

## 2023 Monarch CCAA Annual Compliance Report

### I. Partner Information

<b>Organization Name:</b>	Oklahoma Department of Transportation
<b>Certificate of Inclusion Number:</b>	OKT2020-01
<b>Primary Point of Contact Name:</b>	Amber McIntyre
<b>Address:</b>	3200 Marshall Ave. Suite 110 Norman, Ok 73072
<b>Phone Number:</b>	405-325-7850
<b>Email:</b>	amcintyre@odot.org
<b>Acres Enrolled:</b>	150,472 acres
<b>Adopted Acres Target:</b>	12,038 acres
<b>Adopted Acres Contributed Over Past Year:</b>	10,147.50 acres
<b>If necessary, provide additional explanation or comments related to the enrolled acres and adopted acres values given above.</b>	N/A

### II. Summary of Annual Net Conservation Benefit Contribution

Oklahoma Department of Transportation's (OKDOT) proposed target adoption rate for 2023 involved the monitoring of suitable habitat roadway corridors that were identified in collaboration with the OKDOT Field District Maintenance Engineers from the geo-spatial roadway layer that was developed by the OKDOT Natural Resources Program office in 2022. Our adoption rate and acres are an estimate of an anticipated interim implementation period established to reach the full target adoption rate within 5 years.

In Spring of 2023 in-person field meetings were conducted with Field District Maintenance Engineers and Supervisors and additional Adopted Acres were added to the individual Districts contribution from 2022. These new rights-of-way (ROW) corridors targeted for conservation mowing, set asides, and brush management increased OKDOT's pledged adopted acres total to a little over 10,000 acres.

This on the ground collaboration and use of visual roadway suitability maps with field personnel input has resulted in an increase of approximately 21% from the 2022 adopted acre total (attached effectiveness monitoring table) and exceeded our targeted 3<sup>rd</sup> year interim Adopted Acre estimate by approximately 3,454 acres.

OKDOT can credit increased awareness from field personnel, engagement by the field Districts in seeking out opportunities to rehabilitate, enhance, and/or create habitat, and collaboration across OKDOT Divisions with this continued commitment to provide on the ground conservation benefit for the species. As an example, during one of our in-person meetings the Field District in Northwestern Oklahoma contributed their entire suitable roadway system to the program.

Three Energy sector partners have also become recent enrollees in the Monarch CCAA in the State of Oklahoma. These include ITC Holdings, Northern Natural Gas, and Phillips 66. Northern Natural Gas reported an overlap of adopted acres of 0.658872 acres in Beaver County.

Supplemental activities that promote monarch habitat resources and strengthen conservation practices across OKDOT Districts, partner agencies, and national partners implemented in 2023 include:

- Distribute updated ROWs landscape prioritization maps of monarch roadside habitat in Oklahoma to field district and supporting organizations.
- Maintain monarch resource educational display gardens at OKDOT State Capitol Complex building and Oklahoma State Travel and Tourism Centers
- Present information on Monarch CCAA Program implementation to 2023 National Rights-of-Way Vegetative Managers Association Annual Conference in Knoxville, Tennessee
- Participate as steering committee member to the Oklahoma Monarch and Pollinator Collaborative (<http://www.okiesformonarchs.org>), a multi-agency group providing resources to state residents and agencies as part of the statewide Monarch Conservation Plan
- Deliver Monarch conservation best practices presentations and develop educational materials for events and outreach to local municipalities and industry partners such as the City of Norman Pollinator Week, Monarch Festival, and Earth Day celebration.
- Presentation on OKDOT Monarch Program activities at the 2023 Keep Oklahoma Beautiful Fall Workshop.
- Sitting member of the Transportation Research Board AKR20 Subcommittee on Pollinators.
- Received the Keep Oklahoma Beautiful 2023 State Government Program Environmental Excellence Award in recognition of the Department's Monarch Program activities.

### III. Summary of Effectiveness Monitoring Conducted

Effectiveness monitoring was conducted in late spring, summer, and early fall of 2023 on 78 sites across the enrolled OKDOT land system. Monitoring field inventory activities were conducted by OKDOT Natural Resources Program biologist using the Tier 3 scorecard in 8 of OKDOT maintenance districts. Sites were chosen randomly through ArcGIS randomization tool overlaid on OKDOT suitability roadway layers and from idle lands identified by the Field Districts.

Existing conservation measures within the 78 sites encompass conservation mowing, herbicide applications, native plant seeding, and suitable habitat within idle lands and set asides.

Monitoring target results include -

- 61 (78%) of the sites contained 2 or more milkweed stems. The total milkweed stem count was 4,133, representing 8 *Asclepias* species.
- 51 (65%) of the sites contained greater than 10% nectar resources.

Oklahoma experienced a cool spring and unusually high rains during the summer, the bloom time period in the western part of the state was extended due to these rains. Several *Asclepias* species which had not been catalogued for several decades were found during the summer surveys and nectar resources were extended into the early fall.

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### IV. Upcoming Year Annual Forecast

In 2024 the OKDOT Natural Resources Program will continue close collaboration with the Field Maintenance Districts in identifying suitable habitat within rights-of ways using the developed suitability roadway layers. We will also work closely with the Oklahoma State University Roadside Vegetation Management Team to develop monarch friendly herbicide BMPs outside the safety zone and explore new methods and equipment to enhance existing vegetative management practices on OKDOT adopted acres.

We expect that we will meet our complete adopted acre target of 12,038 acres in year 4. In person meetings will be conducted in the Field Districts in late winter/ early spring of 2024 and we will review our adopted acre contribution during that period.

