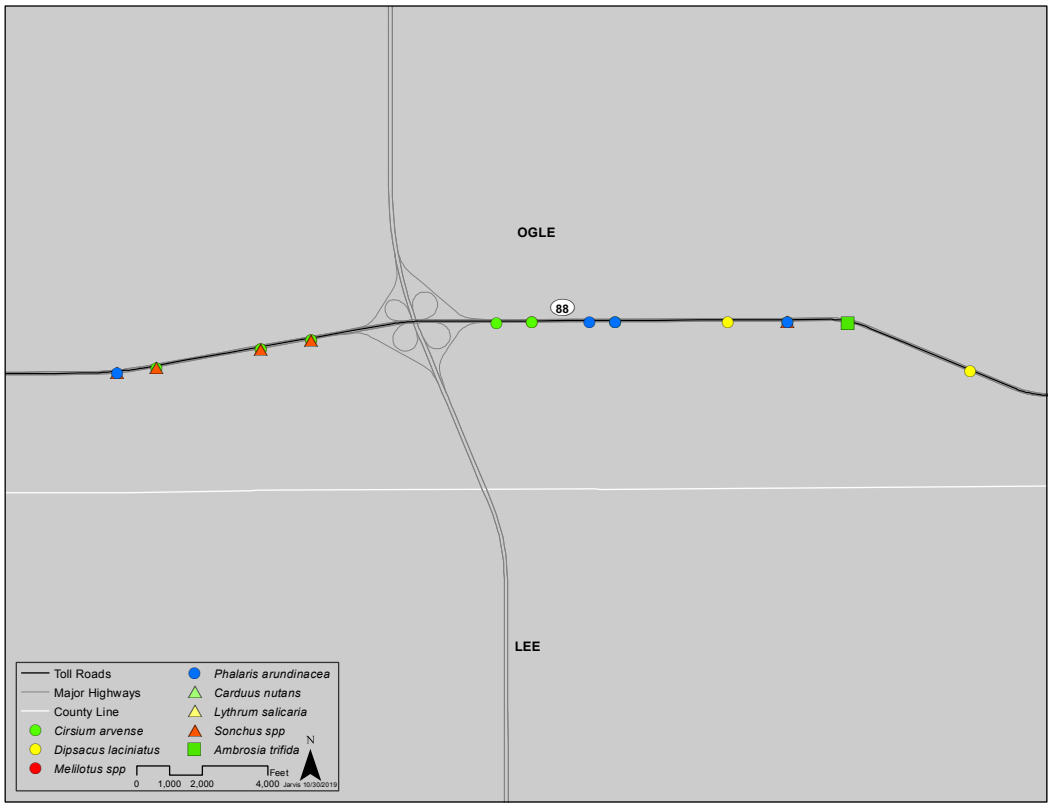
Map 1.15 Enlargement of section 15 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



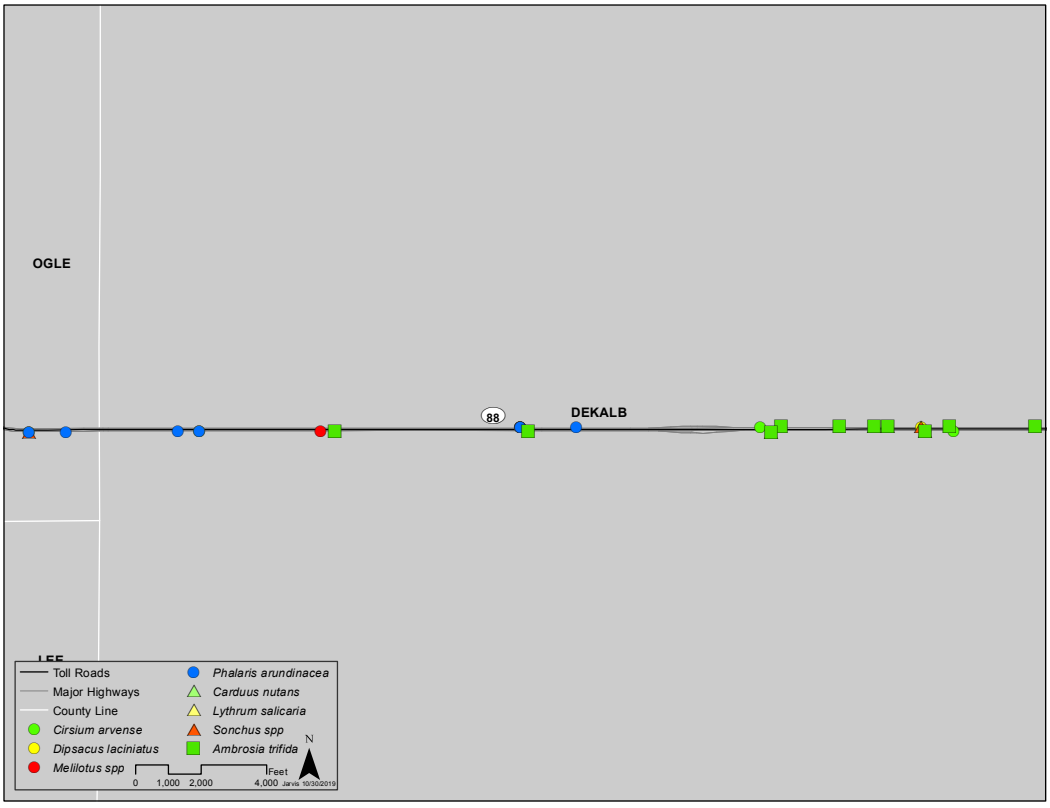
Map 1.16 Enlargement of section 16 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



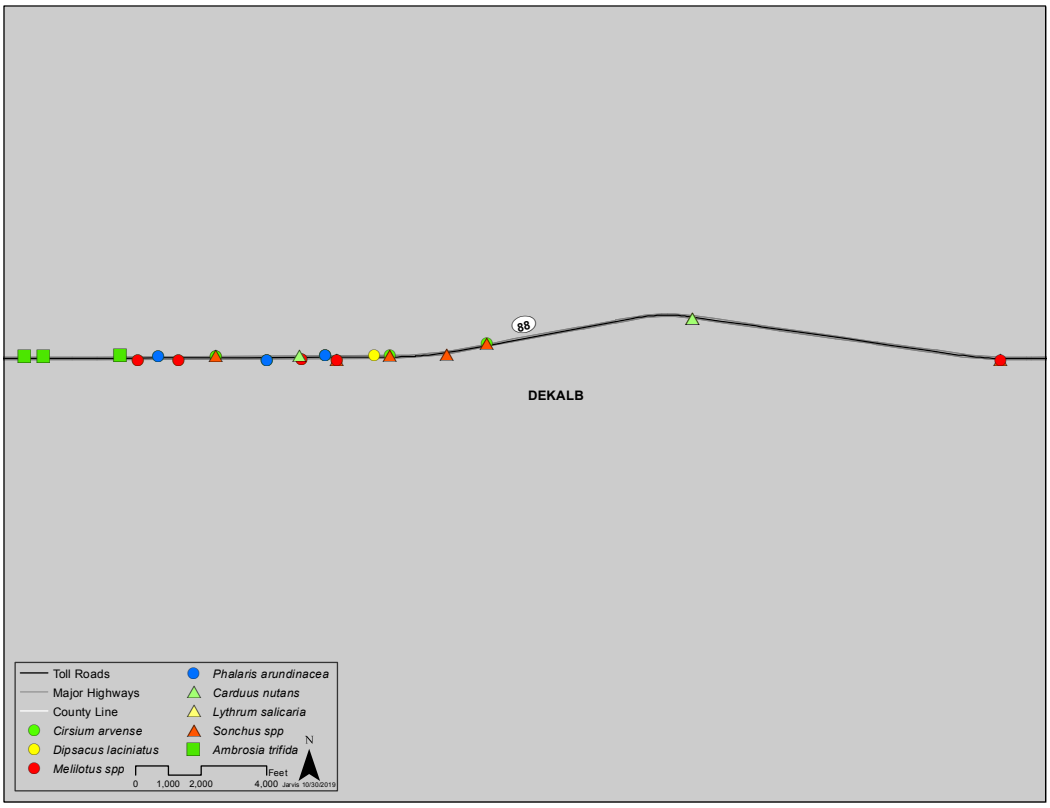
Map 1.17 Enlargement of section 17 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



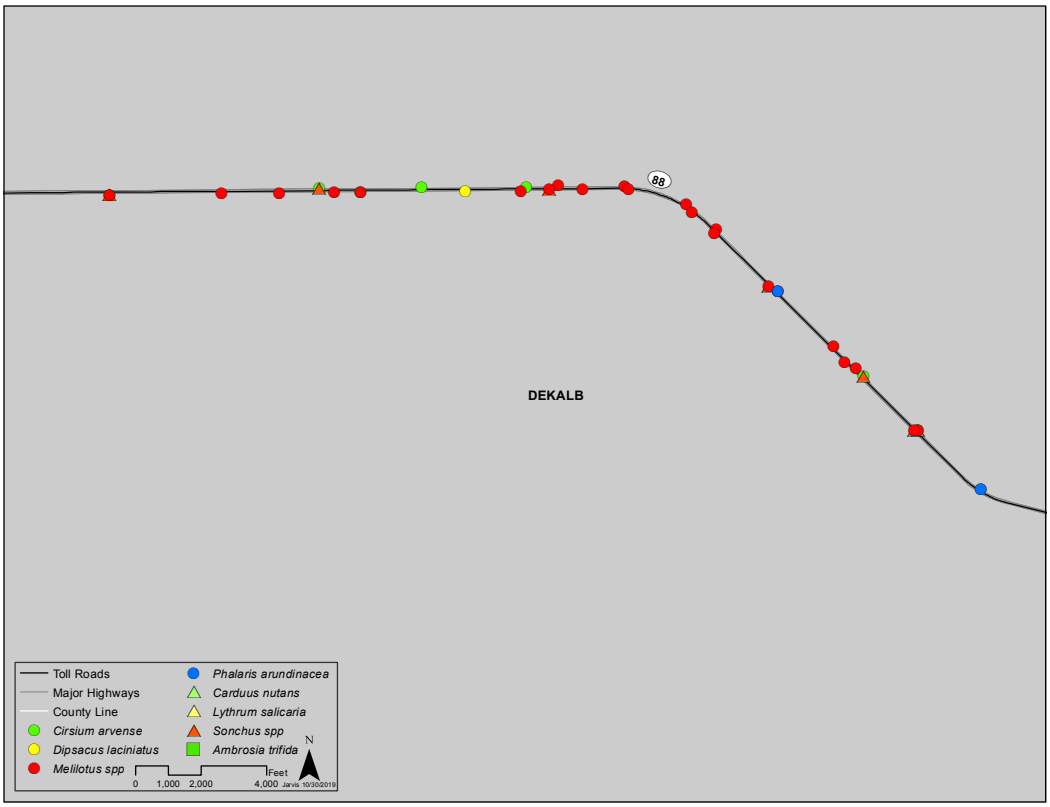
Map 1.18 Enlargement of section 18 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



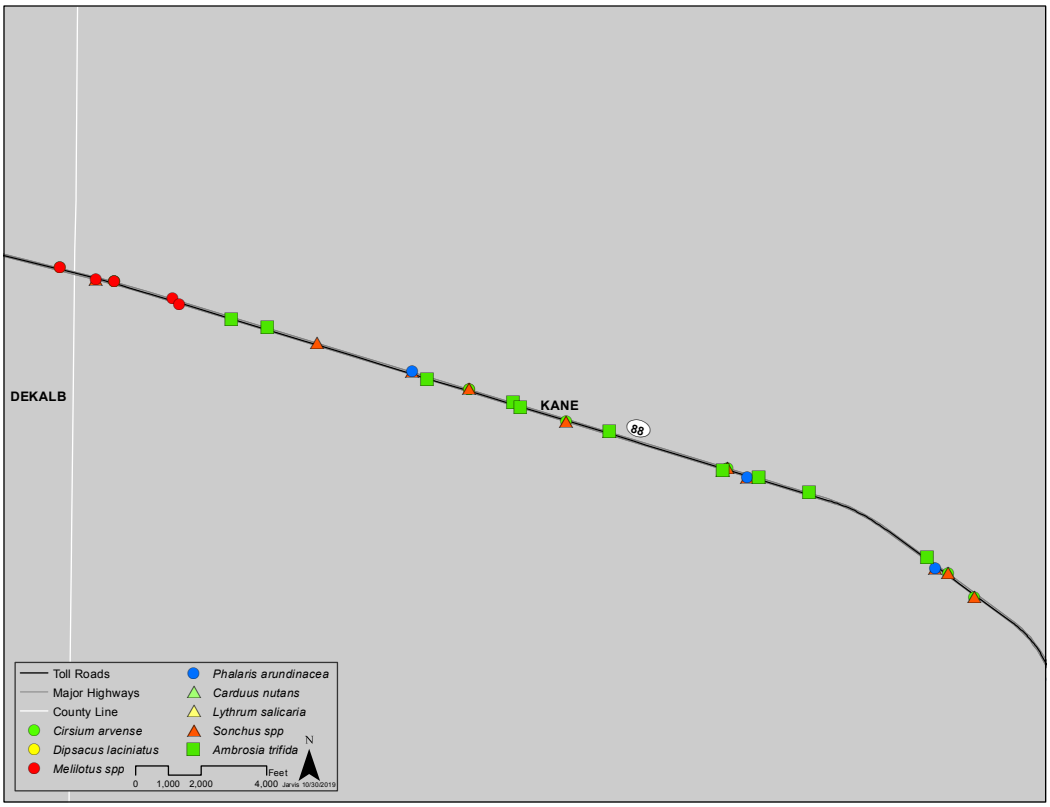
Map 1.19 Enlargement of section 19 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



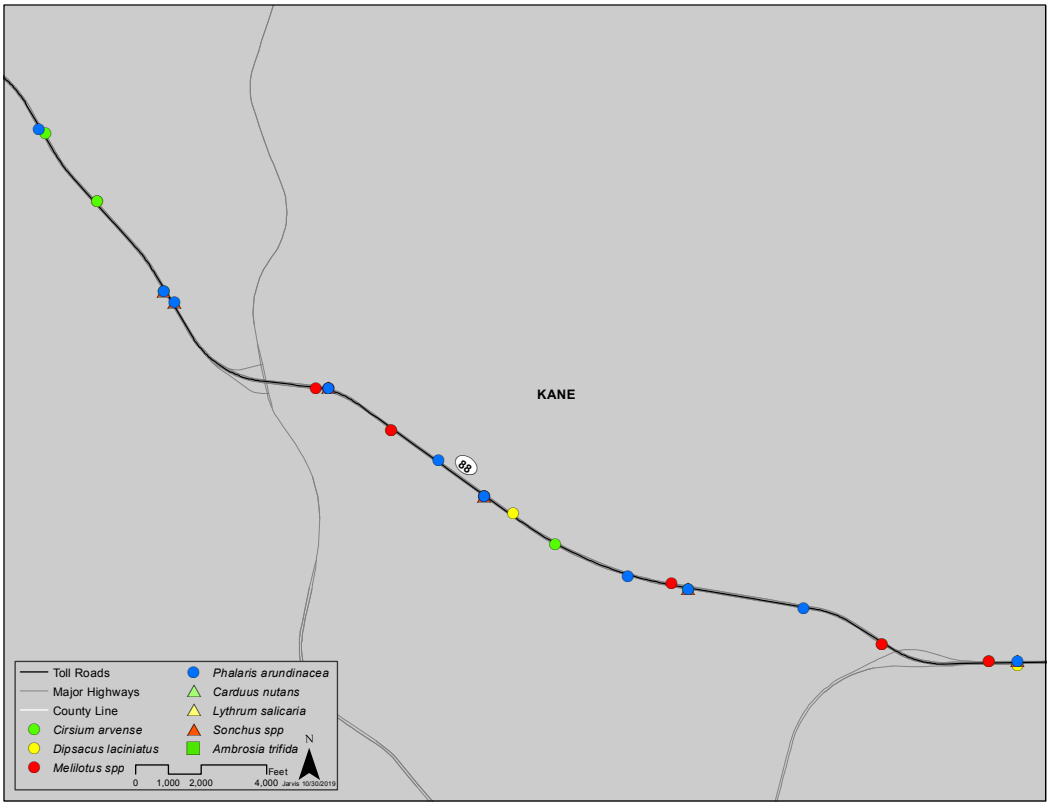
Map 1.20 Enlargement of section 20 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



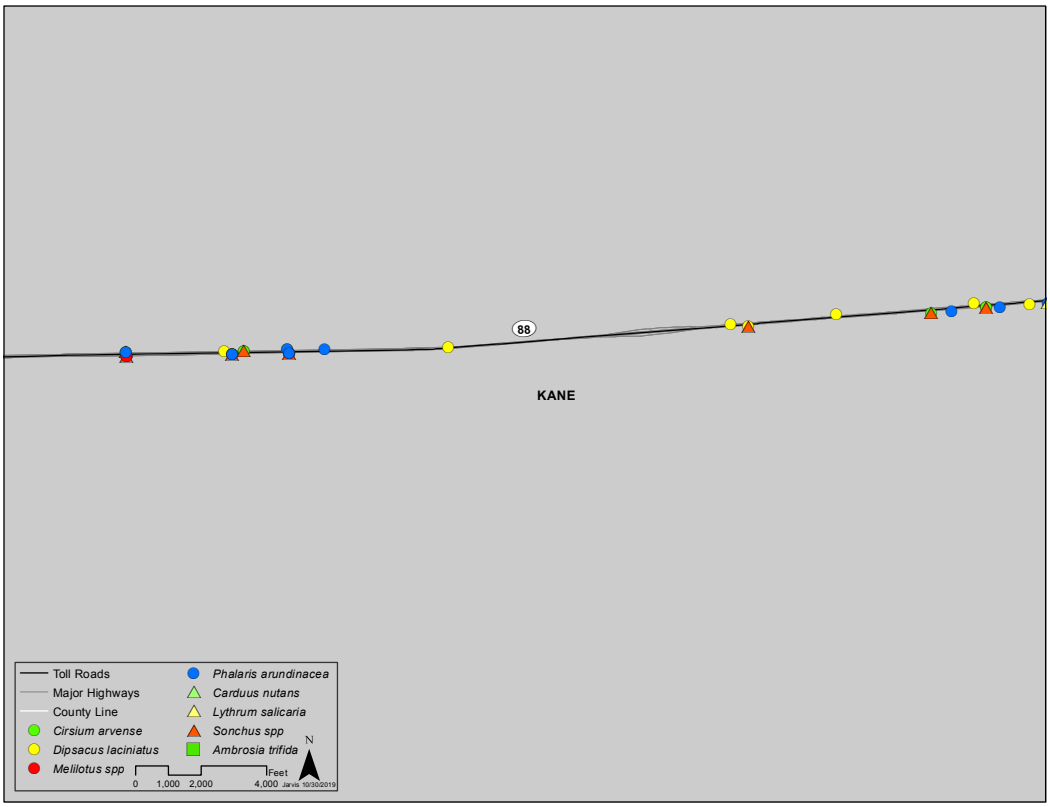
Map 1.21 Enlargement of section 21 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



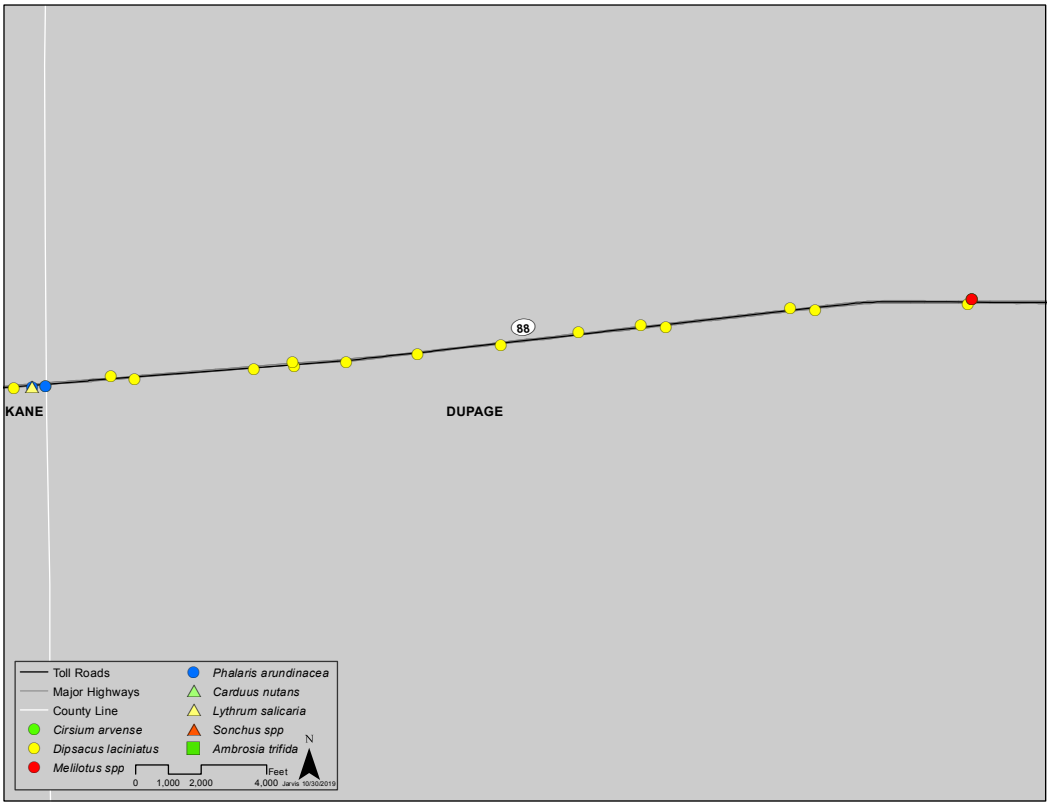
Map 1.22 Enlargement of section 22 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



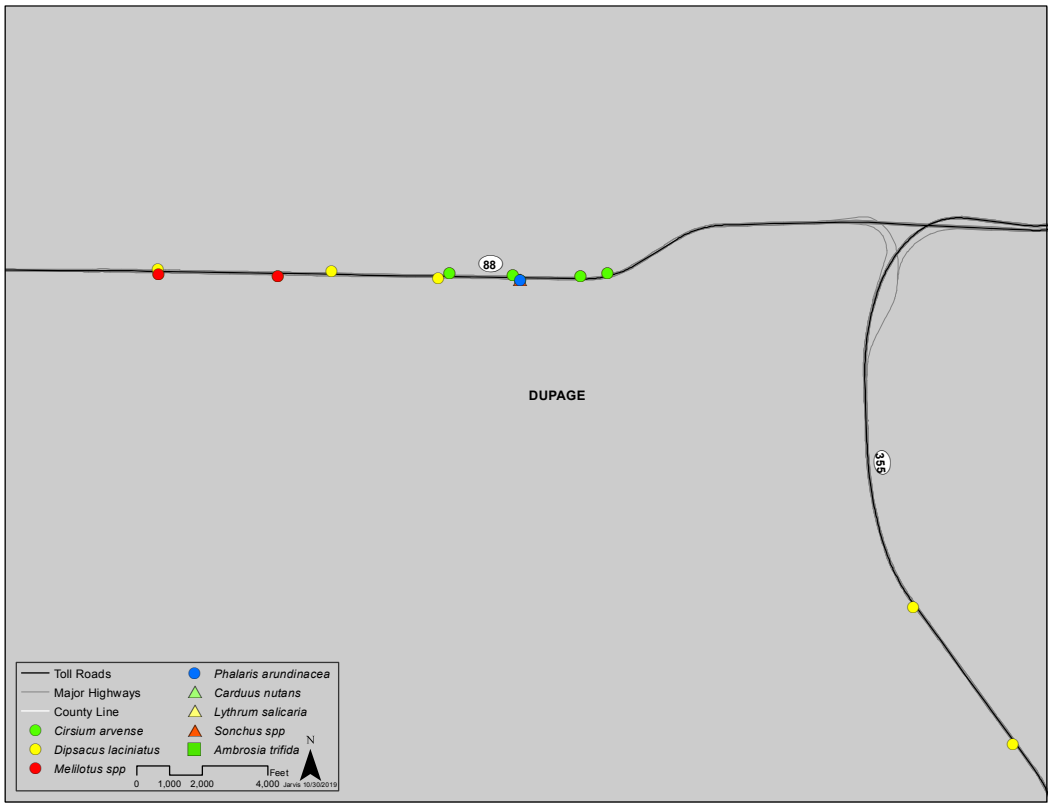
Map 1.23 Enlargement of section 23 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



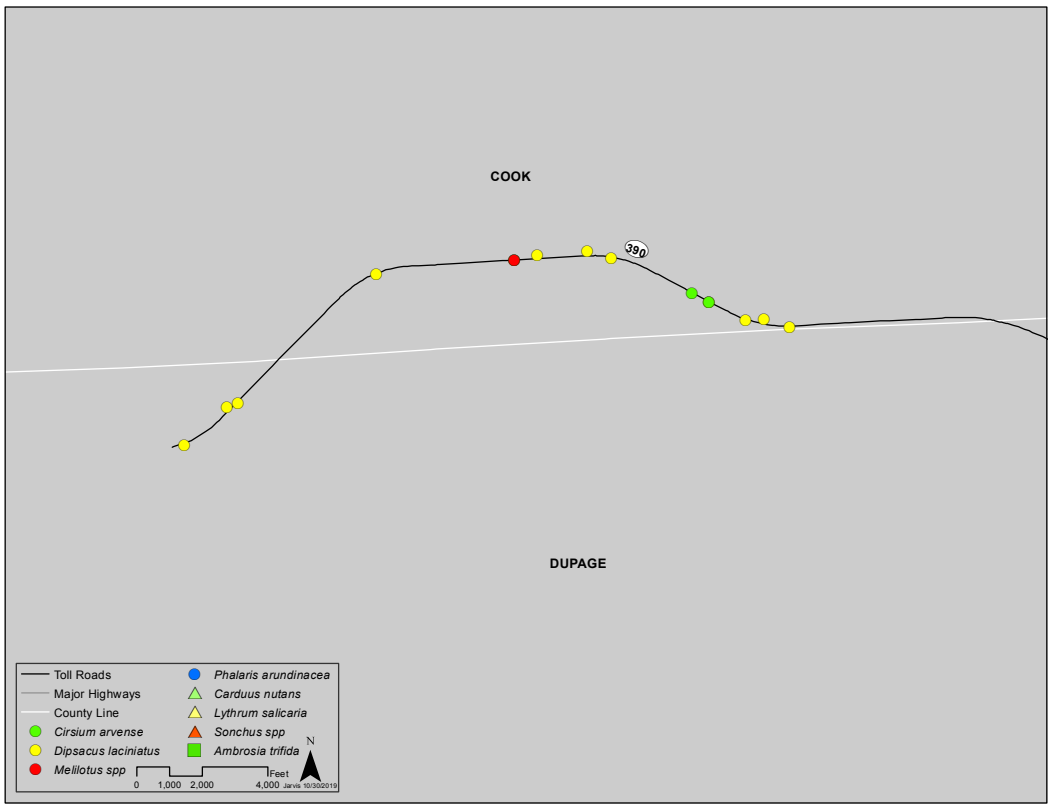
Map 1.24 Enlargement of section 24 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



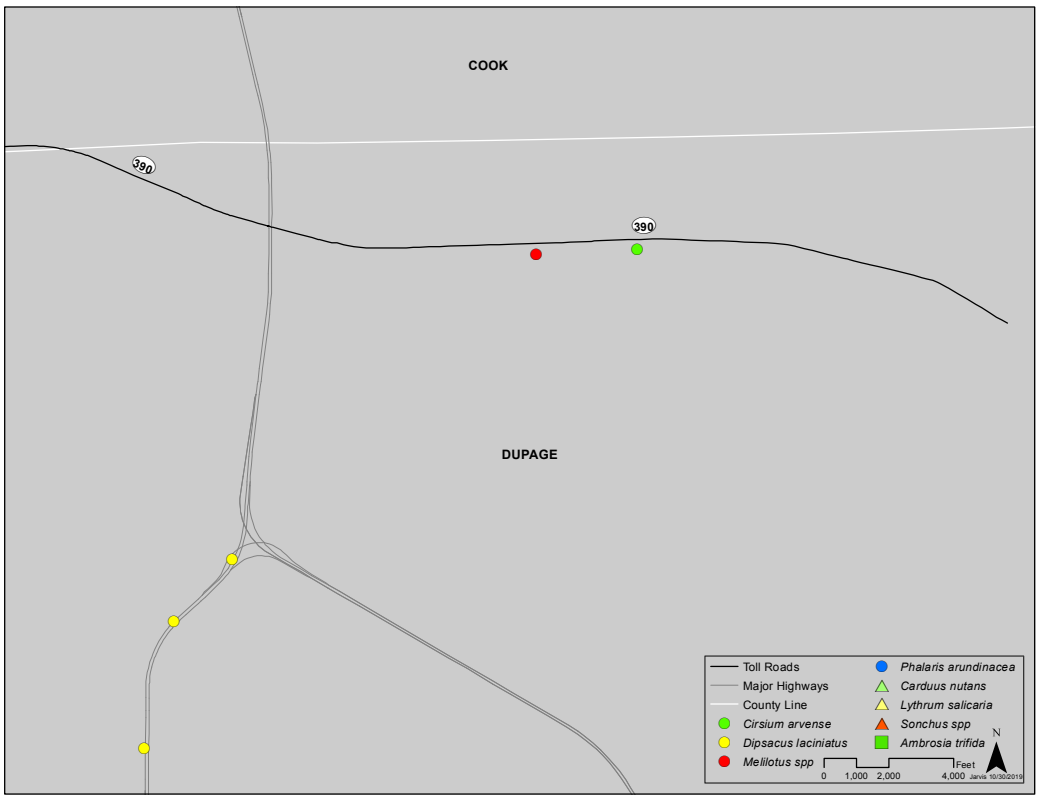
Map 1.25 Enlargement of section 25 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



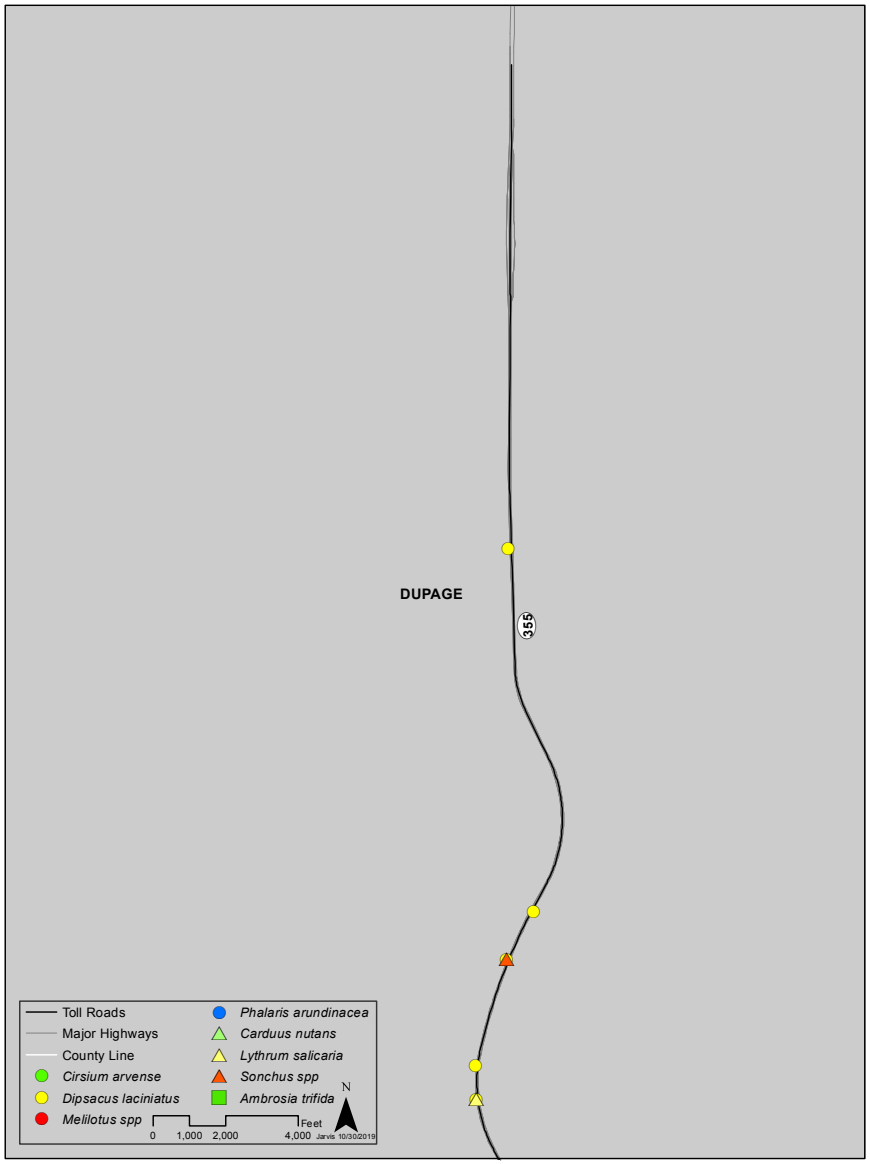
Map 1.26 Enlargement of section 26 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



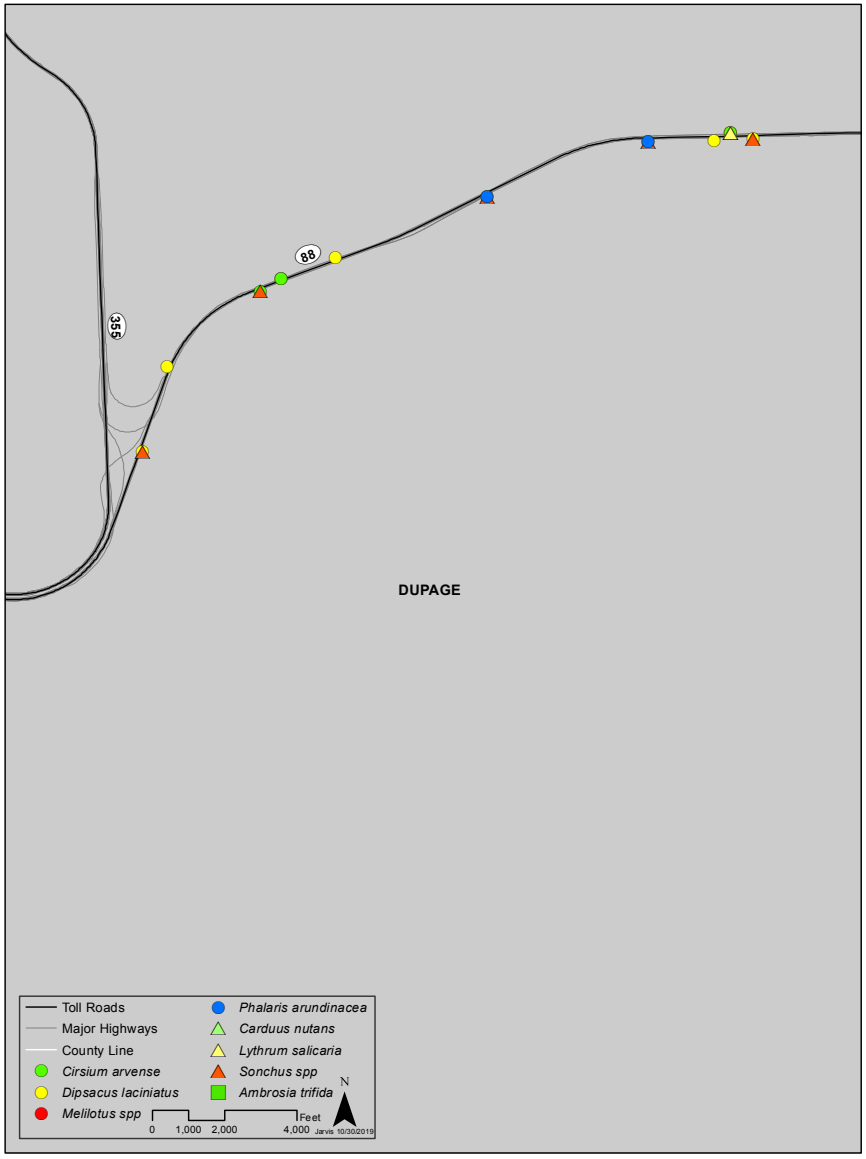
Map 1.27 Enlargement of section 27 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



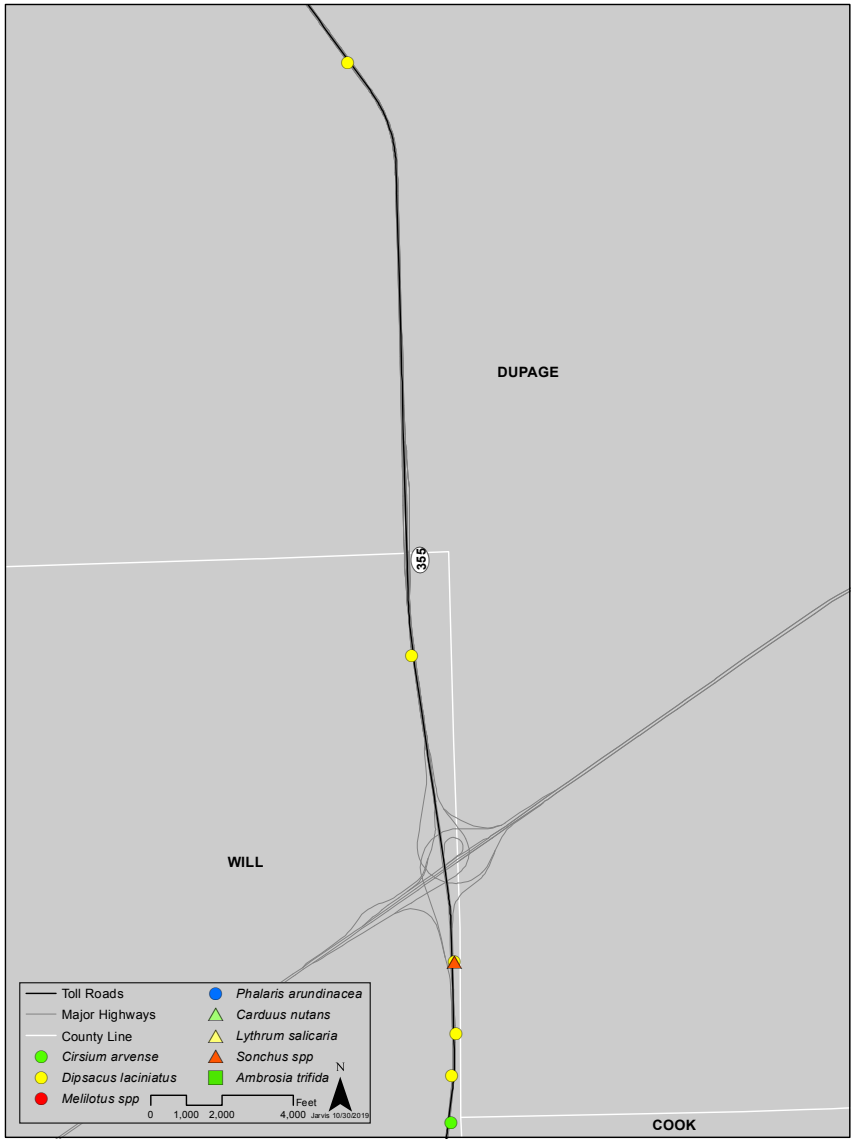
Map 1.28 Enlargement of section 28 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



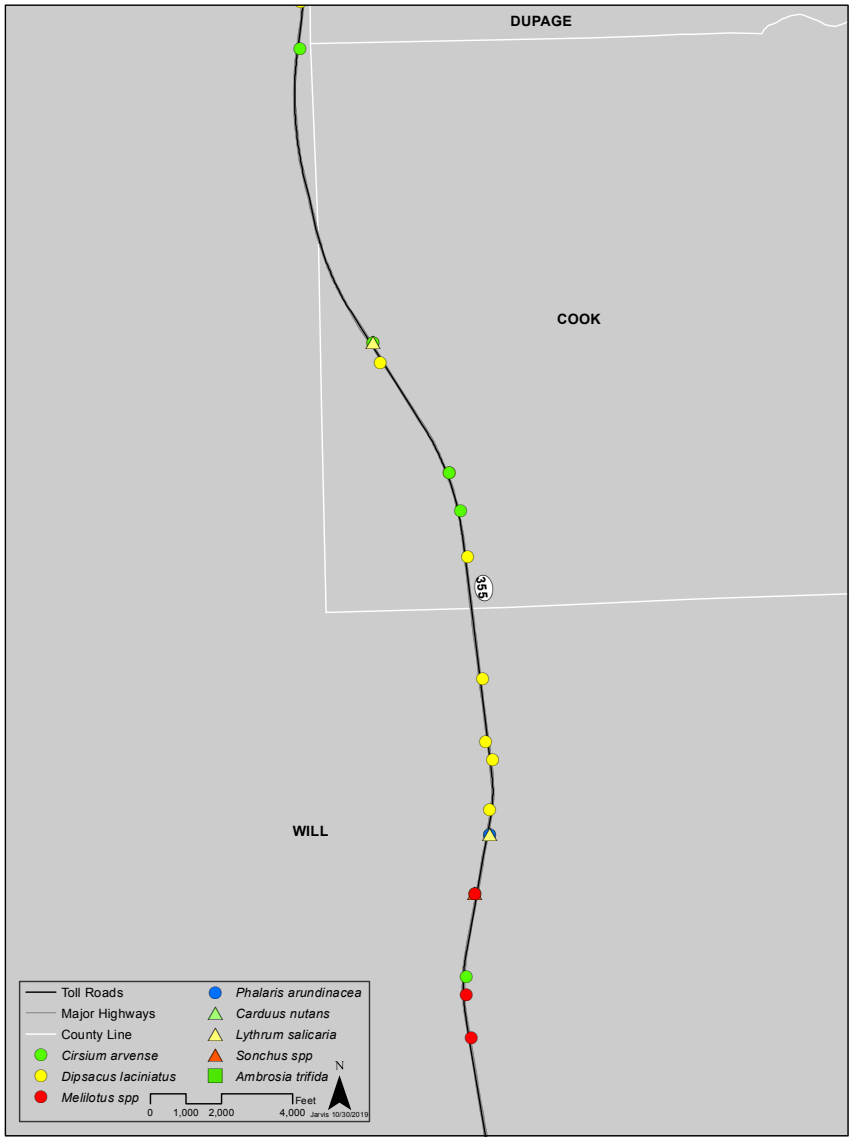
Map 1.29 Enlargement of section 29 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



