

## 2023-2024 prairie seeding report of the Project Clear pipeline path

Prepared by Caity Sims, Restoration Coordinator – Project Clear

September 2024

Soon after the Metropolitan St. Louis Sewer District's (MSD) Project Clear finished installing a sewer pipeline, we began collecting seed for the first seeding of the prairie planting. This effort was completed with the combined work of LREC staff, interns, hired contractors, and volunteers.

**Topography and Site Preparation:** The total area seeded was about 4.8 ac (2 ha). The topography of the seeded landscape is relatively flat, except for the Deer Creek banks leading toward the creek edge and the slope leading up the Ameren right of way. Additionally, there are several wet depressions that retain water for most of the year as well as a drainage culvert leading into Deer Creek.

Some areas of the seeded area are more prone to seasonal flooding, such as the southern section of pipeline path where Deer Creek's channel bends rapidly to the east and then back toward the south. Before the prairie seeding, two rounds of cover crops were seeded in 2022 and 2023 to begin soil amendments. The growing season prior to seeding was hot and dry, thus, the first cover crop (*Triticum aestivum*) did not do well. The second cover crop (*Sorghum bicolor*) was more successful. Early successional and ruderal vegetation grew on the path along with the cover crops as well. Several invasive species were treated on the path, such as *Conium maculatum*, *Humulus scandens*, *Lespedeza cuneata*, *Lotus corniculatus*, *Melilotus albus*, *M. officinalis*, *Perilla frutescens*, *Poa pratensis*, and *Sorghum halapense*. Management for these species is ongoing. No prescribed burns have occurred post construction.

**Seed Collection:** Staff and volunteers collected seed throughout the 2023 growing season to be used in the first pipeline path prairie planting. Species that were collected had [Coefficient of Conservatism](#) ranks (C-values) of 6 or below, with several 7-ranked species selected after consideration of their overall success on the path at this beginning stage.

We collected seeds from 96 species in 2023 for a total weight of 49 kg (108 lbs) of mostly Pure Live Seed (PLS), but some chaff was included. In addition to collecting seeds, contractors drill seeded 39 prairie species onto the path for a total of 16 kg (36 lbs) of PLS. We also added seeds collected in previous years that were housed in seed storage at the LREC. Those seed collection dates ranged from 2010-2022. Including the 2023 collected seed, the PLS from contractors, and the seed collected before 2023, a total of 189 species with a total weight of 74 kg (164 lbs) was seeded onto the path (Table 1). These totals average to about 34 lbs per acre seeded including chaff.

**Prairie Planting:** There were four seeding events between Fall 2023 and Winter 2024. On October 13, 2023, staff, Caity Sims, James Faupel, Adam Rembert, Deanna Deterding, and Allison Azmy, intern, Cailyn Haubein, and volunteer, Tom Kibby, helped to seed spring flowering species onto the entirety of the pipeline path. These species were seeded onto the “prairie” and “wet” sections of the path (Fig. 1). A total of 32 species were seeded on the October 13 seeding. On December 8, 2023, a contractor drill seeded a native prairie mix onto the pipeline path. This mix contained 39 species, and the entire path was seeded at this time. On January 5, 2024, staff, and volunteers, Jack Hambene, Mary Woodward, Cailyn Haubein, Karen Schmiedeler, Tom Kibby, Dean Barnes, Charlie Wilson, and Seth Kilmer, seeded the “prairie” and “woodland edge” seed mixes. A total of 110 species were seeded on January 5. The last seeding of the season occurred on January 11, 2024. At that time, staff and volunteer, Maddie Schaus, seeded 69 species onto the “glade” and “wet” areas of the path. All seedings occurred before rain, snow, or ice events. It should be noted that some species were seeded at multiple dates and in multiple habitats of the path.



**Figure 1.** Pipeline path seeding areas in the Fall and Winter of 2023/2024. The whitened areas were seeded with the prairie mix (p), the green areas were seeded with the

bottomland woodland edge mix (e), the blue areas were seeded with the wetland mix (w), and the pink areas were seeded with the upland or “glade” mix (a).