### V. Attachments

- Implementation Compliance Tracking spreadsheet
- Effectiveness Monitoring spreadsheet
- Monitoring Maps
- Awards and Recognition press releases

**Compliance Tracking Table for the Monarch CCAA/CCA**

Organization Name	Oklahoma Department of Transportation
CI Tracking No.	OKT2020-01
Date of CI Approval	11/30/2020
Compliance Year	2023

Adopted Acres Target	7,223
No. of Annual Sampling	77

**Compliance Tracking Fields**

Site ID	Acres	State	County	Region (auto-filled)	Conservation Measure	Status	Date Completed	Partner Overlap	Data Source(s)	Additional Notes
OKDOT23.D1-S1	16	OK	Wagoner	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	6/21/2023		GIS Map	
OKDOT23.D1-S2	16	OK	Wagoner	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	6/21/2023		GIS Map	
OKDOT23.D1-S3	72.5	OK	Muskogee	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	6/21/2023		GIS Map	
OKDOT23.D1-S4	72.5	OK	Muskogee	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	6/21/2023		GIS Map	
OKDOT23.D1-S5	132	OK	McIntosh	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	6/23/2023		GIS Map	
OKDOT23.D1-S6	132	OK	McIntosh	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	6/23/2023		GIS Map	
OKDOT23.D1-S7	132	OK	Muskogee	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	6/23/2023		GIS Map	
OKDOT23.D1-S8	63	OK	Muskogee	Western and Southern U.S.	Suitable habitat idle lands, or set-asides	Implemented	6/29/2023		GIS Map	
OKDOT23.D1-S9	26.5	OK	Muskogee	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	6/29/2023		GIS Map	
OKDOT23.D2-S1	30	OK	Carter	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	6/13/2023		GIS Map	
OKDOT23.D2-S2	30	OK	Carter	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	6/13/2023		GIS Map	
OKDOT23.D2-S3	277	OK	Atoka	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	8/9/2023		GIS Map	
OKDOT23.D2-S5	112	OK	Latimer	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	8/9/2023		GIS Map	
OKDOT23.D2-S13	33	OK	McCurtain	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	8/9/2023		GIS Map	
OKDOT23.D2-S14	33	OK	McCurtain	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	8/9/2023		GIS Map	
OKDOT23.D3-S1	1	OK	Pontotoc	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	5/25/2023		WF Records	
OKDOT23.D3-S2	100	OK	Pottawatomie	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	6/29/2023		GIS Map	
OKDOT23.D3-S3	52	OK	Seminole	Western and Southern U.S.	Suitable habitat idle lands, or set-asides	Implemented	6/29/2023		WF Records	
OKDOT23.D3-S4	98	OK	Seminole	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	6/29/2023		GIS Map	
OKDOT23.D3-S5	98	OK	Okfuskee	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	6/29/2023		GIS Map	
OKDOT23.D3-S6	108	OK	McClain	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	7/3/2023		GIS Map	
OKDOT23.D3-S7	108	OK	McClain	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	7/3/2023		GIS Map	
OKDOT23.D3-S8	109	OK	Garvin	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	7/3/2023		GIS Map	
OKDOT23.D3-S9	11	OK	Cleveland	Western and Southern U.S.	Seeding and planting to restore or create habitat	Monitoring Complete	7/3/2023		GIS Map	
OKDOT23.D3-S10	18	OK	Hughes	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	7/14/2023		GIS Map	
OKDOT23.D3-S11	18	OK	Hughes	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	7/14/2023		GIS Map	
OKDOT23.D3-S12	18	OK	Hughes	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	7/14/2023		WF Records	
OKDOT23.D4-S1	57	OK	Payne	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	5/12/2023		GIS Map	
OKDOT23.D4-S2	57	OK	Payne	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	5/12/2023		GIS Map	
OKDOT23.D4-S3	57	OK	Payne	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	5/12/2023		GIS Map	
OKDOT23.D4-S4	57	OK	Payne	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	5/24/2023		GIS Map	
OKDOT23.D4-S5	507	OK	Payne	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	5/24/2023		GIS Map	
OKDOT23.D4-S6	507	OK	Noble	Western and Southern U.S.	Conservation mowing to enhance floral resource habitat	Monitoring Complete	5/24/2023		GIS Map	



**Effectiveness Monitoring Table for the Monarch CCAA/CCA**

<b>Organization Name</b>	Oklahoma Department of Transportation
<b>CI Tracking No.</b>	OKT2020-01
<b>Date of CI Approval</b>	11/30/2020
<b>Monitoring Year</b>	2023

<b>Adopted Acres Target</b>	12,038
<b>Interim Adopted Acres Target</b>	7,223
<b>Number of Annual Monitoring Plots</b>	77