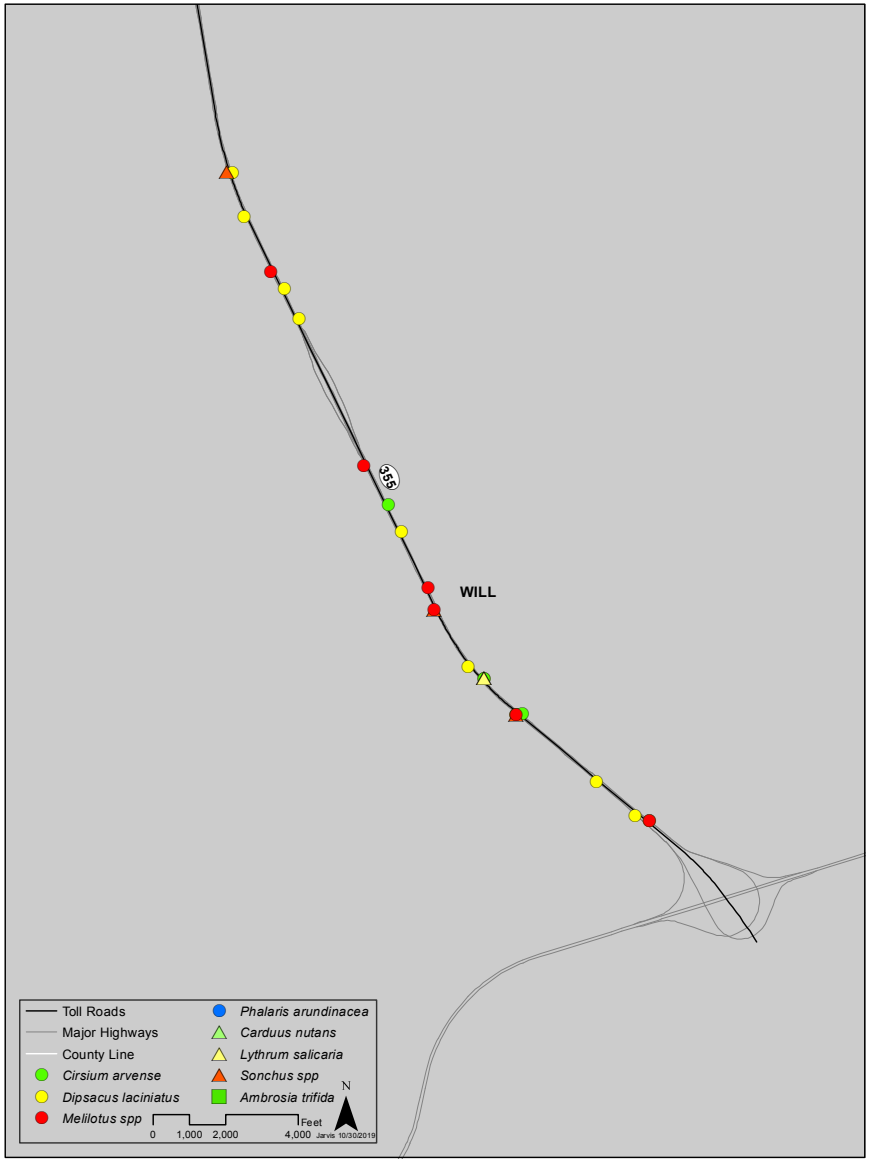
Map 1.30 Enlargement of section 30 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



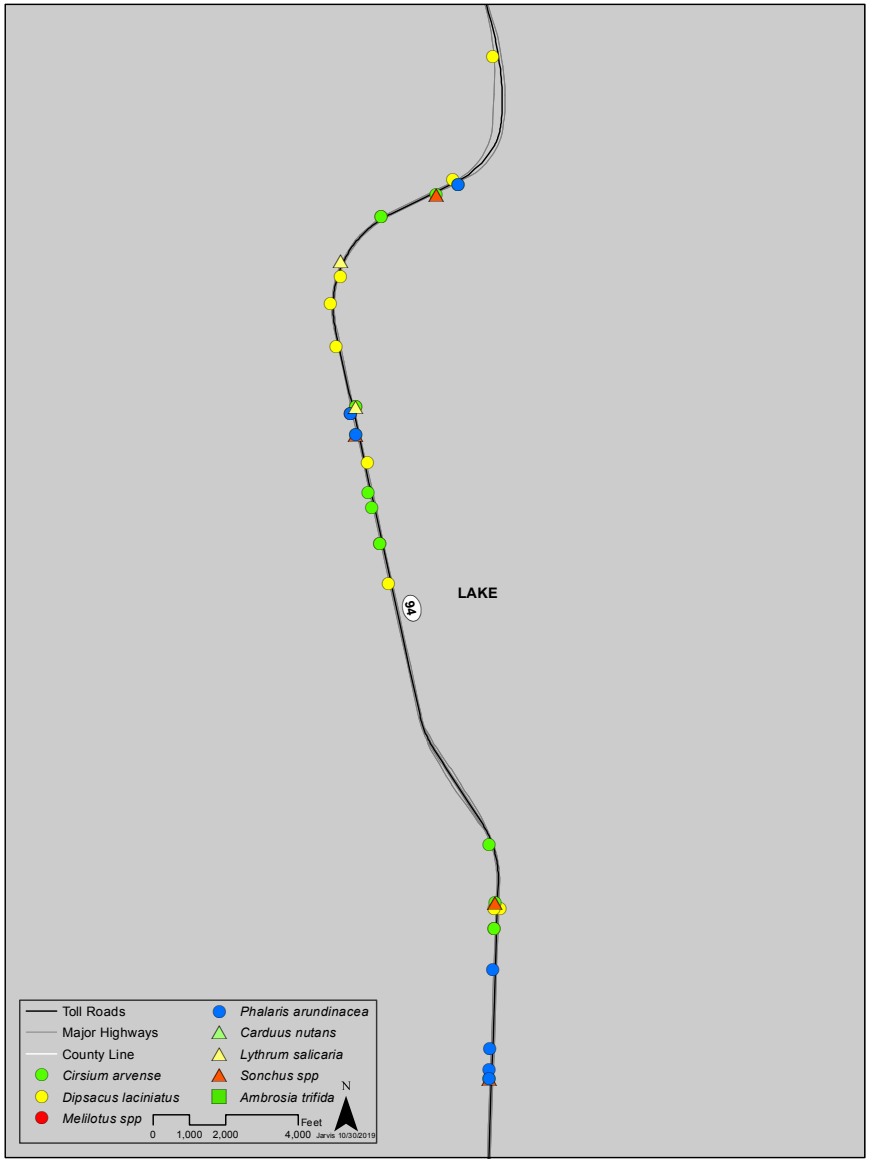
Map 1.31 Enlargement of section 31 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



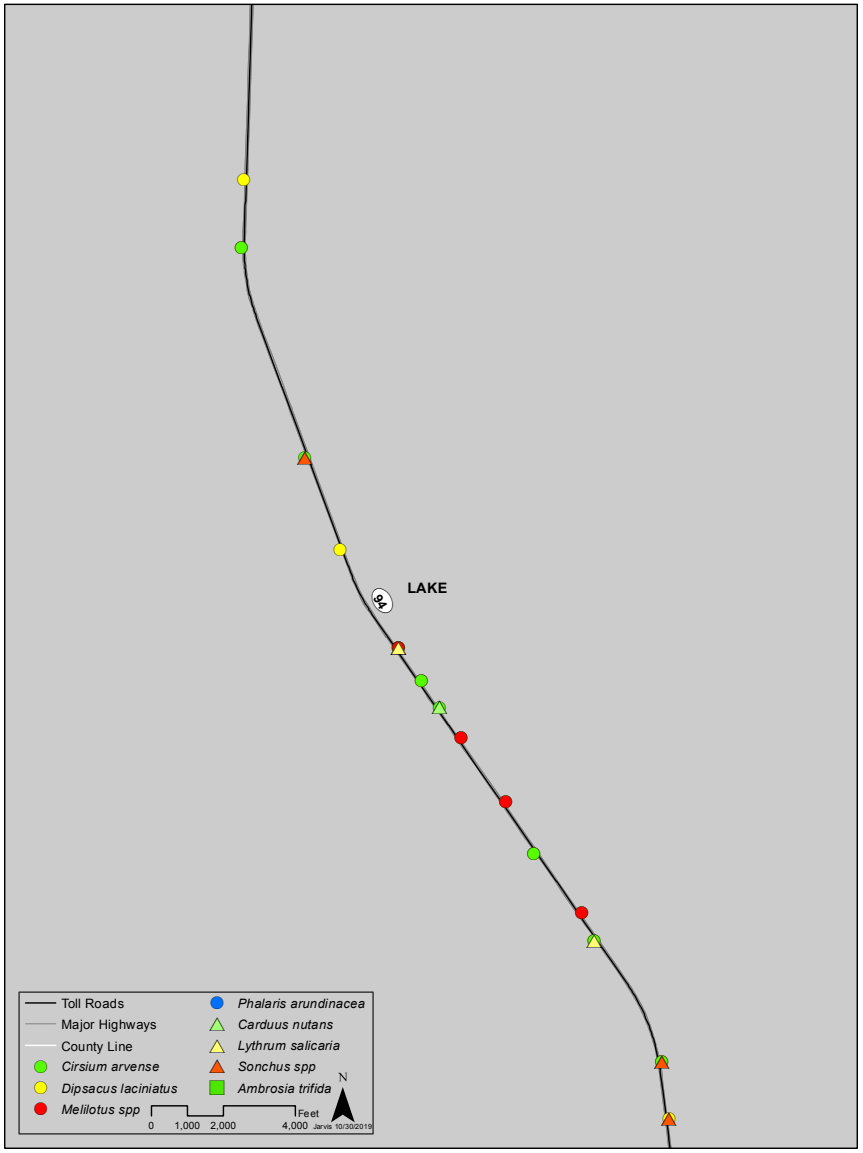
Map 1.32 Enlargement of section 32 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



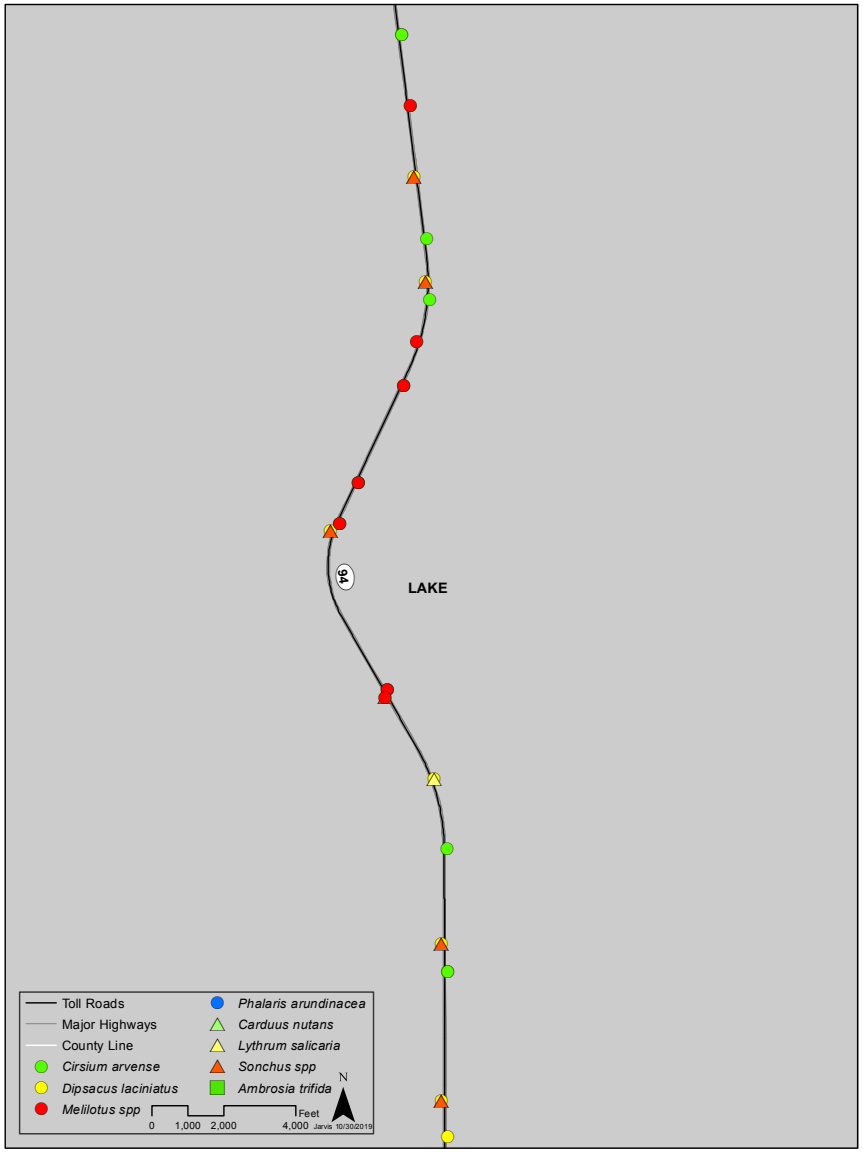
Map 1.33 Enlargement of section 33 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



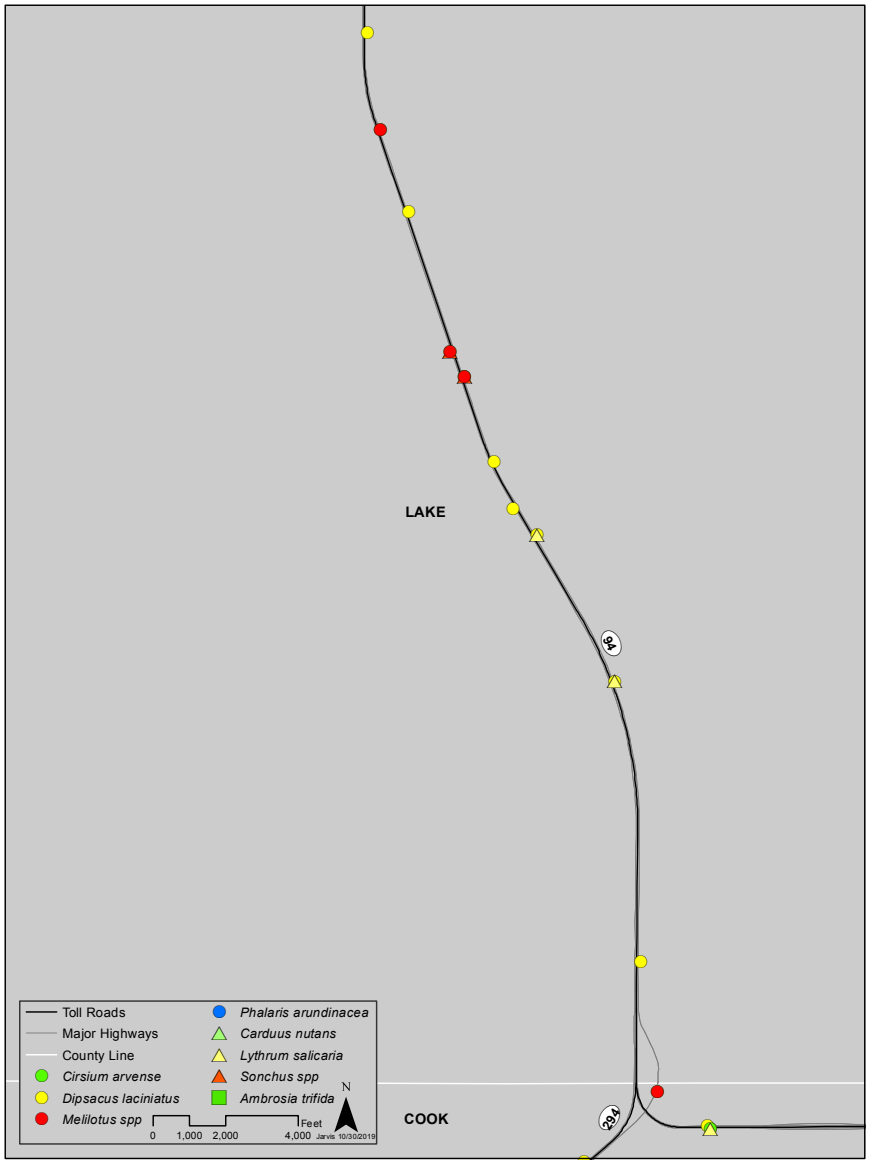
Map 1.34 Enlargement of section 34 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



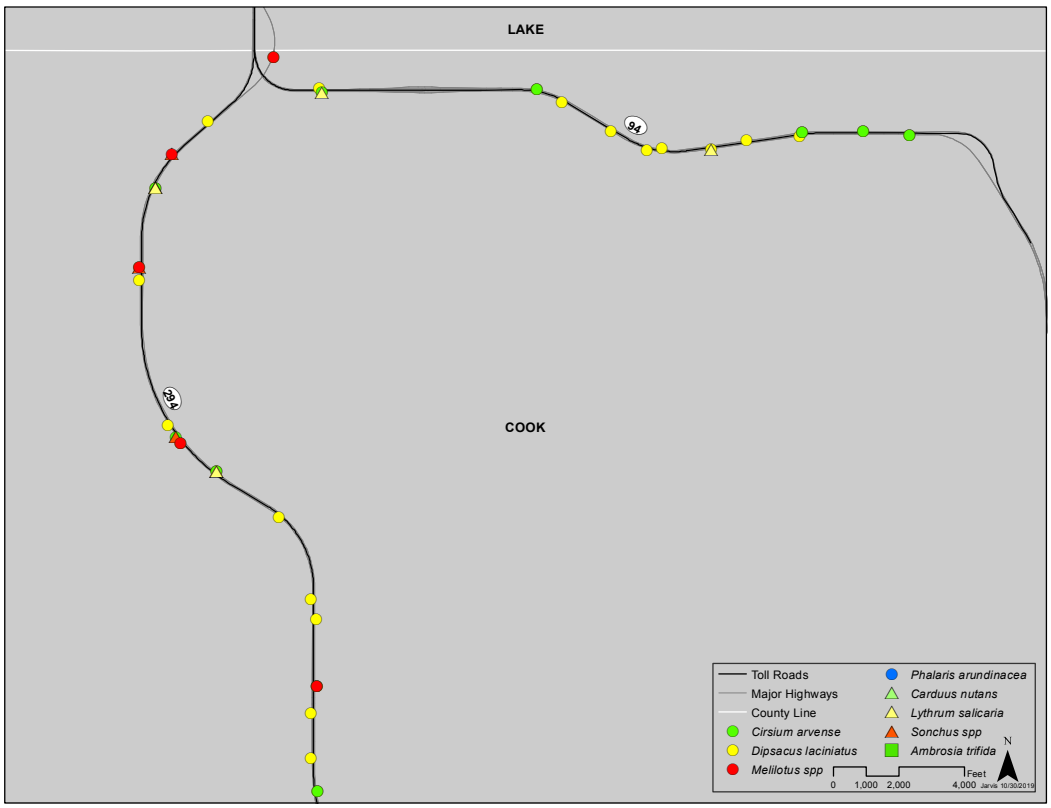
Map 1.35 Enlargement of section 35 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



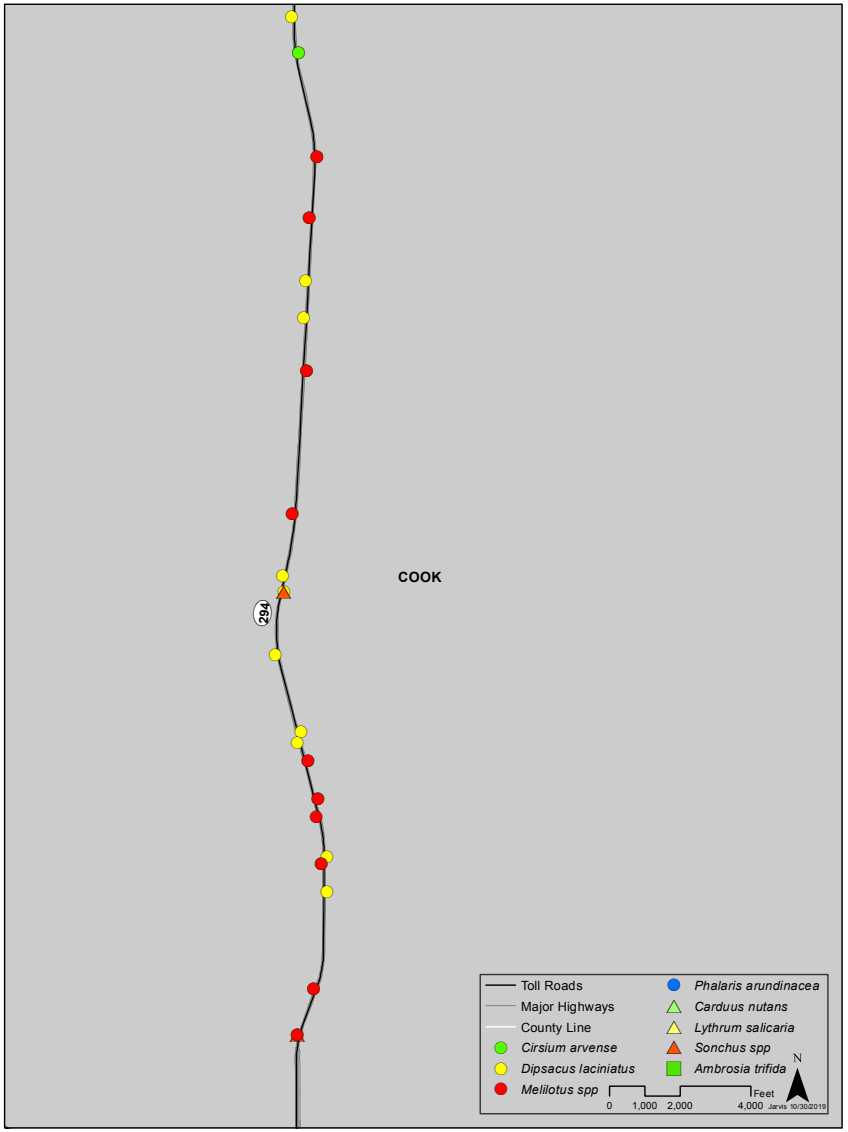
Map 1.36 Enlargement of section 36 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



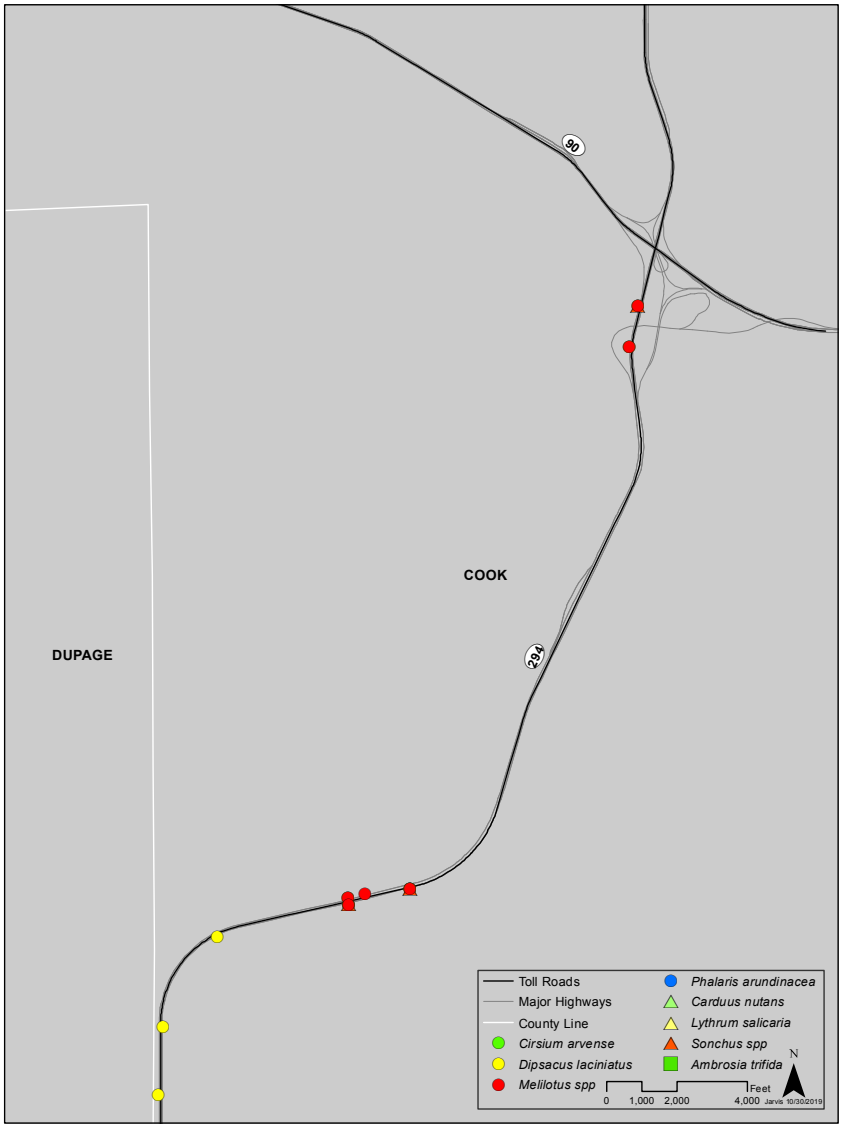
Map 1.37 Enlargement of section 37 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



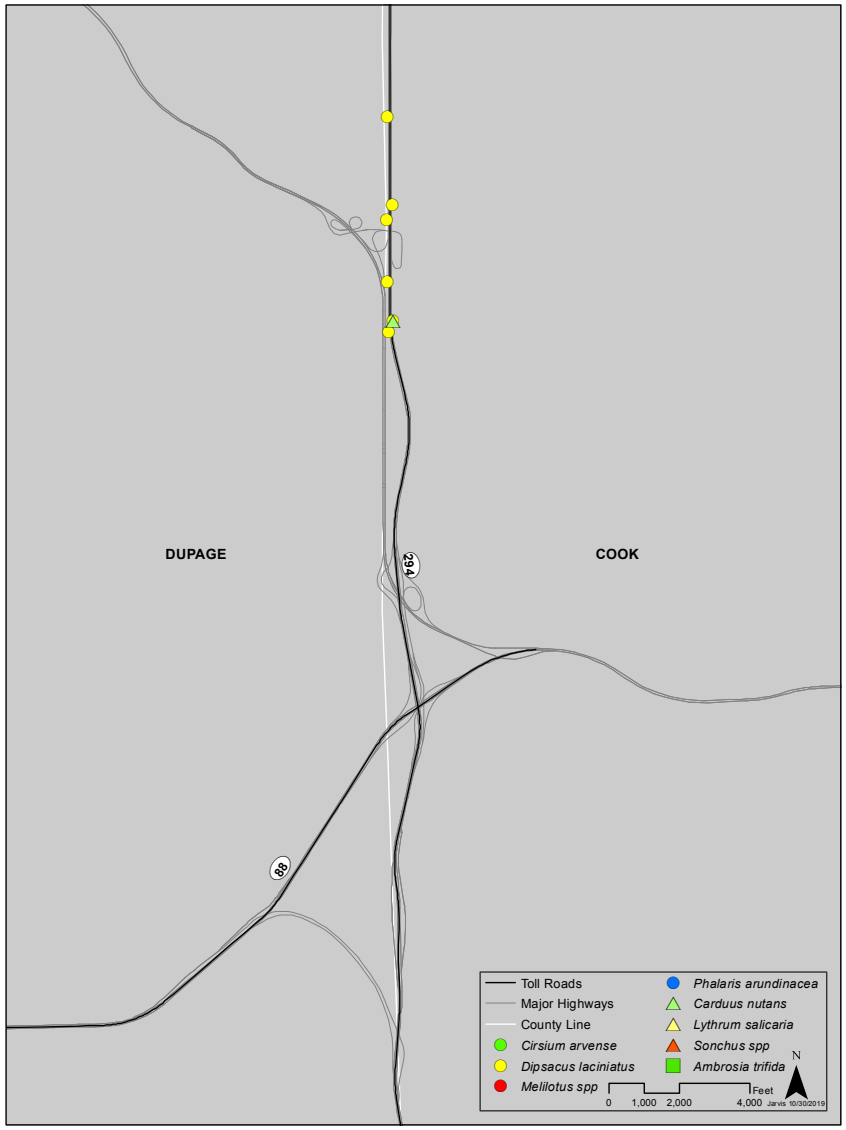
Map 1.38 Enlargement of section 38 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



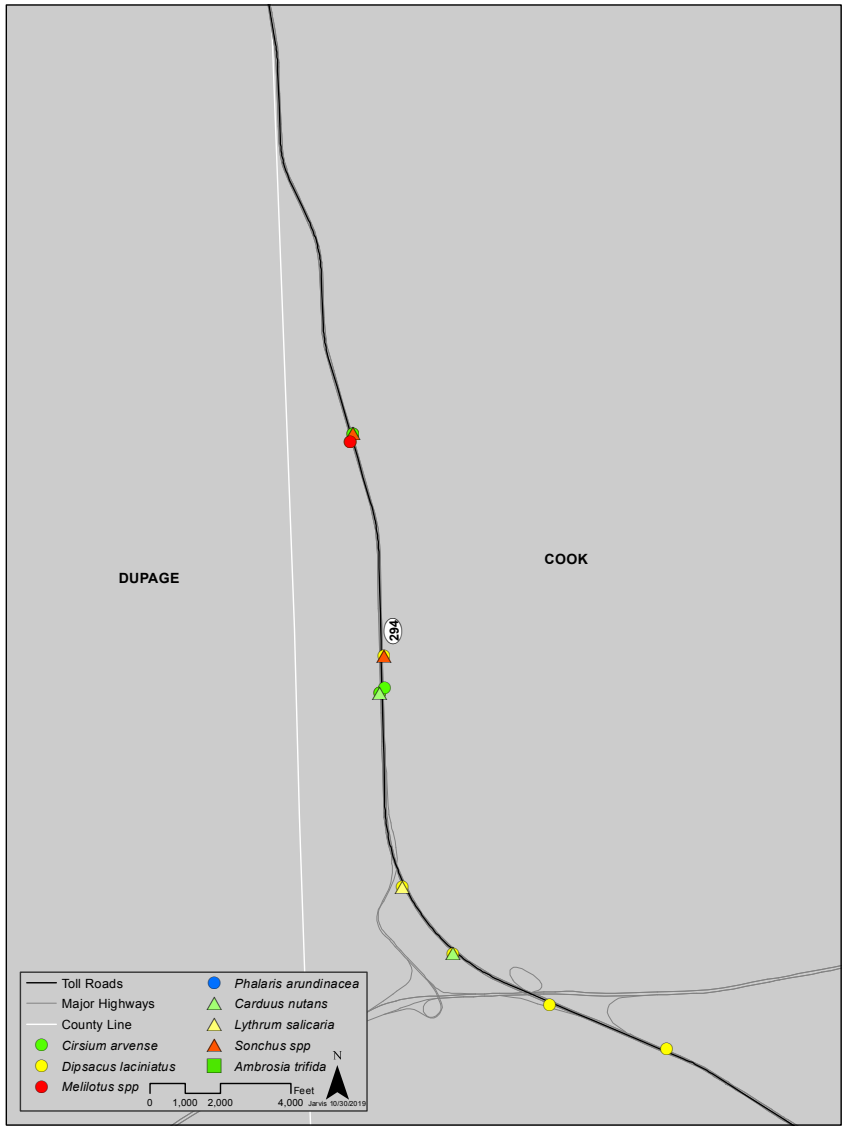
Map 1.39 Enlargement of section 39 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



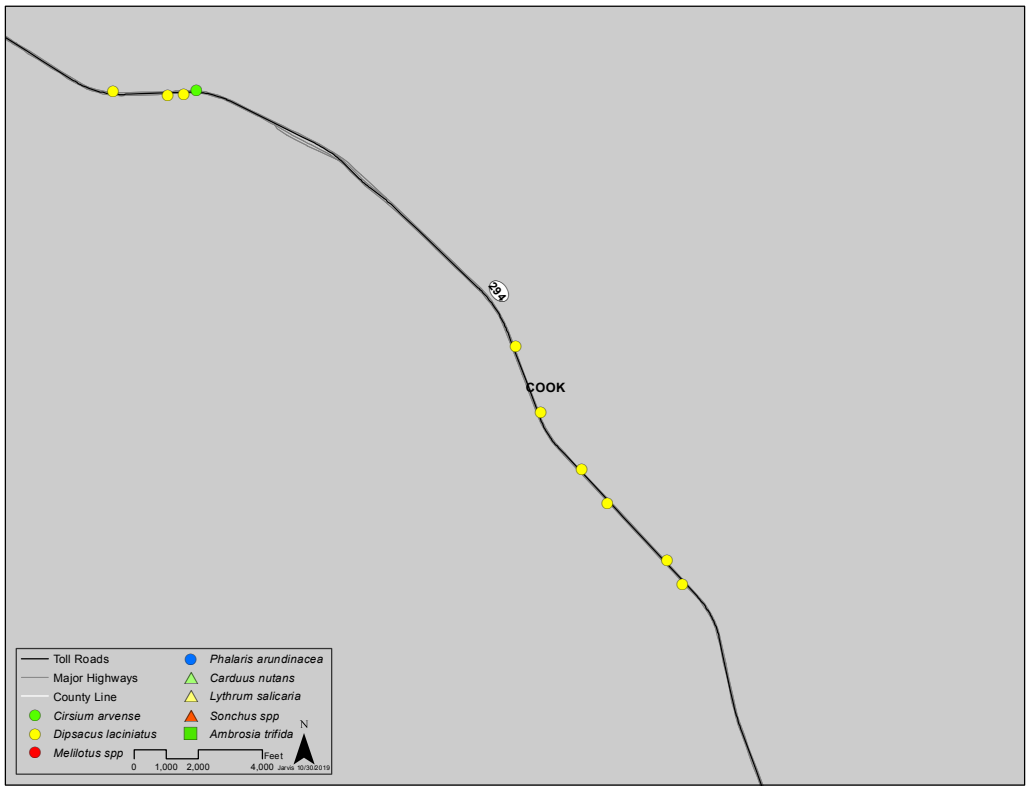
Map 1.40 Enlargement of section 40 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



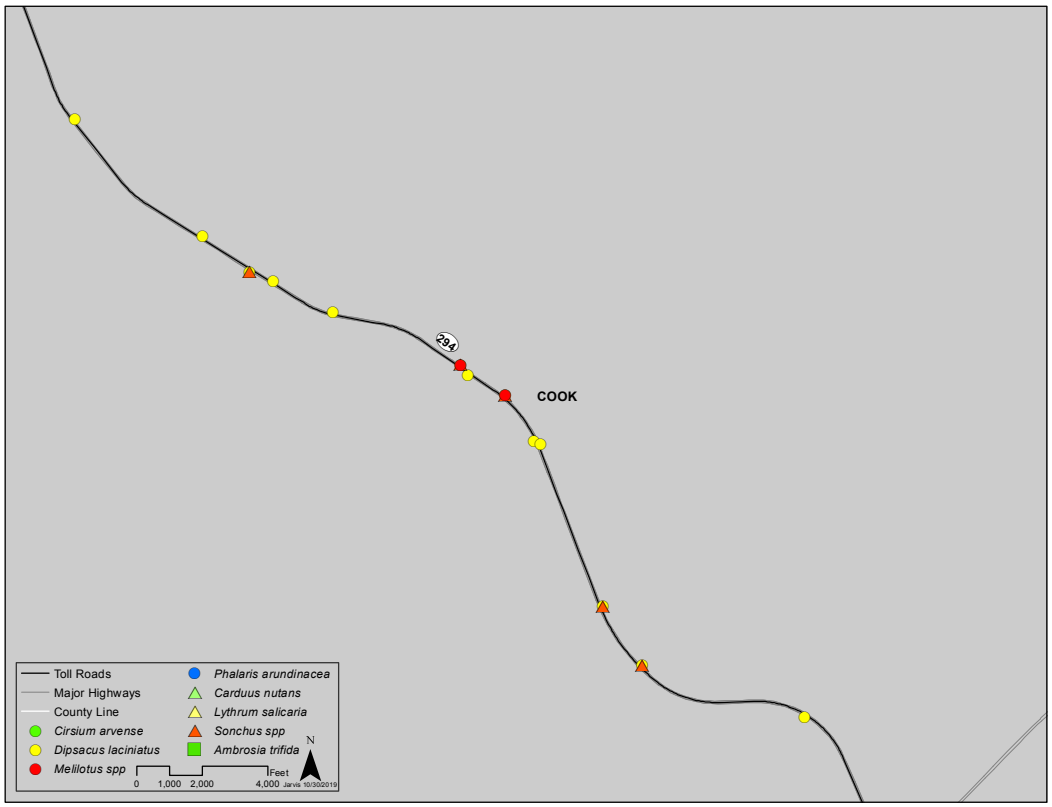
Map 1.41 Enlargement of section 41 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



Map 1.42 Enlargement of section 42 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.

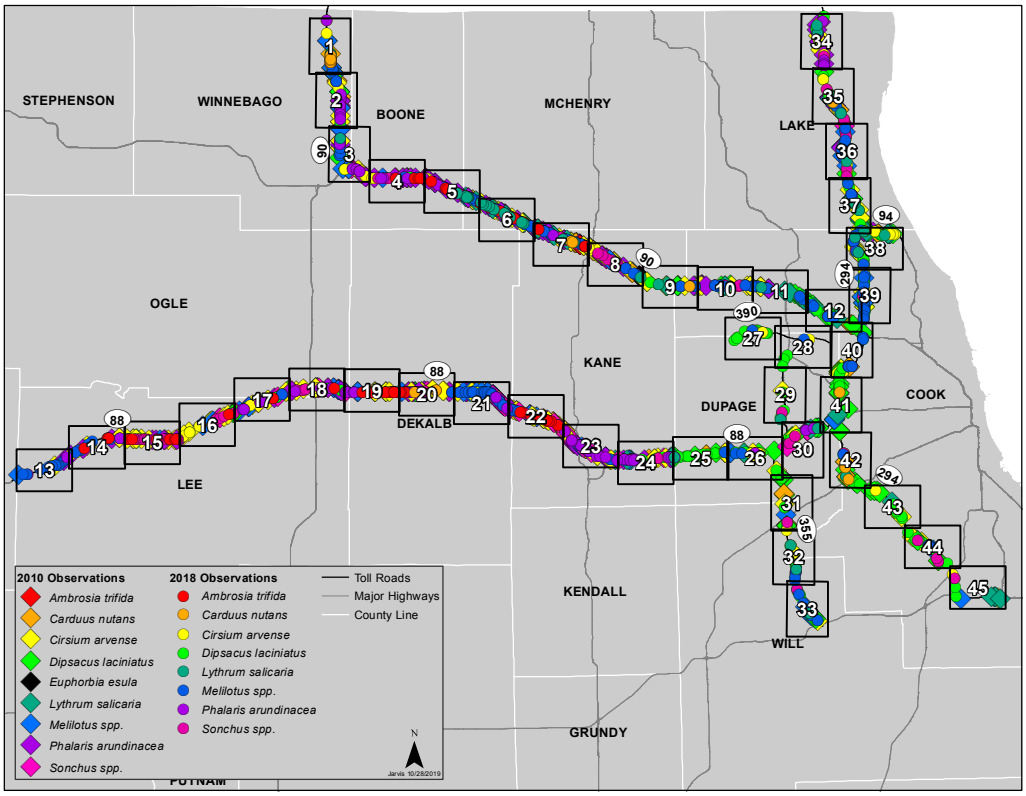


Map 1.43 Enlargement of section 43 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.