**Table 1.** A list of all species seeded in Fall and Winter 2023/2024. Seed mixes were designed for the different habitats occurring along the pipeline path. These mixes include species for the bottomland prairie on the open main path passage (p), woodland edge (e), wetland (w), and upland “glade” on the Ameren right of way (a). Not all collected seeds of *Chasmanthium latifolium* or *Cinna arundinacea* were seeded. Common wheat (*Triticum aestivum*), a cover crop, was the only nonnative species seeded.

Species	Total Weight (g)	Total Weight (lbs)	Collection Date(s)	Area Seeded	Date(s) Seeded
<i>Acalypha rhomboidea</i>	4.90	0.01	10/16/23, 11/10/23	p	1/5/24
<i>Achillea gracilis</i>	5.08	0.01	8/31/23, 9/30/21	p	1/5/24
<i>Agalinis tenuifolia</i>	1.36	0.00	10/1/23	p	12/8/23
<i>Amorpha fruticosa</i>	260.32	0.57	8/25/23, 9/25/23	p/e	1/5/24
<i>Amsonia illustris</i>	0.00	0.00	11/22/22	w	1/11/24
<i>Andropogon gerardi</i>	451.73	1.00	11/2/21, 10/16/23, 3/15/23	p/a/e	12/8/23; 1/5/24; 1/11/2024
<i>Anemone virginiana</i>	0.70	0.00	9/10/21	p	1/5/24
<i>Arnoglossum atriplicifolium</i>	343.02	0.76	10/24/22, 10/18/19, 10/27/21, 10/16-10/19/23	p	1/5/24
<i>Asclepias incarnata</i>	153.14	0.34	10/18/2023, 8/22/23	p/w	12/8/23; 1/5/24; 1/11/2024
<i>Asclepias syriaca</i>	258.78	0.57	9/14-10/9/23	p	1/5/24
<i>Asclepias tuberosa</i>	1.12	0.00	10/26/23	p	1/5/24
<i>Asclepias verticillata</i>	3.54	0.01	10/16/23	p	1/5/24
<i>Baptisia alba</i>	1528.03	3.37	10/5/22, 8/21/19, 9/20, 9/22/23, 11/13/23	p	12/8/23; 1/5/2024
<i>Baptisia australis</i>	82.56	0.18	2020, 10/8/19, 9/26/18, 10/9/23	p/a	12/8/23; 1/11/2024
<i>Berlandiera texana</i>	28.40	0.06	10/16/23, 8/18/21, 10/15/19, 11/4/17	a	1/11/24
<i>Bidens aristosa</i>	139.74	0.31	11/8/2023, 10/17/23	p	12/8/23; 1/5/2024
<i>Blephilia ciliata</i>	4.70	0.01	unknown	e	1/5/24
<i>Blephilia hirsuta</i>	50.76	0.11	10/18/22, 9/5/23, 9/12/23	a	1/11/24
<i>Bouteloua curtipendula</i>	628.74	1.39	9/26/22, 21, 3/21/23	a/p	12/8/23; 1/5/24; 1/11/2024
<i>Bromus pubescens</i>	230.08	0.51	7/31/23	a	1/11/24
<i>Campanulastrum americanum</i>	9.44	0.02	10/9/23, 11/22/22	e	1/5/24
<i>Carex annectens</i>	0.20	0.00	7/5/18	p	1/5/24
<i>Carex cherokeeensis</i>	0.06	0.00	6/6/18	p	10/13/23
<i>Carex comosa</i>	0.00	0.00	2018, 8/22/17	w	1/11/24