Optional data

Effectiveness Monitoring Fields															
Site ID	State	County	Conservation Measure(s)			Monitoring Plot ID	Sample Location	Date	Observer Name	Milkweed Present at CCAA Target Level? (2+ stems)	Milkweed Count	Nectar Resources Present at CCAA Target Level?	Nectar Resources Cover	Nectar Resources Cover Mid-Value (auto-filled)	Monarchs Observed
OKDOT23.D1-S1	OK	Wagoner	Conservation moving to enhance floral resource habitat.			OKDOT23.D1-S1	State Highway 72	6/21/2023	Harmon	Yes	10	Yes	1-10	6	No
OKDOT23.D1-S2	OK	Muskogee	Conservation moving to enhance floral resource.			OKDOT23.D1-S2	State Highway 62	6/21/2023	Harmon	No	0	Yes	1-10	6	No
OKDOT23.D1-S3	OK	Muskogee	Conservation moving to enhance floral resource.			OKDOT23.D1-S3	State Highway 62	6/21/2023	Harmon	Yes	149	Yes	26-50	38	No
OKDOT23.D1-S4	OK	Muskogee	Conservation moving to enhance floral resource.			OKDOT23.D1-S4	State Highway 62	6/21/2023	Harmon	Yes	201	Yes	26-50	38	No
OKDOT23.D1-S5	OK	McIntosh	Conservation moving to enhance floral resource.			OKDOT23.D1-S5	Interstate 40	6/23/2023	Harmon	Yes	25	Yes	1-10	6	No
OKDOT23.D1-S6	OK	McIntosh	Conservation moving to enhance floral resource.			OKDOT23.D1-S6	Interstate 40	6/23/2023	Harmon	Yes	12	Yes	26-50	38	No
OKDOT23.D1-S7	OK	Muskogee	Conservation moving to enhance floral resource.			OKDOT23.D1-S7	Interstate 40	6/23/2023	Harmon	Yes	75	Yes	11-25	18	No
OKDOT23.D1-S8	OK	Muskogee	Suitable habitat idle lands, or set-asides			OKDOT23.D1-S8	US 69	6/29/2023	Harmon	Yes	16	Yes	1-10	6	No
OKDOT23.D1-S9	OK	Muskogee	Conservation moving to enhance floral resource.			OKDOT23.D1-S9	US 69	6/29/2023	Harmon	Yes	210	Yes	26-50	38	No
OKDOT23.D2-S1	OK	Carter	Conservation moving to enhance floral resource.			OKDOT23.D2-S1	US 70	6/13/2023	Harmon	Yes	2	Yes	11-25	18	No
OKDOT23.D2-S2	OK	Carter	Conservation moving to enhance floral resource.			OKDOT23.D2-S2	US 70	6/13/2023	Harmon	Yes	10	Yes	51-75	63	No
OKDOT23.D2-S3	OK	Atoka	Conservation moving to enhance floral resource.			OKDOT23.D2-S3	State Highway 43	8/9/2023	Harmon/Taylor	Yes	11	Yes	1-10	6	No
OKDOT23.D2-S5	OK	Latimer	Conservation moving to enhance floral resource.			OKDOT23.D2-S5	State Highway 82	8/9/2023	Harmon/Taylor	No	0	Yes	1-10	6	No
OKDOT23.D2-S13	OK	McCurtain	Conservation moving to enhance floral resource.			OKDOT23.D2-S13	State Highway 3	8/9/2023	Harmon/Taylor	No	1	Yes	1-10	6	No
OKDOT23.D2-S14	OK	McCurtain	Conservation moving to enhance floral resource.			OKDOT23.D2-S14	State Highway 3	8/9/2023	Harmon/Taylor	No	0	Yes	1-10	6	No
OKDOT23.D3-S1	OK	Pontotoc	Suitable habitat idle lands, or set-asides	Conservation moving to enhance floral resource.		OKDOT23.D3-S1	State Highway 31W	5/25/2023	Harmon/Taylor	Yes	112	Yes	26-50	38	Yes
OKDOT23.D3-S2	OK	Pottawatomie	Conservation moving to enhance floral resource.			OKDOT23.D3-S2	Interstate 40	6/29/2023	Harmon	Yes	85	Yes	26-50	38	No
OKDOT23.D3-S3	OK	Seminole	Suitable habitat idle lands, or set-asides	Conservation moving to enhance floral resource.		OKDOT23.D3-S3	Interstate 40	6/29/2023	Harmon	Yes	59	Yes	1-10	6	No
OKDOT23.D3-S4	OK	Seminole	Conservation moving to enhance floral resource.			OKDOT23.D3-S4	Interstate 40	6/29/2023	Harmon	No	1	Yes	1-10	6	No
OKDOT23.D3-S5	OK	Oklfuskee	Conservation moving to enhance floral resource.			OKDOT23.D3-S5	Interstate 40	6/29/2023	Harmon	Yes	49	Yes	26-50	38	No
OKDOT23.D3-S6	OK	McClain	Conservation moving to enhance floral resource.			OKDOT23.D3-S6	Interstate 35	7/3/2023	Harmon	No	0	Yes	1-10	6	No
OKDOT23.D3-S7	OK	McClain	Conservation moving to enhance floral resource.			OKDOT23.D3-S7	Interstate 35	7/3/2023	Harmon	Yes	18	Yes	11-25	18	No