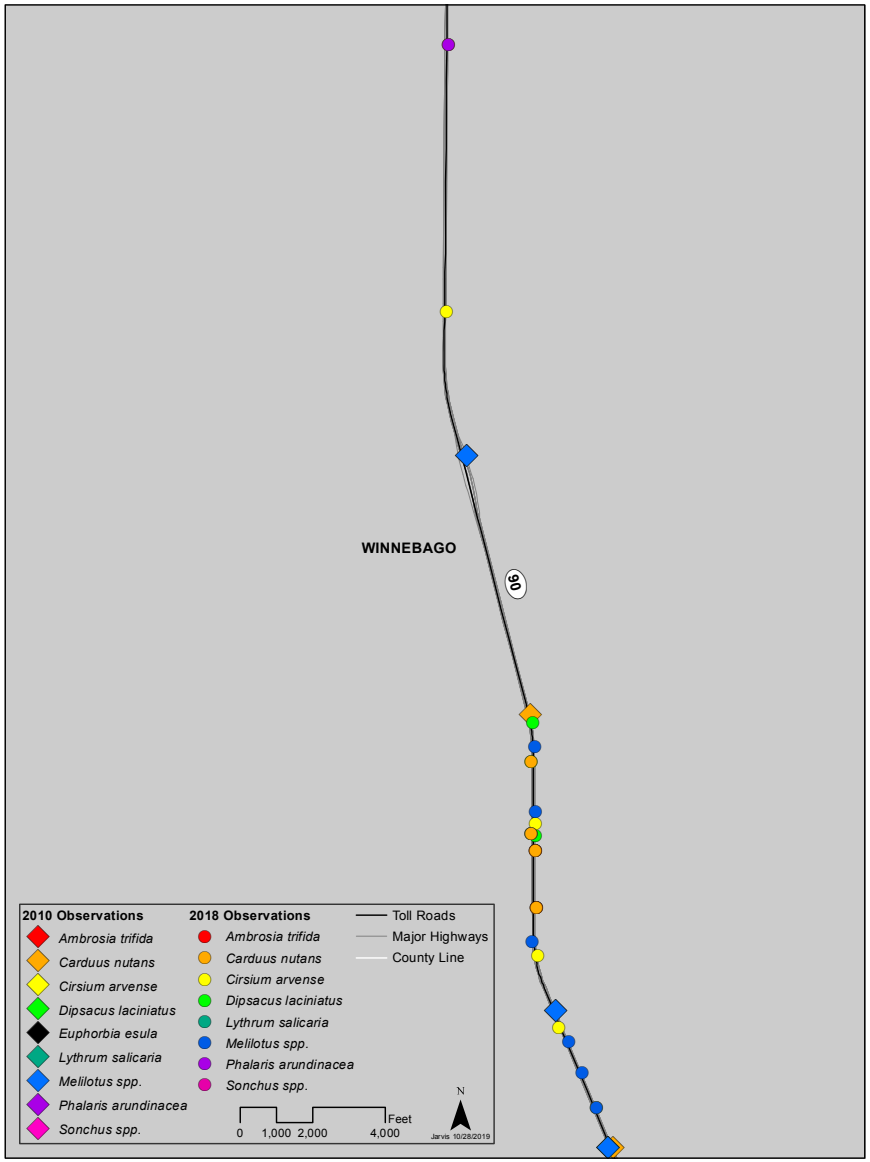


Map 1.44 Enlargement of section 44 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.

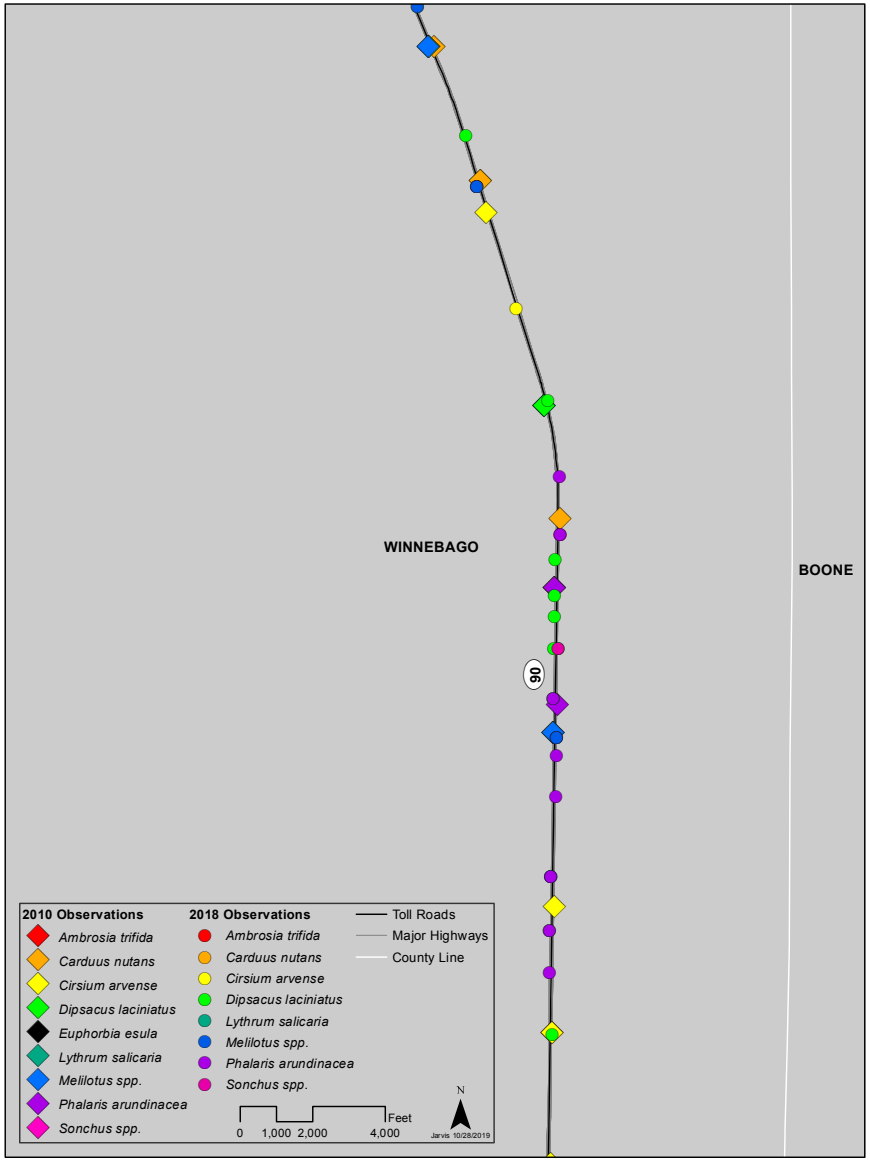
Map 1.45 Enlargement of section 45 on Map 1 showing distribution of noxious and invasive species throughout the ISTHA system. Refer to the overview map (Map 1) for regional orientation to map locations.



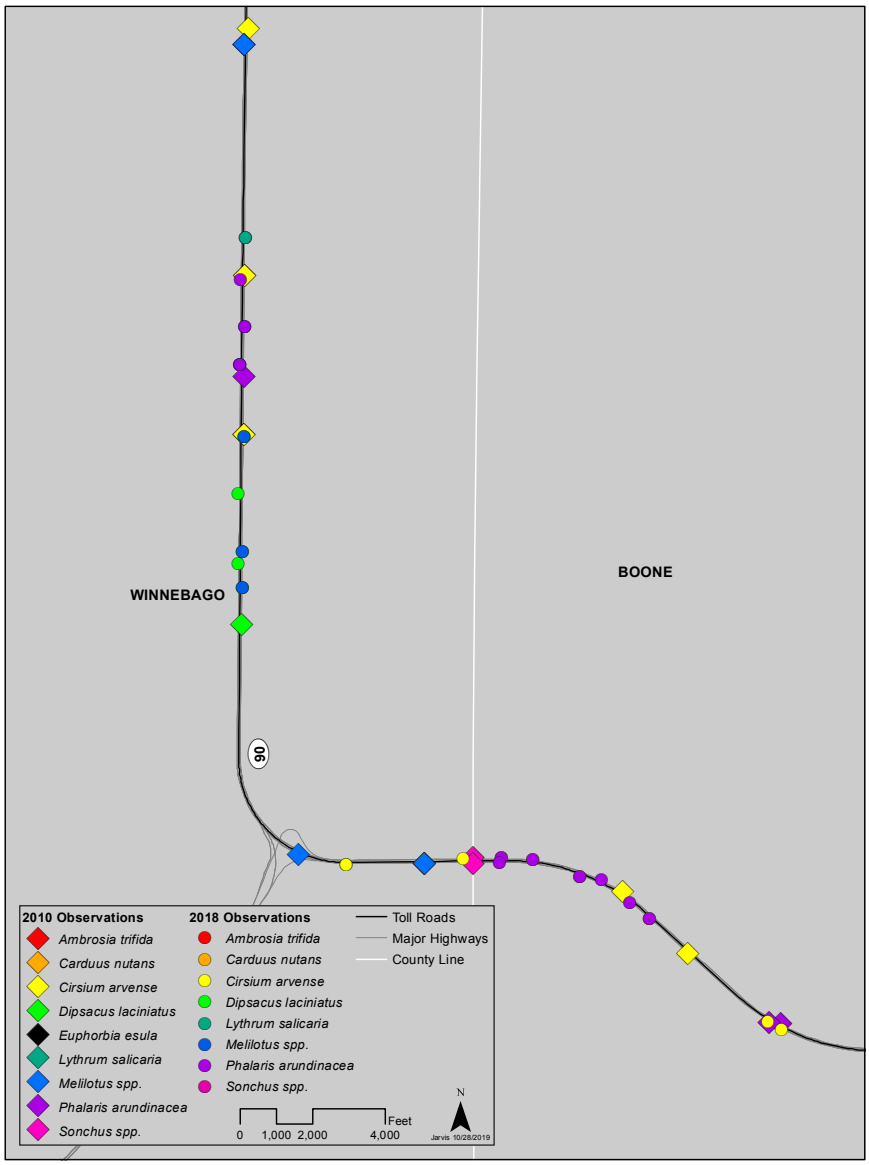
Map 2. Distribution of species mapped during the 2018 survey in comparison with data from 2010. Numbered rectangles identify the regional orientation of enlargement maps 2.1–2.45.



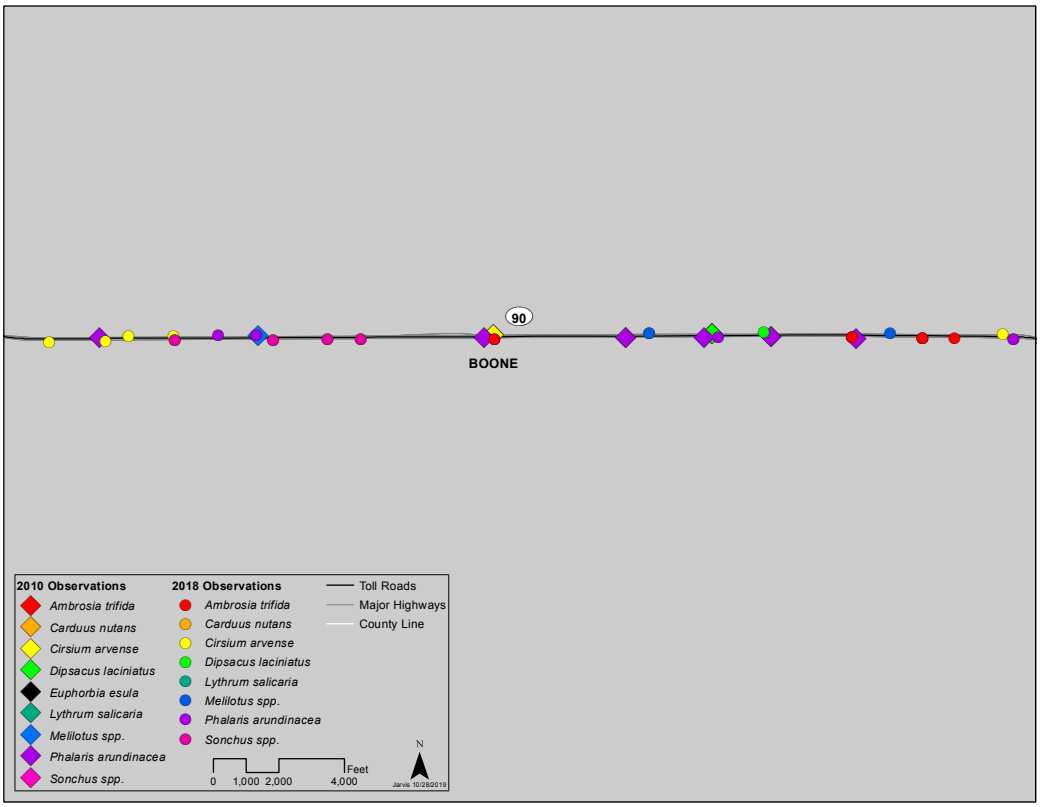
Map 2.1 Enlargement of section 1 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



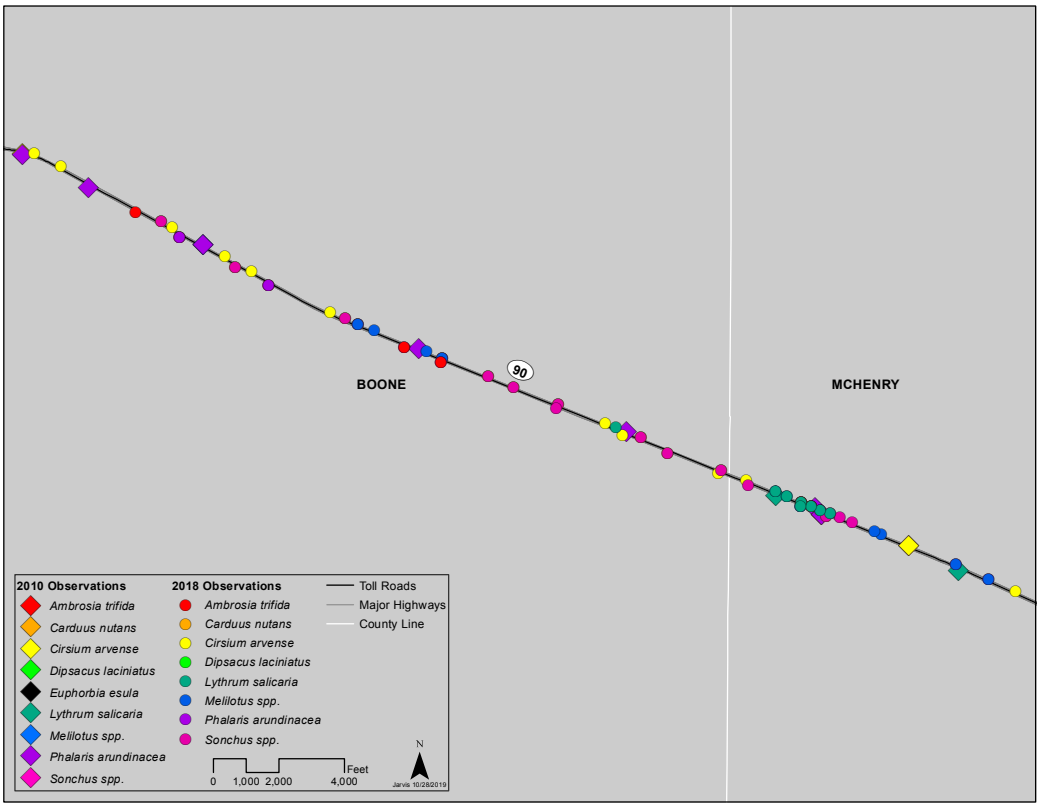
Map 2.2 Enlargement of section 2 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



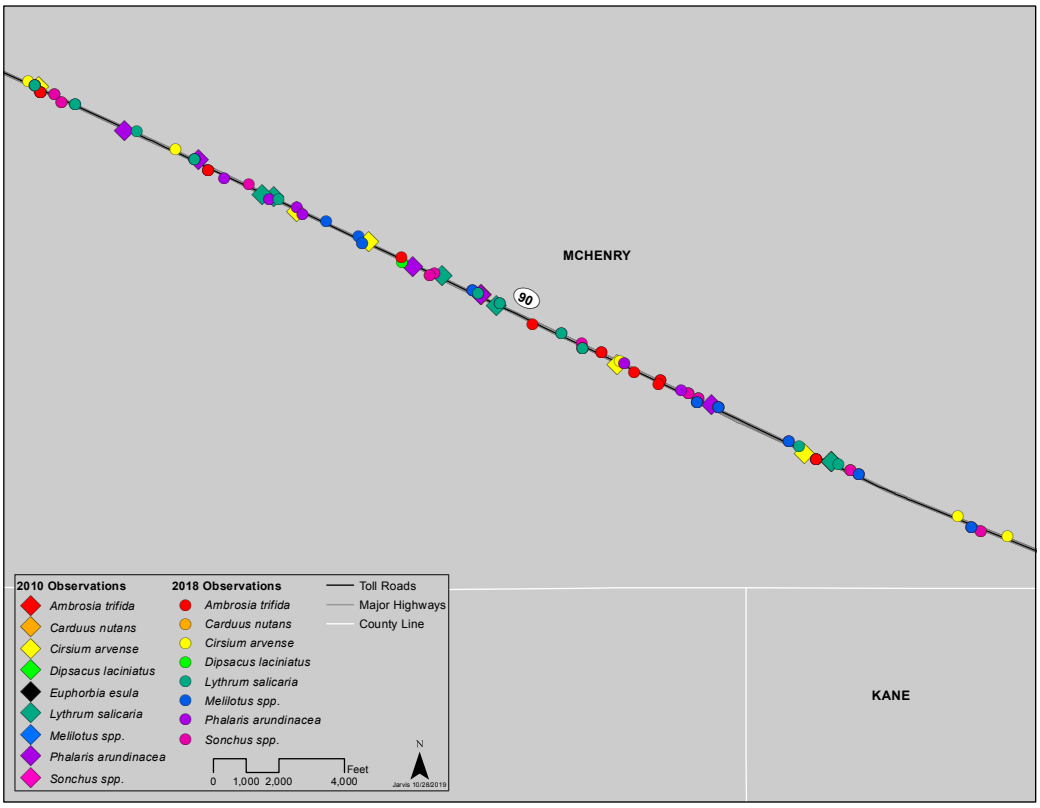
Map 2.3 Enlargement of section 3 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



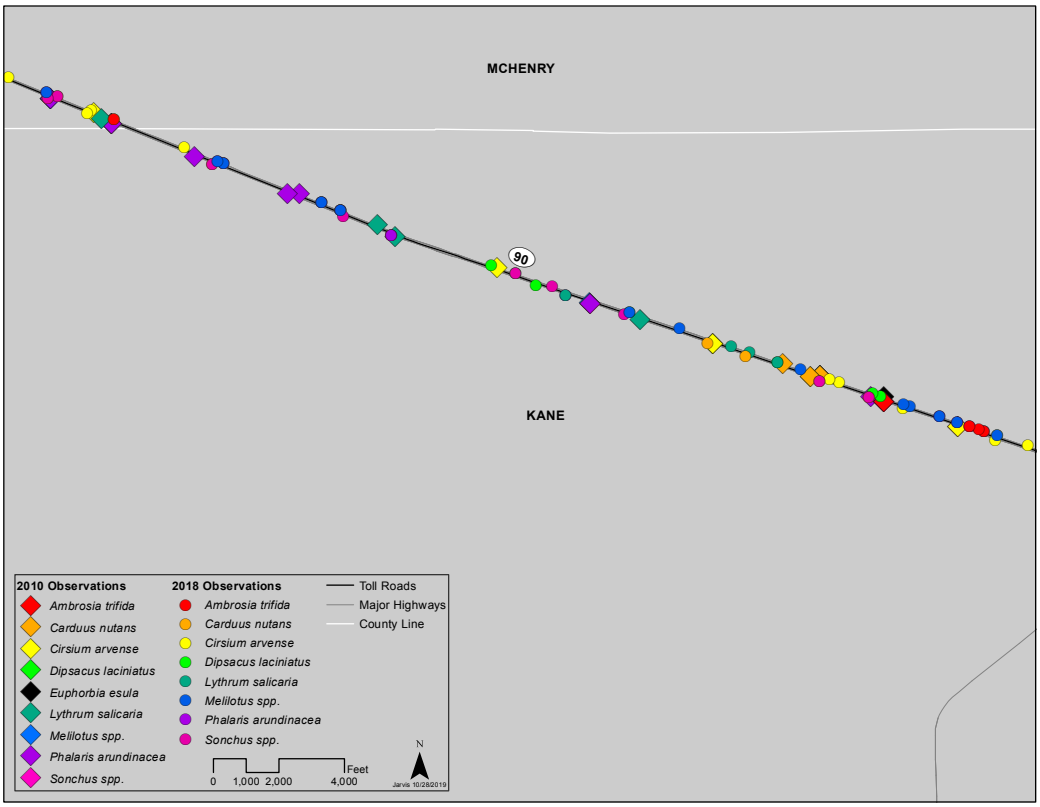
Map 2.4 Enlargement of section 4 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



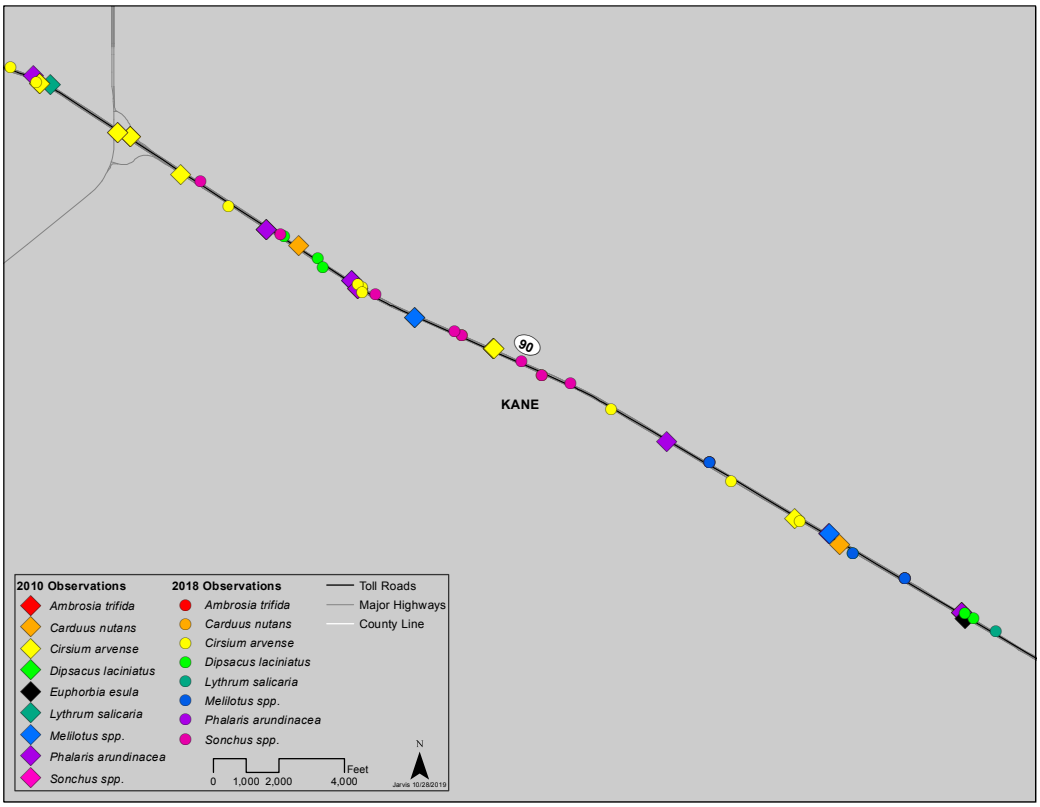
Map 2.5 Enlargement of section 5 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



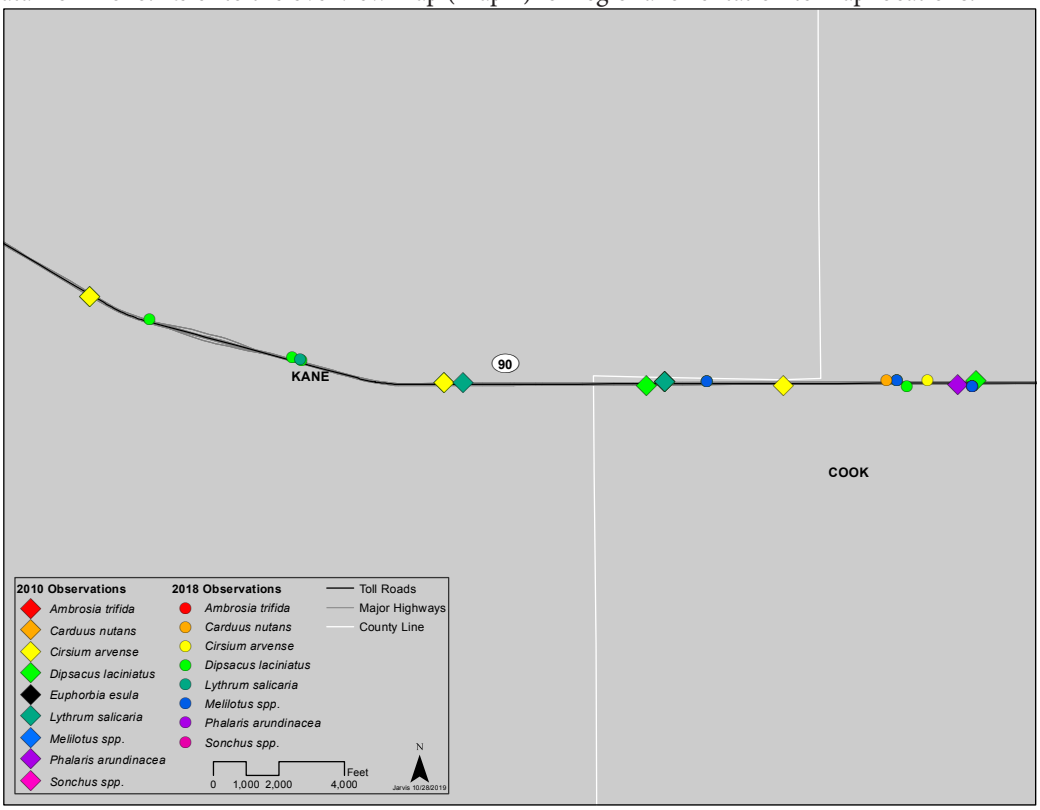
Map 2.6 Enlargement of section 6 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



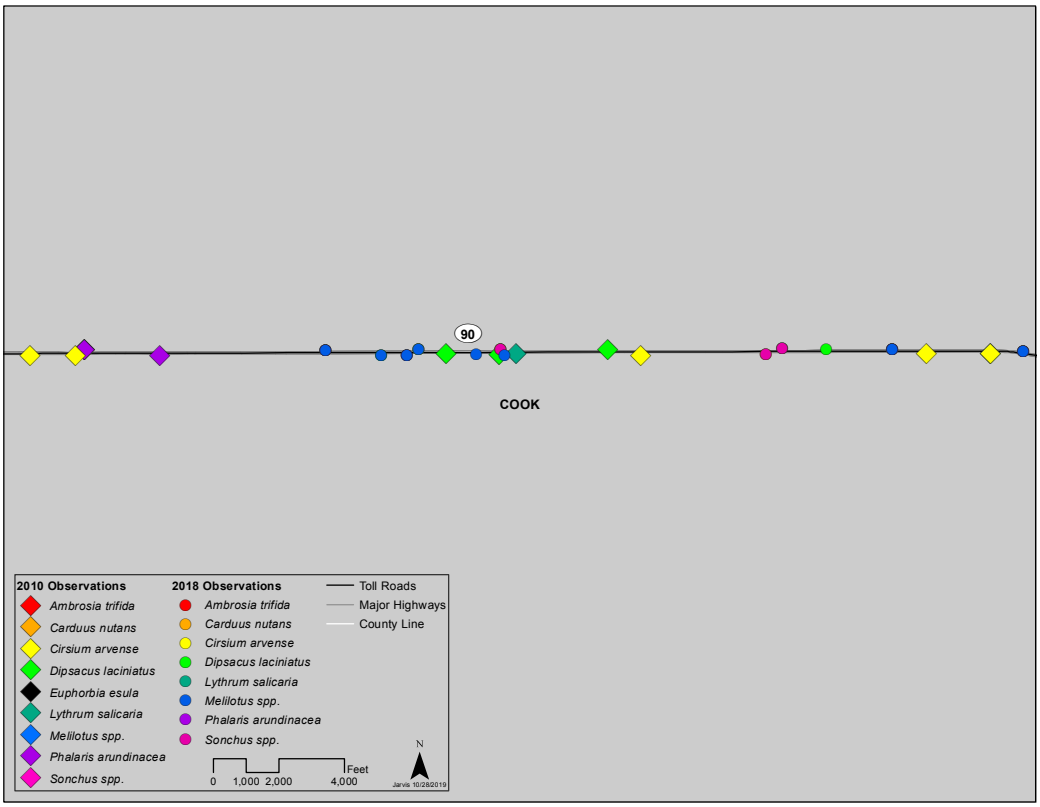
Map 2.7 Enlargement of section 7 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



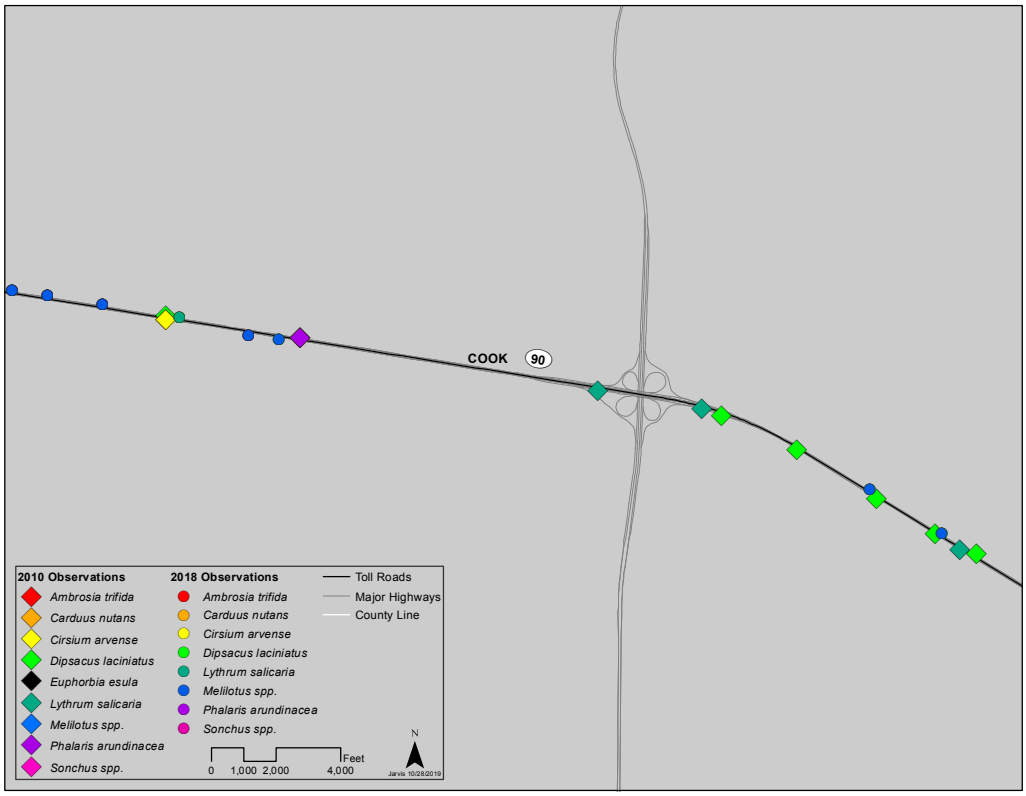
Map 2.8 Enlargement of section 8 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



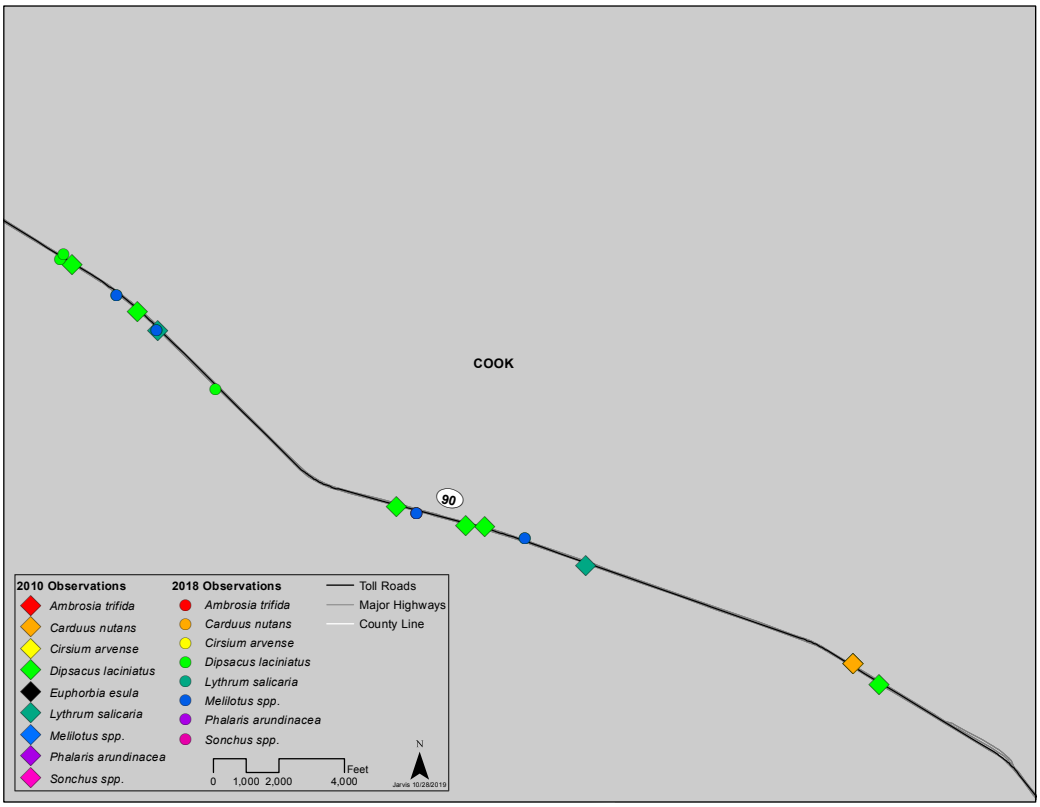
Map 2.9 Enlargement of section 9 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



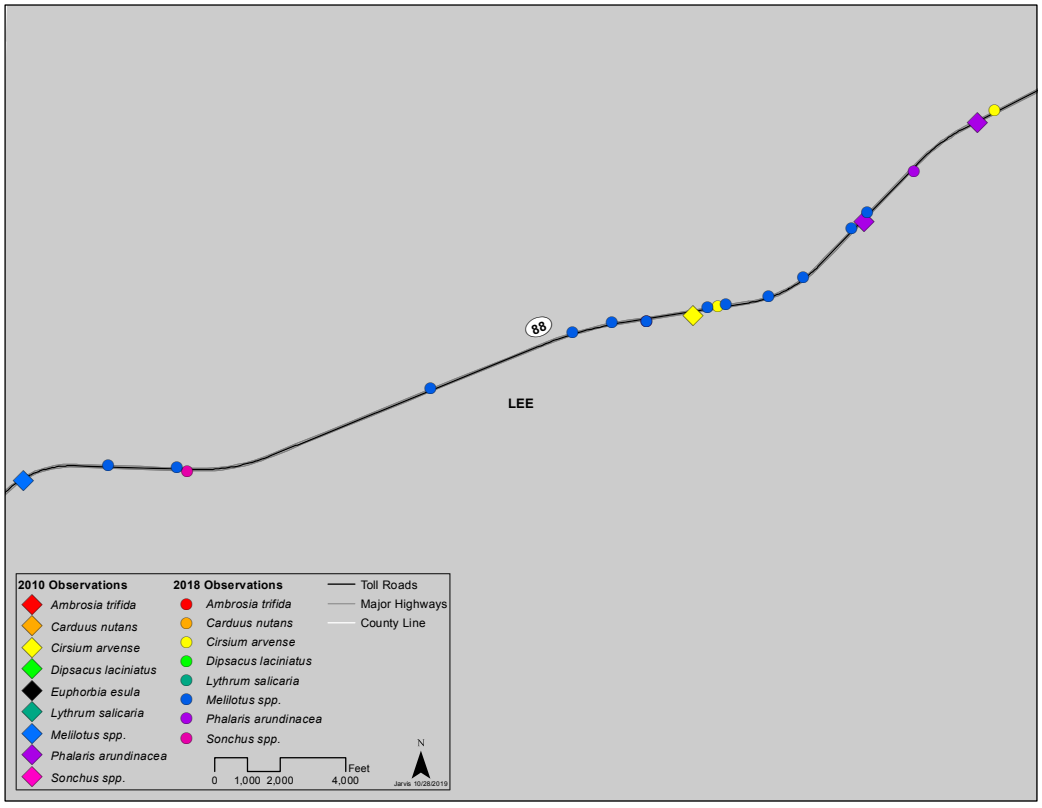
Map 2.10 Enlargement of section 10 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



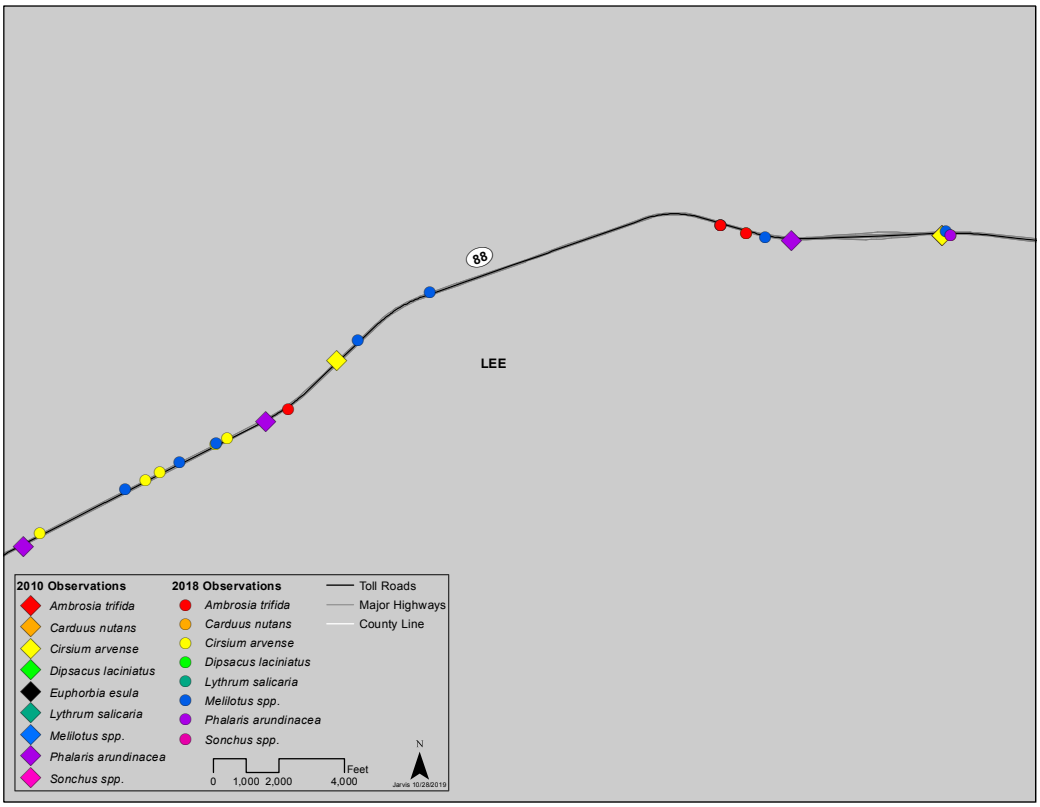
Map 2.11 Enlargement of section 11 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



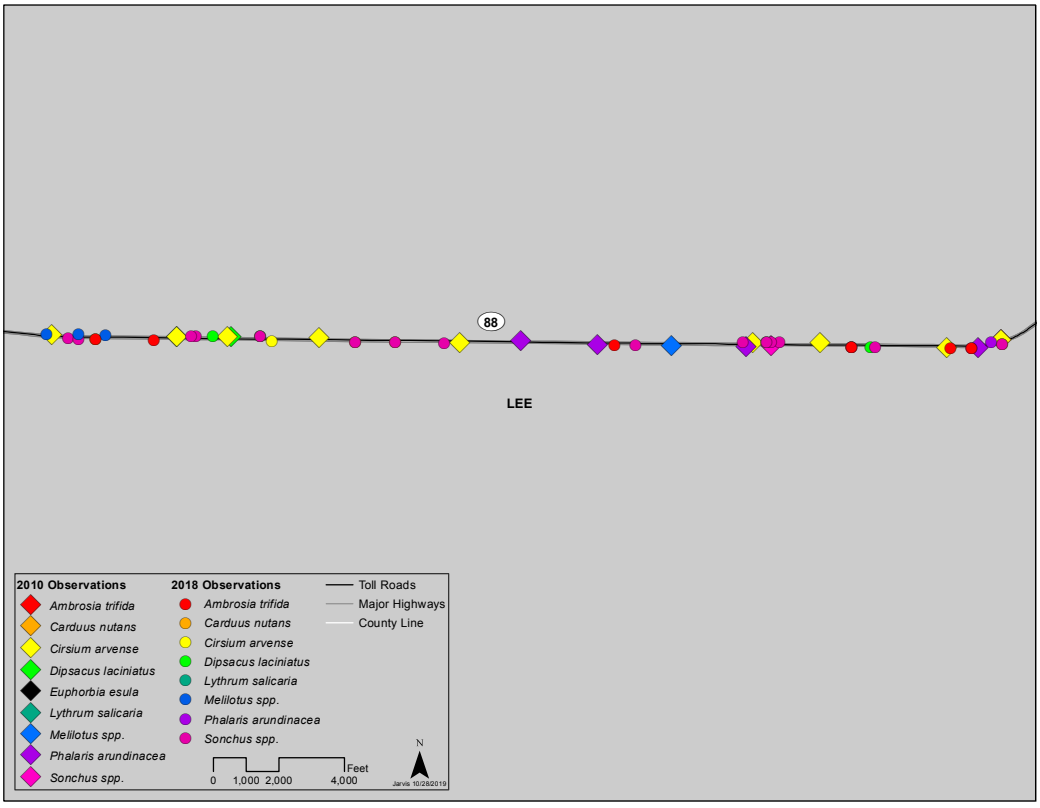
Map 2.12 Enlargement of section 12 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