<i>Carex crinata</i>	82.08	0.18	6/21/22, 8/1/23	p/w	10/13/23; 1/5/24; 1/11/2024
<i>Carex cristatella</i>	18.42	0.04	7/17-8/1/23	p/w	1/5/24; 1/11/2024
<i>Carex davisii</i>	77.26	0.17	6/13/23, 5/31/23, 6/2/23	p	10/13/23
<i>Carex emoryi</i>	0.08	0.00	5/19/11, 4/30/12, 5/24/13	p	10/13/23
<i>Carex flaccosperma</i>	21.46	0.05	6/20/22	p	10/13/23
<i>Carex frankii</i>	36.50	0.08	7/27-8/1/23	w	1/11/24
<i>Carex gravida</i> , <i>C. normalis</i> , <i>C. leavenworthii</i> mix	5.62	0.01	5/31/23	p	10/13/23
<i>Carex grayi</i>	15.94	0.04	10/22/23	w	1/11/24
<i>Carex grisea</i>	0.50	0.00	6/2/23, 6/5/23	p	10/13/23
<i>Carex hyalinolepis</i>	2.40	0.01	6/16/14	p	10/13/23
<i>Carex hystercina</i>	0.50	0.00	8/1/17	w	1/11/24
<i>Carex lupulina</i>	46.92	0.10	8/4/17, 7/8/22	p/w	1/5/24; 1/11/2024
<i>Carex lurida</i>	0.40	0.00	8/4/17	p	1/5/24
<i>Carex molesta</i>	12.25	0.03	11/6/23	p	12/8/23
<i>Carex muehlenbergia</i> var. <i>muehlenbergia</i>	4.64	0.01	5/31/23, 6/2/23, 6/5/23	p	10/13/23
<i>Carex muskingumensis</i>	31.56	0.07	6/26/22	p	10/13/23
<i>Carex normalis</i>	3.36	0.01	6/2/23, 6/5/23	p	10/13/23
<i>Carex radiata</i>	1.46	0.00	5/31/23, 6/2/23, 6/5/23	p	10/13/23
<i>Carex</i> sect. <i>Ovales</i> mix	13.22	0.03	6/21/23, 6/22/23	p	10/13/23
<i>Carex shortiana</i>	105.04	0.23	6/1/18, 6/13/23, 6/21/22, 2021, 5/31/23, 6/2/23, 6/5/23	p	10/13/23
<i>Carex</i> sp.	0.20	0.00	7/15/21	p	1/5/24
<i>Carex</i> spp.	168.38	0.37	6/13/23	p	10/13/23
<i>Carex squarrosa</i>	0.32	0.00	unknown	p	10/13/23
<i>Carex tribuloides</i>	16.46	0.04	7/15/21, 8/11/21	p	1/5/24
<i>Carex vulpinoidea</i>	54.63	0.12	6/27/18, 6/13/17, 6/26/23	p	12/8/23; 10/13/2023
<i>Castilleja coccinea</i>	9.86	0.02	unknown	p	1/5/24
<i>Cephalanthus occidentalis</i>	15.84	0.03	10/14/20	w	1/11/24
<i>Chamaecrista fasciculata</i>	152.44	0.34	10/23/2023, 10/17/23	p	12/8/23; 1/5/2024
<i>Chasmanthium latifolium</i>	13792.97	30.41	2023, 10/8/22	p/e	1/5/24
<i>Chelone obliqua</i>	0.00	0.00	11/9/21	p	1/5/24
<i>Cicuta maculata</i>	1.96	0.00	10/12/11	w	1/11/24
<i>Cinna arundinacea</i>	447.68	0.99	9/29/23	e	1/5/24
<i>Cirsium discolor</i>	41.24	0.09	10/23/20, 9/26/23	p	1/5/24
<i>Coleataenia anceps</i>	140.74	0.31	10/31/18, 10/23/19, 10/18/23	p/e	1/5/24
<i>Conoclinium coelestinum</i>	10.28	0.02	10/18/23	e	1/5/24