OKDOT23.D3-S8	OK	Garvin	Conservation moving to enhance floral resource			OKDOT23.D3-S8	Interstate 35	7/3/2023	Harmon	Yes	29	Yes	26-50	38	No
OKDOT23.D3-S9	OK	Cleveland	Seeding and planting to restore or create habitat	Conservation moving to enhance floral resource		OKDOT23.D3-S9	Interstate 35	7/4/2023	Harmon	Yes	5	Yes	11-25	18	No
OKDOT23.D3-S10	OK	Hughes	Conservation moving to enhance floral resource			OKDOT23.D3-S10	US 270	7/14/2023	Harmon/Taylor	Yes	13	Yes	26-50	38	No
OKDOT23.D3-S11	OK	Hughes	Conservation moving to enhance floral resource			OKDOT23.D3-S11	US 270	7/14/2023	Harmon/Taylor	Yes	4	Yes	51-75	63	Yes
OKDOT23.D3-S12	OK	Hughes	Conservation moving to enhance floral resource			OKDOT23.D3-S12	US 270 & SH 48 JCT	7/14/2023	Harmon/Taylor	Yes	22	Yes	26-50	38	No
OKDOT23.D4-S1	OK	Payne	Conservation moving to enhance floral resource			OKDOT23.D4-S1	State Highway 51	5/12/2023	Harmon/Taylor	Yes	257	Yes	1-10	6	No
OKDOT23.D4-S2	OK	Payne	Conservation moving to enhance floral resource			OKDOT23.D4-S2	State Highway 51	5/12/2023	Harmon/Taylor	Yes	304	Yes	11-25	18	No
OKDOT23.D4-S3	OK	Payne	Conservation moving to enhance floral resource			OKDOT23.D4-S3	State Highway 51	5/12/2023	Harmon/Taylor	Yes	49	Yes	1-10	6	No
OKDOT23.D4-S4	OK	Payne	Conservation moving to enhance floral resource			OKDOT23.D4-S4	State Highway 51	5/12/2023	Harmon/Taylor	Yes	185	Yes	1-10	6	No
OKDOT23.D4-S5	OK	Payne	Conservation moving to enhance floral resource			OKDOT23.D4-S5	Interstate 35	5/24/2023	Harmon/Taylor	Yes	64	Yes	26-50	38	No
OKDOT23.D4-S6	OK	Noble	Conservation moving to enhance floral resource			OKDOT23.D4-S6	Interstate 35	5/24/2023	Harmon/Taylor	Yes	110	Yes	1-5	18	Yes
OKDOT23.D4-S7	OK	Noble	Conservation moving to enhance floral resource			OKDOT23.D4-S7	Interstate 35	5/24/2023	Harmon/Taylor	Yes	137	Yes	1-5	18	No
OKDOT23.D4-S8	OK	Noble	Conservation moving to enhance floral resource			OKDOT23.D4-S8	Interstate 35	5/24/2023	Harmon/Taylor	Yes	581	Yes	1-5	18	Yes
OKDOT23.D4-S9	OK	Kay	Conservation moving to enhance floral resource			OKDOT23.D4-S9	Interstate 35	5/24/2023	Harmon/Taylor	Yes	44		1-5	18	No
OKDOT23.D4-S10	OK	Logan	Suitable habitat idle lands, or set-asides	Conservation moving to enhance floral resource		OKDOT23.D4-S10	Interstate 35	5/24/2023	Harmon/Taylor	Yes	11	Yes	26-50	38	No
OKDOT23.D4-S11	OK	Payne	Conservation moving to enhance floral resource			OKDOT23.D4-S11	State Highway 51	6/2/2023	Harmon	Yes	27	Yes	26-50	38	No
OKDOT23.D4-S12	OK	Payne	Conservation moving to enhance floral resource			OKDOT23.D4-S12	State Highway 51	6/2/2023	Harmon	Yes	223	Yes	26-50	38	No
OKDOT23.D5-S1	OK	Kiowa	Conservation moving to enhance floral resource			OKDOT23.D5-S1	US 62	7/13/2023	Harmon/Taylor	No	0	Yes	1-10%	6	No
OKDOT23.D5-S2	OK	Kiowa	Conservation moving to enhance floral resource			OKDOT23.D5-S2	US 183	7/13/2023	Harmon/Taylor	Yes	2	Yes	1-10	6	No
OKDOT23.D5-S3	OK	Kiowa	Conservation moving to enhance floral resource			OKDOT23.D5-S3	US 183	7/13/2023	Harmon/Taylor	No	0	Yes	1-10	6	No
OKDOT23.D5-S4	OK	Jackson	Conservation moving to enhance floral resource			OKDOT23.D5-S4	US 62	7/13/2023	Harmon/Taylor	No	0	Yes	1-10	6	No
OKDOT23.D5-S5	OK	Jackson	Conservation moving to enhance floral resource			OKDOT23.D5-S5	US 62	7/13/2023	Harmon/Taylor	Yes	66	Yes	1-10	6	No
OKDOT23.D5-S6	OK	Tilman	Conservation moving to enhance floral resource			OKDOT23.D5-S6	US 183	7/13/2023	Harmon/Taylor	Yes	10	Yes	26-50	38	No
OKDOT23.D6-S1	OK	Harper	Conservation moving to enhance floral resource			OKDOT23.D6-S1	US 183	7/6/2023	Harmon	Yes	7	Yes	11-25	18	No
OKDOT23.D6-S2	OK	Harper	Conservation moving to enhance floral resource			OKDOT23.D6-S2	US 183	7/6/2023	Harmon	Yes	13	Yes	26-50	38	No
OKDOT23.D6-S3	OK	Harper	Conservation moving to enhance floral resource			OKDOT23.D6-S3	US 64 & State Highway 46 JCT	7/6/2023	Harmon	Yes	21	Yes	76-100	88	No
OKDOT23.D6-S4	OK	Ellis	Conservation moving to enhance floral resource			OKDOT23.D6-S4	State Highway 46	7/6/2023	Harmon	Yes	15	Yes	1-10	6	No
OKDOT23.D6-S5	OK	Cimarron	Conservation moving to enhance floral resource			OKDOT23.D6-S5	US 412 & US 287 JCT	7/6/2023	Harmon	Yes	51	Yes	76-100	88	No
OKDOT23.D6-S6	OK	Cimarron	Conservation moving to enhance floral resource			OKDOT23.D6-S6	State Highway 325	7/6/2023	Harmon	Yes	11	Yes	11-25	18	No
OKDOT23.D6-S7	OK	Cimarron	Conservation moving to enhance floral resource			OKDOT23.D6-S7	State Highway 325	7/6/2023	Harmon	Yes	12	Yes	26-50	38	No
OKDOT23.D6-S8	OK	Cimarron	Conservation moving to enhance floral resource			OKDOT23.D6-S8	US 287	7/6/2023	Harmon	Yes	5	Yes	26-50	38	No