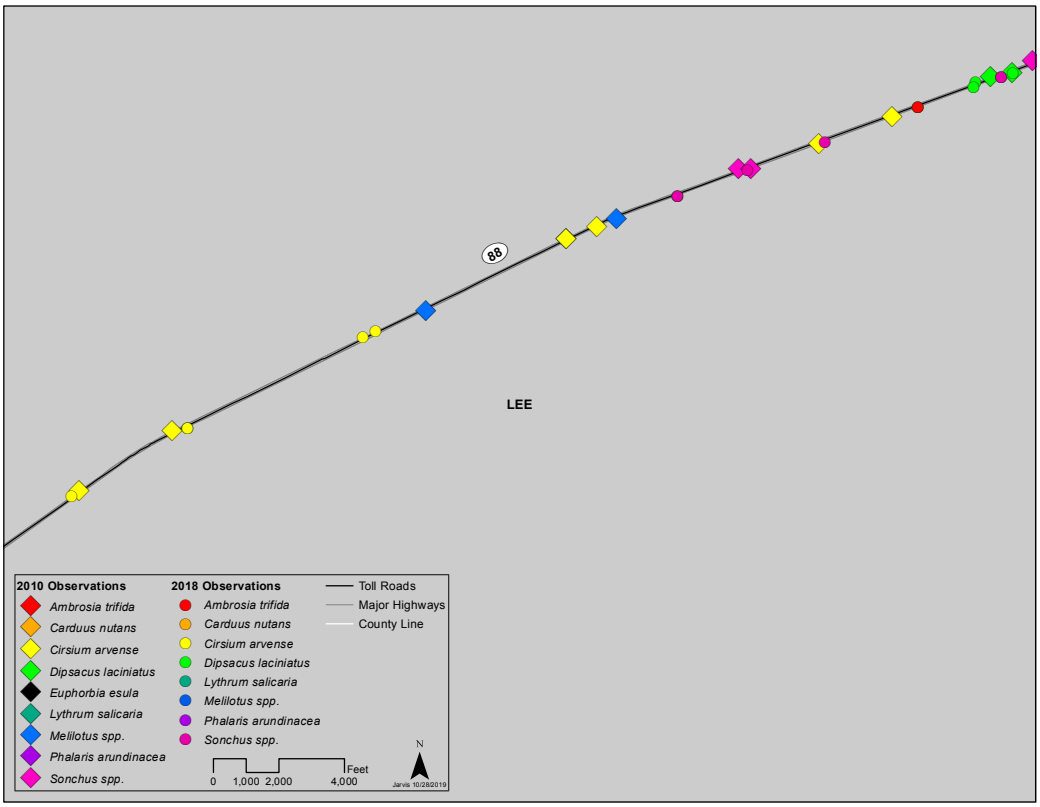
Map 2.13 Enlargement of section 13 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



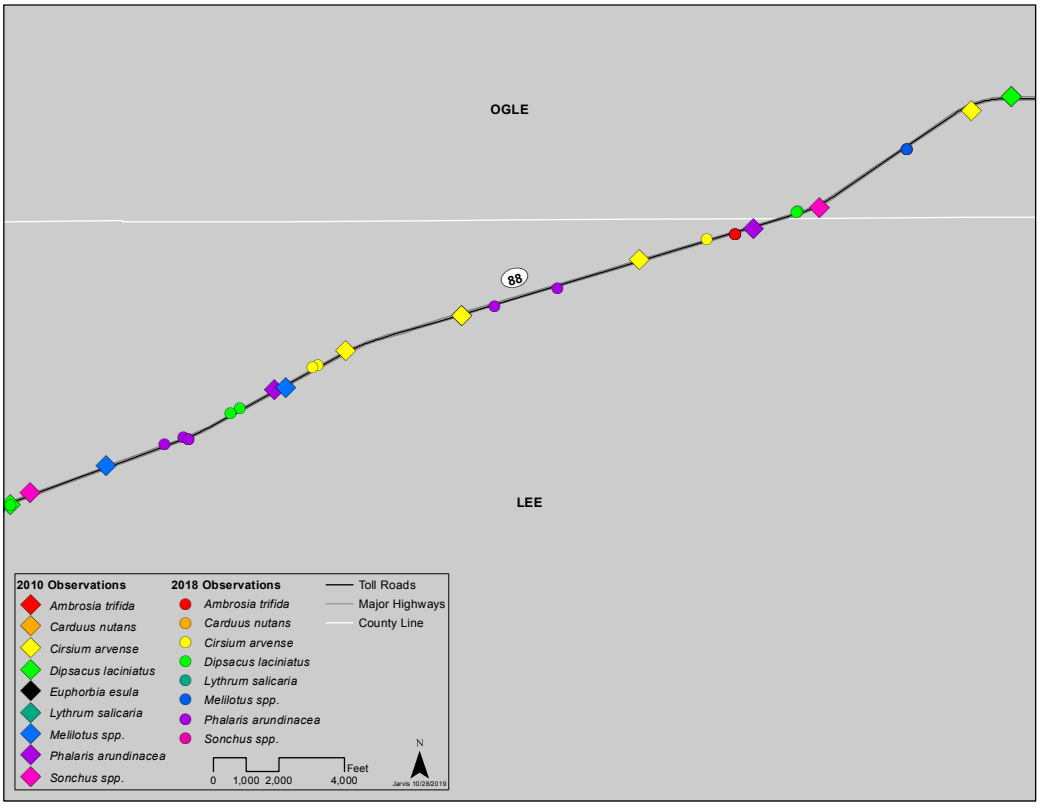
Map 2.14 Enlargement of section 14 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



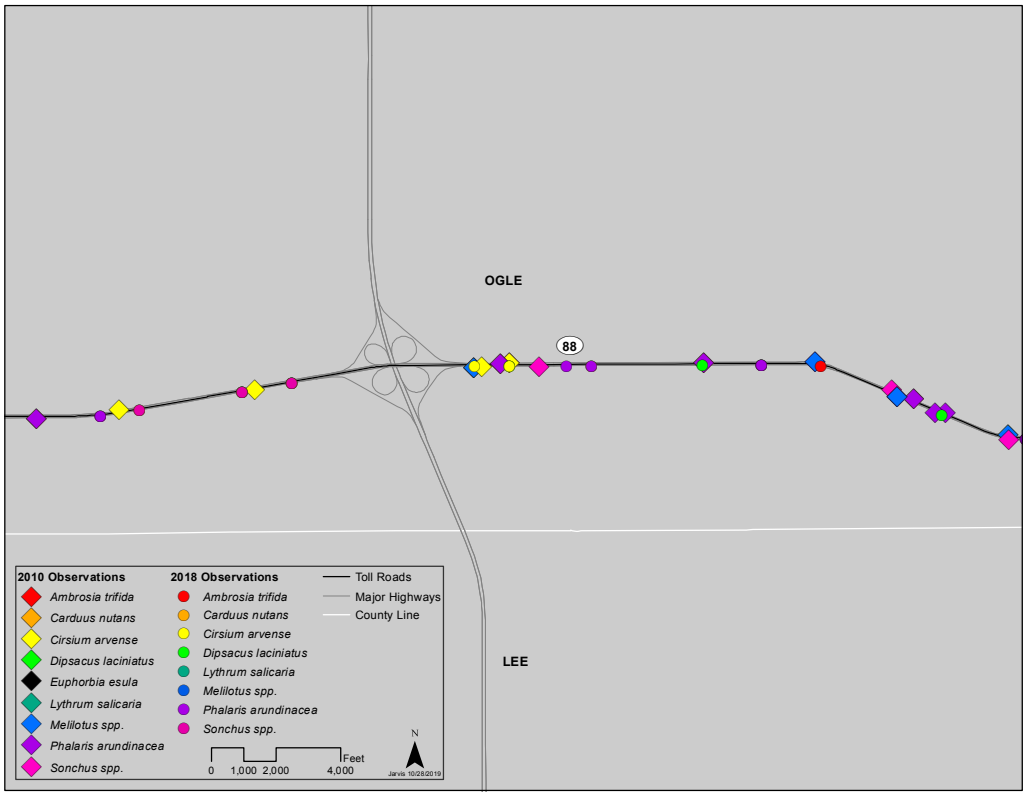
Map 2.15 Enlargement of section 15 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



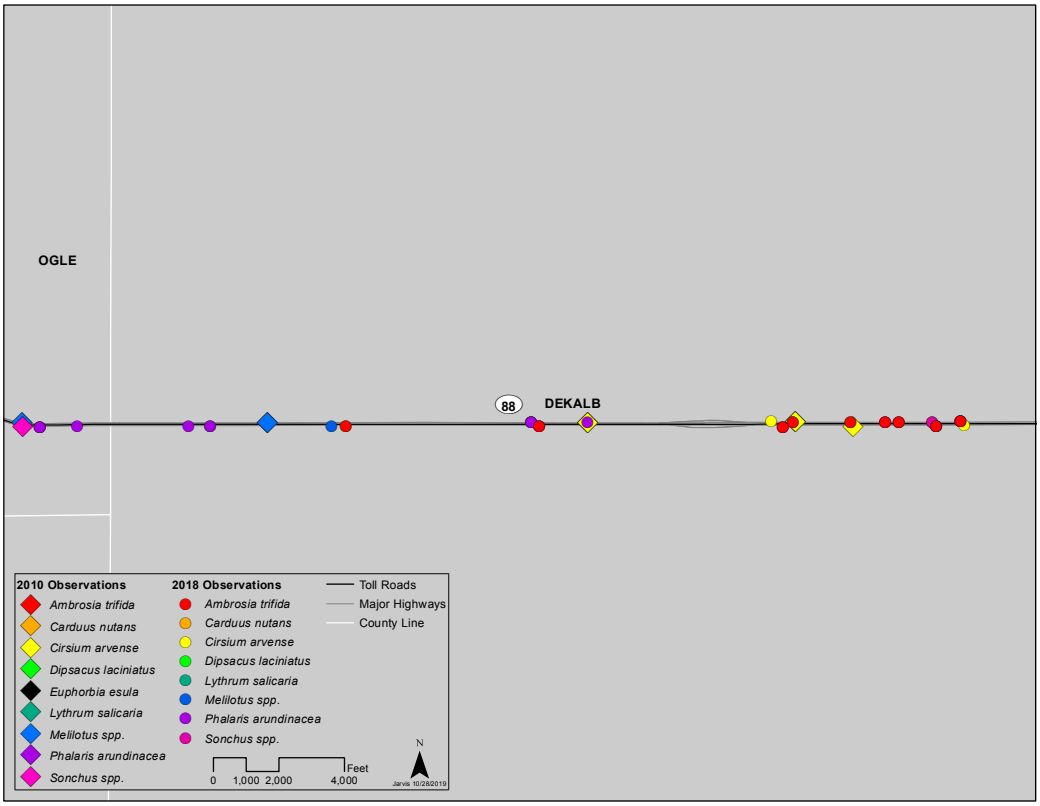
Map 2.16 Enlargement of section 16 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



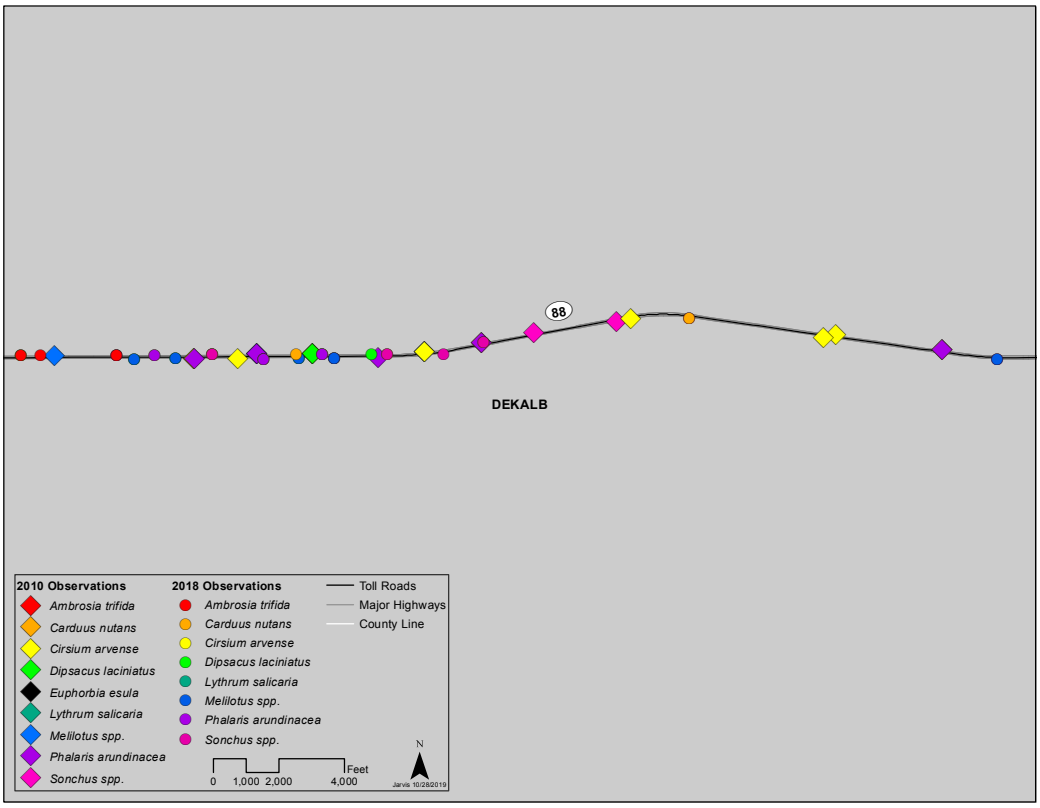
Map 2.17 Enlargement of section 17 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



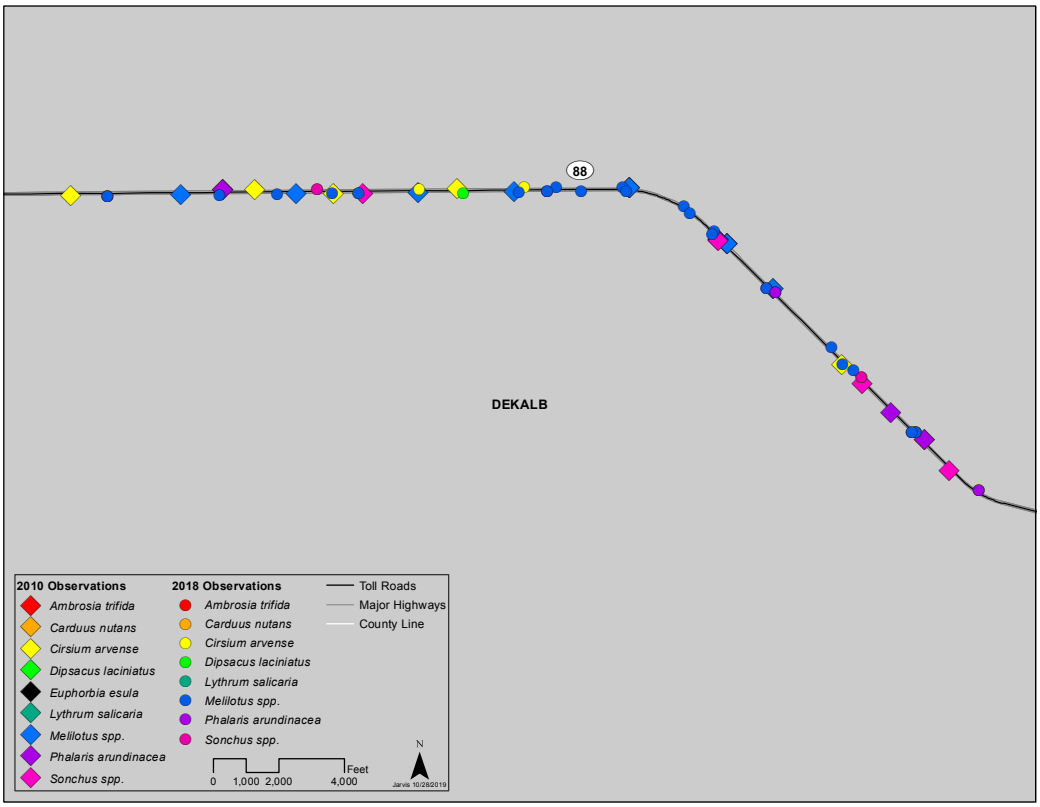
Map 2.18 Enlargement of section 18 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



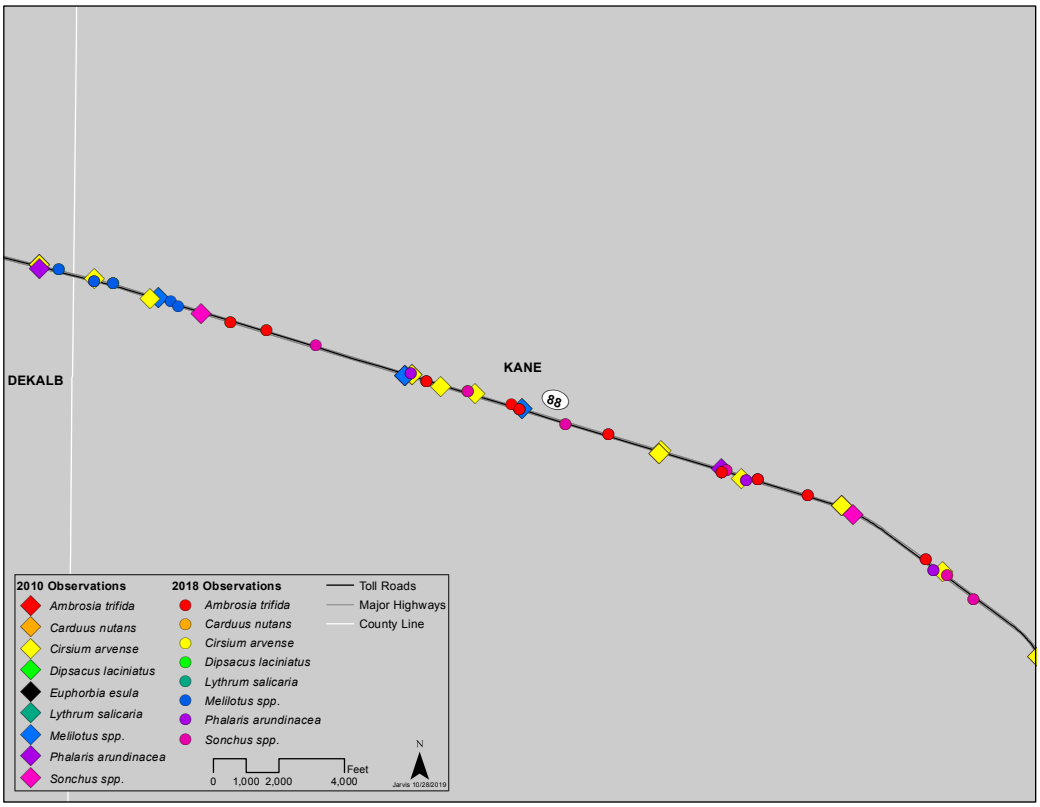
Map 2.19 Enlargement of section 19 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



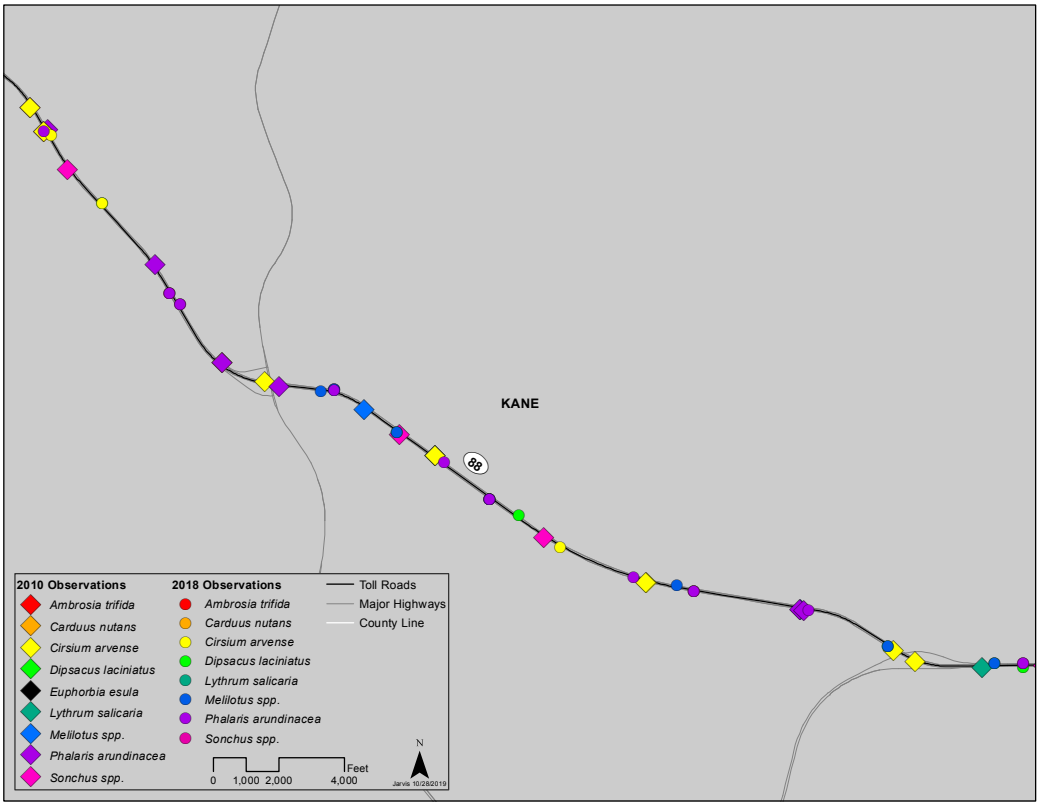
Map 2.20 Enlargement of section 20 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



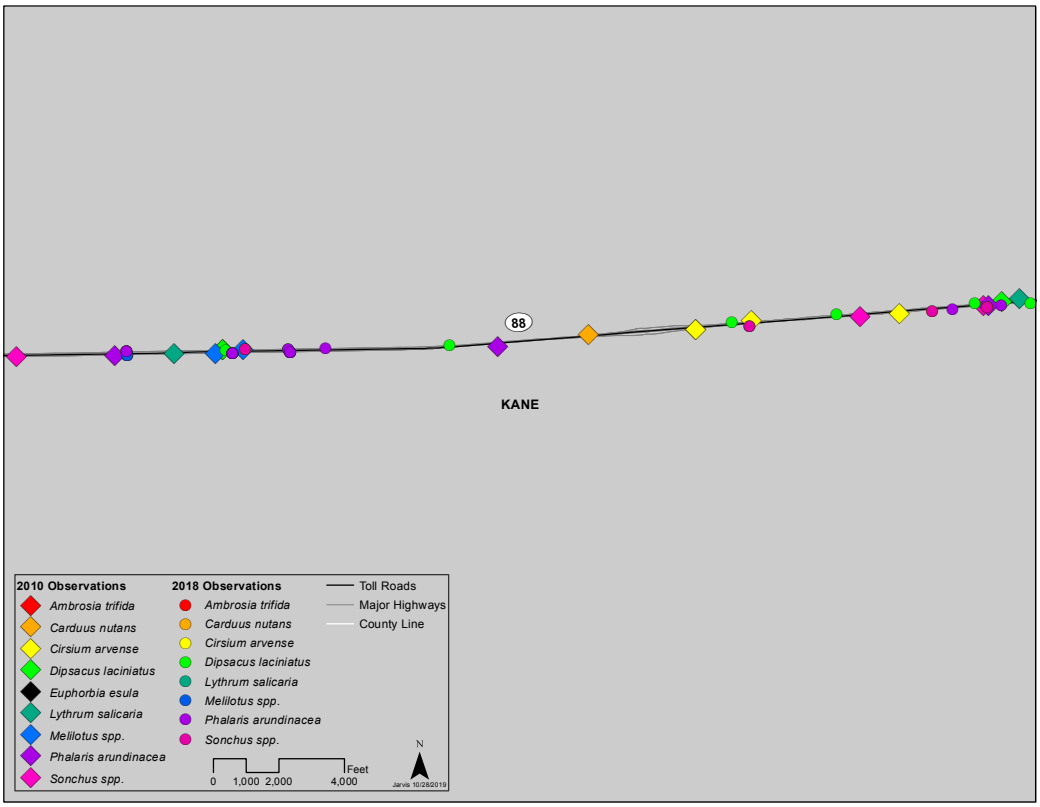
Map 2.21 Enlargement of section 21 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



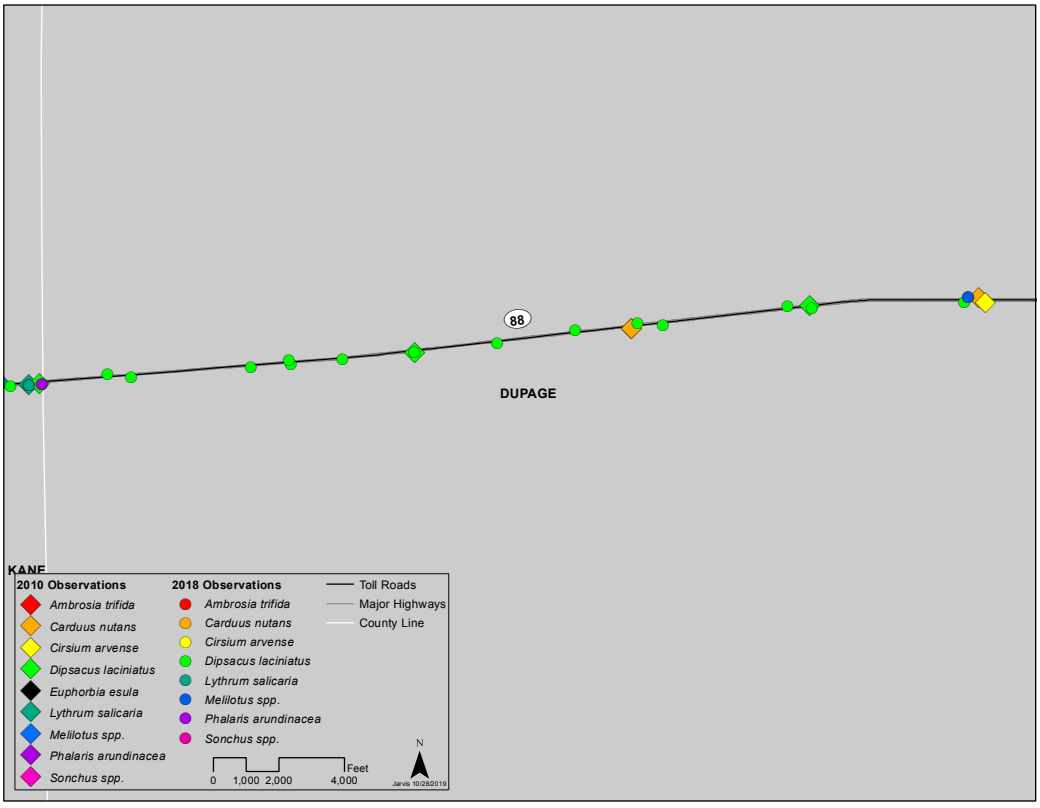
Map 2.22 Enlargement of section 22 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



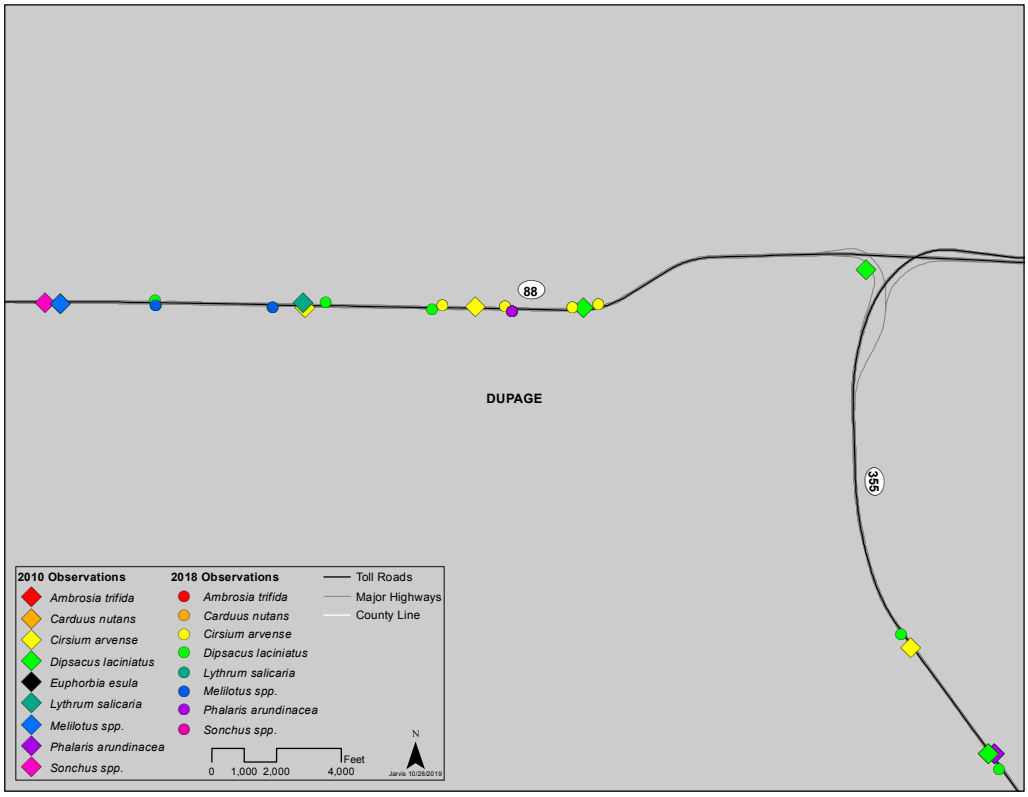
Map 2.23 Enlargement of section 23 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



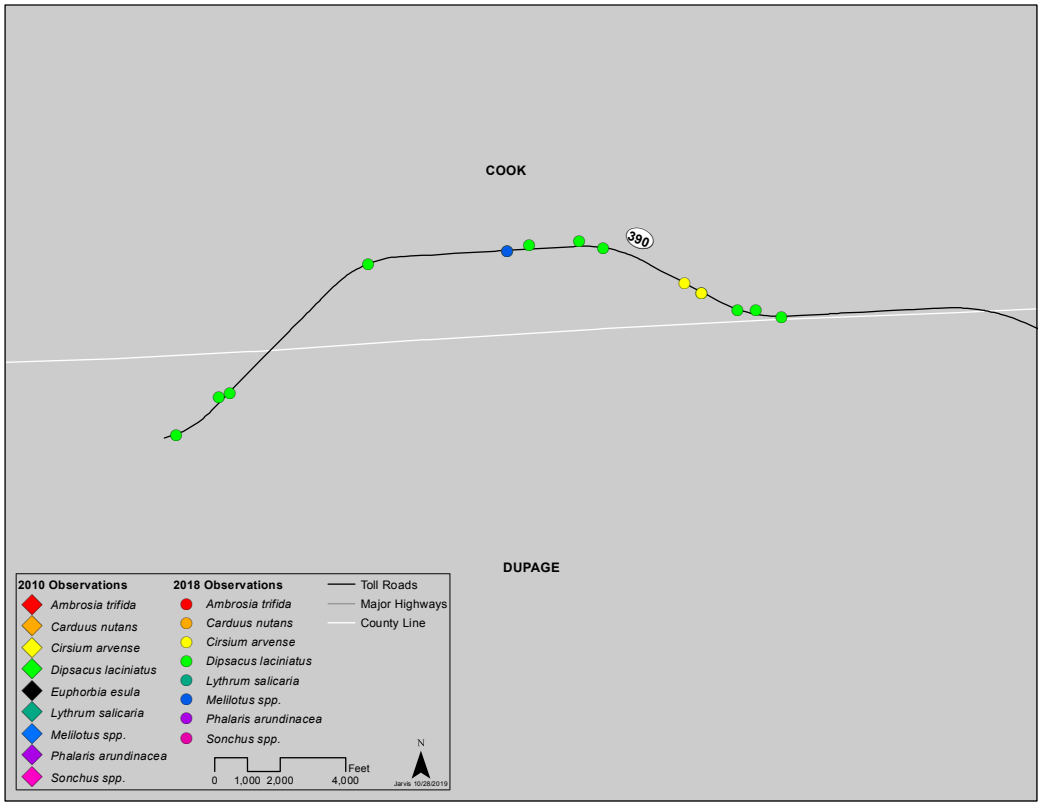
Map 2.24 Enlargement of section 24 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



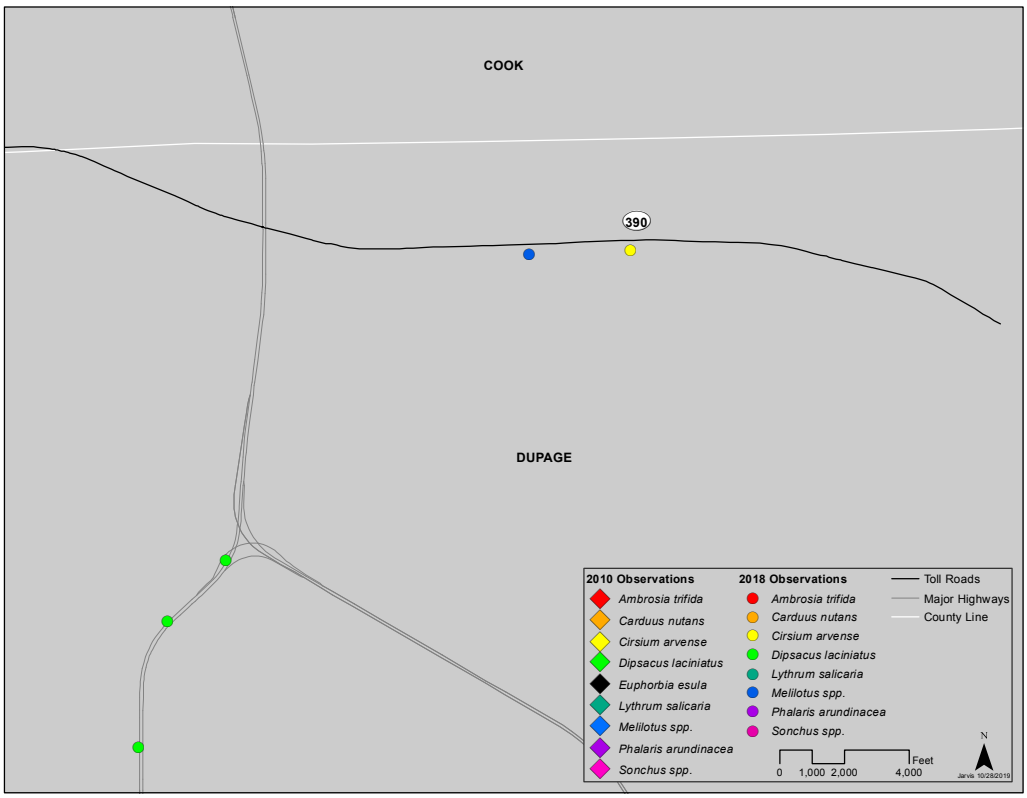
Map 2.25 Enlargement of section 25 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



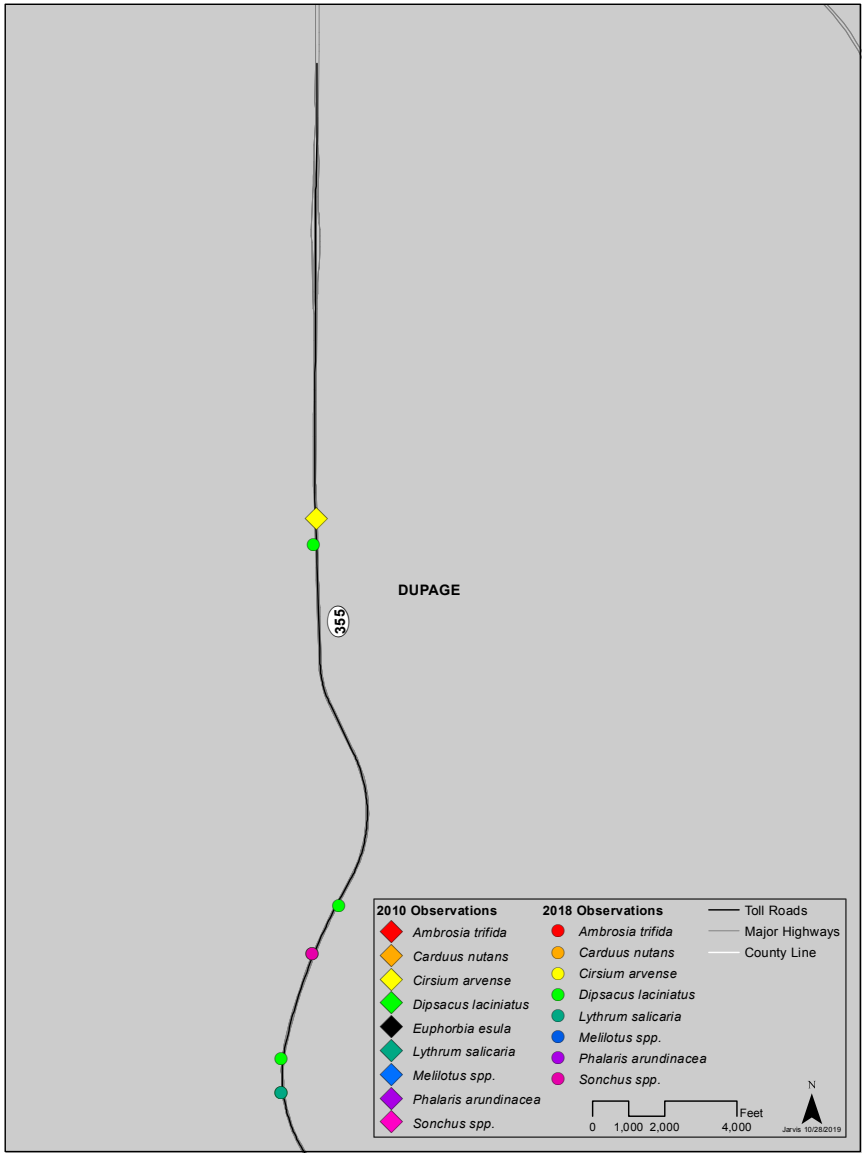
Map 2.26 Enlargement of section 26 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



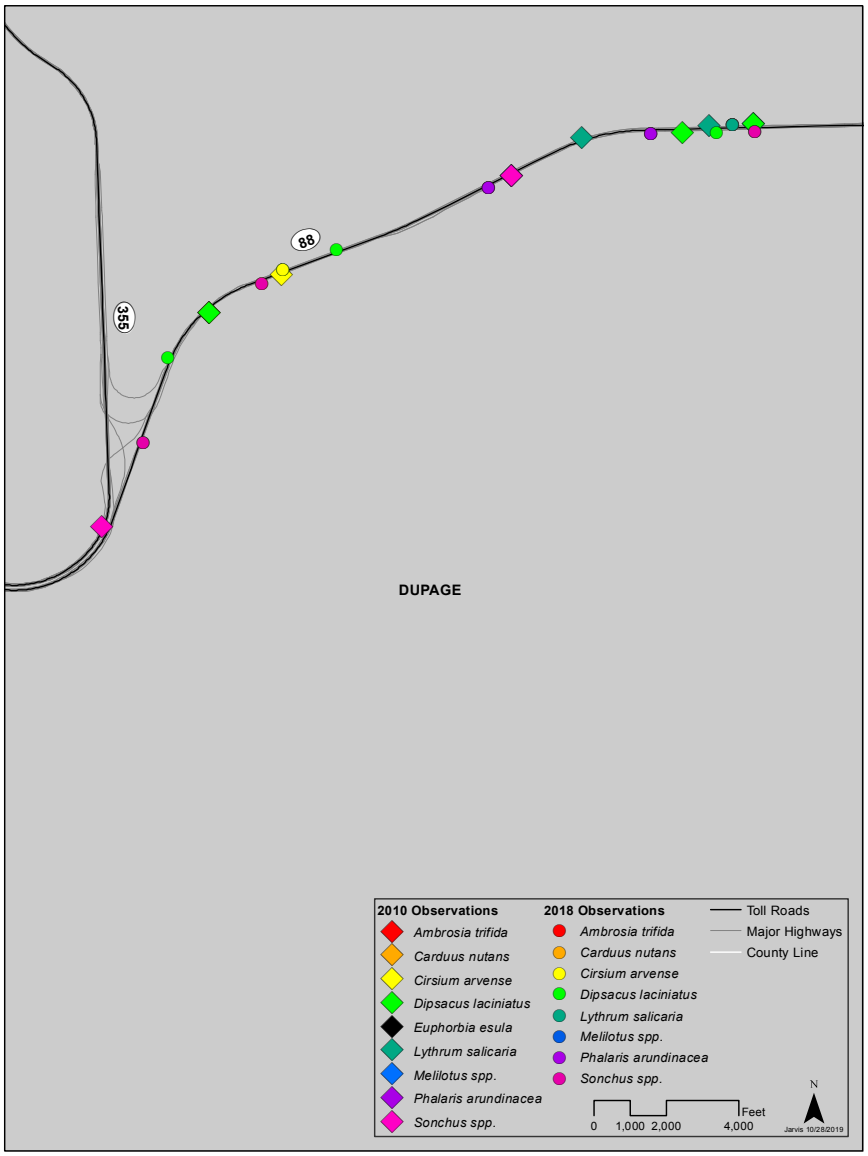
Map 2.27 Enlargement of section 27 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