<i>Coreopsis lanceolata</i>	822.18	1.81	6/12/2023; 8/14/23	p	12/8/23; 10/13/2023
<i>Coreopsis pubescens</i>	0.64	0.00	10/3/17	p	1/5/24
<i>Coreopsis tinctoria</i>	64.71	0.14	2021; 4/3/23	p	12/8/23; 1/5/2024
<i>Coreopsis tripteris</i>	314.94	0.69	9/23-9/27/21, 11/29/22, 10/16-10/26/23	p	1/5/24
<i>Cucurbita melopepo</i> <i>var. ozarkana</i>	27.82	0.06	9/27/23	w	1/11/24
<i>Cuphea viscosissima</i>	4.30	0.01	10/23/23	a	1/11/24
<i>Cynanchum laeve</i>	11.74	0.03	10/16/23	e	1/5/24
<i>Dalea candida</i>	88.91	0.20	7/17/23	p	12/8/23
<i>Dalea purpurea</i>	88.45	0.20	7/5/23	p	12/8/23
<i>Desmanthus illinoensis</i>	731.88	1.61	9/25/20, 8/9/22, 8/23- 9/26/23, 9/11/23	p	12/8/23; 1/5/2024
<i>Diarrhena obovata</i>	284.40	0.63	9/15/23	e	1/5/24
<i>Primula meadia</i>	0.00	0.00	6/7/22	a	1/11/24
<i>Echinacea pallida</i>	145.91	0.32	unknown, 9/6/23	p/a	12/8/23; 1/11/2024
<i>Echinacea purpurea</i>	683.12	1.51	11/1/23	p	12/8/23
<i>Echinochloa muricata</i>	12.18	0.03	10/3/23	p	1/5/24
<i>Eleocharis ovata</i>	0.44	0.00	7/7/11	w	1/11/24
<i>Elephantopus</i> <i>carolinianus</i>	49.46	0.11	10/19/21, 11/1/22	e	1/5/24
<i>Elymus canadensis</i>	6065.25	13.37	9/15/23	p	1/5/24
<i>Elymus hystrix</i>	114.50	0.25	unknown, 7/25/23	e	1/5/24
<i>Elymus riparius</i>	2851.19	6.29	2023	e	1/5/24
<i>Elymus villosus</i>	446.36	0.98	9/15/23	e	1/5/24
<i>Elymus villosus</i> and <i>E.</i> <i>canadensis</i> mix	173.14	0.38	9/15/23	e	1/5/24
<i>Elymus virginicus</i>	1255.59	2.77	9/27/22, 2023, 8/15/23	e/p	12/8/23; 1/5/2024
<i>Epilobium coloratum</i>	2.06	0.00	10/24/11	w	1/11/24
<i>Erigeron annuus</i>	56.34	0.12	6/30/23	p	10/13/23
<i>Erigeron philadelphicus</i>	0.38	0.00	5/31/23, 6/5/23	p	10/13/23
<i>Eryngium yuccifolium</i>	2788.56	6.15	2023, 10/19/21, 3/2/23	p	12/8/23; 1/5/2024
<i>Eupatorium altissimum</i>	23.49	0.05	unknown, 10/1/23	p/e	12/8/23; 1/5/2024
<i>Eupatorium</i> <i>perfoliatum</i>	6.02	0.01	10/23/20	p/e	1/5/24
<i>Eupatorium serotinum</i>	21.82	0.05	9/28/20	p	1/5/24
<i>Euphorbia marginata</i>	311.26	0.69	11/4/19, 11/1/20, 8/18/22, 10/6/23	a	1/11/24
<i>Euthamia lanceolata</i>	1462.08	3.22	11/7/23, 11/9/21	p/e	1/5/24
<i>Eutrochium fistulosum</i>	620.02	1.37	2023, 11/4/20, 10/1/19	p	1/5/24
<i>Eutrochium purpureum</i>	284.10	0.63	9/15/20, 8/13/18, 2023, unknown	e	1/5/24
<i>Eutrochium sp.</i>	16.54	0.04	unknown	e	1/5/24
<i>Frasera carolinense</i>	26.76	0.06	9/9/22	e	1/5/24
<i>Gentiana andrewsii</i>	6.30	0.01	11/9/21, 11/12/18, 2020	p	1/5/24