OKDOT23.D6-S9	OK	Alfalfa	Conservation mowing to enhance floral resource			OKDOT23.D6-S9	State Highway 11	8/3/2023	Harmon	No	0	Yes	11-25	18	No
OKDOT23.D6-S10	OK	Alfalfa	Conservation mowing to enhance floral resource			OKDOT23.D6-S10	State Highway 11	8/3/2023	Harmon	Yes	23	Yes	26-50	38	Yes
OKDOT23.D6-S11	OK	Alfalfa	Conservation mowing to enhance floral resource			OKDOT23.D6-S11	State Highway 11	8/3/2023	Harmon	No	0	No	0	0	No
OKDOT23.D6-S12	OK	Woodward	Conservation mowing to enhance floral resource			OKDOT23.D6-S12	State Highway 50	8/3/2023	Harmon	No	0	Yes	1-10	6	No
OKDOT23.D6-S13	OK	Woodward	Conservation mowing to enhance floral resource			OKDOT23.D6-S13	State Highway 50	8/3/2023	Harmon	No	0	Yes	51-75	63	No
OKDOT23.D6-S14	OK	Texas	Conservation mowing to enhance floral resource			OKDOT23.D6-S14	US 412	8/3/2023	Harmon	Yes	25	Yes	26-50	38	No
OKDOT23.D6-S15	OK	Major	Conservation mowing to enhance floral resource			OKDOT23.D6-S15	US 281	8/4/2023	Harmon	Yes	7	Yes	26-50	38	No
OKDOT23.D6-S16	OK	Major	Conservation mowing to enhance floral resource			OKDOT23.D6-S16	US 281	8/4/2023	Harmon	Yes	11	Yes	51-75	63	No
OKDOT23.D7-S1	OK	Comanche	Conservation mowing to enhance floral resource			OKDOT23.D7-S1	US 62	7/13/2023	Harmon/Taylor	No	0	Yes	1-10	6	No
OKDOT23.D7-S2	OK	Comanche	Conservation mowing to enhance floral resource			OKDOT23.D7-S2	US-62	7/13/2023	Harmon/Taylor	Yes	87	Yes	26-50	38	No
OKDOT23.D7-S3	OK	Garvin	Suitable habitat idle lands, or set-asides			OKDOT23.D7-S3	Interstate 35	7/20/2023	Harmon	Yes	61	Yes	51-75	63	No
OKDOT23.D7-S4	OK	Murray	Suitable habitat idle lands, or set-asides			OKDOT23.D7-S4	Interstate 35	7/26/2023	Harmon	Yes	7	Yes	11-25	18	No
OKDOT23.D7-S6	OK	Carter	Conservation mowing to enhance floral resource			OKDOT23.D7-S6	Interstate 35	7/26/2023	Harmon	Yes	131	Yes	1-10	6	No
OKDOT23.D7-S7	OK	Love	Conservation mowing to enhance floral resource			OKDOT23.D7-S7	Interstate 35	7/26/2023	Harmon	Yes	17	Yes	26-50	38	No
OKDOT23.D7-S9	OK	Love	Conservation mowing to enhance floral resource			OKDOT23.D7-S9	Interstate 35	7/26/2023	Harmon	Yes	18	Yes	26-50	38	No
OKDOT23.D7-S10	OK	Stephens	Conservation mowing to enhance floral resource			OKDOT23.D7-S10	State Highway 7	7/20/2023	Harmon	Yes	25	Yes	11-25	18	No
OKDOT23.D7-S11	OK	Stephens	Conservation mowing to enhance floral resource			OKDOT23.D7-S11	State Highway 7	7/20/2023	Harmon	Yes	37	Yes	26-50	38	No
OKDOT23.D7-S12	OK	Stephens	Conservation mowing to enhance floral resource			OKDOT23.D7-S12	US 81	7/20/2023	Harmon	Yes	50	Yes	26-50	38	No
OKDOT23.D7-S13	OK	Jefferson	Conservation mowing to enhance floral resource			OKDOT23.D7-S13	US 81	7/20/2023	Harmon	Yes	31	Yes	26-50	38	No
OKDOT23.D8-S1	OK	Creek	Conservation mowing to enhance floral resource			OKDOT23.D8-S1	State Highway 48	7/27/2023	Harmon/Taylor	No	0	Yes	1-10	6	No
OKDOT23.D8-S2	OK	Pawnee	Conservation mowing to enhance floral resource			OKDOT23.D8-S2	State Highway 48	7/27/2023	Harmon/Taylor	Yes	56	Yes	76-100	18	No
OKDOT23.D8-S3	OK	Osage	Conservation mowing to enhance floral resource			OKDOT23.D8-S3	State Highway 20	7/27/2023	Harmon/Taylor	Yes	24	Yes	1-10	6	No
OKDOT23.D8-S4	OK	Osage	Conservation mowing to enhance floral resource			OKDOT23.D8-S4	State Highway 20	7/27/2023	Harmon/Taylor	Yes	90	Yes	26-50	38	No
OKDOT23.D8-S5	OK	Tulsa	Conservation mowing to enhance floral resource			OKDOT23.D8-S5	US 169	7/27/2023	Harmon/Taylor	Yes	11	Yes	1-10	6	No
OKDOT23.D8-S6	OK	Rogers	Conservation mowing to enhance floral resource			OKDOT23.D8-S6	US 169	7/27/2023	Harmon/Taylor	Yes	98	Yes	26-50	38	No



Monarch CCAA for Energy and Transportation Lands  
Monitoring Results Calculator



Partner Name: Oklahoma Department of Transportation  
Date: \_\_\_\_\_

Site ID	Milkweed Count	Nectar Resources Cover (%)	Notes
OKDOT23.D1-S1	10	6	
OKDOT23.D1-S2	0	6	
OKDOT23.D1-S3	149	38	
OKDOT23.D1-S4	201	38	
OKDOT23.D1-S5	25	6	
OKDOT23.D1-S6	12	38	
OKDOT23.D1-S7	75	18	
OKDOT23.D1-S8	16	6	
OKDOT23.D1-S9	210	38	
OKDOT23.D2-S1	2	18	
OKDOT23.D2-S2	10	63	
OKDOT23.D2-S3	11	6	
#REF!			#REF!
OKDOT23.D2-S5	0	6	
OKDOT23.D2-S13	1	6	
OKDOT23.D2-S14	0	6	
OKDOT23.D3-S1	112	38	
OKDOT23.D3-S2	85	38	
OKDOT23.D3-S3	59	6	
OKDOT23.D3-S4	1	6	
OKDOT23.D3-S5	49	38	
OKDOT23.D3-S6	0	6	
OKDOT23.D3-S7	18	18	
OKDOT23.D3-S8	29	38	
OKDOT23.D3-S9	5	18	
OKDOT23.D3-S10	13	38	
OKDOT23.D3-S11	4	63	
OKDOT23.D3-S12	22	38	
OKDOT23.D4-S1	257	6	
OKDOT23.D4-S2	304	18	
OKDOT23.D4-S3	49	6	
OKDOT23.D4-S4	185	6	
OKDOT23.D4-S5	64	38	
OKDOT23.D4-S6	110	18	
OKDOT23.D4-S7	137	18	
OKDOT23.D4-S8	581	18	
OKDOT23.D4-S9	44	18	
OKDOT23.D4-S10	11	38	
OKDOT23.D4-S11	27	38	
OKDOT23.D4-S12	223	38	
OKDOT23.D5-S1	0	6	
OKDOT23.D5-S2	2	6	
OKDOT23.D5-S3	0	6	
OKDOT23.D5-S4	0	6	
OKDOT23.D5-S5	66	6	
OKDOT23.D5-S6	10	38	
OKDOT23.D6-S1	7	18	
OKDOT23.D6-S2	13	38	
OKDOT23.D6-S3	21	88	
OKDOT23.D6-S4	15	6	
OKDOT23.D6-S5	51	88	
OKDOT23.D6-S6	11	18	
OKDOT23.D6-S7	12	38	
OKDOT23.D6-S8	5	38	
OKDOT23.D6-S9	0	18	
OKDOT23.D6-S10	23	38	
OKDOT23.D6-S11	0	0	
OKDOT23.D6-S12	0	6	
OKDOT23.D6-S13	0	63	
OKDOT23.D6-S14	25	38	
OKDOT23.D6-S15	7	38	
OKDOT23.D6-S16	11	63	
OKDOT23.D7-S1	0	6	
OKDOT23.D7-S2	87	38	
OKDOT23.D7-S3	61	63	
OKDOT23.D7-S4	7	18	
OKDOT23.D7-S6	131	6	
OKDOT23.D7-S7	17	38	
OKDOT23.D7-S9	18	38	
OKDOT23.D7-S10	25	18	
OKDOT23.D7-S11	37	38	
OKDOT23.D7-S12	50	38	
OKDOT23.D7-S13	31	38	
OKDOT23.D8-S1	0	6	
OKDOT23.D8-S2	56	18	
OKDOT23.D8-S3	24	6	
OKDOT23.D8-S4	90	38	
OKDOT23.D8-S5	11	6	
OKDOT23.D8-S6	98	38	