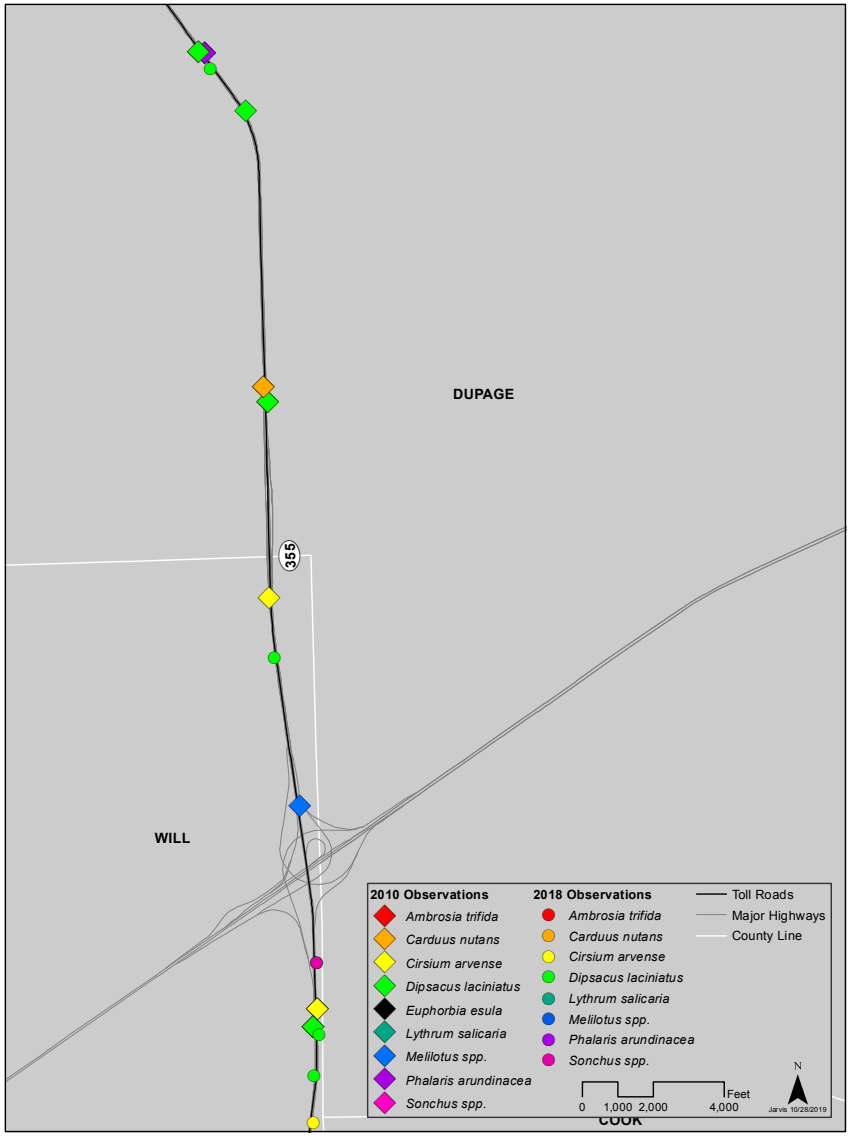
Map 2.28 Enlargement of section 28 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



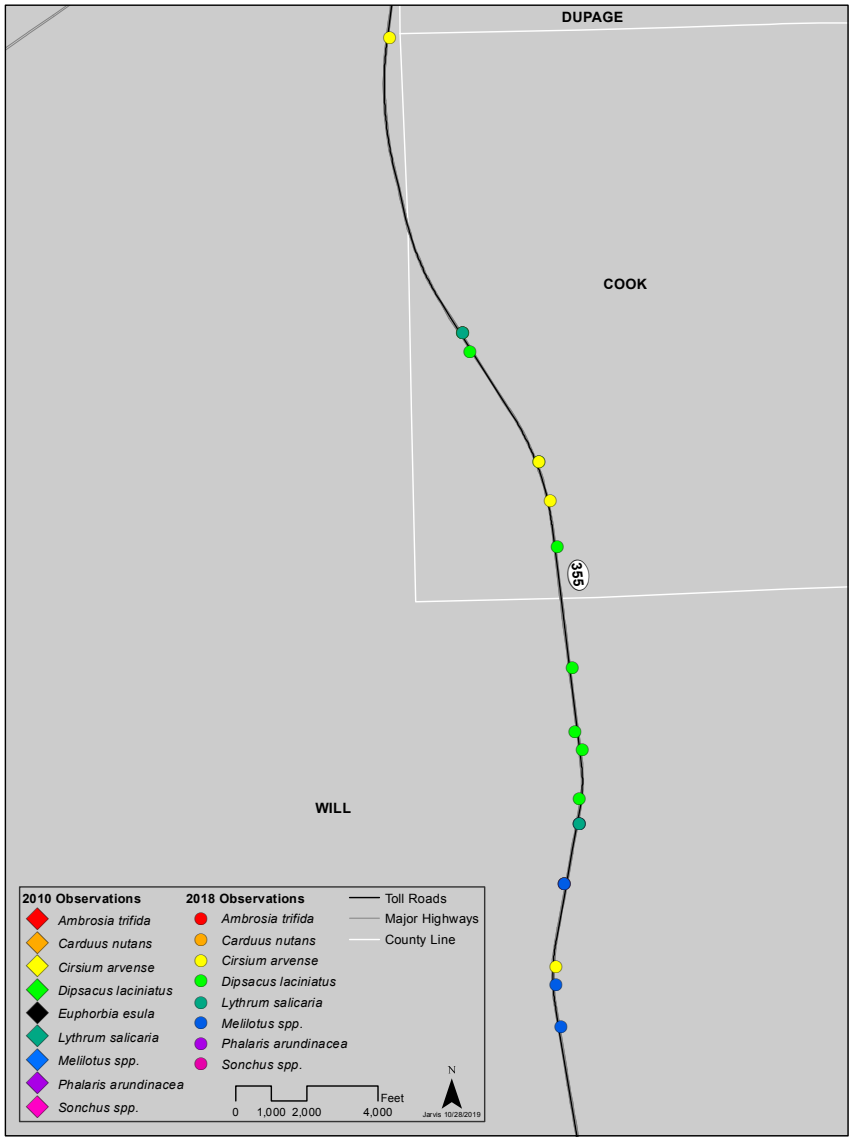
Map 2.29 Enlargement of section 29 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



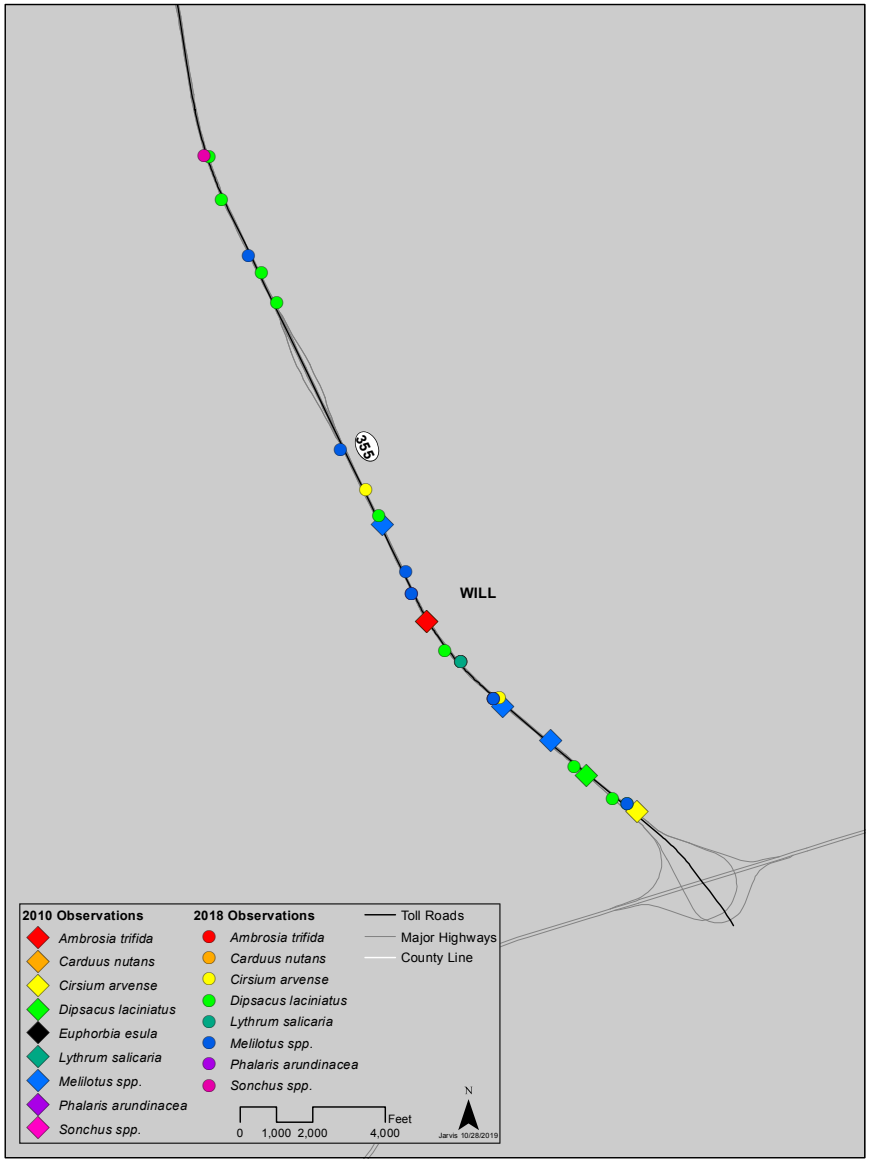
Map 2.30 Enlargement of section 30 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



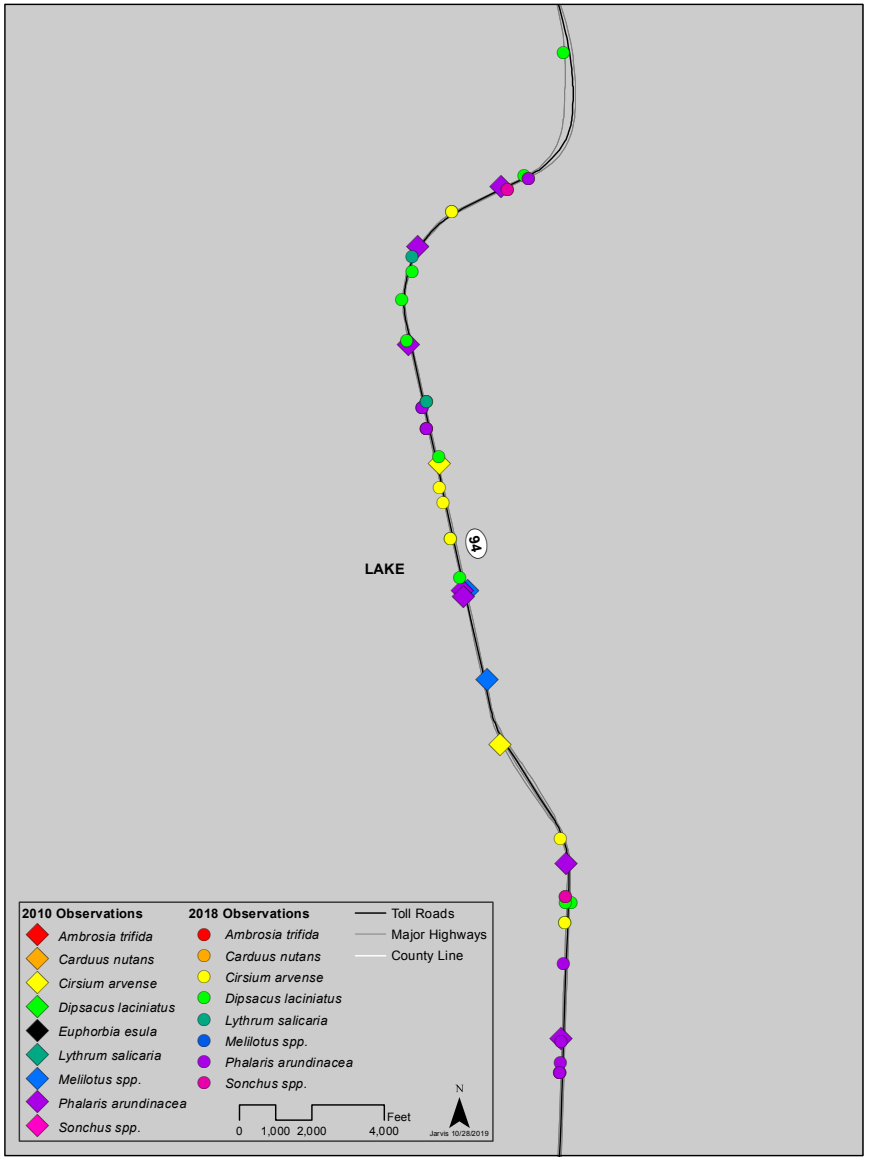
Map 2.31 Enlargement of section 31 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



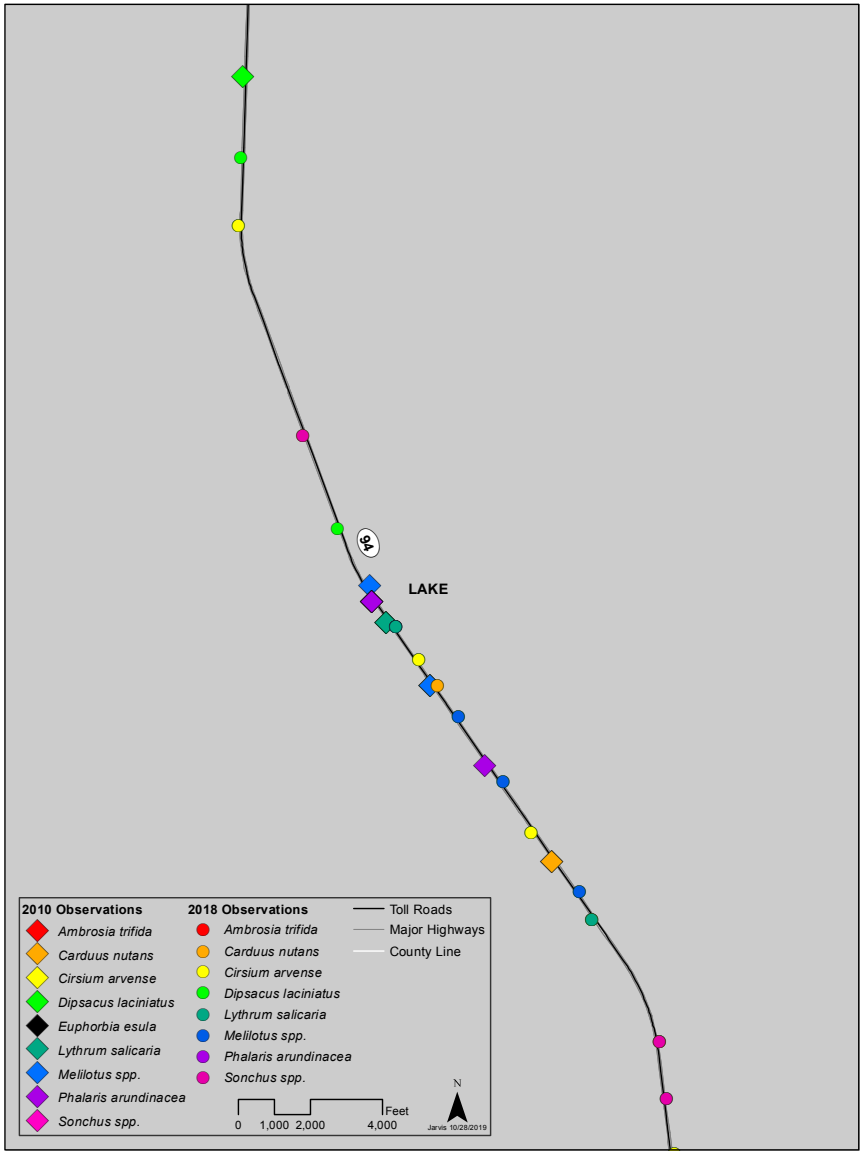
Map 2.32 Enlargement of section 32 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



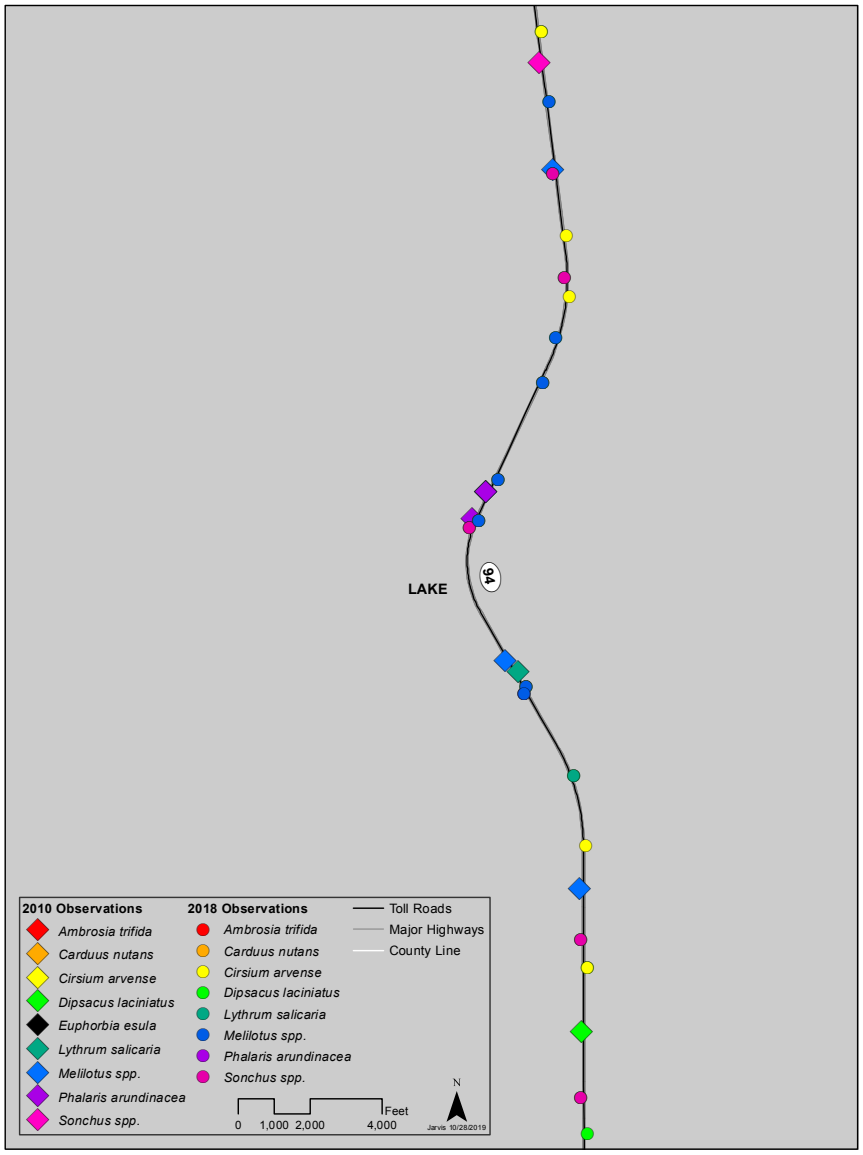
Map 2.33 Enlargement of section 33 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



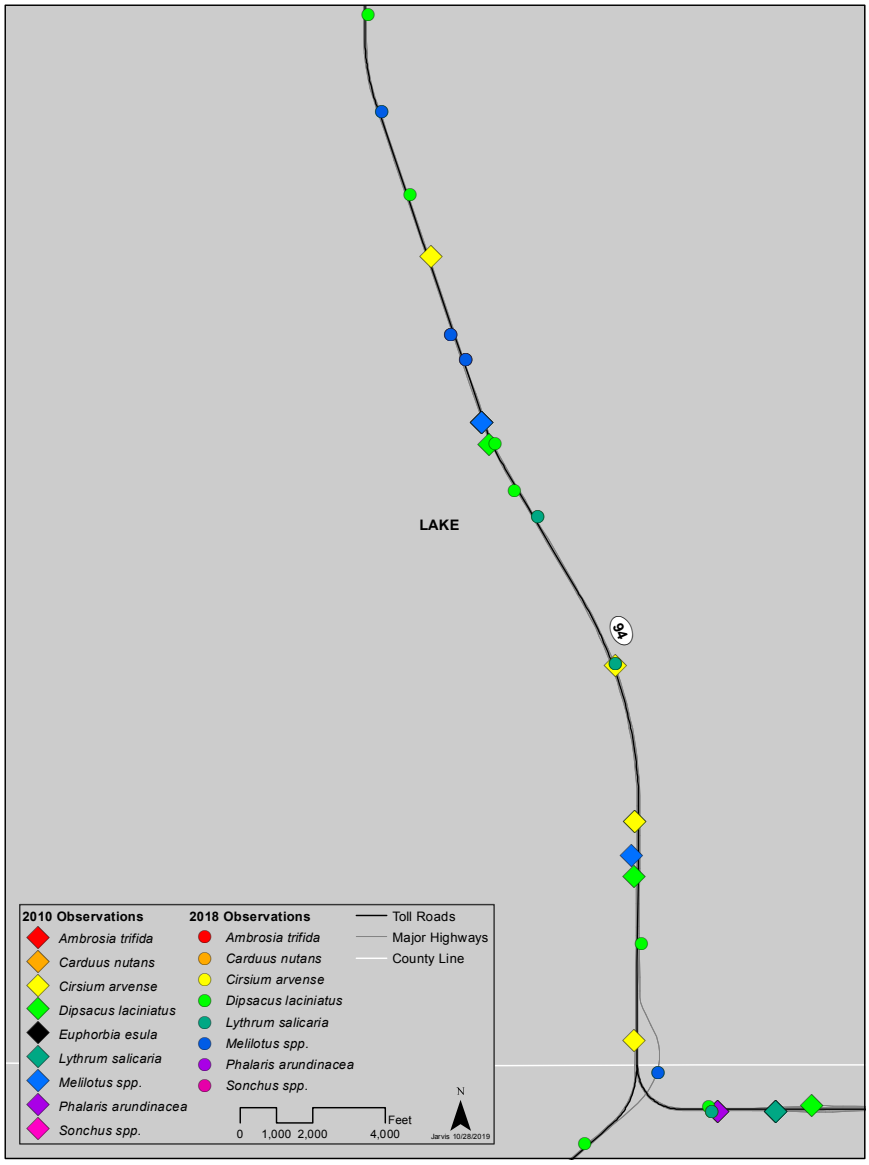
Map 2.34 Enlargement of section 34 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



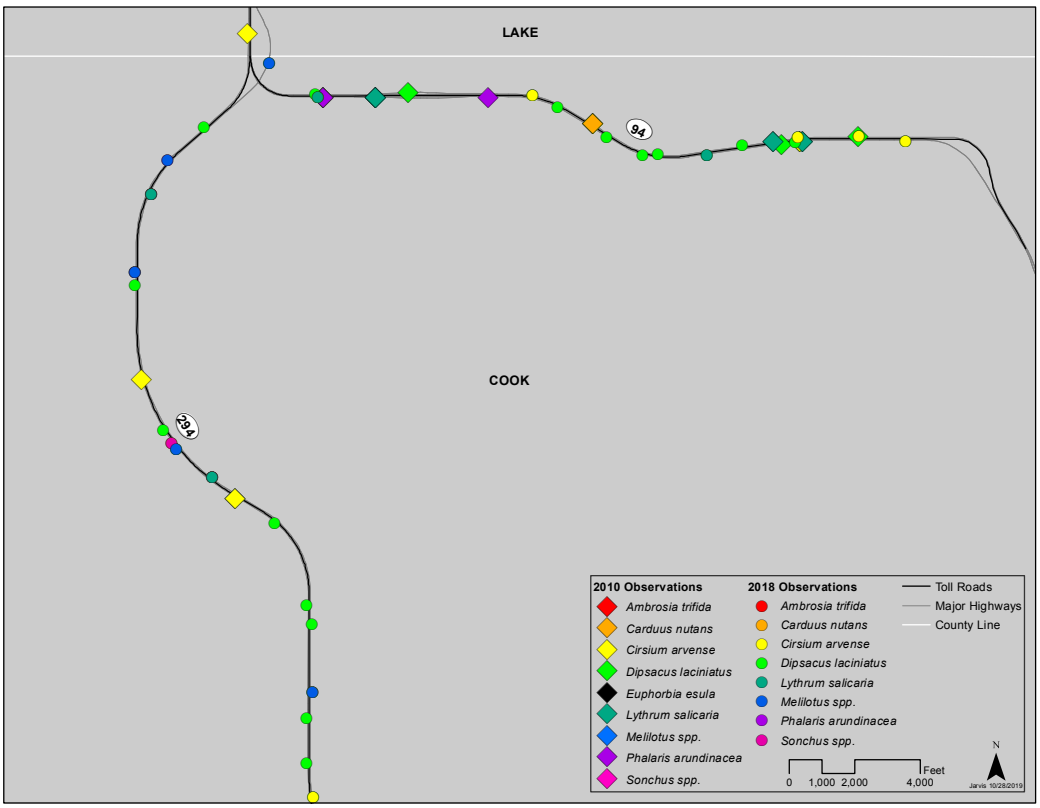
Map 2.35 Enlargement of section 35 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



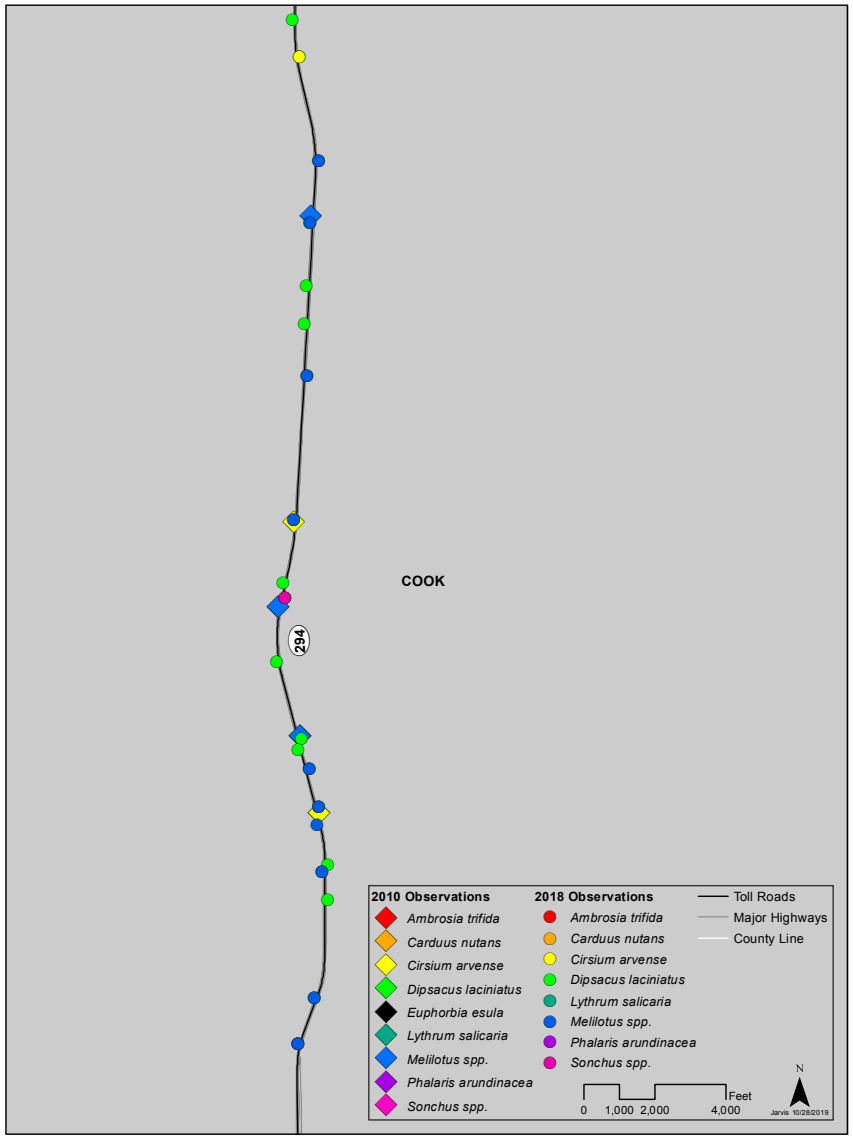
Map 2.36 Enlargement of section 36 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



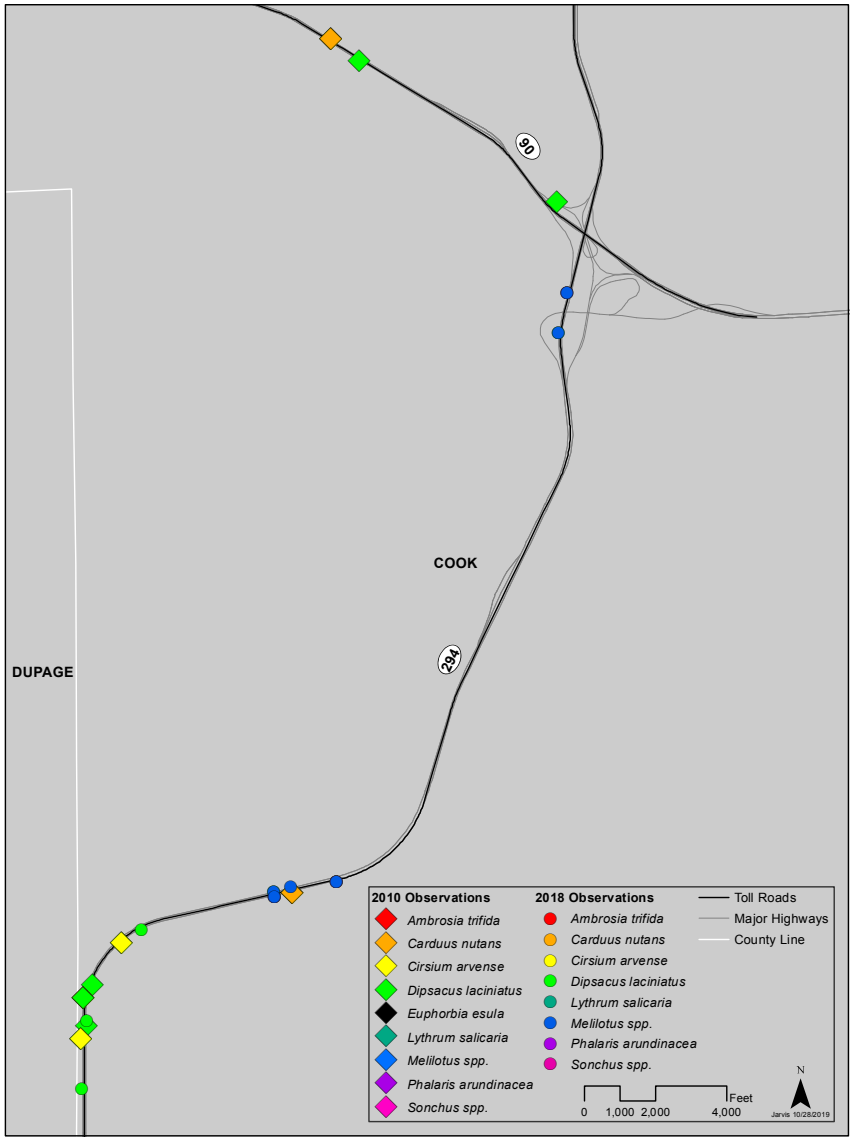
Map 2.37 Enlargement of section 37 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



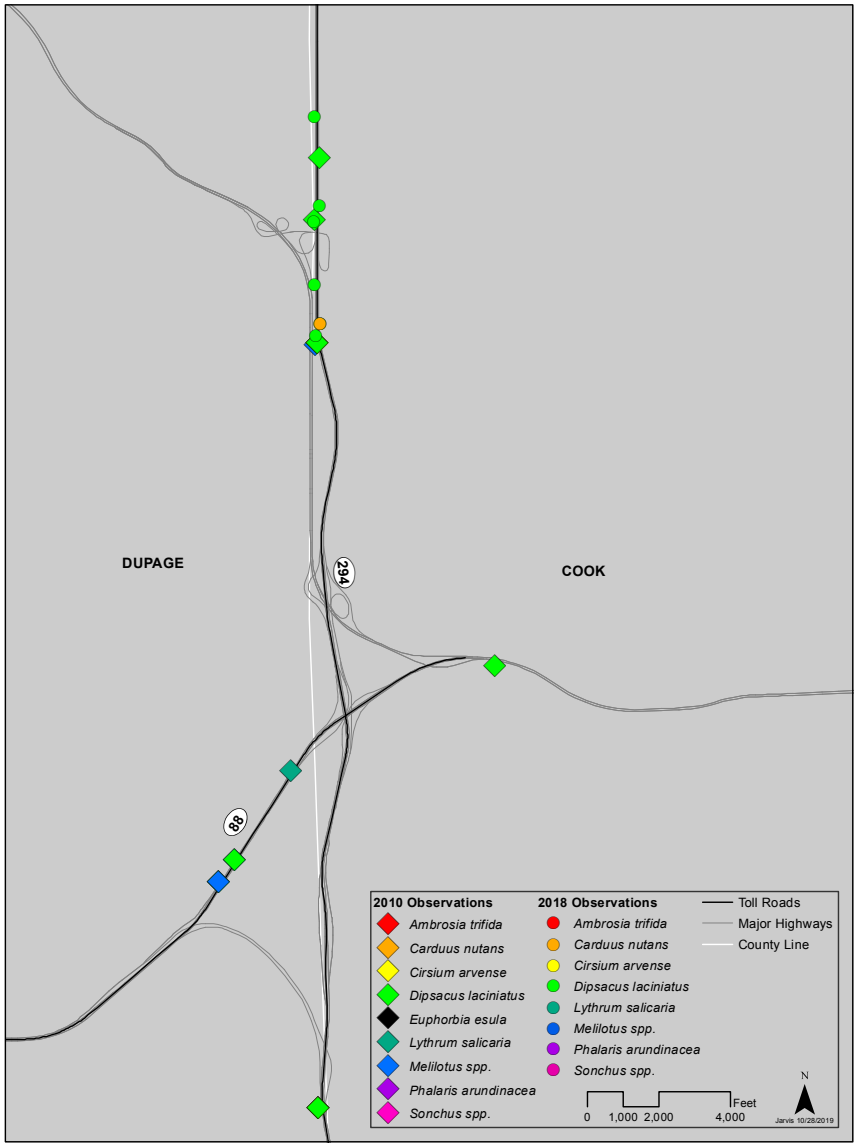
Map 2.38 Enlargement of section 38 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



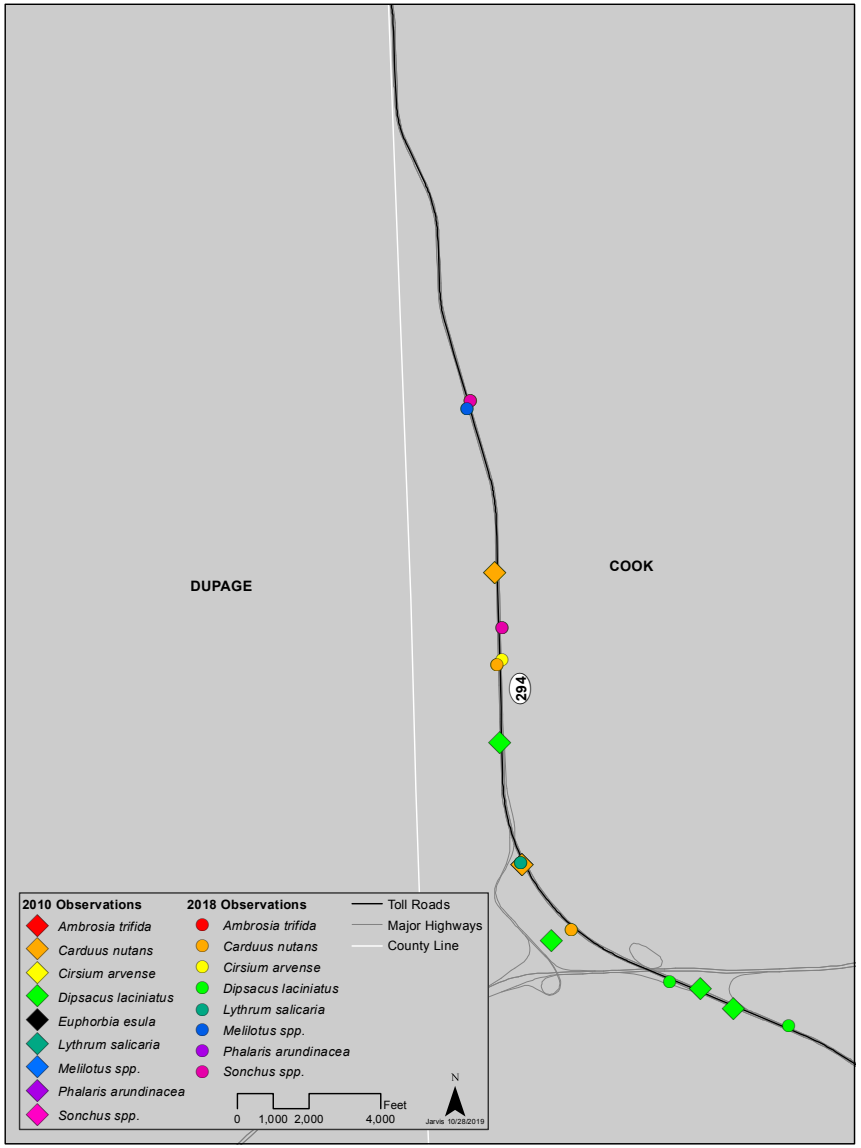
Map 2.39 Enlargement of section 39 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



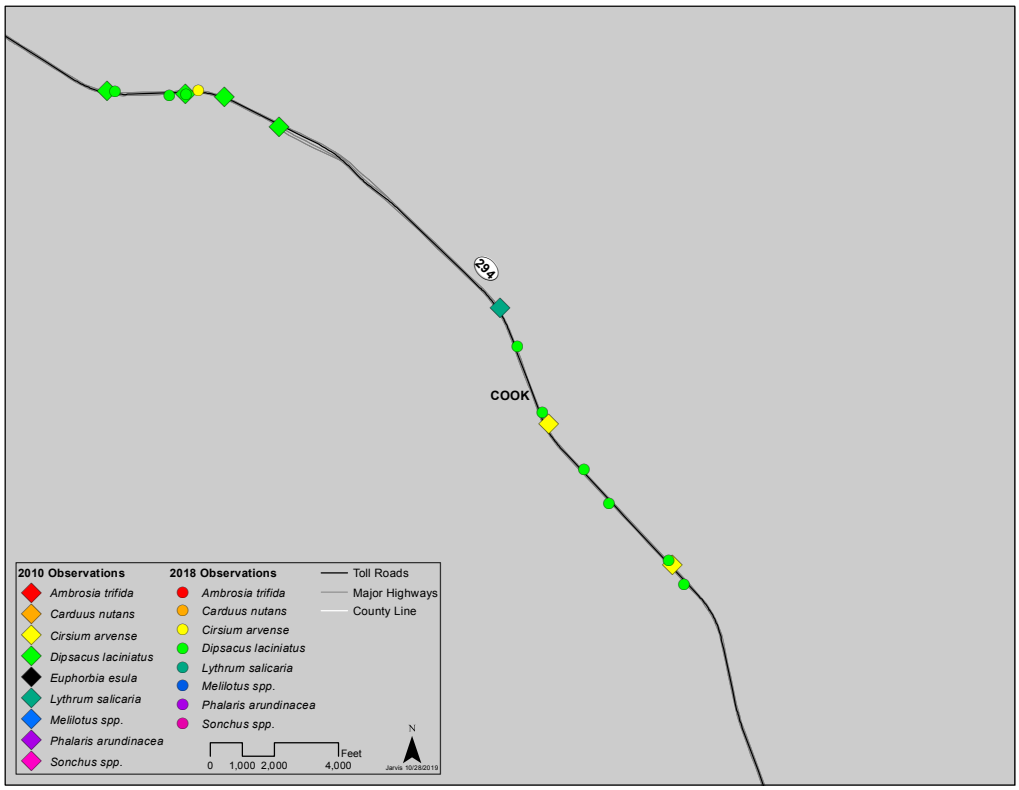
Map 2.40 Enlargement of section 40 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



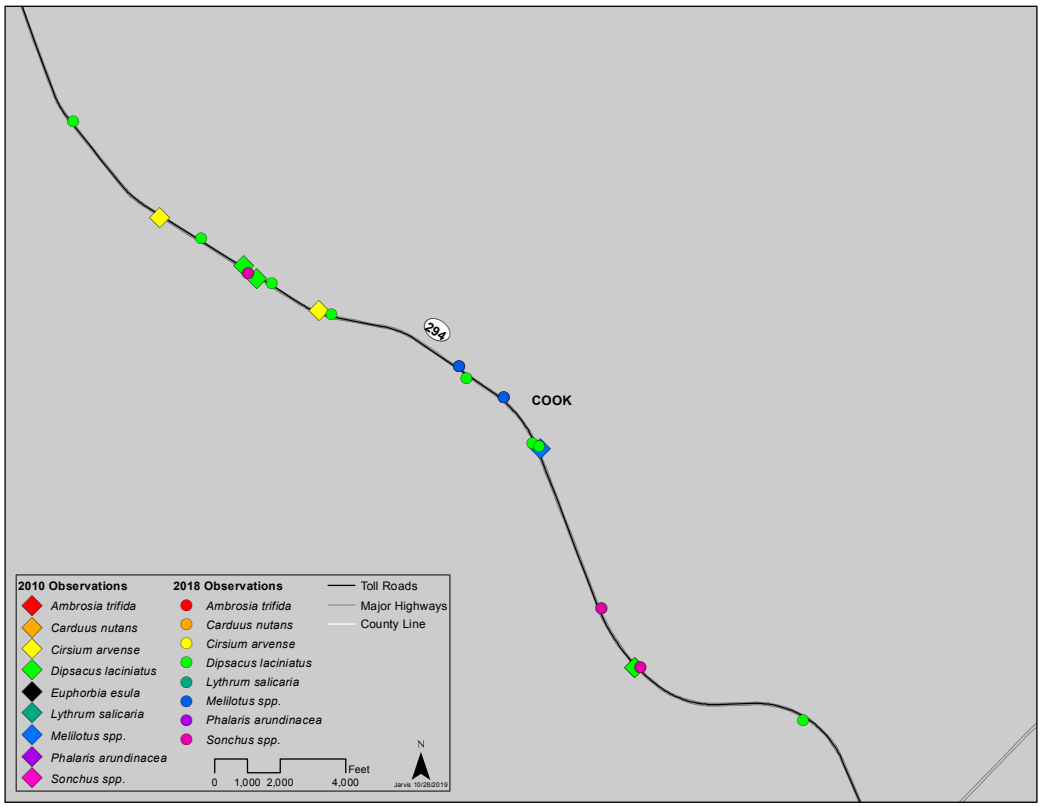
Map 2.41 Enlargement of section 41 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



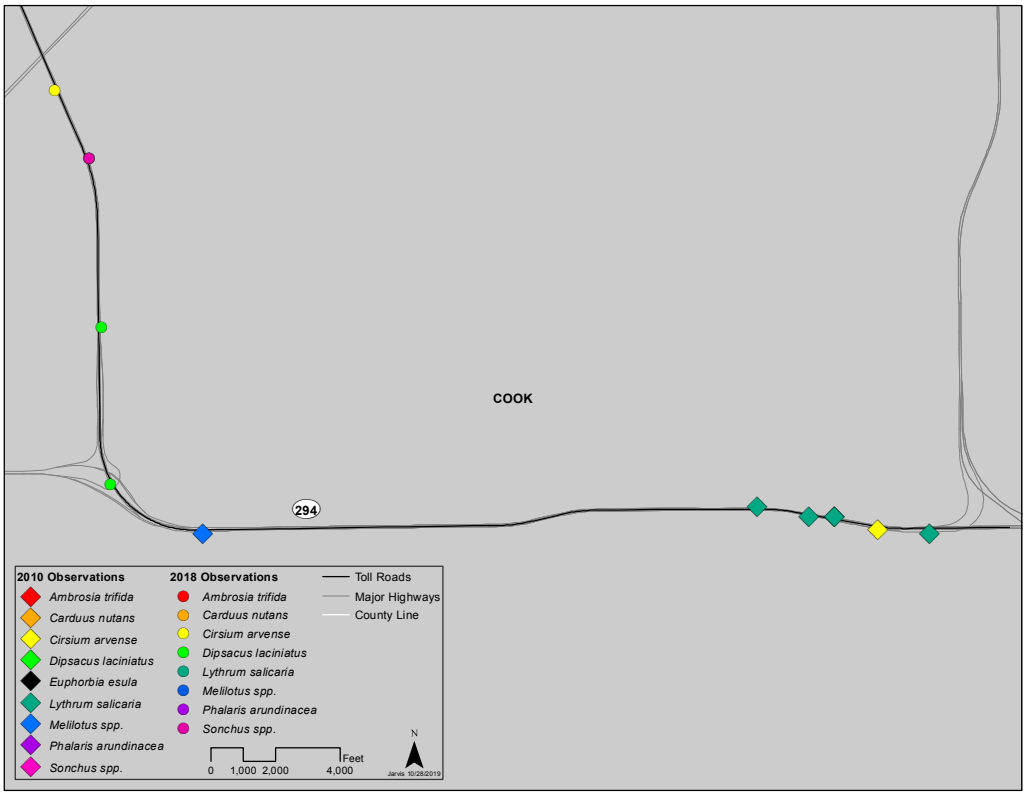
Map 2.42 Enlargement of section 42 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



Map 2.43 Enlargement of section 43 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



Map 2.44 Enlargement of section 44 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.