<i>Glyceria striata</i>	42.84	0.09	6/20/23, 6/21/23	p	10/13/23
<i>Helenium autumnale</i>	222.08	0.49	10/18/19, 10/8/21, 11/22/22, 10/30/20, 11/6/23, 7/14/23	p	12/8/23; 1/5/2024
<i>Helianthus grosseserratus</i>	9.88	0.02	10/27/21	p	1/5/24
<i>Helianthus mollis</i>	28.80	0.06	10/23/19, 10/23/23	p	1/5/24
<i>Heliopsis helianthoides</i>	203.13	0.45	9/10/21, 9/3/19, 8/7/23	p/e	12/8/23; 1/5/2024
<i>Heterotheca subaxillaris</i>	8.78	0.02	9/23/23	a	1/11/24
<i>Heuchera americana</i>	1.72	0.00	6/6/18	a	1/11/24
<i>Heuchera richardsonii</i>	4.16	0.01	7/19/19	a	1/11/24
<i>Hibiscus laevis</i>	125.06	0.28	10/18/23	p/w	1/5/24; 1/11/2024
<i>Hibiscus lasiocarpus</i>	226.64	0.50	10/8/21, 10/19/22, 11/10/22, 9/18-10/19/23, 9/28/20	w/p	1/5/24; 1/11/2024
<i>Hibiscus moscheutos</i>	15.14	0.03	9/16/20	w	1/11/24
<i>Impatiens capensis</i>	5.52	0.01	10/3/22	e	1/5/24
<i>Iodanthus pinnatifidus</i>	1.16	0.00	10/5/22	e	1/5/24
<i>Iris virginica</i>	2.86	0.01	9/9/19	w	1/11/24
<i>Juncus biflorus</i>	173.26	0.38	2021, 6/26/12, 7/11/13, 2016	p	10/13/23
<i>Juncus diffusissimus</i>	0.30	0.00	2011	w	1/11/24
<i>Juncus dudleyi</i>	1.28	0.00	7/12/10	p	10/13/23
<i>Juncus marginatus</i>	0.60	0.00	7/27/11	w	1/11/24
<i>Juncus tenuis</i>	15.12	0.03	7/7/23	p	10/13/23
<i>Lespedeza capitata</i>	1143.18	2.52	10/23/2023, 10/23/19	p	1/5/24
<i>Liatris aspera</i>	1.14	0.00	10/14/22	a	1/11/24
<i>Liatris pycnostachya</i>	98.30	0.22	10/14/22, 9/28/20, 10/23/19, 10/2/21, 11/1/23	p/a	1/5/24; 1/11/2024
<i>Liatris scariosa</i>	28.32	0.06	10/8/19	a	1/11/24
<i>Lobelia cardinalis</i>	10.00	0.02	10/3/22	e	1/5/24
<i>Lobelia cardinalis/L. siphilitica</i>	10.68	0.02	11/6/23	e	1/5/24
<i>Lobelia siphilitica</i>	2.04	0.00	10/19/20	e	1/5/24
<i>Ludwigia alternifolia</i>	74.20	0.16	10/3/19, 10/22, 9/29/20, 9/21/23	p	1/5/24
<i>Agave virginica</i>	103.60	0.23	9/13/17, 9/8/20, 9/8/23	a	1/11/24
<i>Marshallia caespitosa</i>	0.00	0.00	2015	a	1/11/24
<i>Melanthium virginicum</i>	301.90	0.67	8/17/19, 9/7/21, 9/13- 9/18/23, 2020	a	1/11/24
<i>Mimulus ringens</i>	0.06	0.00	10/4/15	w	1/11/24
<i>Monarda bradburiana</i>	2.90	0.01	unknown	e	1/5/24
<i>Monarda fistulosa</i>	323.42	0.71	9/7/21, 8/23/22, 8/24/21, 11/1/20, 10/07/20, 9/26- 11/13/23, 4/27/23	p	12/8/23; 1/5/2024
<i>Oenothera biennis</i>	526.20	1.16	2020, 11/5/19, 10/29/19, 11/1/23, 10/19/23, 10/9/23	p	12/8/23; 1/5/2024
<i>Oxypolis rigidor</i>	466.02	1.03	10/24/11, 10/23/15, 10/13- 10/26/23, 10/19/21	p	1/5/24
<i>Packera glabella</i>	21.82	0.05	6/5/23	p	10/13/23
<i>Palafoxia callosa</i>	6.22	0.01	2023	a	1/11/24