Did I Achieve My Monitoring Target?

Congratulations on achieving the target!

Target Achieved?

Total # of Plots with Milkweed (Any)	65.0
Total # of Plots with Milkweed (at Target)	61.0
Percentage of Plots with Milkweed at Target	78%
Mean	53.0
Standard Deviation	88.9
Minimum	0.0
Maximum	581.0
Plots Sampled	78.0
Confidence Interval (90%)	16.8

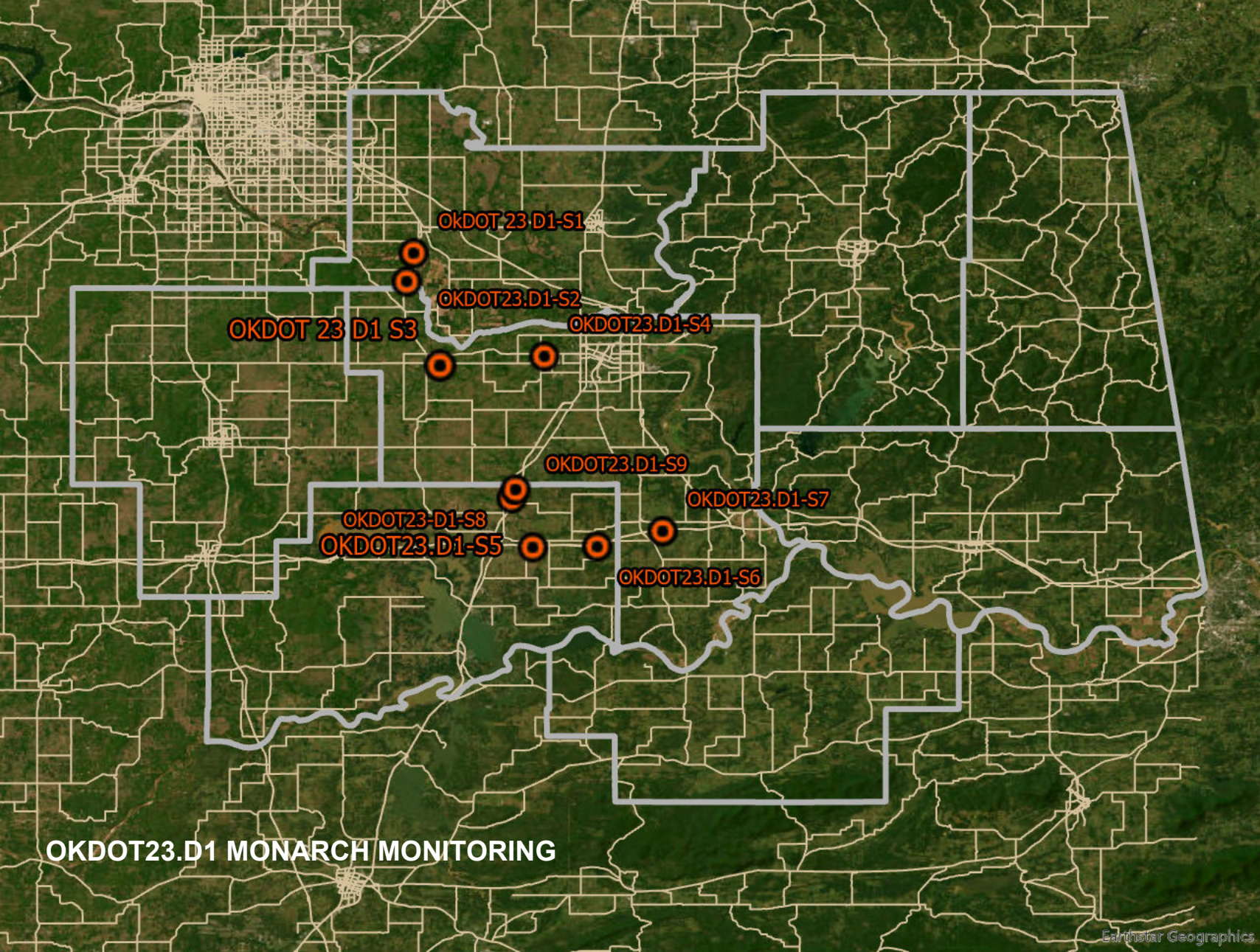
We are 90% confident our adopted acres sampled contain at least:  
**36.2** stems/plot, or at least  
**1052** stems/acre\*

Target Achieved?