Map 2.45 Enlargement of section 45 on Map 2 showing distribution of species mapped during the 2018 survey in comparison with data from 2010. Refer to the overview map (Map 2) for regional orientation to map locations.

Appendix 1.
2018 noxious and invasive botanical survey results within the ISTHA system. Not all populations recorded have associated GPS data.

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
1	I-80 W	7/24/18	*Dipsacus laciniatus*	74.75 to 74.5, four clumps	50	2	-89.0929	41.8908
2	I-80 W	7/24/18	*Dipsacus laciniatus*	73.85	25	2	-89.0931	41.8908
3	I-80 W	7/24/18	*Cirsium arvense*	71.75	10	2	-89.1032	41.8884
4	I-80 W	7/24/18	*Cirsium arvense*	71.75	10	2	-89.1466	41.8776
5	I-80 W	7/24/18	*Cirsium arvense*	71.25 to 71.20			-89.1472	41.8774
6	I-80 W	7/24/18	*Dipsacus laciniatus*	71.25 to 71.20	25 to 50	3	-89.1553	41.8739
7	I-80 W	7/24/18	*Dipsacus laciniatus*				-89.1564	41.8735
8	I-80 W	7/24/18	*Phalaris arundinacea*	70.8 to 70.75	25 to 50	3 to 4	-89.1616	41.8714
9	I-80 W	7/24/18	*Phalaris arundinacea*				-89.1637	41.8708
10	I-80 W	7/24/18	*Dipsacus laciniatus*	70.25 to 69.6	25 to 50	4	-89.1851	41.8648
11	I-80 W	7/24/18	*Cirsium arvense*	65.8 to 65.75	25 to 50	3	-89.2520	41.8434
12	I-80 W	7/24/18	*Cirsium arvense*				-89.2534	41.8429
13	I-80 W	7/24/18	*Cirsium arvense*	63.80	40 to 50	2	-89.2859	41.8293
14	I-80 W	7/24/18	*Phalaris arundinacea*	63.10	25 to 50	2 to 3	-89.2988	41.8232
15	I-80 W	7/24/18	*Sonchus spp*	61.8 to 61.75	25 to 50	3 to 4	-89.3225	41.8230
16	I-80 W	7/24/18	*Sonchus spp*				-89.3234	41.8230
17	I-80 W	7/24/18	*Dipsacus laciniatus*	61.6 to 61.5	30 to 50	3	-89.3240	41.8230
	I-80 W		*Sonchus spp*					
18	I-80 W	7/24/18	*Sonchus spp*				-89.3266	41.8230
19	I-80 W	7/24/18	*Dipsacus laciniatus*	58.8 to 58.2	30 to 50	3	-89.3807	41.8229
	I-80 W		*Sonchus spp*					
20	I-80 W	7/24/18	*Dipsacus laciniatus*				-89.3859	41.8229
21	I-80 W	7/24/18	*Sonchus spp*	58.30	20 to 50	3	-89.3879	41.8229
22	I-80 W	7/24/18	*Sonchus spp*				-89.3884	41.8229
23	I-80 W	7/24/18	*Melilotus spp*	58.9 to 58.75	0 to 25	4	-89.3980	41.8229
24	I-80 W	7/24/18	*Melilotus spp*				-89.4010	41.8229
25	I-80 W	7/24/18	*Melilotus spp*	57.6 to 56.8	0 to 50	3 to 4	-89.4046	41.8230
26	I-80 W	7/24/18	*Melilotus spp*				-89.4187	41.8237
27	I-80 W	7/24/18	*Melilotus spp*	54.0 to 53.25	0 to 50	4 to 5	-89.4764	41.8180
28	I-80 W	7/24/18	*Melilotus spp*				-89.4844	41.8139
29	I-80 W	7/24/18	*Cirsium arvense*	52.3 to 52.25	25 to 40	2 to 3	-89.4989	41.8056
30	I-80 W	7/24/18	*Cirsium arvense*				-89.5002	41.8051
31	I-80 W	7/24/18	*Melilotus spp*	52.2 to 51.9	25 to 50	3 to 4	-89.5001	41.8051
32	I-80 W	7/24/18	*Melilotus spp*				-89.5042	41.8035
33	I-80 W	7/24/18	*Cirsium arvense*	51.8 to 51.75	25 to 50	3	-89.5064	41.8026
34	I-80 W	7/24/18	*Cirsium arvense*				-89.5080	41.8020
35	I-80 W	7/24/18	*Melilotus spp*	51.75 to 51.7	25 to 50	4 to 5	-89.5102	41.8011
36	I-80 W	7/24/18	*Cirsium arvense*	51.10	25 to 50	2 to 3	-89.5197	41.7974
37	I-80 W	7/24/18	*Melilotus spp*	50 to 49.3	0 to 50	5	-89.5338	41.7887
38	I-80 W	7/24/18	*Melilotus spp*				-89.5355	41.7873
39	I-80 W	7/24/18	*Melilotus spp*	49.20	25 to 50	3 to 4	-89.5408	41.7832
40	I-80 W	7/24/18	*Melilotus spp*				-89.5447	41.7816
41	I-80 W	7/24/18	*Melilotus spp*	49.10	25 to 50	2 to 3	-89.5494	41.7808
42	I-80 W	7/24/18	*Cirsium arvense*				-89.5503	41.7807
43	I-80 W	7/24/18	*Melilotus spp*	49.0 to 48.4	25 to 40	3 to 4	-89.5515	41.7806
44	I-80 W	7/24/18	*Melilotus spp*				-89.5621	41.7792
45	I-80 W	7/24/18	*Melilotus spp*	48.2, intermittent to Bollman Road	25 to 50	4 to 5	-89.5665	41.7783

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
46	I-80 W	7/24/18	*Melilotus spp*				-89.5824	41.7734
47	I-80 W	7/24/18	*Melilotus spp*	45.9 to 49.3	0 to 50	4 to 5	-89.6106	41.7665
48	I-80 W	7/24/18	*Melilotus spp*				-89.6183	41.7666
49	I-90 W	7/25/18	*Dipsacus laciniatus* start	54.1 to 53.5	15 to 50	2 to 3	-88.2965	42.0685
50	I-90 W	7/25/18	*Lythrum salicaria*	54.20	25	1	-88.2966	42.0685
51	I-90 W	7/25/18	*Dipsacus laciniatus* end				-88.2975	42.0687
52	I-90 W	7/25/18	*Dipsacus laciniatus*	Exit 52		2	-88.3136	42.0720
53	I-90 W	7/25/18	*Lythrum salicaria*	52.30	>50	2	-88.3335	42.0800
54	I-90 W	7/25/18	*Dipsacus laciniatus*	52.20	>50	3	-88.3359	42.0811
55	I-90 W	7/25/18	*Dipsacus laciniatus*				-88.3369	42.0816
56	I-90 W	7/25/18	*Dipsacus laciniatus*	52.2 to 50.3	25 to 50	4 to 5	-88.3437	42.0846
	I-90 W		*Melilotus spp*					
	I-90 W		*Sonchus spp*					
	I-90 W		*Cirsium arvense*					
57	I-90 W	7/25/18	*Dipsacus laciniatus*				-88.3657	42.0942
	I-90 W		*Melilotus spp*					
	I-90 W		*Sonchus spp*					
	I-90 W		*Cirsium arvense*					
58	I-90 W	7/25/18	*Sonchus spp*	49.2 to 49.1, from IL 72 bridge	25 to 50	3	-88.3813	42.1009
59	I-90 W	7/25/18	*Sonchus spp*				-88.3868	42.1027
60	I-90 W	7/25/18	*Sonchus spp*	48.9 to 48375	25 to 50	2 to 3	-88.3935	42.1049
	I-90 W		*Cirsium arvense*	48.80	25 to 50	2		
61	I-90 W	7/25/18	*Sonchus spp*		25 to 50	4 to 5	-88.3943	42.1052
62	I-90 W	7/25/18	*Sonchus spp*				-88.4033	42.1083
63	I-90 W	7/25/18	*Cirsium arvense*	48.70	40 to 50	2	-88.4047	42.1089
64	I-90 W	7/25/18	*Cirsium arvense*				-88.4052	42.1092
65	I-90 W	7/25/18	*Dipsacus laciniatus*	47.8 to 47.3	10 to 50	2	-88.4097	42.1113
66	I-90 W	7/25/18	*Dipsacus laciniatus*				-88.4135	42.1131
67	I-90 W	7/25/18	*Sonchus spp*	47.3 to 47.1	0 to 50	3 to 4	-88.4139	42.1133
68	I-90 W	7/25/18	*Sonchus spp*				-88.4229	42.1178
69	I-90 W	7/25/18	*Cirsium arvense*	43.6 to 45.5	40 to 50	1	-88.4443	42.1273
70	I-90 W	7/25/18	*Cirsium arvense*				-88.4478	42.1281
	I-90 W		*Melilotus spp*	45.50				
71	I-90 W	7/25/18	*Ambrosia trifida*	45.40	25 to 50	2 to 3	-88.4493	42.1285
	I-90 W		*Melilotus spp*					
72	I-90 W	7/25/18	*Ambrosia trifida*				-88.4499	42.1286
73	I-90 W	7/25/18	*Ambrosia trifida*				-88.4509	42.1289
74	I-90 W	7/25/18	*Sonchus spp*				-88.4509	42.1289
75	I-90 W	7/25/18	*Sonchus spp*	45.3 to 45.2	25 to 50	3	-88.4523	42.1293
	I-90 W		*Melilotus spp*					
76	I-90 W	7/25/18	*Sonchus spp*				-88.4543	42.1298
	I-90 W		*Melilotus spp*					
77	I-90 W	7/25/18	*Melilotus spp*	45.0 to 44.4	25 to 50	2 to 3	-88.4576	42.1306
78	I-90 W	7/25/18	*Melilotus spp*				-88.4584	42.1308
79	I-90 W	7/25/18	*Dipsacus laciniatus*	45.8 to 45.75	25 to 50	2 to 3	-88.4609	42.1314
80	I-90 W	7/25/18	*Dipsacus laciniatus*				-88.4618	42.1316
81	I-90 W	7/25/18	*Cirsium arvense*	44.6 to 44.5	25 to 50	2 to 3	-88.4656	42.1326
82	I-90 W	7/25/18	*Cirsium arvense*				-88.4667	42.1328

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
83	I-90 W	7/25/18	*Melilotus spp*				-88.4699	42.1336
84	I-90 W	7/25/18	*Dipsacus laciniatus*		25 to 50	2	-88.4725	42.1343
	I-90 W		*Lythrum salicaria*					
85	I-90 W	7/25/18	*Lythrum salicaria*	44.2 to 44.0	25 to 50	2	-88.4757	42.1351
86	I-90 W	7/25/18	*Lythrum salicaria*				-88.4777	42.1356
87	I-90 W	7/25/18	*Melilotus spp*	43.3 to 43.25	25 to 75	3	-88.4836	42.1370
88	I-90 W	7/25/18	*Melilotus spp*				-88.4892	42.1384
89	I-90 W	7/25/18	*Dipsacus laciniatus*	43.3 to 43.25, scattered plants	25 to 75	2	-88.4892	42.1384
90	I-90 W	7/25/18	*Sonchus spp*	42.75 to 42.6	25 to 50	3	-88.4979	42.1406
91	I-90 W	7/25/18	*Sonchus spp*				-88.5021	42.1417
92	I-90 W	7/25/18	*Dipsacus laciniatus*	42.7 to 42.5, scattered plants	25 to 50	2	-88.5021	42.1417
93	I-90 W	7/25/18	*Dipsacus laciniatus*				-88.5048	42.1423
94	I-90 W	7/25/18	*Sonchus spp*	41.5 to 40.75	25 to 50	3 to 4	-88.5218	42.1469
	I-90 W		*Cirsium arvense* start	41.50	40 to 50	2		
	I-90 W		*Melilotus spp*					
	I-90 W		*Dipsacus laciniatus* start		25 to 50	2		
95	I-90 W	7/25/18	*Sonchus spp*				-88.5239	42.1475
	I-90 W		*Dipsacus laciniatus* end	41.25				
	I-90 W		*Melilotus spp*					
96	I-90 W	7/25/18	*Sonchus spp*				-88.5349	42.1508
	I-90 W		*Melilotus spp*					
	I-90 W		*Cirsium arvense* end					
97	I-90 W	7/25/18	*Sonchus spp*	40.75	25 to 50	3	-88.5356	42.1510
	I-90 W		*Melilotus spp*	40.75 to 39.75				
98	I-90 W	7/25/18	*Cirsium arvense*	40.55	15 to 50	2	-88.5394	42.1521
99	I-90 W	7/25/18	*Ambrosia trifida*	40.10	25 to 50	2	-88.5472	42.1545
	I-90 W		*Cirsium arvense*					
100	I-90 W	7/25/18	*Cirsium arvense*	40.00	25 to 50	2	-88.5499	42.1552
101	I-90 W	7/25/18	*Cirsium arvense*	39.75			-88.5537	42.1564
	I-90 W		*Sonchus spp*					
102	I-90 W	7/25/18	*Sonchus spp*	39.75 to 38.5	25 to 50	3 to 4	-88.5549	42.1567
	I-90 W		*Melilotus spp* start					
103	I-90 W	7/25/18	*Cirsium arvense*	39.2 to 38.75	25 to 50	3	-88.5592	42.1580
104	I-90 W	7/25/18	*Cirsium arvense*				-88.5647	42.1596
105	I-90 W	7/25/18	*Melilotus spp* end	38.50			-88.5759	42.1631
106	I-90 W	7/25/18	*Cirsium arvense*	38.50	25 to 50	3	-88.5759	42.1631
	I-90 W		*Sonchus spp*					
107	I-90 W	7/25/18	*Cirsium arvense*		25 to 50	2	-88.5768	42.1635
	I-90 W		*Sonchus spp*					
	I-90 W		*Dipsacus laciniatus*					
108	I-90 W	7/25/18	*Lythrum salicaria*	38.3 to 38.2	25 to 35	2 to 3	-88.5782	42.1640
109	I-90 W	7/25/18	*Lythrum salicaria*				-88.5826	42.1655
110	I-90 W	7/25/18	*Melilotus spp*	38.25 to 37.5	25 to 50	3	-88.5838	42.1659
	I-90 W		*Sonchus spp*					
111	I-90 W	7/25/18	*Melilotus spp*				-88.5917	42.1687
	I-90 W		*Sonchus spp*					
112	I-90 W	7/25/18	*Cirsium arvense*	37.60	25 to 50	2	-88.5917	42.1687
	I-90 W		*Dipsacus laciniatus*					
113	I-90 W	7/25/18	*Sonchus spp*	37.50	40 to 60	3	-88.5940	42.1695
	I-90 W		*Dipsacus laciniatus*			2		

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
114	I-90 W	7/25/18	*Sonchus spp*				-88.5951	42.1699
	I-90 W		*Dipsacus laciniatus*					
115	I-90 W	7/25/18	*Phalaris arundinacea*	37.40	15 to 30	2	-88.5959	42.1702
116	I-90 W	7/25/18	*Sonchus spp*	37.25	25 to 60	3	-88.5983	42.1710
	I-90 W		*Ambrosia trifida*					
117	I-90 W	7/25/18	*Phalaris arundinacea*				-88.6024	42.1724
118	I-90 W	7/25/18	*Cirsium arvense*	37.20	25 to 50	3	-88.6024	42.1724
119	I-90 W	7/25/18	*Cirsium arvense*				-88.6028	42.1726
120	I-90 W	7/25/18	*Ambrosia trifida*				-88.6049	42.1733
121	I-90 W	7/25/18	*Sonchus spp*	37.00 to 36.75	25 to 60	3 to 4	-88.6049	42.1733
122	I-90 W	7/25/18	*Sonchus spp*				-88.6072	42.1741
123	I-90 W	7/25/18	*Sonchus spp*	36.5 to 36.25	25 to 50	4	-88.6094	42.1749
	I-90 W		*Lythrum salicaria*			3		
124	I-90 W	7/25/18	*Lythrum salicaria*				-88.6164	42.1774
	I-90 W		*Sonchus spp*					
125	I-90 W	7/25/18	*Lythrum salicaria*	36.2 to 35.7	25 to 60+	3	-88.6189	42.1782
	I-90 W		*Sonchus spp*			4		
126	I-90 W	7/25/18	*Sonchus spp*	35.80	25 to 60+	3	-88.6195	42.1785
	I-90 W		*Melilotus spp*	36.0 to 35.3	25 to 60+	4		
127	I-90 W	7/25/18	*Sonchus spp*				-88.6238	42.1799
128	I-90 W	7/25/18	*Ambrosia trifida*	35.70	30 to 60	2	-88.6275	42.1812
129	I-90 W	7/25/18	*Melilotus spp*				-88.6324	42.1830
130	I-90 W	7/25/18	*Melilotus spp*	35.2 to 34.25	40 to 60	3 to 4	-88.6360	42.1842
131	I-90 W	7/25/18	*Phalaris arundinacea*	35.00	25 to 50	2	-88.6393	42.1854
132	I-90 W	7/25/18	*Lythrum salicaria*	34.8 to 34.25	25 to 35	3	-88.6413	42.1861
133	I-90 W	7/25/18	*Sonchus spp*	34.6 to 34.25	25 to 60	3 to 4	-88.6447	42.1873
134	I-90 W	7/25/18	*Melilotus spp*	34.2 to 33.9	25 to 60	3 to 4	-88.6508	42.1894
	I-90 W		*Lythrum salicaria*					
	I-90 W		*Sonchus spp*					
135	I-90 W	7/25/18	*Cirsium arvense*	34.00	25 to 50	2 to 3	-88.6530	42.1902
136	I-90 W	7/25/18	*Lythrum salicaria*	33.9 to 33.5	25 to 35	2 to 3	-88.6574	42.1917
137	I-90 W	7/25/18	*Lythrum salicaria*				-88.6643	42.1940
138	I-90 W	7/25/18	*Melilotus spp*	33.5 to 33.3	25 to 60	3 to 4	-88.6643	42.1940
139	I-90 W	7/25/18	*Cirsium arvense*	33.3 to 33.2	25 to 60	3 to 4	-88.6667	42.1948
	I-90 W		*Sonchus spp*					
140	I-90 W	7/25/18	*Cirsium arvense*				-88.6689	42.1956
	I-90 W		*Sonchus spp*					
141	I-90 W	7/25/18	*Phalaris arundinacea*	33.20	25 to 60	2	-88.6689	42.1956
	I-90 W		*Lythrum salicaria*					
142	I-90 W	7/25/18	*Cirsium arvense*	33.10	25 to 50	2	-88.6696	42.1958
143	I-90 W	7/25/18	*Cirsium arvense*	33.00	25 to 50	2	-88.6732	42.1970
144	I-90 W	7/25/18	*Melilotus spp*	32.9 to 32.8	25 to 60	3 to 4	-88.6762	42.1980
	I-90 W		*Sonchus spp* start					
145	I-90 W	7/25/18	*Melilotus spp*	32.9 to 32.8	25 to 50	2	-88.6799	42.1993
	I-90 W		*Sonchus spp* end					
146	I-90 W	7/25/18	*Melilotus spp*	32.2 to 32.1	25 to 50	2	-88.6883	42.2018
147	I-90 W	7/25/18	*Melilotus spp*				-88.6890	42.2020
148	I-90 W	7/25/18	*Sonchus spp*	32.1 to 31.75	30 to 60	2	-88.6916	42.2027

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
149	I-90 W	7/25/18	*Sonchus spp*				-88.6930	42.2032
150	I-90 W	7/25/18	*Lythrum salicaria*	31.9 to 31.75	40 to 60	2	-88.6941	42.2035
	I-90 W		*Sonchus spp*					
151	I-90 W	7/25/18	*Lythrum salicaria*				-88.6952	42.2038
	I-90 W		*Sonchus spp*					
152	I-90 W	7/25/18	*Sonchus spp*	31.75	10 to 60	3	-88.6962	42.2041
	I-90 W		*Lythrum salicaria*					
	I-90 W		*Cirsium arvense*					
	I-90 W		*Ambrosia trifida*					
153	I-90 W	7/25/18	*Sonchus spp*				-88.6973	42.2044
	I-90 W		*Lythrum salicaria*					
	I-90 W		*Cirsium arvense*					
	I-90 W		*Ambrosia trifida*					
154	I-90 W	7/25/18	*Melilotus spp*	31.6 to 31.5	25 to 50	3	-88.6989	42.2049
	I-90 W		*Lythrum salicaria* start			2		
155	I-90 W	7/25/18	*Lythrum salicaria* end				-88.7002	42.2053
156	I-90 W	7/25/18	*Melilotus spp*	31.5 to 31.3	25 to 50	3	-88.7002	42.2053
157	I-90 W	7/25/18	*Cirsium arvense*	31.30	30 to 50	2	-88.7035	42.2063
158	I-90 W	7/25/18	*Sonchus spp*	31.2 to 30.6	25 to 60	3	-88.7064	42.2071
	I-90 W		*Cirsium arvense*					
159	I-90 W	7/25/18	*Cirsium arvense*				-88.7155	42.2098
	I-90 W		*Sonchus spp*					
160	I-90 W	7/25/18	*Lythrum salicaria*	30.50	40 to 60	3	-88.7182	42.2106
161	I-90 W	7/25/18	*Cirsium arvense*	30.40	25 to 50	2	-88.7194	42.2110
162	I-90 W	7/25/18	*Cirsium arvense*	30.2 to 30.0	25 to 60	3	-88.7248	42.2125
	I-90 W		*Sonchus spp*					
163	I-90 W	7/25/18	*Cirsium arvense*				-88.7298	42.2140
	I-90 W		*Sonchus spp*					
164	I-90 W	7/25/18	*Cirsium arvense* start	29.75 to 29.5	25 to 60	3 to 4	-88.7327	42.2149
	I-90 W		*Sonchus spp* start					
165	I-90 W	7/25/18	*Sonchus spp* end				-88.7379	42.2164
	I-90 W		*Cirsium arvense* end					
	I-90 W		*Melilotus spp*	29.75 to 29.3	40 to 60	3		
166	I-90 W	7/25/18	*Melilotus spp*				-88.7396	42.2169
167	I-90 W	7/25/18	*Melilotus spp*	29.0 to 28.9	40 to 60	3	-88.7456	42.2187
168	I-90 W	7/25/18	*Melilotus spp*				-88.7474	42.2192
169	I-90 W	7/25/18	*Cirsium arvense*	28.80	40 to 60	3	-88.7474	42.2192
	I-90 W		*Sonchus spp*					
170	I-90 W	7/25/18	*Sonchus spp*				-88.7488	42.2196
	I-90 W		*Cirsium arvense*					
171	I-90 W	7/25/18	*Cirsium arvense*	28.75	50 to 60	2	-88.7505	42.2201
172	I-90 W	7/25/18	*Cirsium arvense*	28.2 to 28.0	25 to 60	3	-88.7594	42.2236
173	I-90 W	7/25/18	*Cirsium arvense*				-88.7625	42.2248
174	I-90 W	7/25/18	*Cirsium arvense*				-88.7684	42.2272
175	I-90 W	7/25/18	*Cirsium arvense*	27.75	25 to 50	2	-88.7696	42.2277
	I-90 W		*Sonchus spp*					
176	I-90 W	7/25/18	*Cirsium arvense*	26.9 to 26.8	25 to 60	3	-88.7809	42.2322
177	I-90 W	7/25/18	*Cirsium arvense*				-88.7840	42.2333

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
178	I-90 W	7/25/18	*Cirsium arvense*	26.70	25 to 60	2	-88.7902	42.2340
179	I-90 W	7/25/18	*Melilotus spp*	25.8 to 24.4	25 to 50	3	-88.8029	42.2340
180	I-90 W	7/25/18	*Dipsacus laciniatus*	25.10	>60	2	-88.8171	42.2340
181	I-90 W	7/25/18	*Melilotus spp*				-88.8301	42.2339
	I-90 W		*Cirsium arvense*	25.8 to 24.4	25 to 50	2 to 3		
182	I-90 W	7/25/18	*Phalaris arundinacea*	22.2 to 22.0	40 to 60	3 to 4	-88.8744	42.2335
183	I-90 W	7/25/18	*Phalaris arundinacea*				-88.8787	42.2334
184	I-90 W	7/25/18	*Cirsium arvense*	21.7 to 21.5	50 to 60	3	-88.8837	42.2334
185	I-90 W	7/25/18	*Cirsium arvense*				-88.8888	42.2334
186	I-90 W	7/25/18	*Phalaris arundinacea*	19.2 to 18.5	25 to 40	2	-88.9278	42.2459
187	I-90 W	7/25/18	*Phalaris arundinacea*				-88.9348	42.2474
	I-90 W		*Cirsium arvense*	18.75	15 to 40	2 to 3		
188	I-90 W	7/25/18	*Phalaris arundinacea*				-88.9380	42.2475
	I-90 W		*Cirsium arvense*					
189	I-90 W	7/25/18	*Cirsium arvense*	18.60	0 to 25	2	-88.9419	42.2474
190	I-90 W	7/25/18	*Melilotus spp*	16.5 to 15.8	0 to 60	3	-88.9646	42.2678
	I-90 W		*Dipsacus laciniatus*					
191	I-90 W	7/25/18	*Dipsacus laciniatus*				-88.9646	42.2705
	I-90 W		*Melilotus spp*					
192	I-90 W	7/25/18	*Dipsacus laciniatus*	15.25 to 15.0	0 to 60	2	-88.9645	42.2792
	I-90 W		*Melilotus spp*					
193	I-90 W	7/25/18	*Melilotus spp*	14.75 to 14.5	50	3	-88.9646	42.2875
	I-90 W		*Phalaris arundinacea*	14.75 to 14.2	20	2		
194	I-90 W	7/25/18	*Phalaris arundinacea*				-88.9646	42.2943
	I-90 W		*Lythrum salicaria*					
--	I-90 W		*Phalaris arundinacea*	13.10	25 to 50	2	--	--
195	I-90 W	7/25/18	*Dipsacus laciniatus*	12.25	25 to 50	2	-88.9643	42.3198
196	I-90 W	7/25/18	*Phalaris arundinacea*	11.2 to 11.0	10 to 30	2 to 3	-88.9641	42.3378
197	I-90 W	7/25/18	*Phalaris arundinacea*				-88.9641	42.3409
198	I-90 W	7/25/18	*Sonchus spp*	10.80	0	2	-88.9641	42.3423
	I-90 W		*Melilotus spp*		0	2		
	I-90 W		*Dipsacus laciniatus*		20	2		
199	I-90 W	7/25/18	*Dipsacus laciniatus*	10.40	0 to 50	2	-88.9640	42.3490
	I-90 W		*Sonchus spp*					
200	I-90 W	7/25/18	*Phalaris arundinacea*	9.9 to 9.5	10 to 20	1 to 2	-88.9639	42.3576
	I-90 W		*Sonchus spp*					
201	I-90 W	7/25/18	*Phalaris arundinacea*	9.9 to 9.5	10 to 20	2 to 3	-88.9640	42.3621
202	I-90 W	7/25/18	*Dipsacus laciniatus*	9.10	25 to 50	2	-88.9653	42.3678
203	I-90 W	7/25/18	*Dipsacus laciniatus*	7.60	5 to 50	2	-88.9738	42.3878
204	I-90 W	7/25/18	*Cirsium arvense*	7.00	25 to 50	3	-88.9789	42.3975
	I-90 W		*Melilotus spp*					
205	I-90 W	7/25/18	*Melilotus spp*	6.7 to 6.3	25 to 50	2 to 3	-88.9804	42.4002
206	I-90 W	7/25/18	*Melilotus spp*				-88.9818	42.4025
207	I-90 W	7/25/18	*Cirsium arvense*	6.10	10 to 50	2	-88.9851	42.4090
208	I-90 W	7/25/18	*Ambrosia trifida*	6.0 to 5.75	0 to 50	2 to 3	-88.9853	42.4126
	I-90 W		*Melilotus spp*					
	I-90 W		*Carduus nutans*					
	I-90 W		*Cirsium arvense*					

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
209	I-90 W	7/25/18	*Ambrosia trifida*				-88.9853	42.4169
	I-90 W		*Carduus nutans*					
	I-90 W		*Meilotus spp*					
	I-90 W		*Cirsium arvense*					
210	I-90 W	7/25/18	*Dipsacus laciniatus*	5.50	5 to 50	2	-88.9853	42.4180
211	I-90 W	7/25/18	*Cirsium arvense*	5.30	25 to 50	2	-88.9854	42.4190
212	I-90 W	7/25/18	*Melilotus spp*	5.3 to 5.0	25 to 60+	3	-88.9854	42.4199
213	I-90 W	7/25/18	*Melilotus spp*				-88.9855	42.4248
214	I-90 W	7/25/18	*Dipsacus laciniatus*	4.80	40 to 60+	2 to 3	-88.9858	42.4266
215	I-90 W	7/25/18	*Cirsium arvense*	2.00	60+	3 to 4	-88.9948	42.4577
216	I-90 W	7/25/18	*Phalaris arundinacea*	1.25	20 to 40	2	-88.9949	42.4778
	I-90 W		*Cirsium arvense*	0.75	20 to 40	2		
217	I-90E	7/25/18	*Carduus nutans*	5.75	25 to 50	1 to 2	-88.9859	42.4237
	I-90E		*Dipsacus laciniatus*					
218	I-90E	7/25/18	*Dipsacus laciniatus*	5.70	0 to 60	3	-88.9858	42.4182
	I-90E		*Carduus nutans*					
	I-90E		*Melilotus spp* start			3 to 4		
219	I-90E	7/25/18	*Melilotus spp* end	6.00	0 to 60		-88.9857	42.4100
220	I-90E	7/25/18	*Cirsium arvense*	6.50	25 to 50	2	-88.9829	42.4035
221	I-90E	7/25/18	*Melilotus spp*	6.7 to 8.1	0 to 50	2	-88.9727	42.3840
	I-90E		*Dipsacus laciniatus*					
	I-90E		*Sonchus spp*					
	I-90E		*Cirsium arvense*					
222	I-90E	7/25/18	*Cirsium arvense*	8.80	50 to 100	3 to 4	-88.9686	42.3747
223	I-90E	7/25/18	*Dipsacus laciniatus*	9.9 to 10.0	25 to 40	2	-88.9644	42.3558
224	I-90E	7/25/18	*Dipsacus laciniatus*	10.1 to 10.25	0 to 50	2	-88.9644	42.3530
225	I-90E	7/25/18	*Dipsacus laciniatus*				-88.9645	42.3514
226	I-90E	7/25/18	*Dipsacus laciniatus*	10.30	50 to 70	2	-88.9645	42.3490
227	I-90E	7/25/18	*Dipsacus laciniatus*	10.70	50 to 70	1 to 2	-88.9645	42.3452
	I-90E		*Phalaris arundinacea*					
228	I-90E	7/25/18	*Dipsacus laciniatus*	10.75 to 11.6	25 to 70	3	-88.9646	42.3318
	I-90E		*Meilotus spp*					
	I-90E		*Phalaris arundinacea*	11.5 to 11.6	25 to 50	2		
229	I-90E	7/25/18	*Dipsacus laciniatus*	11..8 to 12.1	25 to 40	2	-88.9647	42.3277
	I-90E		*Phalaris arundinacea*					
230	I-90E	7/25/18	*Phalaris arundinacea*				-88.9647	42.3245
231	I-90E	7/25/18	*Phalaris arundinacea*	14.30	25 to 60	3	-88.9650	42.2911
232	I-90E	7/25/18	*Phalaris arundinacea*	14.25 to 14.5	25 to 60	3 to 4	-88.9650	42.2846
	I-90E		*Melilotus spp*					
	I-90E		*Dipsacus laciniatus*					
233	I-90E	7/25/18	*Dipsacus laciniatus*	15.00			-88.9651	42.2749
234	I-90E	7/25/18	*Dipsacus laciniatus*	15.25	25 to 60	3	-88.9650	42.2696
235	I-90E	7/25/18	*Dipsacus laciniatus*	on-ramp to Bus. US 20	0 to 60	4	-88.9538	42.2469
--	I-90E		*Cirsium arvense*	16.2, 17.6 to 17.7	0 to 60	2	--	--
--	I-90E		*Dipsacus laciniatus*	16.8, 17.4, 17.6 to 17.7	0 to 60	2 to 3	--	--
236	I-90E	7/25/18	*Phalaris arundinacea*				-88.9382	42.2471
237	I-90E	7/25/18	*Phalaris arundinacea* start	18.5 to 19.0		3 to 4	-88.9300	42.2461
	I-90E		*Cirsium arvense*					
238	I-90E	7/25/18	*Phalaris arundinacea* end				-88.9249	42.2441

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
239	I-90E	7/25/18	*Phalaris arundinacea*	19.0 to 19.25		3	-88.9229	42.2429
	I-90E		*Cirsium arvense*					
240	I-90E	7/25/18	*Cirsium arvense*	20.25 to 20.3	25 to 50	3	-88.9108	42.2352
241	I-90E	7/25/18	*Cirsium arvense*				-88.9094	42.2346
242	I-90E	7/25/18	*Cirsium arvense*	20.90	25 to 60	3	-88.8977	42.2328
243	I-90E	7/25/18	*Cirsium arvense*	21.25	50 to 100	3 to 4	-88.8914	42.2330
244	I-90E	7/25/18	*Sonchus spp*	21.6 to 22.25	25 to 50	3	-88.8836	42.2330
	I-90E		*Cirsium arvense*					
245	I-90E	7/25/18	*Cirsium arvense*				-88.8725	42.2331
	I-90E		*Sonchus spp*					
246	I-90E	7/25/18	*Cirsium arvense*	22.6 to 22.75	25 to 50	3 to 4	-88.8664	42.2332
	I-90E		*Sonchus spp*					
247	I-90E	7/25/18	*Cirsium arvense*				-88.8626	42.2332
	I-90E		*Sonchus spp*					
248	I-90E	7/25/18	*Ambrosia trifida*	23.50	25 to 50	2 to 3	-88.8475	42.2333
	I-90E		*Phalaris arundinacea*					
249	I-90E	7/25/18	*Phalaris arundinacea*	24.25	10 to 40	3	-88.8224	42.2335
250	I-90E	7/25/18	*Cirsium arvense*	25.5 to 26.0	30 to 60	3 to 4	-88.8072	42.2336
	I-90E		*Ambrosia trifida*					
	I-90E		*Sonchus spp*					
251	I-90E	7/25/18	*Cirsium arvense*				-88.7993	42.2336
	I-90E		*Ambrosia trifida*					
	I-90E		*Sonchus spp*					
252	I-90E	7/25/18	*Ambrosia trifida*	26.20	30 to 60	2	-88.7956	42.2336
253	I-90E	7/25/18	*Phalaris arundinacea*	26.2 to 26.3	10 to 50	3 to 4	-88.7890	42.2336
	I-90E		*Cirsium arvense*			2		
254	I-90E	7/25/18	*Ambrosia trifida*	27.20	30 to 60	2	-88.7725	42.2284
255	I-90E	7/25/18	*Phalaris arundinacea*	26.5 to 27.75	25 to 60	3 to 4	-88.7676	42.2264
	I-90E		*Cirsium arvense*					
	I-90E		*Sonchus spp*					
256	I-90E	7/25/18	*Cirsium arvense*	28.0 to 28.3	25 to 60	3	-88.7613	42.2239
	I-90E		*Sonchus spp*					
257	I-90E	7/25/18	*Cirsium arvense*				-88.7575	42.2224
	I-90E		*Sonchus spp*					
	I-90E		*Phalaris arundinacea*					
258	I-90E	7/25/18	*Phalaris arundinacea*	29.1 to 29.2	30 to 70	3 to 4	-88.7422	42.2172
	I-90E		*Ambrosia trifida*					
259	I-90E	7/25/18	*Ambrosia trifida*				-88.7380	42.2160
	I-90E		*Phalaris arundinacea*					
260	I-90E	7/25/18	*Sonchus spp*	30.1 to 30.25	25 to 50	3	-88.7250	42.2122
261	I-90E	7/25/18	*Cirsium arvense*	30.5 to 29.9	40 to 60	2	-88.7175	42.2100
262	I-90E	7/25/18	*Cirsium arvense*	29.8 to 29.9	40 to 60	3	-88.7125	42.2085
	I-90E		*Sonchus spp*					
263	I-90E	7/25/18	*Cirsium arvense*	31.25	25 to 50	2	-88.7067	42.2068
264	I-90E	7/25/18	*Sonchus spp* start	31.25 to 31.75, from County Line Rd	25 to 60		-88.7033	42.2058
265	I-90E	7/25/18	*Lythrum salicaria*	31.70	25 to 60	2	-88.6974	42.2041
	I-90E		*Phalaris arundinacea*					
	I-90E		*Melilotus spp*					