<i>Panicum virgatum</i>	112.76	0.25	10/31/18, 10/23/19, 10/18/23, 4/20/23	p/a	12/8/23; 1/5/24; 1/11/2024
<i>Panicum virgatum/ Coleataenia anceps mix</i>	15.84	0.03	9/28/23	p	1/5/24
<i>Parthenium integrifolium</i>	290.53	0.64	7/29/2019, 10/31/23	p/a	12/8/23; 1/5/24; 1/11/2024
<i>Pedicularis canadensis</i>	5.10	0.01	5/30/23	p	10/13/23
<i>Pedicularis lanceolata</i>	515.66	1.14	11/29/22, 10/26/21	p	1/5/24
<i>Penstemon digitalis</i>	419.62	0.93	9/22/21, 9/24/21, 9/8/20, 5/17/22gh, 9/19/23, 10/17/23	p	12/8/23; 1/5/2024
<i>Penthorum sedoides</i>	1.66	0.00	9/30/13	w	1/11/24
<i>Persicaria virginiana</i>	29.46	0.06	10/26/21-11/1/21, 10/3/23	e	1/5/24
<i>Physostegia virginiana</i>	17.32	0.04	11/9/21, 11/11/22	p	1/5/24
<i>Polanisia dodecantra</i>	8.52	0.02	8/20/23	a	1/11/24
<i>Pycnanthemum pilosum</i>	14.16	0.03	10/7/20, 10/18/19, 10/26/21	p	1/5/24
<i>Pycnanthemum spp.</i>	148.22	0.33	11/29/22, 10/26/23	p	1/5/24
<i>Pycnanthemum tenuifolium</i>	22.33	0.05	10/19/21, 10/18/19, 10/1/23	p	12/8/23; 1/5/2024
<i>Pycnanthemum virginianum</i>	11.24	0.02	10/18/19	p	1/5/24
<i>Ratibida columnifera</i>	107.05	0.24	11/10/23	p	12/8/23
<i>Ratibida pinnata</i>	581.63	1.28	9/26/22, 9/10/21, 9/20/20, 10/18/23, 10/2/23	p/a	12/8/23; 1/5/24; 1/11/2024
<i>Rhexia mariana</i>	0.00	0.00	unknown	w	1/11/24
<i>Rhexia virginica</i>	0.22	0.00	9/25/21	w	1/11/24
<i>Rudbeckia hirta</i>	37.65	0.08	9/6/23	p	12/8/23
<i>Rudbeckia laciniata</i>	11.90	0.03	11/8/22	e	1/5/24
<i>Rudbeckia subtomentosa</i>	2108.66	4.65	11/13/23, 10/8/21, 11/29/22,	p	1/5/24
<i>Rudbeckia triloba</i>	337.82	0.74	9/20/21, 9/26/22, 11/1/23	p/e	1/5/24
<i>Ruellia humilis</i>	45.08	0.10	11/5/19	a	1/11/24
<i>Rumex altissimus</i>	63.08	0.14	6/20/23	p	10/13/23
<i>Sagittaria brevirostra</i>	6.54	0.01	9/7/11	w	1/11/24
<i>Sagittaria latifolia</i>	21.62	0.05	9/30/14	w	1/11/24
<i>Sagittaria sp.</i>	3.06	0.01	11/10/10	w	1/11/24
<i>Scirpus atrovirens</i>	452.99	1.00	8/9/2012, 7/7/23	w/p	10/13/23; 1/11/2024
<i>Scirpus georgianus</i>	2.34	0.01	8/3/10	w	1/11/24
<i>Scirpus pendulus</i>	207.04	0.46	7/7/23, 7/10/23, 7/17/23, 7/10/19, 6/22/11	p	10/13/23
<i>Scizachyrium scoparium</i>	362.92	0.80	10/23/19, 10/31/18, 10/18/23, 10/9/23	p/a	12/8/2023; 1/11/2024
<i>Scrophularia marilandica</i>	1.86	0.00	10/20/21	e	1/5/24
<i>Scutellaria incana</i>	4.22	0.01	9/12/23	e	1/5/24

<i>Senna marilandica</i>	158.96	0.35	unknown	p/a	1/5/24; 1/11/2024
<i>Silene regia</i>	0.00	0.00	9/22/21, 9/27/21	a	1/11/24
<i>Silphium integrifolium</i>	660.46	1.46	9/23, 10/7/20	a	1/11/24
<i>Silphium laciniatum</i>	266.50	0.59	10/20/21, 10/23/19, 10/18/23	p/a	1/5/24; 1/11/2024
<i>Sisyrinchium angustifolium</i>	4.34	0.01	6/30/23, 7/3/2023	p	10/13/23; 1/5/2024
<i>Sium suave</i>	21.40	0.05	unknown	p/w	1/5/24; 1/11/2024
<i>Solidago drummondii</i>	38.04	0.08	10/24/22	a	1/11/24
<i>Solidago missouriensis</i>	59.56	0.13	10/23/23	p	1/5/24
<i>Solidago nemoralis</i>	10.89	0.02	9/13/23	p	12/8/23
<i>Solidago rigida</i>	612.04	1.35	10/31/18, 10/23/19, 11/11/22, 10/23/23, 10/5/23	p/a	12/8/23; 1/11/2024
<i>Solidago speciosa</i>	8.30	0.02	10/31/18, 10/23/23	a	1/11/24
<i>Sorghastrum nutans</i>	654.07	1.44	9/25-10/9/23, 10/9/23	p/a/e	12/8/23; 1/5/24; 1/11/2024
<i>Spartina pectinata</i>	42.20	0.09	10/18/23	p/w	1/5/24; 1/11/2024
<i>Sporobolus compositus</i>	25.86	0.06	10/9/23	p	12/8/23
<i>Sporobolus heterolepis</i>	0.64	0.00	2021	a	1/11/24
<i>Symphyotrichum laeve</i>	14.52	0.03	9/11/23	p	12/8/23
<i>Symphyotrichum lateriflorum</i>	232.46	0.51	11/8/23	p	1/5/24
<i>Symphyotrichum mix</i>	152.24	0.34	11/10/23	p	1/5/24
<i>Symphyotrichum novae-angliae</i>	52.49	0.12	11/24/21, 11/18/20, 10/4/23	p	12/8/23; 1/5/2024
<i>Symphyotrichum praealtum</i>	1032.26	2.28	11/24/21	p	1/5/24
<i>Teucrium canadense</i>	240.58	0.53	Aug-23	p	1/5/24
<i>Tradescantia ohiensis</i>	98.50	0.22	6/20/23, 6/28/22	p	10/13/23
<i>Tripsacum dactyloides</i>	537.42	1.18	9/25/20, 2021, 2019, 2023	p/a/e	1/5/24; 1/11/2024
<i>Triticum aestivum</i>	268.58	0.59	6/21/23	p	10/13/23
<i>Verbena hastata</i>	110.98	0.24	11/4/20, 12/8/14	p	1/5/24
<i>Verbena urticifolia</i>	104.06	0.23	10/30/18, 10/11	p	1/5/24
<i>Verbesina alternifolia</i>	110.34	0.24	Fall 2019	p/e	1/5/24
<i>Vernonia baldwinii</i>	132.70	0.29	9/23/21, 9/30/20, 10/30/18, 9/13/20	p	1/5/24
<i>Vernonia fasciculata</i>	8.50	0.02	10/31/18	w	1/11/24
<i>Vernonia gigantea</i>	1.14	0.00	10/31/18	w/p	1/5/24; 1/11/2024
<i>Vernonia spp.</i>	1237.12	2.73	9/18/23, 9/10/19, 10/19/22,	p	1/5/24
<i>Veronicastrum virginicum</i>	2106.16	4.64	9/7/21, 9/19/19, 10/8/19, 9/18/20, 9/22/23	p	1/5/24
<i>Zizia aurea</i>	1428.69	3.15	9/2/21, 8/23/22, 8/9/218/26/20, 8/23, 6/21/23	p	12/8/23; 1/5/2024



**Additional sources about this project:**

1. Natural History of Ecological Restoration by James Faupel and Caity Sims:  
<https://mbgecologicalrestoration.wordpress.com/2024/03/03/reconstructing-and-reconnecting-native-habitats-post-pipeline-construction-at-the-litzsinger-road-ecology-center/>
2. Summer and Fall 2023 Intern Report:  
<https://docs.google.com/document/d/1XcC6rHzUNJz2J1Suo4VxhsQhAs6qRE9uyexmbEKm8fA/edit?usp=sharing>