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
266	I-90E	7/25/18	*Sonchus spp* end				-88.6945	42.2032
	I-90E		*Cirsium arvense begin*		25 to 50	3		
267	I-90E	7/25/18	end *Cirsium arvense*				-88.6682	42.1949
	I-90E		*Phalaris arundinacea*	31.8 to 33.3	25 to 50	3		
	I-90E		*Sonchus spp*					
	I-90E		*Ambrosia trifida*					
268	I-90E	7/25/18	*Cirsium arvense*	33.4 to 34.3	25 to 50	4	-88.6659	42.1942
	I-90E		*Sonchus spp*					
269	I-90E	7/25/18	*Cirsium arvense*				-88.6493	42.1885
	I-90E		*Sonchus spp*					
	I-90E		*Ambrosia trifida*					
270	I-90E	7/25/18	*Phalaris arundinacea*	34.2 to 34.75, scattered Lythrum and Dipsacus	25 to 50	3	-88.6475	42.1879
271	I-90E	7/25/18	*Phalaris arundinacea*				-88.6424	42.1861
272	I-90E	7/25/18	*Phalaris arundinacea*	34.90	25 to 60	2	-88.6387	42.1848
273	I-90E	7/25/18	*Melilotus spp*	32.25	25 to 50	2	-88.6319	42.1824
	I-90E		*Cirsium arvense*					
274	I-90E	7/25/18	*Dipsacus laciniatus*	35.70	40 to 50	1	-88.6274	42.1808
275	I-90E	7/25/18	*Sonchus spp*	35.80	25 to 50	2	-88.6243	42.1797
	I-90E		*Cirsium arvense*					
276	I-90E	7/25/18	*Ambrosia trifida*	36.40	40 to 60	2 to 3	-88.6127	42.1756
277	I-90E	7/25/18	*Ambrosia trifida*	36.4 to 36.75	30 to 60		-88.6071	42.1737
	I-90E		*Sonchus spp*	36.4 to 37.0	40 to 60	3		
	I-90E		*Lythrum salicaria*			1		
278	I-90E	7/25/18	*Ambrosia trifida*	37.1 to 37.25	40 to 60	4 to 5	-88.6012	42.1716
279	I-90E	7/25/18	*Ambrosia trifida*				-88.5985	42.1707
280	I-90E	7/25/18	*Sonchus spp*	37.25 to 37.5	25 to 50	3 to 4	-88.5941	42.1691
	I-90E		*Cirsium arvense*					
	I-90E		*Melilotus spp*					
	I-90E		*Dipsacus laciniatus*	toll plaza to 38.0				
281	I-90E	7/25/18	*Sonchus spp*	38.25	30 to 70	3 to 4	-88.5807	42.1644
	I-90E		*Ambrosia trifida*					
	I-90E		*Cirsium arvense*					
	I-90E		*Melilotus spp*					
282	I-90E	7/25/18	*Sonchus spp*	38.25 to 39.25	25 to 60	3 to 4	-88.5632	42.1588
	I-90E		*Melilotus spp*					
	I-90E		*Cirsium arvense*					
283	I-90E	7/25/18	*Cirsium arvense*	39.30	30 to 60	2	-88.5622	42.1585
	I-90E		*Sonchus spp*					
284	I-90E	7/25/18	*Cirsium arvense*	39.70	40 to 60	2	-88.5548	42.1563
	I-90E		*Sonchus spp*					
285	I-90E	7/25/18	*Cirsium arvense*	39.9 to 40.75	40 to 60	3 to 4	-88.5503	42.1549
286	I-90E	7/25/18	*Cirsium arvense*				-88.5362	42.1508
	I-90E		*Sonchus spp*					
287	I-90E	7/25/18	*Sonchus spp*	41.0 to 41.9	40 to 60	2 to 3	-88.5214	42.1464
288	I-90E	7/25/18	*Sonchus spp*				-88.5160	42.1448
	I-90E		*Cirsium arvense*					
	I-90E		*Phalaris arundinacea*					
289	I-90E	7/25/18	*Dipsacus laciniatus*	42.70	25 to 60	2	-88.4997	42.1407

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
290	I-90E	7/25/18	*Lythrum salicaria*	42.7 to 43.0	15 to 50	2	-88.4964	42.1398
	I-90E		*Phalaris arundinacea*					
291	I-90E	7/25/18	*Sonchus spp*	43.25	40 to 60	2	-88.4898	42.1382
292	I-90E	7/25/18	*Carduus nutans*	43.75 to 44.0	50 to 60	2	-88.4804	42.1358
293	I-90E	7/25/18	*Carduus nutans*				-88.4761	42.1348
294	I-90E	7/25/18	*Cirsium arvense*	44.4 to 44.7	25 to 50	3	-88.4678	42.1327
	I-90E		*Sonchus spp*					
295	I-90E	7/25/18	*Sonchus spp*				-88.4623	42.1313
	I-90E		*Cirsium arvense*					
296	I-90E	7/25/18	*Cirsium arvense*	45.00	40 to 60	3	-88.4584	42.1304
297	I-90E	7/25/18	*Cirsium arvense*	45.6 to 46.0	30 to 60	2 to 3	-88.4480	42.1278
298	I-90E	7/25/18	*Cirsium arvense*				-88.4414	42.1260
299	I-90E	7/25/18	*Cirsium arvense*	47.7 to 49.25	30 to 50	2	-88.4198	42.1157
300	I-90E	7/25/18	*Dipsacus laciniatus*	47.90	25 to 50	2	-88.4091	42.1106
301	I-90E	7/25/18	*Cirsium arvense*				-88.4047	42.1085
302	I-90E	7/25/18	*Cirsium arvense*				-88.3845	42.1016
	I-90E		*Sonchus spp*					
303	I-90E	7/25/18	*Cirsium arvense*	49.25 to 49.75	25 to 60	3 to 4	-88.3767	42.0986
304	I-90E	7/25/18	*Cirsium arvense*	49.75 to 50.75	30 to 60	3 to 4	-88.3632	42.0927
305	I-90E	7/25/18	*Cirsium arvense*	51.00	30 to 60	2	-88.3554	42.0893
306	I-90E	7/25/18	*Melilotus spp*	51.40	30 to 60	3	-88.3495	42.0866
	I-90E		*Dipsacus laciniatus*					
--	I-90E		*Dipsacus laciniatus*	53.00	25 to 60	3	--	--
307	I-90E	7/26/18	*Dipsacus laciniatus*	57.80	50+	3	-88.2284	42.0663
308	I-90E	7/26/18	*Dipsacus laciniatus*				-88.2210	42.0663
	I-90E		*Sonchus spp*					
	I-90E		*Cirsium arvense*					
	I-90E		*Melilotus spp*					
309	I-90E	7/26/18	*Melilotus spp*	60.75 to 61.0	10 to 50	2	-88.1722	42.0664
	I-90E		*Dipsacus laciniatus*			1		
310	I-90E	7/26/18	*Melilotus spp*				-88.1694	42.0664
	I-90E		*Dipsacus laciniatus*					
	I-90E		*Sonchus spp*					
311	I-90E	7/26/18	*Melilotus spp*	61.0 to 61.3	5 to 60	3 to 4	-88.1616	42.0664
312	I-90E	7/26/18	*Melilotus spp*	61.3 to 61.5	10 to 50	2 to 3	-88.1583	42.0663
313	I-90E	7/26/18	*Cirsium arvense*	63.00	25 to 40	2	-88.1290	42.0664
	I-90E		*Sonchus spp*					
314	I-90E	7/26/18	*Cirsium arvense*	65.9 to 66.1, onto I-290 exit 68 ramp	5 to 50	3	-88.0731	42.0628
	I-90E		*Sonchus spp*					
	I-90E		*Melilotus spp*					
315	I-90E	7/26/18	*Melilotus spp*				-88.0696	42.0623
	I-90E		*Cirsium arvense*					
--	I-90E		*Melilotus spp*				--	--
	I-90E		*Dipsacus laciniatus*	70.00	5 to 50	3		
316	I-90E	7/26/18	*Dipsacus laciniatus*	70.80	30 to 60+	2	-87.9825	42.0397
317	I-90E	7/26/18	*Dipsacus laciniatus*	71.3 to 71.7	5 to 50	2 to 3	-87.9762	42.0366
	I-90E		*Melilotus spp*					
318	I-90E	7/26/18	*Dipsacus laciniatus*				-87.9717	42.0337
	I-90E		*Melilotus spp*					

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
319	I-90E	7/26/18	*Dipsacus laciniatus*	72.10	0 to 25	2	-87.9651	42.0288
320	I-90E	7/26/18	*Dipsacus laciniatus*	73.50	25 to 60+	2	-87.9425	42.0183
	I-90E		*Melilotus spp*					
	I-90E		*Sonchus spp*					
	I-90E		*Cirsium arvense*					
--	I-90E		*Dipsacus laciniatus*	at Lee Rd	--	2 to 3	--	--
--	I-90E		*Dipsacus, Cirsium, and Melilotus*	at I-294 entrance ramp	--	3 to 4	--	--
321	I-294S	7/26/18	*Sonchus spp*	40.5 to 40.25	50 to 70+	3	-87.8694	41.9859
	I-294S		*Dipsacus laciniatus*					
	I-294S		*Melilotus spp*					
322	I-294S	7/26/18	*Dipsacus laciniatus*				-87.8703	41.9827
	I-294S		*Melilotus spp*	39.25 to 39.0				
	I-294S		*Dipsacus laciniatus*					
323	I-294S	7/26/18	*Melilotus spp*	36.8 to 36.6	--	2	-87.8982	41.9401
324	I-294S	7/26/18	*Melilotus spp*		--		-87.9000	41.9398
--	I-294S		*Melilotus spp*	35.7 to 35.5	--	2 to 3	--	--
	I-294S		*Dipsacus laciniatus*					
325	I-294S	7/26/18	*Dipsacus laciniatus*	35.0 to 34.25	15 to 50	3 to 4	-87.9200	41.9246
326	I-294S	7/26/18	*Dipsacus laciniatus*				-87.9200	41.9154
327	I-294S	7/26/18	*Dipsacus laciniatus*	34.2 to 33.0	0 to 50	3 to 4	-87.9201	41.9074
328	I-294S	7/26/18	*Dipsacus laciniatus*				-87.9201	41.9025
329	I-294S	7/26/18	*Dipsacus laciniatus*	to Lake St/North Ave exit	0 to 60+	4	-87.9200	41.8986
--	I-294S		*Dipsacus laciniatus*	at exit 31	--	3	--	--
--	I-294S		*Dipsacus laciniatus*	29.30		2 to 3	--	--
--	I-294S		*Dipsacus laciniatus*	at exit 27		2 to 3	--	--
330	I-294S	7/26/18	*Melilotus spp*	26.50	0 to 50	2 to 3	-87.9111	41.8039
	I-294S		*Dipsacus laciniatus*					
331	I-294S	7/26/18	*Dipsacus laciniatus*	25.1 to 25.0, at Hinsdale Oasis	15 to 50	3	-87.9082	41.7843
	I-294S		*Cirsium arvense*					
	I-294S		*Carduus nutans*					
--	I-294S		*Dipsacus laciniatus*	24.50	0 to 50	2	--	--
332	I-294S	7/26/18	*Dipsacus laciniatus*	24.10	30 to 50	2	-87.9059	41.7692
	I-294S		*Lythrum salicaria*					
333	I-294S	7/26/18	*Dipsacus laciniatus*	24.1 to 23.5, to Joliet Rd	0 to 50	3	-87.9007	41.7640
	I-294S		*Carduus nutans*			1		
334	I-294S	7/26/18	*Dipsacus laciniatus*	23.5 to 23.0, to I-55	0 to 50		-87.8907	41.7600
335	I-294S	7/26/18	*Dipsacus laciniatus*	20.6 to 20.5	50 to 100	3	-87.8488	41.7464
336	I-294S	7/26/18	*Dipsacus laciniatus*				-87.8470	41.7465
337	I-294S	7/26/18	*Dipsacus laciniatus*	17.25 to 16.25	0 to 60+	4 to 5	-87.7989	41.7113
338	I-294S	7/26/18	*Dipsacus laciniatus*	IL 43 exit			-87.7904	41.7044
339	I-294S	7/26/18	*Dipsacus laciniatus*	13.25 to 12.5, to Cicero exit	0 to 60+	3	-87.7586	41.6691
	I-294S		*Sonchus spp*					
340	I-294S	7/26/18	*Dipsacus laciniatus*	to 11.75	10 to 60+	4	-87.7343	41.6603
341	I-294S	7/26/18	*Dipsacus laciniatus*	11.5 to 11.25	0 to 60	3	-87.7270	41.6548
--	I-294S		*Dipsacus laciniatus*	10.1 to 10.0		2 to 3	--	--
--	I-294S		*Dipsacus laciniatus*	9.75 to 9.6		2 to 3	--	--
342	I-294S	7/26/18	*Dipsacus laciniatus*	9.0 to 8.75	0 to 60	3	-87.6969	41.6315
343	I-294S	7/26/18	*Cirsium arvense*	7.5, IL 51 exit	60 to 75	2	-87.6859	41.6155

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
344	I-294S	7/26/18	*Dipsacus laciniatus*	5.2 to 5.0	25 to 60	3	-87.6799	41.5820
345	I-294N	7/26/18	*Dipsacus laciniatus*	5.0 to 6.0, toll plaza to exit 6A	25 to 60	4	-87.6808	41.5954
346	I-294N	7/26/18	*Dipsacus laciniatus*	6.5 to 7.0	5 to 60	4	-87.6820	41.6098
	I-294N		*Sonchus spp*			1		
347	I-294N	7/26/18	*Dipsacus laciniatus*	7.6 to 10.1	0 to 50	4	-87.7150	41.6359
	I-294N		*Sonchus spp*			1		
348	I-294N	7/26/18	*Dipsacus laciniatus*				-87.7194	41.6409
	I-294N		*Sonchus spp*					
349	I-294N	7/26/18	*Dipsacus laciniatus*	11.1, at 31st St	0 to 50	2 to 3	-87.7262	41.6545
350	I-294N	7/26/18	*Dipsacus laciniatus*	11.50	0 to 50	2	-87.7302	41.6586
	I-294N		*Sonchus spp*					
	I-294N		*Melilotus spp*					
351	I-294N	7/26/18	*Dipsacus laciniatus*	12.00	0 to 75	4	-87.7351	41.6612
	I-294N		*Sonchus spp*					
	I-294N		*Melilotus spp*					
352	I-294N	7/26/18	*Dipsacus laciniatus*	12.50	25 to 50	2	-87.7493	41.6657
353	I-294N	7/26/18	*Dipsacus laciniatus*	13.0 to 13.5	0 to 50	4 to 5	-87.7559	41.6684
354	I-294N	7/26/18	*Dipsacus laciniatus*				-87.7638	41.6721
355	I-294N	7/26/18	*Dipsacus laciniatus*	13.5 to 14.6	10 to 60	4 to 5	-87.7780	41.6820
356	I-294N	7/26/18	*Dipsacus laciniatus*	16.25 to 16.5	5 to 50	4	-87.7921	41.7064
357	I-294N	7/26/18	*Dipsacus laciniatus*	17.0 to exit 17	5 to 50	2 to 3	-87.8018	41.7142
358	I-294N	7/26/18	*Dipsacus laciniatus*	17.50	0 to 60	2 to 3	-87.8064	41.7191
359	I-294N	7/26/18	*Dipsacus laciniatus*	17.75 to 18.0	10 to 60	3 to 4	-87.8092	41.7248
360	I-294N	7/26/18	*Cirsium arvense*	20.25	10 to 50	2 to 3	-87.8455	41.7469
361	I-294N	7/26/18	*Dipsacus laciniatus*	20.9 to 21.0	10 to 60	2	-87.8551	41.7468
362	I-294N	7/26/18	*Dipsacus laciniatus*	22.80	25 to 60	2	-87.8785	41.7565
363	I-294N	7/31/18	*Cirsium arvense*	25.0, at oasis	25 to 60	3	-87.9077	41.7847
364	I-294N	7/31/18	*Dipsacus laciniatus*	25.25 to 26.25	15 to 60	3	-87.9077	41.7872
	I-294N		*Sonchus spp*			1 to 2		
--	I-294N		*Dipsacus laciniatus*	at exit 29	15 to 75	2 to 3	--	--
365	I-294N	7/31/18	*Dipsacus laciniatus*				-87.9108	41.8046
	I-294N		*Cirsium arvense*					
	I-294N		*Sonchus spp*					
366	I-294N	7/31/18	*Dipsacus laciniatus*	33.10	0 to 50	2 to 3	-87.9195	41.8995
	I-294N		*Carduus nutans*			1		
367	I-294N	7/31/18	*Dipsacus laciniatus*	33.75 to 34.0	0 to 60	3	-87.9195	41.9086
368	I-294N	7/31/18	*Dipsacus laciniatus*	35.2 to 35.8	0 to 60	3	-87.9194	41.9298
369	I-294N	7/31/18	*Dipsacus laciniatus*				-87.9137	41.9368
370	I-294N	7/31/18	*Dipsacus laciniatus*	36.6 to 36.9	0 to 50	3	-87.9000	41.9393
	I-294N		*Melilotus spp*			2		
	I-294N		*Sonchus spp*			2		
	I-294N		*Cirsium arvense*			2		
371	I-294N	7/31/18	*Dipsacus laciniatus*				-87.8936	41.9405
	I-294N		*Melilotus spp*					
	I-294N		*Sonchus spp*					
	I-294N		*Cirsium arvense*					
372	I-294N	7/31/18	*Dipsacus laciniatus*	43.25 to 43.5	0 to 25	2 to 3	-87.8652	42.0257
373	I-294N	7/31/18	*Dipsacus laciniatus*				-87.8652	42.0284
374	I-294N	7/31/18	*Dipsacus laciniatus*	43.75 to 44.0	0 to 50	3	-87.8661	42.0329
	I-294N		*Melilotus spp*					

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
375	I-294N	7/31/18	*Dipsacus laciniatus*				-87.8671	42.0358
	I-294N		*Melilotus spp*					
376	I-294N	7/31/18	*Dipsacus laciniatus*	44.10	10 to 60	2	-87.8679	42.0381
377	I-294N	7/31/18	*Dipsacus laciniatus*	44.8 to 45.0	0 to 50	2	-87.8695	42.0490
	I-294N		*Sonchus spp*					
378	I-294N	7/31/18	*Dipsacus laciniatus*	46.0 to 47.25	0 to 60	3 to 4	-87.8671	42.0662
	I-294N		*Melilotus spp*					
379	I-294N	7/31/18	*Dipsacus laciniatus*	47.75 to 48.4	0 to 60	4	-87.8658	42.0828
	I-294N		*Melilotus spp*			2 to 3		
380	I-294N	7/31/18	*Dipsacus laciniatus*				-87.8677	42.0909
	I-294N		*Cirsium arvense*			2 to 3		
381	I-294N	7/31/18	*Dipsacus laciniatus*				-87.8677	42.0997
	I-294N		*Melilotus spp*					
	I-294N		*Cirsium arvense*					
382	I-294N	7/31/18	*Dipsacus laciniatus*	48.00	10 to 50	2	-87.8678	42.1053
383	I-294N	7/31/18	*Dipsacus laciniatus*	48.9 to 51.75	30 to 50	4	-87.8789	42.1177
	I-294N		*Sonchus spp*					
	I-294N		*Cirsium arvense*					
	I-294N		*Lythrum salicaria*					
384	I-294N	7/31/18	*Dipsacus laciniatus*				-87.8856	42.1415
	I-294N		*Sonchus spp*					
	I-294N		*Cirsium arvense*					
	I-294N		*Lythrum salicaria*					
--	I-294N		*Dipsacus laciniatus*	at exit 52			--	--
385	I-294N	7/31/18	*Dipsacus laciniatus*	52.5 to 52.75	0 to 75	4	-87.8722	42.1524
	I-294N		*Melilotus spp*			2		
386	I-294N	7/31/18	*Dipsacus laciniatus*	24.00	25 to 50	3	-87.8738	42.1622
387	I-294N	7/31/18	*Dipsacus laciniatus*	24.25 to 22.1	0 to 50	4	-87.8763	42.1834
	I-294N		*Lythrum salicaria*			2		
388	I-294N	7/31/18	*Dipsacus laciniatus*				-87.8841	42.1945
	I-294N		*Lythrum salicaria*					
389	I-294N	7/31/18	*Dipsacus laciniatus*	21.60	25 to 60	2	-87.8884	42.2000
390	I-294N	7/31/18	*Dipsacus laciniatus*	21.3 to 20.5	0 to 60	4	-87.8914	42.2065
	I-294N		*Sonchus spp*			2		
	I-294N		*Melilotus spp*			2		
	I-294N		*Cirsium arvense*			2		
391	I-294N	7/31/18	*Dipsacus laciniatus*				-87.8970	42.2189
392	I-294N	7/31/18	*Dipsacus laciniatus*	20.1 to 19.1	0 to 60	4	-87.8998	42.2253
	I-294N		*Melilotus spp*					
393	I-294N	7/31/18	*Dipsacus laciniatus*				-87.9011	42.2326
394	I-294N	7/31/18	*Cirsium arvense*	18.75	0 to 60	3 to 4	-87.9011	42.2452
	I-294N		*Dipsacus laciniatus*					
395	I-294N	7/31/18	*Cirsium arvense*	18.00	25 to 50	2	-87.9011	42.2546
396	I-294N	7/31/18	*Dipsacus laciniatus*	17.75 to 17.5	15 to 50	3	-87.9024	42.2599
	I-294N		*Lythrum salicaria*					
397	I-294N	7/31/18	*Dipsacus laciniatus*	17.25 to 16.0	30 to 100	4	-87.9072	42.2667
	I-294N		*Cirsium arvense*					
	I-294N		*Melilotus spp*					

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
398	I-294N	7/31/18	*Dipsacus laciniatus*				-87.9120	42.2794
	I-294N		*Cirsium arvense*					
	I-294N		*Melilotus spp*					
399	I-294N	7/31/18	*Dipsacus laciniatus*	16.0 to 15.25	0 to 100	4	-87.9100	42.2825
	I-294N		*Cirsium arvense*					
	I-294N		*Melilotus spp*					
400	I-294N	7/31/18	*Dipsacus laciniatus*				-87.9053	42.2899
	I-294N		*Cirsium arvense*					
	I-294N		*Melilotus spp*					
401	I-294N	7/31/18	*Cirsium arvense*	14.75 to 14.5	25 to 50	2 to 3	-87.9025	42.2964
402	I-294N	7/31/18	*Cirsium arvense*				-87.9028	42.3011
403	I-294N	7/31/18	*Dipsacus laciniatus*	13.80	0 to 50	2	-87.9045	42.3113
	I-294N		*Melilotus spp*					
404	I-294N	7/31/18	*Cirsium arvense*	13.50	30 to 60	2	-87.9053	42.3167
	I-294N		*Dipsacus laciniatus*					
405	I-294N	7/31/18	*Dipsacus laciniatus*	13.2 to 12.6	0 to 50	3	-87.9060	42.3209
	I-294N		*Sonchus spp*					
406	I-294N	7/31/18	*Dipsacus laciniatus*				-87.9068	42.3252
	I-294N		*Sonchus spp*					
	I-294N		*Cirsium arvense*					
407	I-294N	7/31/18	*Dipsacus laciniatus*	12.00	20 to 60	2	-87.9149	42.3367
	I-294N		*Melilotus spp*					
408	I-294N	7/31/18	*Dipsacus laciniatus*	11.25	0 to 60	2	-87.9227	42.3451
	I-294N		*Melilotus spp*			1		
409	I-294N	7/31/18	*Dipsacus laciniatus*	10.70	25 to 60	2	-87.9273	42.3500
	I-294N		*Melilotus spp*					
410	I-294N	7/31/18	*Cirsium arvense*	10.5 to 10.3	25 to 50	3 to 4	-87.9294	42.3524
	I-294N		*Carduus nutans*			1		
411	I-294N	7/31/18	*Cirsium arvense*	10.5 to 10.25	10 to 50	3	-87.9313	42.3544
	I-294N		*Dipsacus laciniatus*					
412	I-294N	7/31/18	*Dipsacus laciniatus*				-87.9336	42.3570
	I-294N		*Cirsium arvense*					
	I-294N		*Lythrum salicaria*					
--	I-294N		*Dipsacus laciniatus*	9.75 to 9.5	0 to 50	2	--	--
	I-294N		*Sonchus spp*					
	I-294N		*Melilotus spp*					
413	I-294N	7/31/18	*Dipsacus laciniatus*	5.60	10 to 60	2	-87.9473	42.4221
414	I-294N	7/31/18	*Dipsacus laciniatus*	3.25 to 2.8	5 to 60	3	-87.9606	42.4559
415	I-294N	7/31/18	*Dipsacus laciniatus*				-87.9618	42.4601
	I-294N		*Cirsium arvense*			2		
	I-294N		*Lythrum salicaria*			2		
416	I-294N	7/31/18	*Dipsacus laciniatus*	2.20	25 to 60	2	-87.9633	42.4700
417	I-294N	7/31/18	*Cirsium arvense*	1.50	0 to 60	2	-87.9535	42.4761
	I-294N		*Sonchus spp*					
418	I-294N	7/31/18	*Phalaris arundinacea*	1.30	20 to 60	3	-87.9513	42.4769
	I-294N		*Cirsium arvense*					
419	I-294S	7/31/18	*Dipsacus laciniatus*	0.25	50 to 75	1 to 2	-87.9477	42.4866
420	I-294S	7/31/18	*Dipsacus laciniatus*	1.25	15 to 75	1 to 2	-87.9517	42.4772

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
421	I-294S	7/31/18	*Cirsium arvense*	1.6 to 2.5	15 to 75	3 to 4	-87.9591	42.4745
	I-294S		*Dipsacus laciniatus*					
422	I-294S	7/31/18	*Lythrum salicaria*	2.00	25 to 50	2	-87.9633	42.4711
423	I-294S	7/31/18	*Dipsacus laciniatus*	2.50	15 to 60	2	-87.9643	42.4679
424	I-294S	7/31/18	*Dipsacus laciniatus*				-87.9638	42.4647
425	I-294S	7/31/18	*Phalaris arundinacea*	2.80	0 to 75	2	-87.9623	42.4596
	I-294S		*Melilotus spp*					
426	I-294S	7/31/18	*Phalaris arundinacea*	2.90	10 to 75	2	-87.9618	42.4580
	I-294S		*Cirsium arvense*					
	I-294S		*Sonchus spp*					
427	I-294S	7/31/18	*Cirsium arvense*	3.3 to 3.4	30 to 50	2	-87.9605	42.4536
428	I-294S	7/31/18	*Cirsium arvense*				-87.9602	42.4525
429	I-294S	7/31/18	*Dipsacus laciniatus*	3.50	30 to 60	2	-87.9594	42.4498
	I-294S		*Cirsium arvense*					
430	I-294S	7/31/18	*Dipsacus laciniatus*		0 to 60	2	-87.9585	42.4467
431	I-294S	7/31/18	*Cirsium arvense*	5.25 to 5.5	25 to 75	3 to 4	-87.9483	42.4269
432	I-294S	7/31/18	*Cirsium arvense*				-87.9478	42.4226
	I-294S		*Sonchus spp*					
433	I-294S	7/31/18	*Dipsacus laciniatus*	5.6 to 5.7	15 to 75	3	-87.9478	42.4221
434	I-294S	7/31/18	*Dipsacus laciniatus*				-87.9479	42.4206
	I-294S		end *Cirsium arvense*			1		
435	I-294S	7/31/18	*Phalaris arundinacea*	5.80	30 to 75	3 to 4	-87.9481	42.4175
436	I-294S	7/31/18	*Phalaris arundinacea*	6.30	30 to 60	3	-87.9484	42.4115
437	I-294S	7/31/18	*Phalaris arundinacea*	6.4 to 6.5	30 to 50	3	-87.9484	42.4099
438	I-294S	7/31/18	*Sonchus spp*			2	-87.9485	42.4092
	I-294S		*Cirsium arvense*			2		
	I-294S		*Phalaris arundinacea*					
439	I-294S	7/31/18	*Dipsacus laciniatus*	7.6 to 8.0	40 to 60	2 to 3	-87.9493	42.3927
440	I-294S	7/31/18	*Dipsacus laciniatus*				-87.9496	42.3875
	I-294S		*Cirsium arvense*					
441	I-294S	7/31/18	*Cirsium arvense*	9.10	40 to 60	2	-87.9431	42.3715
	I-294S		*Sonchus spp*					
442	I-294S	7/31/18	*Dipsacus laciniatus*	9.60	0 to 75	3	-87.9396	42.3644
443	I-294S	8/1/18	*Dipsacus laciniatus*	11.5 to 12.0	50 to 75	2 to 3	-87.9198	42.3412
	I-294S		*Cirsium arvense*					
444	I-294S	8/1/18	*Dipsacus laciniatus*				-87.9136	42.3345
	I-294S		*Cirsium arvense*					
	I-294S		*Lythrum salicaria*	12.00	25 to 60	2		
445	I-294S	8/1/18	*Dipsacus laciniatus*	14.1 to 14.75	30 to 60	3	-87.9042	42.3059
	I-294S		*Sonchus spp*					
446	I-294S	8/1/18	*Dipsacus laciniatus*				-87.9030	42.2979
	I-294S		*Sonchus spp*					
447	I-294S	8/1/18	*Melilotus spp*		0 to 25	2	-87.9039	42.2933
	I-294S		*Dipsacus laciniatus*	15.25	0 to 75	2		
448	I-294S	8/1/18	*Dipsacus laciniatus*	16.1 to 17.25	0 to 75	4 to 5	-87.9129	42.2788
	I-294S		*Sonchus spp*					
449	I-294S	8/1/18	*Dipsacus laciniatus*				-87.9074	42.2661
	I-294S		*Sonchus spp*					
	I-294S		*Melilotus spp*					

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
450	I-294S	8/1/18	*Dipsacus laciniatus*	17.25 to 18.0	0 to 75	4 to 5	-87.9017	42.2473
	I-294S		*Sonchus spp*					
451	I-294S	8/1/18	*Dipsacus laciniatus*	18.25	0 to 50	3	-87.9018	42.2353
	I-294S		*Sonchus spp*					
452	I-294S	8/1/18	*Dipsacus laciniatus*	19.25 to 21.25	0 to 60	4 to 5	-87.8929	42.2083
	I-294S		*Sonchus spp*					
	I-294S		*Melilotus spp*	extends to exit 21				
453	I-294S	8/1/18	*Dipsacus laciniatus*	22.10	0 to 50	3	-87.8865	42.1965
--	I-294S		*Dipsacus laciniatus*	24.00	0 to 50	2 to 3	--	--
--	I-294S		*Dipsacus laciniatus*	24.50	0 to 50	2	--	--
454	Edens Spur	8/1/18	*Dipsacus laciniatus*	25.25	25 to 60	3	-87.8668	42.1495
	Edens Spur		*Cirsium arvense*					
	Edens Spur		*Lythrum salicaria*					
455	Edens Spur	8/1/18	*Dipsacus laciniatus*	26.0 to 27.25	0 to 75	4	-87.8398	42.1485
456	Edens Spur	8/1/18	*Dipsacus laciniatus*				-87.8343	42.1460
457	Edens Spur	8/1/18	*Dipsacus laciniatus*	27.75	0 to 75	3 to 4	-87.8302	42.1445
458	Edens Spur	8/1/18	*Dipsacus laciniatus*	27.8 to 28.0	0 to 75	3	-87.8230	42.1445
	Edens Spur		*Lythrum salicaria*					
459	Edens Spur	8/1/18	*Dipsacus laciniatus*				-87.8131	42.1455
460	Edens Spur	8/1/18	*Dipsacus laciniatus*	29.25 to 28.6	0 to 60	3 to 4	-87.8006	42.1456
	Edens Spur		*Cirsium arvense*					
461	Edens Spur	8/1/18	*Dipsacus laciniatus*				-87.8059	42.1460
	Edens Spur		*Cirsium arvense*					
462	Edens Spur	8/1/18	*Dipsacus laciniatus*	29.25	25 to 60	4	-87.8127	42.1459
	Edens Spur		*Cirsium arvense*					
463	Edens Spur	8/1/18	*Dipsacus laciniatus*	28.4 to 27.75, to IL 43	30 to 60	3 to 4	-87.8190	42.1453
464	Edens Spur	8/1/18	*Dipsacus laciniatus*				-87.8285	42.1446
465	Edens Spur	8/1/18	*Dipsacus laciniatus*	27.25 to 27.0	0 to 75	3	-87.8426	42.1496
	Edens Spur		*Dipsacus laciniatus*	26.5 to 26.15, at toll plaza 24	0 to 50			
	Edens Spur		*Cirsium arvense*					
466	Edens Spur	8/1/18	*Dipsacus laciniatus*	25.8 to 25.5	25 to 75	2 to 3	-87.8671	42.1498
467	I-294S	8/1/18	*Dipsacus laciniatus*	52.25	0 to 50	2 to 3	-87.8796	42.1471
468	I-294S	8/1/18	*Melilotus spp*	52.0 to 51.3	0 to 75	3	-87.8837	42.1443
	I-294S		*Sonchus spp*					
469	I-294S	8/1/18	*Melilotus spp*				-87.8875	42.1349
	I-294S		*Sonchus spp*					
	I-294S		*Dipsacus laciniatus*					
470	I-294S	8/1/18	*Dipsacus laciniatus*	51.10	25 to 50	2	-87.8875	42.1338
471	I-294S	8/1/18	*Dipsacus laciniatus*	50.35	25 to 50	2	-87.8843	42.1216
472	I-294S	8/1/18	*Cirsium arvense*	50.25	15 to 75	2	-87.8834	42.1206
	I-294S		*Sonchus spp*					
473	I-294S	8/1/18	*Dipsacus laciniatus*	50.20	25 to 50	2	-87.8829	42.1201
	I-294S		*Melilotus spp*					
474	I-294S	8/1/18	*Dipsacus laciniatus*	49.50	25 to 60	2	-87.8719	42.1138
475	I-294S	8/1/18	*Dipsacus laciniatus*	49.00	0 to 75	2	-87.8683	42.1070
476	I-294S	8/1/18	*Dipsacus laciniatus*	48.5 to 48.25	25 to 50	3	-87.8684	42.0974
477	I-294S	8/1/18	*Dipsacus laciniatus*	48.0 to 46.9	0 to 50	3	-87.8684	42.0937
478	I-294S	8/1/18	*Dipsacus laciniatus*				-87.8667	42.0781
	I-294S		*Melilotus spp*					

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
479	I-294S	8/1/18	*Dipsacus laciniatus*	46.6 to 46.25	25 to 50	1 to 2	-87.8671	42.0731
480	I-294S	8/1/18	*Dipsacus laciniatus*				-87.8673	42.0703
481	I-294S	8/1/18	*Dipsacus laciniatus*	44.35 to 45.0	0 to 60	2 to 3	-87.8686	42.0550
	I-294S		*Melilotus spp*					
482	I-294S	8/1/18	*Dipsacus laciniatus*	44.75 to 44.6	0 to 75	3	-87.8697	42.0502
483	I-294S	8/1/18	*Dipsacus laciniatus*	44.00	0 to 60	2	-87.8704	42.0442
484	I-294S	8/1/18	*Dipsacus laciniatus*				-87.8683	42.0373
485	I-294S	8/1/18	*Melilotus spp*	43.75	0 to 60	2	-87.8663	42.0315
486	I-294S	8/1/18	*Melilotus spp*	43.0 to 42.75	0 to 60	2	-87.8658	42.0279
	I-294S		*Dipsacus laciniatus*					
487	I-294S	8/1/18	*Melilotus spp*				-87.8667	42.0182
	I-294S		*Dipsacus laciniatus*					
488	I-294S	8/1/18	*Melilotus spp*	42.75 to 42.25	0 to 60	3	-87.8684	42.0146
	I-294S		*Dipsacus laciniatus*					
	I-294S		*Sonchus spp*					
--	I-90W		*Dipsacus laciniatus*	77.80	0 to 60	2	--	--
489	I-90W	8/1/18	*Dipsacus laciniatus*	74.10	25 to 50	2	-87.9305	42.0162
--	I-90W		*Melilotus spp*	71.30	0 to 50	2	--	--
490	I-90W	8/1/18	*Dipsacus laciniatus*	71.00	30 to 80	2	-87.9821	42.0402
491	I-90W	8/1/18	*Dipsacus laciniatus*	69.9 to 69.75	0 to 60	3	-87.9942	42.0457
	I-90W		*Melilotus spp*					
	I-90W		*Cirsium arvense*					
492	I-90W	8/1/18	*Dipsacus laciniatus*				-88.0023	42.0495
	I-90W		*Melilotus spp*					
	I-90W		*Cirsium arvense*					
493	I-90W	8/1/18	*Dipsacus laciniatus*	65.50	0 to 60	2	-88.0810	42.0643
	I-90W		*Lythrum salicaria*					
	I-90W		*Cirsium arvense*					
494	I-90W	8/1/18	*Melilotus spp*	65.0 to 64.6	0 to 60	3	-88.0897	42.0654
	I-90W		*Cirsium arvense*					
	I-90W		*Dipsacus laciniatus*					
	I-90W		*Sonchus spp*					
495	I-90W	8/1/18	*Melilotus spp*				-88.0960	42.0661
	I-90W		*Cirsium arvense*					
	I-90W		*Dipsacus laciniatus*					
	I-90W		*Sonchus spp*					
496	I-90W	8/1/18	*Dipsacus laciniatus*	64.5 to 63.75	10 to 75	2	-88.1001	42.0666
	I-90W		*Cirsium arvense*					
	I-90W		*Sonchus spp*					
	I-90W		*Melilotus spp*					
497	I-90W	8/1/18	*Dipsacus laciniatus*				-88.1148	42.0668
	I-90W		*Cirsium arvense*					
	I-90W		*Sonchus spp*					
	I-90W		*Melilotus spp*					
498	I-90W	8/1/18	*Dipsacus laciniatus*	63.4 to 63.0	15 to 75	2 to 3	-88.1222	42.0668
499	I-90W	8/1/18	*Dipsacus laciniatus*				-88.1271	42.0669
	I-90W		*Sonchus spp*					
500	I-90W	8/1/18	*Dipsacus laciniatus*	61.75 to 61.5	0 to 75	3	-88.1588	42.0669
	I-90W		*Cirsium arvense*					
	I-90W		*Sonchus spp*					

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
501	I-90W	8/1/18	*Dipsacus laciniatus*	61.0 to 60.5	0 to 60	2	-88.1680	42.0668
	I-90W		*Melilotus spp*					
	I-90W		*Cirsium arvense*					
502	I-90W	8/1/18	*Dipsacus laciniatus*				-88.1785	42.0668
	I-90W		*Melilotus spp*					
	I-90W		*Cirsium arvense*					
	I-90W		*Sonchus spp*					
503	I-90W	8/1/18	*Cirsium arvense*	58.00	5 to 60	3	-88.2261	42.0668
504	I-90W	8/1/18	*Melilotus spp*	57.80	0 to 50	3	-88.2295	42.0668
	I-90W		*Dipsacus laciniatus*					
	I-90W		*Cirsium arvense*					
505	I-90W	8/1/18	*Carduus nutans*	57.75	5 to 30	1	-88.2307	42.0668
506	I-90W	8/1/18	end *Dipsacus laciniatus*	to 56.75		4 to 5	-88.2509	42.0667
	I-90W		*Cirsium arvense*					
	I-90W		*Melilotus spp*					
507	I390E	8/1/18	*Dipsacus laciniatus*	6.50	10 to 60	2	-88.1380	41.9818
508	I390E	8/1/18	*Dipsacus laciniatus*	6.6 to 6.5	30 to 75	4	-88.1320	41.9853
509	I390E	8/1/18	*Dipsacus laciniatus*	exit 7 to 8.9		4 to 5	-88.1164	41.9960
510	I390E	8/1/18	*Cirsium arvense*	8.75	0 to 60	2	-88.1009	41.9971
	I390E		*Melilotus spp*					
511	I390E	8/1/18	*Dipsacus laciniatus*				-88.0900	41.9974
512	I390E	8/1/18	*Cirsium arvense*	9.40	50 to 75	2	-88.0809	41.9944
513	I390E	8/1/18	*Cirsium arvense*	9.60	50 to 75	2	-88.0790	41.9936
	I390E		*Dipsacus laciniatus*					
514	I390E	8/1/18	*Dipsacus laciniatus*	9.7 to 10.0	25 to 60	3 to 4	-88.0749	41.9921
515	I390E	8/1/18	*Dipsacus laciniatus*				-88.0700	41.9915
516	I390E	8/1/18	*Melilotus spp*	14.0 to 14.25	0 to 75	3 to 4	-87.9933	41.9830
517	I390E	8/1/18	*Cirsium arvense*	14.75	25 to 100	4	-87.9817	41.9833
518	I-355S	8/1/18	*Dipsacus laciniatus*	33.00	25 to 100	2 to 3	-88.0279	41.9572
519	I-355S	8/1/18	*Dipsacus laciniatus*	32.4 to 30.5	0 to 100	3 to 4	-88.0345	41.9520
520	I-355S	8/1/18	*Dipsacus laciniatus*				-88.0379	41.9412
--	I-355S		*Dipsacus laciniatus*	to 29.0	0 to 60	3 to 4	--	--
521	I-355S	8/1/18	*Dipsacus laciniatus*	27.6 to 25.2	25 to 75	3	-88.0382	41.8996
522	I-355S	8/1/18	*Dipsacus laciniatus*				-88.0385	41.8686
	I-355S		*Sonchus spp*					
523	I-355S	8/1/18	*Dipsacus laciniatus*	24.75 to 24.5	0 to 75	3	-88.0417	41.8605
524	I-355S	8/1/18	*Dipsacus laciniatus*				-88.0417	41.8580
--	I-355S		*Dipsacus laciniatus*	21.90	25 to 100	4	--	--
--	I-355S		*Lythrum salicaria*	21.25 to 21.0	25 to 100	3 to 4	--	--
	I-355S		*Dipsacus laciniatus*					
525	I-355S	8/1/18	*Dipsacus laciniatus*	17.75	25 to 100	3	-88.0516	41.7779
526	I-355S	8/1/18	*Dipsacus laciniatus*	17.25 to 16.0	25 to 100	3	-88.0405	41.7665
527	I-355S	8/1/18	*Dipsacus laciniatus*				-88.0341	41.7209
528	I-355S	8/1/18	*Dipsacus laciniatus*	13.5, to exit 12 to I-55	25 to 100	2	-88.0302	41.6885
--	I-355S		*Dipsacus laciniatus*	11.75 to 11.5	25 to 100	3	--	--
529	I-355S	8/1/18	*Dipsacus laciniatus*	11.30	25 to 75	2	-88.0222	41.6607
530	I-355S	8/1/18	*Dipsacus laciniatus*	9.4, at exit 8	25 to 75	3	-88.0114	41.6313
531	I-355S	8/1/18	*Dipsacus laciniatus*	7.1 to 6.9	40 to 75	2 to 3	-88.0111	41.6261

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
532	I-355S	8/1/18	*Melilotus spp*	6.4 to 6.0	25 to 27	2 to 3	-88.0126	41.6196
	I-355S		*Sonchus spp*					
	I-355S		*Cirsium arvense*					
533	I-355S	8/1/18	*Sonchus spp*	4.6 to 4.5	30 to 75	2	-88.0098	41.5936
534	I-355S	8/1/18	*Dipsacus laciniatus*	4.40	25 to 100	3	-88.0081	41.5903
535	I-355S	8/1/18	*Melilotus spp*	3.90	0 to 75	2 to 3	-88.0054	41.5860
536	I-355S	8/1/18	*Melilotus spp*	2.80	0 to 100	2 to 3	-87.9962	41.5714
537	I-355S	8/1/18	*Melilotus spp*	2.00	0 to 100	3	-87.9891	41.5604
	I-355S		*Sonchus spp*					
538	I-355S	8/1/18	*Dipsacus laciniatus*	1.6 to 1.25, to exit 1	75 to 100	2 to 3	-87.9857	41.5561
539	I-355S	8/1/18	*Dipsacus laciniatus*				-87.9809	41.5524
	I-355S		*Melilotus spp*					
	I-355S		*Cirsium arvense*					
	I-355S		*Sonchus spp*					
540	I-355S	8/1/18	*Dipsacus laciniatus*	.75 to .5	15 to 100	3	-87.9728	41.5473
541	I-355S	8/1/18	*Dipsacus laciniatus*				-87.9690	41.5448
542	I-355N	8/1/18	*Dipsacus laciniatus*	.15 to .35	20 to 100	3	-87.9675	41.5444
	I-355N		*Melilotus spp*					
543	I-355N	8/1/18	*Cirsium arvense*	1.0 to 1.5	25 to 100	3 to 4	-87.9803	41.5525
544	I-355N	8/1/18	*Dipsacus laciniatus*	1.50	30 to 100	2	-87.9841	41.5552
	I-355N		*Sonchus spp*					
	I-355N		*Cirsium arvense*					
	I-355N		*Lythrum salicaria*					
545	I-355N	8/1/18	*Melilotus spp*	2.00	30 to 100	3	-87.9897	41.5621
546	I-355N	8/1/18	*Dipsacus laciniatus*	2.40	50 to 75	2	-87.9924	41.5663
547	I-355N	8/1/18	*Cirsium arvense*	2.60	50 to 75	2	-87.9937	41.5683
548	I-355N	8/1/18	*Dipsacus laciniatus*	3.60	50 to 75	2	-88.0026	41.5825
549	I-355N	8/1/18	*Dipsacus laciniatus*	3.8 to 4.5	30 to 100	4	-88.0041	41.5847
550	I-355N	8/1/18	*Dipsacus laciniatus*				-88.0093	41.5936
551	I-355N	8/1/18	*Melilotus spp*	5.5 to 5.75	0 to 75	3	-88.0130	41.6085
552	I-355N	8/1/18	*Melilotus spp*				-88.0136	41.6118
553	I-355N	8/1/18	*Cirsium arvense*	5.90	50 to 75	2	-88.0136	41.6132
554	I-355N	8/1/18	*Phalaris arundinacea*	6.6, at exit 7	0 to 30	2	-88.0111	41.6242
	I-355N		*Lythrum salicaria*					
	I-355N		*Dipsacus laciniatus*					
555	I-355N	8/1/18	*Dipsacus laciniatus*	6.75 to 7.4	25 to 200	4 to 5	-88.0107	41.6299
556	I-355N	8/1/18	*Dipsacus laciniatus*				-88.0118	41.6362
557	I-355N	8/1/18	*Dipsacus laciniatus*	8.00	30 to 100	2	-88.0132	41.6456
558	I-355N	8/1/18	*Cirsium arvense*	8.10	30 to 75	2	-88.0139	41.6491
559	I-355N	8/1/18	*Cirsium arvense*	8.60	25 to 75	3	-88.0151	41.6521
	I-355N		*Dipsacus laciniatus*					
560	I-355N	8/1/18	*Dipsacus laciniatus*	8.80	40 to 100	3	-88.0228	41.6622
	I-355N		*Cirsium arvense*					
	I-355N		*Lythrum salicaria*					
561	I-355N	8/1/18	*Cirsium arvense*	11.00	50 to 100	2	-88.0303	41.6849
562	I-355N	8/1/18	*Dipsacus laciniatus*	11.6 to 12.75, to exit 13	0 to 100	3 to 4	-88.0297	41.6917

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
563	I-355N	8/1/18	*Dipsacus laciniatus*				-88.0299	41.6973
	I-355N		*Sonchus spp*					
--	I-355N		*Dipsacus laciniatus*	15.25	0 to 60	2 to 3	--	--
--	I-355N		*Dipsacus laciniatus*	16.00	0 to 60	2 to 3	--	--
--	I-355N		*Dipsacus laciniatus*	16.50	0 to 60	2 to 3	--	--
--	I-355N		*Dipsacus laciniatus*	17.30	0 to 60	2 to 3	--	--
--	I-355N		*Dipsacus laciniatus*	17.75 to 19.0	0 to 60	4 to 5	--	--
--	I-355N		*Dipsacus laciniatus*	19.50	0 to 75	2	--	--
--	I-355N		*Dipsacus laciniatus*	20.25 to 20.6	0 to 75	4 to 5	--	--
564	I-355N	8/1/18	*Dipsacus laciniatus*	26.0 to 27.0	0 to 30	2 to 3	-88.0358	41.8722
--	I-355N		*Dipsacus laciniatus*	27.25	20 to 75	3	--	--
--	I-355N		*Dipsacus laciniatus*	30.0 to exit 31	0 to 75	4	--	--
565	I-390W	8/1/18	*Dipsacus laciniatus*	10.0 to 9.5, to exit 9	25 to 75	4	-88.0729	41.9922
566	I-390W	8/1/18	*Dipsacus laciniatus*	8.75	25 to 100	3 to 4	-88.0927	41.9979
567	I-390W	8/1/18	*Dipsacus laciniatus*	8.5 to exit 7A	0 to 75	3	-88.0983	41.9977
--	I-390W		*Dipsacus laciniatus*	7.50	0 to 50	2 to 3	--	--
568	I-390W	8/1/18	*Dipsacus laciniatus*	6.40	0 to 50	2 to 3	-88.1332	41.9849
569	I-88W	8/2/18	*Dipsacus laciniatus*	116.75 to 115.75	20 to 75	3	-88.3314	41.7957
570	I-88W	8/2/18	*Phalaris arundinacea*	116.0, sporadic to 115.75	30 to 75	2	-88.3453	41.7955
571	I-88W	8/2/18	*Dipsacus laciniatus*				-88.3494	41.7955
	I-88W		*Phalaris arundinacea*					
572	I-88W	8/2/18	*Dipsacus laciniatus*	115.75 to 115.5	25 to 75	2 to 3	-88.3543	41.7954
	I-88W		*Cirsium arvense*					
	I-88W		*Sonchus spp*					
573	I-88W	8/2/18	*Dipsacus laciniatus*	115.3 to 114.8	25 to 50	4	-88.3565	41.7954
574	I-88W	8/2/18	*Dipsacus laciniatus*				-88.3675	41.7953
	I-88W		*Cirsium arvense*					
	I-88W		*Sonchus spp*					
	I-88W		*Phalaris arundinacea*	115.00				
575	I-88W	8/2/18	*Phalaris arundinacea*	114.2 to 114.0, to exit 113 ramp	25 to 50	2 to 3	-88.3822	41.7950
	I-88W		*Sonchus spp*					
576	I-88W	8/2/18	*Dipsacus laciniatus*				-88.3855	41.7950
	I-88W		*Melilotus spp*	113.25 to 12.75				
577	I-88W	8/2/18	*Melilotus spp*	12.75	30 to 75	4 to 5	-88.4210	41.8015
578	I-88W	8/2/18	*Dipsacus laciniatus*		30 to 75	1 to 2	-88.4387	41.8073
579	I-88W	8/2/18	*Phalaris arundinacea*	sporadic to 110.25	30 to 75		-88.4471	41.8119
580	I-88W	8/2/18	*Melilotus spp*	110.25 to 110.0	15 to 75	3	-88.4594	41.8178
	I-88W		*Phalaris arundinacea*					
581	I-88W	8/2/18	*Sonchus spp*	110.0 to 109.5	30 to 75	3	-88.4594	41.8178
	I-88W		*Melilotus spp*					
582	I-88W	8/2/18	*Phalaris arundinacea*	endpoint	30 to 75	2	-88.4766	41.8250
	I-88W		*Sonchus spp*					
583	I-88W	8/2/18	*Dipsacus laciniatus*		30 to 75	2	-88.4854	41.8334
	I-88W		*Cirsium arvense*					
584	I-88W	8/2/18	*Cirsium arvense*	107.25 to Main St	25 to 100	2	-88.4912	41.8392
585	I-88W	8/2/18	*Cirsium arvense*	106.75, sporadic to 106.0	25 to 50	2	-88.5037	41.8483
	I-88W		*Sonchus spp*					
586	I-88W	8/2/18	*Ambrosia trifida*	106.0 to 105.8	25 to 50	2 to 3	-88.5061	41.8496
	I-88W		*Phalaris arundinacea*					

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
587	I-88W	8/2/18	*Ambrosia trifida*				-88.5193	41.8550
	I-88W		*Phalaris arundinacea*					
588	I-88W	8/2/18	*Ambrosia trifida*				-88.5249	41.8563
	I-88W		*Phalaris arundinacea* end					
	I-88W		*begin Sonchus spp*	105.25 to 105.0	25 to 75	3		
589	I-88W	8/2/18	*Sonchus spp*				-88.5284	41.8571
	I-88W		*Cirsium arvense*	105.00				
590	I-88W	8/2/18	*Ambrosia trifida*	105.0 to 104.25	30 to 60	2 to 3	-88.5417	41.8601
	I-88W		*Sonchus spp*	to 184.0	20 to 60	2		
591	I-88W	8/2/18	*Ambrosia trifida*	103.75	30 to 60	2 to 3	-88.5525	41.8625
592	I-88W	8/2/18	*Cirsium arvense*	103.4 to 103.25		2 to 3	-88.5574	41.8636
	I-88W		*Sonchus spp*					
	I-88W		*Dipsacus laciniatus*					
593	I-88W	8/2/18	*Phalaris arundinacea*	103.25 to 102.75	20 to 50	3	-88.5638	41.8651
	I-88W		*Sonchus spp*					
594	I-88W	8/2/18	*Sonchus spp*	103.25 to 102.6	25 to 75	4	-88.5745	41.8674
595	I-88W	8/2/18	*Ambrosia trifida*	102.50	30 to 60	2	-88.5800	41.8687
	I-88W		*Dipsacus laciniatus*	101.75				
596	I-88W	8/2/18	*Melilotus spp*	101.6 to 101.35	30 to 60	3	-88.5907	41.8711
597	I-88W	8/2/18	*Melilotus spp*				-88.5972	41.8726
	I-88W		*Cirsium arvense*					
	I-88W		*Dipsacus laciniatus*					
598	I-88W	8/2/18	*Dipsacus laciniatus*	101.10	25 to 60	2	-88.6033	41.8737
	I-88W		*Melilotus spp*					
599	I-88W	8/2/18	*Dipsacus laciniatus*	100.35	30 to 60	2	-88.6133	41.8759
	I-88W		*Phalaris arundinacea*					
600	I-88W	8/2/18	*Cirsium arvense*	100.35 to 99.9	30 to 75	3	-88.6203	41.8808
	I-88W		*Sonchus spp*					
	I-88W		*Melilotus spp*					
601	I-88W	8/2/18	*Cirsium arvense*	99.9 to 99.75, sporadic	30 to 75	2 to 3	-88.6265	41.8854
	I-88W		*Sonchus spp*					
602	I-88W	8/2/18	*Melilotus spp*	99.6 to 99.3	30 to 75	2 to 3	-88.6274	41.8860
603	I-88W	8/2/18	*Melilotus spp*				-88.6299	41.8879
604	I-88W	8/2/18	*Melilotus spp*	98.75	30 to 75	2	-88.6361	41.8925
--	I-88W		*Phalaris arundinacea*	98.35	30 to 75	2	--	--
605	I-88W	8/2/18	*Melilotus spp*	98.25	40 to 75	3	-88.6431	41.8976
606	I-88W	8/2/18	*Melilotus spp*				-88.6465	41.8997
607	I-88W	8/2/18	*Melilotus spp*	97.6 to 97.4	40 to 100	4 to 5	-88.6534	41.9012
608	I-88W	8/2/18	*Melilotus spp*				-88.6608	41.9013
609	I-88W	8/2/18	*Cirsium arvense*	97.1 to 96.35, sporadic	30 to 75	2	-88.6644	41.9012
610	I-88W	8/2/18	*Cirsium arvense*				-88.6762	41.9011
611	I-88W	8/2/18	*Cirsium arvense*	96.35 to Somonauk Rd	30 to 75	3	-88.6876	41.9010
	I-88W		*Sonchus spp*					
612	I-88W	8/2/18	*Cirsium arvense*	from Somonauk Rd to 94.75	25 to 75	3	-88.7845	41.9015
	I-88W		*Sonchus spp*					
--	I-88W		*Cirsium arvense*	0.5 mile west of oasis, to oasis	25 to 75	4 to 5	--	--
--	I-88W		*Cirsium arvense*	93.0, from oasis to bridge			--	--
613	I-88W	8/2/18	*Cirsium arvense*	90.85 to 90.35	30 to 75	2	-88.7953	41.9005
	I-88W		*Sonchus spp*					
614	I-88W	8/2/18	*Dipsacus laciniatus*	90.35	30 to 75	2	-88.7971	41.9005

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
615	I-88W	8/2/18	*end Dipsacus laciniatus*	90.00	30 to 100	2	-88.8026	41.9004
	I-88W		*Cirsium arvense*					
	I-88W		*Phalaris arundinacea*					
616	I-88W	8/2/18	*Carduus nutans*	to 89.75	40 to 60	2	-88.8055	41.9004
617	I-88W	8/2/18	*Dipsacus laciniatus*	to 89.8	40 to 60	2 to 3	-88.8149	41.9003
	I-88W		*Cirsium arvense*					
	I-88W		*Sonchus spp*					
618	I-88W	8/2/18	*Cirsium arvense*	to 88.75	40 to 60	2	-88.8214	41.9003
	I-88W		*Phalaris arundinacea*					
619	I-88W	8/2/18	*Phalaris arundinacea*				-88.8257	41.9002
	I-88W		*Cirsium arvense*					
	I-88W		*Ambrosia trifida*					
620	I-88W	8/2/18	*Ambrosia trifida*	88.75	40 to 60	1 to 2	-88.8342	41.9002
621	I-88W	8/2/18	*Ambrosia trifida*	88.35 to 88.15		3	-88.8364	41.9002
	I-88W		*Dipsacus laciniatus* end					
622	I-88W	8/2/18	end *Ambrosia trifida*	87.70	30 to 60		-88.8460	41.9001
	I-88W		*Dipsacus laciniatus*					
	I-88W		*Phalaris arundinacea*					
	I-88W		*Melilotus spp*					
623	I-88W	8/2/18	*Dipsacus laciniatus*	87.65	30 to 75	2	-88.8492	41.9001
	I-88W		*Sonchus spp*					
624	I-88W	8/2/18	*Ambrosia trifida*	87.55	30 to 75	3 to 4	-88.8529	41.9001
	I-88W		*Sonchus spp*					
	I-88W		*Cirsium arvense*					
625	I-88W	8/2/18	*Ambrosia trifida*				-88.8544	41.9001
	I-88W		*Sonchus arvense*					
	I-88W		*Cirsium arvense*					
626	I-88W	8/2/18	*Dipsacus laciniatus*		40 to 75	3	-88.8583	41.9001
	I-88W		*Ambrosia trifida*					
627	I-88W	8/2/18	*Dipsacus laciniatus*				-88.8648	41.9000
	I-88W		*Ambrosia trifida*					
	I-88W		*Cirsium arvense*					
628	I-88W	8/2/18	*Cirsium arvense*		40 to 75	2	-88.8672	41.9000
629	I-88W	8/2/18	*Phalaris arundinacea*	85.55	25 to 60	4	-88.8878	41.8999
630	I-88W	8/2/18	*Phalaris arundinacea*				-88.8941	41.8999
--	I-88W		*Cirsium arvense*	83.50	--	--	--	--
--	I-88W		*Phalaris arundinacea*	82.75	--	--	--	--
--	I-88W		*Melilotus spp*	82.50	--	--	--	--
--	I-88W		*Cirsium arvense and Phalaris arundinacea*	82.00	--	--	--	--
--	I-88W		*Cirsium arvense*	81.80	--	--	--	--
--	I-88W		*Cirsium arvense*	81.5, sporadic to 81.0	--	--	--	--
--	I-88W		*Cirsium arvense and Phalaris arundinacea*	80.50	--	--	--	--
--	I-88W		*Cirsium arvense and Phalaris arundinacea*	79.5, to 500 ft before exit 78B	--	--	--	--
631	I-88E	8/14/18	*Sonchus spp*	45.75	0 to 75	2 to 3	-89.6094	41.7662
632	I-88E	8/14/18	*Melilotus spp*	48.5 to 48.6	25 to 75	2 to 3	-89.5583	41.7793
	I-88E		*Sonchus spp*					

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
633	I-88E	8/14/18	*Phalaris arundinacea*	50.3 to 50.5	25 to 60	2 to 3	-89.5286	41.7922
634	I-88E	8/14/18	*Ambrosia trifida*	52.5 to 52.75, 53.25	30 to 75	2 to 3	-89.4921	41.8081
635	I-88E	8/14/18	*Ambrosia trifida*	55.5 to 55.65	30 to 75	3	-89.4440	41.8239
	I-88E		*Melilotus spp*			1 to 2		
	I-88E		*Cirsium arvense*			1 to 2		
636	I-88E	8/14/18	*Ambrosia trifida*				-89.4411	41.8233
	I-88E		*Cirsium arvense*					
637	I-88E	8/14/18	*Melilotus spp*	55.75	15 to 75	2 to 3	-89.4390	41.8230
638	I-88E	8/14/18	*Phalaris arundinacea*	56.0, 56.75	25 to 60	2 to 3	-89.4182	41.8234
	I-88E		*Cirsium arvense*					
639	I-88E	8/14/18	*Sonchus spp*	57.65 to 57.75	30 to 60	3	-89.4022	41.8226
640	I-88E	8/14/18	*Sonchus spp*				-89.4010	41.8226
641	I-88E	8/14/18	*Ambrosia trifida*	57.85	40 to 60	1 to 2	-89.3991	41.8225
	I-88E		*Cirsium arvense*					
642	I-88E	8/14/18	*Ambrosia trifida*	58.10	30 to 60	1 to 2	-89.3925	41.8226
643	I-88E	8/14/18	*Cirsium arvense*	58.9 to 59.0	30 to 60	1 to 2	-89.3793	41.8226
644	I-88E	8/14/18	*Sonchus spp*	59.3 to 59.6	40 to 75	3	-89.3700	41.8226
	I-88E		*Cirsium arvense*					
645	I-88E	8/14/18	*Sonchus spp*				-89.3656	41.8226
	I-88E		*Cirsium arvense*					
646	I-88E	8/14/18	*Sonchus spp*	59.80	30 to 60	2 to 3	-89.3601	41.8226
647	I-88E	8/14/18	*Ambrosia trifida*	60.80	40 to 60	1 to 2	-89.3410	41.8226
648	I-88E	8/14/18	*Sonchus spp*	59.9 to 62.25	40 to 75	3 to 4	-89.3386	41.8226
649	I-88E	8/14/18	*Sonchus spp*				-89.3144	41.8226
	I-88E		*Ambrosia trifida*					
	I-88E		*Cirsium arvense*					
650	I-88E	8/14/18	*Dipsacus laciniatus*	62.30	40 to 60	1	-89.3123	41.8226
651	I-88E	8/14/18	*Sonchus spp*	62.35 to 62.75	40 to 60	2	-89.3118	41.8226
652	I-88E	8/14/18	*Ambrosia trifida*	62.75	40 to 75	3	-89.3034	41.8227
653	I-88E	8/14/18	*Ambrosia trifida*				-89.3010	41.8227
	I-88E		*Sonchus spp*					
654	I-88E	8/14/18	*Sonchus spp*	62.9 to 63.1	40 to 75	2 to 3	-89.2976	41.8230
--	I-88E		*Cirsium arvense*	63.70	40 to 75	2	--	--
655	I-88E	8/14/18	*Dipsacus laciniatus*	64.60	40 to 75	1	-89.2730	41.8351
	I-88E		*Cirsium arvense*			2		
656	I-88E	8/14/18	*Dipsacus laciniatus*	67.75	30 to 60	2	-89.2184	41.8550
	I-88E		*Sonchus spp*			3		
657	I-88E	8/14/18	*Sonchus spp*	68.15	30 to 60	3	-89.2105	41.8572
658	I-88E	8/14/18	*Sonchus spp*	68.65 to 68.75	30 to 60	2	-89.2019	41.8597
659	I-88E	8/14/18	*Ambrosia trifida*	69.25	40 to 75	2	-89.1915	41.8626
	I-88E		*Dipsacus laciniatus*					
660	I-88E	8/14/18	*Dipsacus laciniatus*	69.5 to 69.75	40 to 75	2 to 3	-89.1852	41.8644
661	I-88E	8/14/18	*Dipsacus laciniatus*				-89.1822	41.8652
	I-88E		*Sonchus spp*					
662	I-88E	8/14/18	*Dipsacus laciniatus*	69.80	30 to 60	2 to 3	-89.1809	41.8656
663	I-88E	8/14/18	*Sonchus spp*	70.75 to 70.9	30 to 75	2	-89.1610	41.8713
	I-88E		*Phalaris arundinacea*					
664	I-88E	8/14/18	*Phalaris arundinacea*	72.5 to 73.25	40 to 60	3	-89.1269	41.8826

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
665	I-88E	8/14/18	*Phalaris arundinacea*				-89.1198	41.8842
666	I-88E	8/14/18	*Melilotus spp*	74.15	0 to 60	2	-89.1000	41.8888
--	I-88E		*Phalaris arundinacea*	74.75	25 to 50	2	--	--
	I-88E		*Ambrosia trifida*					
667	I-88E	8/14/18	*Sonchus spp*	75.4 to 75.75	40 to 75	2	-89.0808	41.8961
--	I-88E		*Dipsacus laciniatus*	76.25	0 to 60	2 to 3	--	--
	I-88E		*Melilotus spp*					
668	I-88E	8/14/18	*Sonchus spp*	76.75	0 to 60	2	-89.0544	41.9005
	I-88E		*Phalaris arundinacea*					
669	I-88E	8/14/18	*Sonchus spp*	77.00	25 to 75	2 to 3	-89.0500	41.9011
	I-88E		*Cirsium arvense*					
670	I-88E	8/14/18	*Dipsacus laciniatus*	77.70	30 to 100	2 to 3	-89.0384	41.9027
	I-88E		*Sonchus spp*					
	I-88E		*Cirsium arvense*					
671	I-88E	8/14/18	*Dipsacus laciniatus*				-89.0327	41.9035
	I-88E		*Cirsium arvense*					
	I-88E		*Sonchus spp*					
672	I-88E	8/14/18	*Cirsium arvense*	79.1 to 79.3	40 to 75	2 to 3	-89.0119	41.9050
673	I-88E	8/14/18	*Dipsacus laciniatus*				-89.0079	41.9051
	I-88E		*Cirsium arvense*					
674	I-88E	8/14/18	*Phalaris arundinacea*	79.3 to 79.75	30 to 75	3	-89.0015	41.9051
675	I-88E	8/14/18	*Phalaris arundinacea*	79.80	15 to 60	2	-88.9986	41.9052
	I-88E		*Cirsium arvense*					
676	I-88E	8/14/18	*Dipsacus laciniatus*	80.0 to 80.75	20 to 60	2	-88.9860	41.9053
677	I-88E	8/14/18	*Phalaris arundinacea*				-88.9793	41.9053
	I-88E		*Dipsacus laciniatus*					
	I-88E		*Sonchus spp*					
678	I-88E	8/14/18	*Ambrosia trifida*	81.00	25 to 60	2	-88.9725	41.9052
679	I-88E	8/14/18	*Dipsacus laciniatus*	81.5 to 82.0	25 to 75	2	-88.9588	41.9012
680	I-88E	8/14/18	*Dipsacus laciniatus*				-88.9492	41.8992
	I-88E		*Phalaris arundinacea*					
	I-88E		*Sonchus spp*					
681	I-88E	8/14/18	*Phalaris arundinacea*	82.6 to 83.15	15 to 60	2	-88.9451	41.8992
682	I-88E	8/14/18	*Phalaris arundinacea*				-88.9326	41.8993
683	I-88E	8/14/18	*Dipsacus laciniatus*		15 to 60	2	-88.9301	41.8993
	I-88E		*Phalaris arundinacea*	intermittent				
684	I-88E	8/14/18	*Melilotus spp*	84.00	25 to 60	2	-88.9165	41.8994
685	I-88E	8/14/18	*Cirsium arvense*	84.15	30 to 60	2	-88.9149	41.8994
--	I-88E		*Ambrosia trifida*	84.25	30 to 60	2	--	--
	I-88E		*Cirsium arvense*					
686	I-88E	8/14/18	*Phalaris arundinacea*	to Shabbona Rd toll booth	25 to 60	2 to 3	-88.8932	41.8995
	I-88E		*Cirsium arvense*					
	I-88E		*Ambrosia trifida*					
687	I-88E	8/14/18	*Ambrosia trifida*	87.0 to 87.6	40 to 60	2	-88.8659	41.8996
	I-88E		*Sonchus spp*					
688	I-88E	8/14/18	end *Ambrosia trifida*				-88.8487	41.8997
	I-88E		*Sonchus spp*					
	I-88E		*Melilotus spp*	to University Rd				
	I-88E		*Cirsium arvense*	to University Rd				

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
689	I-88E	8/14/18	*Cirsium arvense*	87.75	40 to 60	2	-88.8456	41.8998
690	I-88E	8/14/18	*Melilotus spp*		25 to 50	2	-88.8236	41.8999
	I-88E		*Dipsacus laciniatus*			1		
691	I-88E	8/14/18	*Melilotus spp*	89.0 to 89.1	25 to 60	2	-88.8191	41.9000
	I-88E		*Dipsacus laciniatus*			3		
692	I-88E	8/14/18	*Phalaris arundinacea*	89.60	25 to 60	2	-88.8092	41.9000
	I-88E		*Dipsacus laciniatus*					
	I-88E		*Cirsium arvense*					
693	I-88E	8/14/18	*Dipsacus laciniatus*	89.75	30 to 60	2	-88.8052	41.9001
	I-88E		*Melilotus spp*					
694	I-88E	8/14/18	*Dipsacus laciniatus*	90.00	30 to 60	1 to 2	-88.8013	41.9001
	I-88E		*Melilotus spp*					
	I-88E		*Sonchus spp*					
695	I-88E	8/14/18	*Sonchus spp*	90.20	40 to 75	2 to 3	-88.7890	41.9005
696	I-88E	8/14/18	*Sonchus spp*	92.00	40 to 75	3	-88.7614	41.9036
	I-88E		*Carduus nutans*			1 to 2		
697	I-88E	8/14/18	*Sonchus spp*	93.0 to 94.0	25 to 75	3 to 4	-88.7269	41.9003
	I-88E		*Melilotus spp*					
698	I-88E	8/14/18	*Melilotus spp*	94.6 to 94.75	30 to 75	3	-88.7111	41.9003
--	I-88E		*Cirsium arvense*	94.75	25 to 75		--	--
	I-88E		*Sonchus arvense*					
699	I-88E	8/14/18	*Melilotus spp*	95.25	25 to 75	4	-88.6985	41.9005
700	I-88E	8/14/18	*Melilotus spp*	95.6, to Somonauk Rd	25 to 60	3	-88.6921	41.9005
701	I-88E	8/14/18	*Melilotus spp*	to 96.0	25 to 100	4	-88.6859	41.9006
702	I-88E	8/14/18	end *Melilotus spp*				-88.6830	41.9006
	I-88E		start *Cirsium arvense*	96.00	25 to 100	4		
703	I-88E	8/14/18	*Dipsacus laciniatus*	96.75	30 to 75	2	-88.6712	41.9007
704	I-88E	8/14/18	*Melilotus spp*	97.0 to 97.25	25 to 75	3	-88.6650	41.9008
705	I-88E	8/14/18	*Melilotus spp*	97.5 to 97.75	25 to 75	3 to 4	-88.6618	41.9009
	I-88E		*Sonchus spp*					
706	I-88E	8/14/18	*Melilotus spp*				-88.6580	41.9009
707	I-88E	8/14/18	*Melilotus spp*	98.0 to 98.25	25 to 75	4	-88.6529	41.9009
708	I-88E	8/14/18	*Melilotus spp*				-88.6458	41.8991
709	I-88E	8/14/18	*Melilotus spp*	98.60	30 to 75	3	-88.6433	41.8973
710	I-88E	8/14/18	*Melilotus spp*	99.25	25 to 60	3	-88.6371	41.8928
	I-88E		*Sonchus spp*					
711	I-88E	8/14/18	*Melilotus spp*				-88.6286	41.8865
712	I-88E	8/14/18	*Melilotus spp*	101.1 to 101.7	15 to 60	3	-88.6208	41.8808
	I-88E		*Sonchus spp*					
713	I-88E	8/14/18	*Melilotus spp*				-88.5993	41.8727
	I-88E		*Sonchus spp*					
714	I-88E	8/14/18	*Melilotus spp*				-88.5900	41.8707
715	I-88E	8/14/18	*Ambrosia trifida*	102.0 to 103.2	25 to 75	2 to 3	-88.5840	41.8693
	I-88E		*Dipsacus laciniatus*					
716	I-88E	8/14/18	*Melilotus spp*				-88.5621	41.8644
	I-88E		*Ambrosia trifida*					
	I-88E		*Dipsacus laciniatus*					

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
717	I-88E	8/14/18	*Ambrosia trifida*	103.25 to 103.75	25 to 75	3	-88.5517	41.8621
	I-88E		*Dipsacus laciniatus*					
	I-88E		*Melilotus spp*					
718	I-88E	8/14/18	*Cirsium arvense*	104.0 to 105.0	25 to 50	3 to 4	-88.5465	41.8609
	I-88E		*Sonchus spp*					
719	I-88E	8/14/18	*Cirsium arvense*				-88.5289	41.8568
	I-88E		*Sonchus spp*					
	I-88E		*Ambrosia trifida*					
720	I-88E	8/14/18	*Phalaris arundinacea*	105.1 to 106.3	30 to 75	4 to 5	-88.5262	41.8563
	I-88E		*Sonchus spp*					
721	I-88E	8/14/18	*Phalaris arundinacea*				-88.5052	41.8487
	I-88E		*Sonchus spp*					
722	I-88E	8/14/18	*Cirsium arvense*	106.60	25 to 50	2 to 3	-88.5007	41.8463
	I-88E		*Sonchus spp*					
723	I-88E	8/14/18	*Phalaris arundinacea*	107.0 to 108.5	25 to 75	4 to 5	-88.4919	41.8394
724	I-88E	8/14/18	*Phalaris arundinacea*				-88.4778	41.8259
	I-88E		*Sonchus spp*					
	I-88E		*Cirsium arvense*					
725	I-88E	8/14/18	*Melilotus spp*	109.60	25 to 75	3	-88.4608	41.8178
726	I-88E	8/14/18	*Dipsacus laciniatus*	110.0 to 111.0	25 to 60	2	-88.4523	41.8143
	I-88E		*Melilotus spp*			4		
727	I-88E	8/14/18	end *Melilotus spp*				-88.4420	41.8087
	I-88E		*Phalaris arundinacea*	110.75				
	I-88E		*Sonchus spp*	110.0 to 111.0				
	I-88E		*Cirsium arvense*					
	I-88E		*Dipsacus laciniatus*					
728	I-88E	8/14/18	*Cirsium arvense*	112.00	25 to 60	2	-88.4340	41.8047
729	I-88E	8/14/18	*Phalaris arundinacea*	111.6 to 112.0	25 to 50	2	-88.4259	41.8021
730	I-88E	8/14/18	*Phalaris arundinacea*				-88.4191	41.8010
	I-88E		*Cirsium arvense*					
	I-88E		*Sonchus spp*					
731	I-88E	8/14/18	*Phalaris arundinacea*	112.70	25 to 60	2	-88.4062	41.7994
732	I-88E	8/14/18	*Melilotus spp*	112.75 to 113.25	25 to 75	4	-88.3974	41.7965
	I-88E		*Dipsacus laciniatus*			1		
733	I-88E	8/14/18	*Dipsacus laciniatus*	113.50	15 to 50	2	-88.3822	41.7947
734	I-88E	8/14/18	*Dipsacus laciniatus*	114.8 to 115.4	30 to 75	2 to 3	-88.3675	41.7949
	I-88E		*Sonchus spp*					
	I-88E		*Melilotus spp*					
	I-88E		*Cirsium arvense*					
735	I-88E	8/14/18	*Dipsacus laciniatus*				-88.3557	41.7951
	I-88E		*Cirsium arvense*					
	I-88E		*Sonchus spp*					
	I-88E		*Melilotus spp*					
	I-88E		*Phalaris arundinacea*	115.40		2		
736	I-88E	8/14/18	*Dipsacus laciniatus*	115.9 to 116.0	30 to 75	2	-88.3492	41.7952
	I-88E		*Phalaris arundinacea*					
	I-88E		*Sonchus spp*					
	I-88E		*Cirsium arvense*					
--	I-88E		*Melilotus spp*	116.50			--	--
	I-88E		*Phalaris arundinacea*					

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
737	I-88E	8/15/18	*Dipsacus laciniatus*	118.4 to 118.5	15 to 50	2	-88.2978	41.7974
	I-88E		*Sonchus spp*					
738	I-88E	8/15/18	*Cirsium arvense*	119.50	30 to 60	2	-88.2774	41.7986
	I-88E		*Sonchus spp*					
739	I-88E	8/15/18	*Phalaris arundinacea*	119.60	30 to 60	2	-88.2751	41.7987
740	I-88E	8/15/18	*Dipsacus laciniatus*	119.7 to 120.0	30 to 60	3	-88.2712	41.7990
	I-88E		*Cirsium arvense*					
	I-88E		*Sonchus spp*					
741	I-88E	8/15/18	*Phalaris arundinacea*	120.00	30 to 60	3	-88.2697	41.7991
742	I-88E	8/15/18	*Dipsacus laciniatus*				-88.2664	41.7993
743	I-88E	8/15/18	*Lythrum salicaria*	120.10	30 to 60	2	-88.2643	41.7994
	I-88E		*Phalaris arundinacea*					
744	I-88E	8/15/18	*Dipsacus laciniatus*	120.1 to 120.25	30 to 75	2 to 3	-88.2629	41.7995
	I-88E		*Phalaris arundinacea*					
745	I-88E	8/15/18	*Dipsacus laciniatus*	120.75	30 to 75	3	-88.2529	41.8001
746	I-88E	8/15/18	*Dipsacus laciniatus*				-88.2395	41.8009
747	I-88E	8/15/18	*Dipsacus laciniatus*	121.45 to 121.8	20 to 75	4	-88.2350	41.8011
748	I-88E	8/15/18	*Dipsacus laciniatus*				-88.2292	41.8015
749	I-88E	8/15/18	*Dipsacus laciniatus*	122.00	25 to 75	2	-88.2212	41.8021
750	I-88E	8/15/18	*Dipsacus laciniatus*	122.15 to 123.0	0 to 100	4	-88.2119	41.8029
751	I-88E	8/15/18	*Dipsacus laciniatus*				-88.1933	41.8043
752	I-88E	8/15/18	*Dipsacus laciniatus*	123.25 to 124.75	25 to 75	5	-88.1766	41.8057
753	I-88E	8/15/18	*Dipsacus laciniatus*				-88.1595	41.8062
754	I-88E	8/15/18	*Dipsacus laciniatus*	125.5 to 126.8	25 to 60	4	-88.1360	41.8060
	I-88E		*Melilotus spp*		0 to 60			
755	I-88E	8/15/18	*Dipsacus laciniatus*				-88.1227	41.8059
	I-88E		*Melilotus spp*					
756	I-88E	8/15/18	*Dipsacus laciniatus*	127.50	25 to 60	2	-88.1047	41.8056
757	I-88E	8/15/18	*Dipsacus laciniatus*	128.5 to 129.0	25 to 50	2	-88.0955	41.8055
	I-88E		*Cirsium arvense*					
	I-88E		*Phalaris arundinacea*					
	I-88E		*Sonchus spp*					
--	I-88E		*Phalaris arundinacea*	129.0 to 129.5			--	--
--	I-88E		*Dipsacus laciniatus*	at I-355 exit on and off ramps			--	--
758	I-88E	8/15/18	*Dipsacus laciniatus*	133.0 to 133.25	10 to 50	2 to 3	-88.0246	41.8207
	I-88E		*Sonchus spp*					
--	I-88E		*Dipsacus laciniatus*	133.0 to 134.0	2		--	--
759	I-88E	8/15/18	*Cirsium arvense*	134.1 to 134.25	0 to 50	2	-88.0126	41.8328
	I-88E		*Sonchus spp*					
760	I-88E	8/15/18	*Sonchus spp*	135.4 to 136.3	15 to 50	3	-87.9895	41.8400
	I-88E		*Dipsacus laciniatus*					
	I-88E		*Phalaris arundinacea*					
761	I-88E	8/15/18	*Dipsacus laciniatus*				-87.9731	41.8441
	I-88E		*Sonchus spp*					
	I-88E		*Phalaris arundinacea*					
762	I-88E	8/15/18	*Dipsacus laciniatus*	136.75 to 137.0	5 to 25	3	-87.9664	41.8442

Point	Location	Date	Species	Mile marker, Notes	Approximate distance to edge (feet)	Population size	Long.	Lat.
763	I-88E	8/15/18	*Dipsacus laciniatus*				-87.9625	41.8443
--	I-88E		*Dipsacus laciniatus*	137.50	--	2	--	--
--	I-88E		*Dipsacus laciniatus*	138.40	--	2	--	--
--	I-88E		*Dipsacus laciniatus*	138.75	--	2	--	--
--	I-88E		*Sonchus spp*	139.00	--	2 to 3	--	--
--	I-88W		*Dipsacus laciniatus*	exit 139 on-ramp	--	2	--	--
--	I-88W		*Dipsacus laciniatus*	137.25	--	2	--	--
764	I-88W	8/15/18	*Dipsacus laciniatus*	137.0 to 134.5	0 to 60	5	-87.9648	41.8447
	I-88W		*Lythrum salicaria*			2 to 3		
	I-88W		*Cirsium arvense*			2 to 3		
	I-88W		*Sonchus spp*			2 to 3		
765	I-88W	8/15/18	*Dipsacus laciniatus*				-88.0050	41.8354
766	I-88W	8/15/18	*Dipsacus laciniatus*	134.5 to 133.5	5 to 75	3 to 4	-88.0105	41.8339
	I-88W		*Cirsium arvense*					
767	I-88W	8/15/18	*Dipsacus laciniatus*				-88.0222	41.8272
--	I-88W		*Dipsacus laciniatus*	I-355 exit	--	--	--	--
--	I-88W		*Dipsacus laciniatus*	132.75	--	--	--	--
768	I-88W	8/15/18	*Dipsacus laciniatus*	129.5 to 129.25	10 to 50	2 to 3	-88.0857	41.8060
	I-88W		*Cirsium arvense*					
769	I-88W	8/15/18	*Dipsacus laciniatus*				-88.0887	41.8058
	I-88W		*Cirsium arvense*					
770	I-88W	8/15/18	*Dipsacus laciniatus*	128.85 to 128.5, to exit 27	5 to 50	3 to 4	-88.0963	41.8059
	I-88W		*Cirsium arvense*					
771	I-88W	8/15/18	*Dipsacus laciniatus*				-88.1034	41.8060
	I-88W		*Cirsium arvense*					
772	I-88W	8/15/18	*Dipsacus laciniatus*				-88.1166	41.8063
773	I-88W	8/15/18	*Dipsacus laciniatus*				-88.1361	41.8065
774	I-88W	8/15/18	*Dipsacus laciniatus*	126.85 to 125.5	25 to 50	3 to 4	-88.1591	41.8066
	I-88W		*Cirsium arvense*					
	I-88W		*Melilotus spp*	to exit 125	0 to 25			
775	I-88W	8/15/18	*Dipsacus laciniatus*				-88.1794	41.8059
776	I-88W	8/15/18	*Dipsacus laciniatus*	124.6 to 123.5	30 to 60	4	-88.1962	41.8046
777	I-88W	8/15/18	*Dipsacus laciniatus*				-88.2031	41.8039
778	I-88W	8/15/18	*Dipsacus laciniatus*	123.35 to 121.65	25 to 100	3 to 4	-88.2352	41.8015
779	I-88W	8/15/18	*Dipsacus laciniatus*				-88.2555	41.8003
780	I-88W	8/15/18	*Dipsacus laciniatus*	120.6 to 119.5, to Farnsworth exit	30 to 75	4	-88.2726	41.7993
781	I-88W	8/15/18	*Dipsacus laciniatus*				-88.2880	41.7984
782	I-88W	8/15/18	*Dipsacus laciniatus*	119.0 to 118.25, to toll booth 61	25 to 75	3	-88.2998	41.7977