Total # of Plots with Nectar Plants (Any)	77.0
Total # of Plots with >10% Nectar Plants	51.0
Percentage of Plots with >10% Nectar Plants	65%
Mean	25.9
Standard Deviation	20.0
Minimum	0.0
Maximum	88.0
Plots Sampled	78.0
Confidence Interval (90%)	3.8

We are 90% confident our adopted acres sampled contain at least:  
**22.1** percent cover of nectar plants

**How is this data populated?**  
The values that populate the table to the left (including Site ID, Milkweed Count, Nectar Resource Cover, and Notes) come directly from the INPUT datasheets included in this tool. The calculated midrange of nectar resource percent cover is used in place of the entered range for summary statistic



OKDOT 23.D1-S1

OKDOT23.D1-S2

OKDOT 23 D1 S3

OKDOT23.D1-S4

OKDOT23.D1-S9

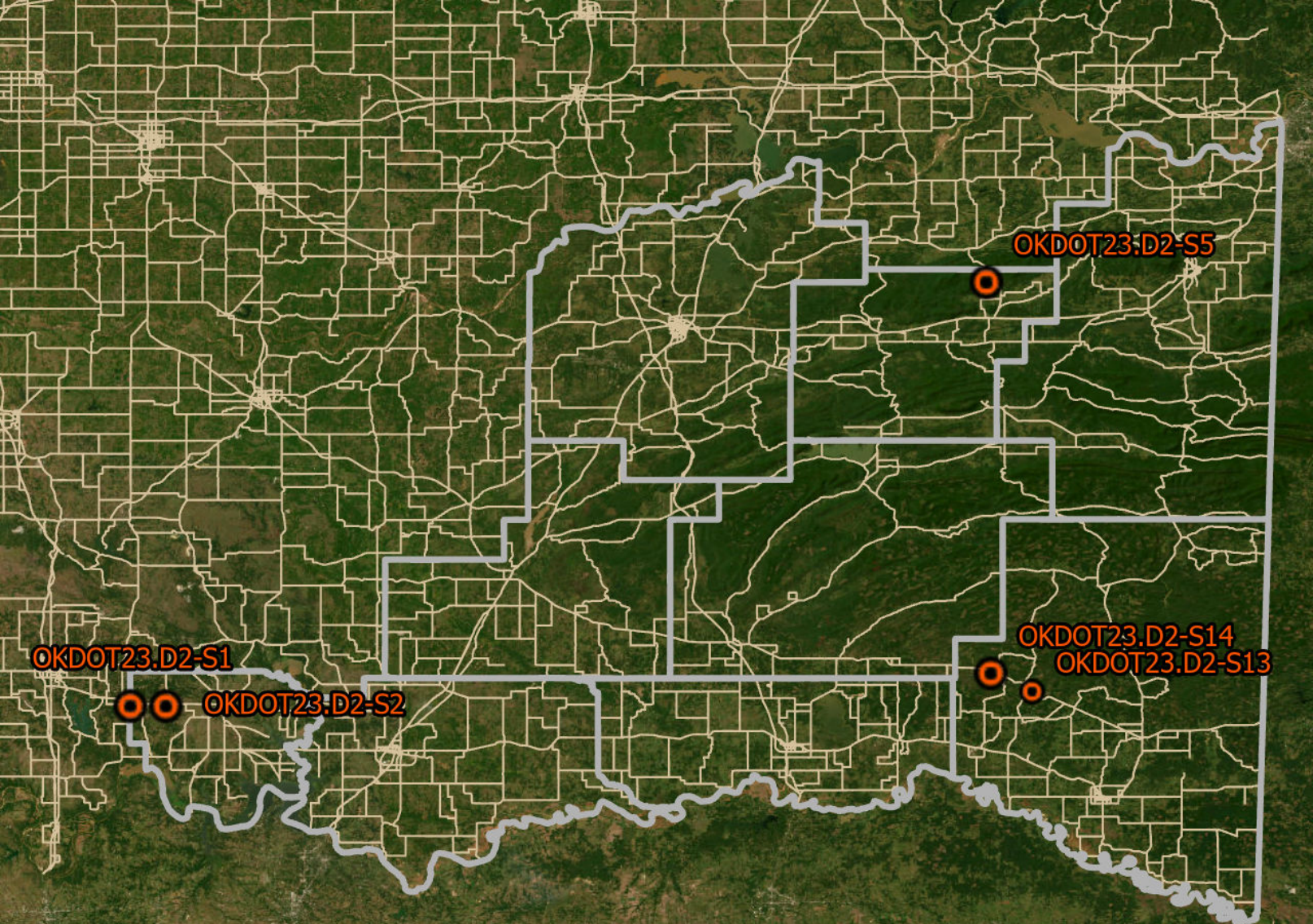
OKDOT23-D1-S8

OKDOT23.D1-S7

OKDOT23.D1-S5

OKDOT23.D1-S6

**OKDOT23.D1 MONARCH MONITORING**



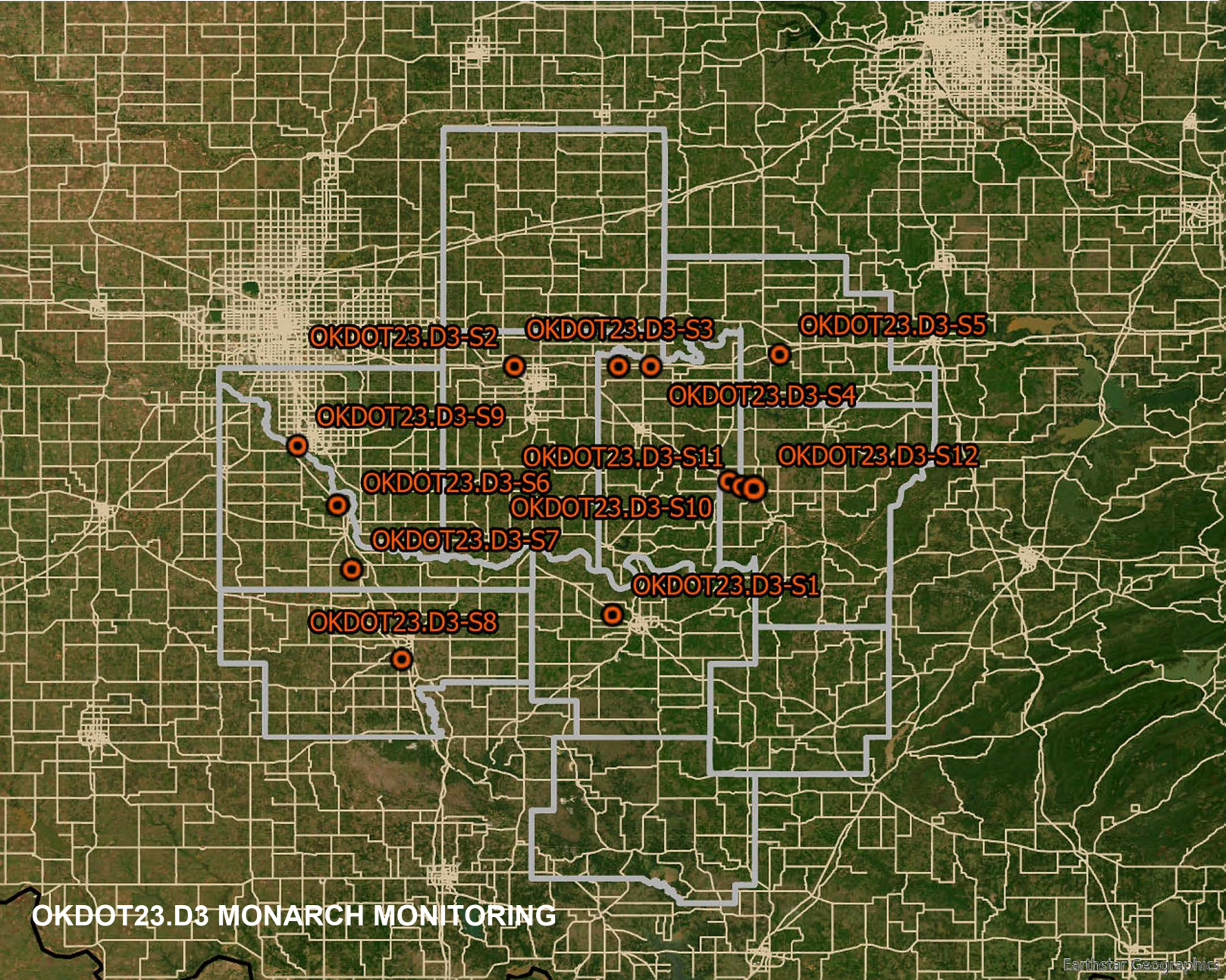
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OKDOT23.D2-S2

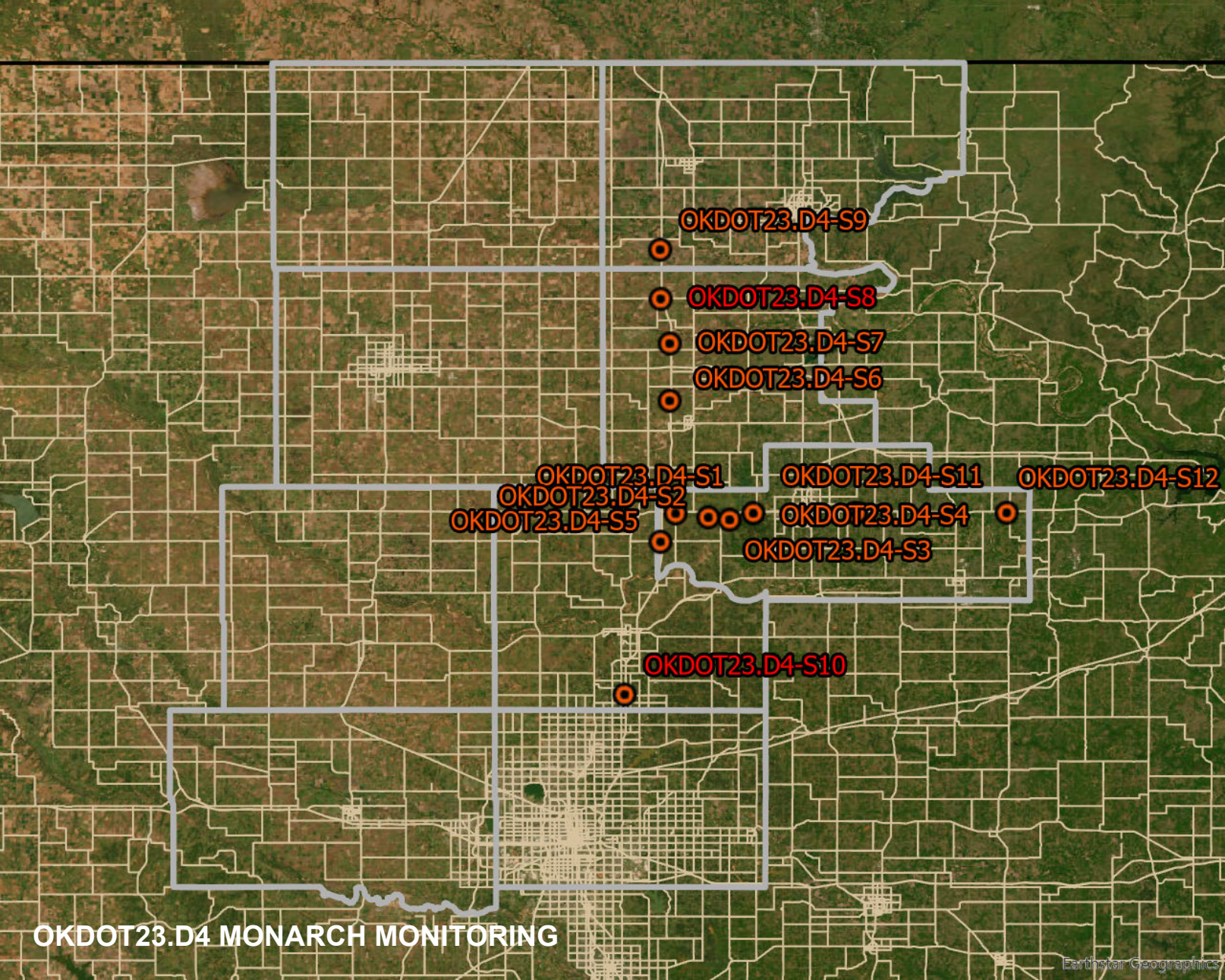
OKDOT23.D2-S5

OKDOT23.D2-S14  
OKDOT23.D2-S13

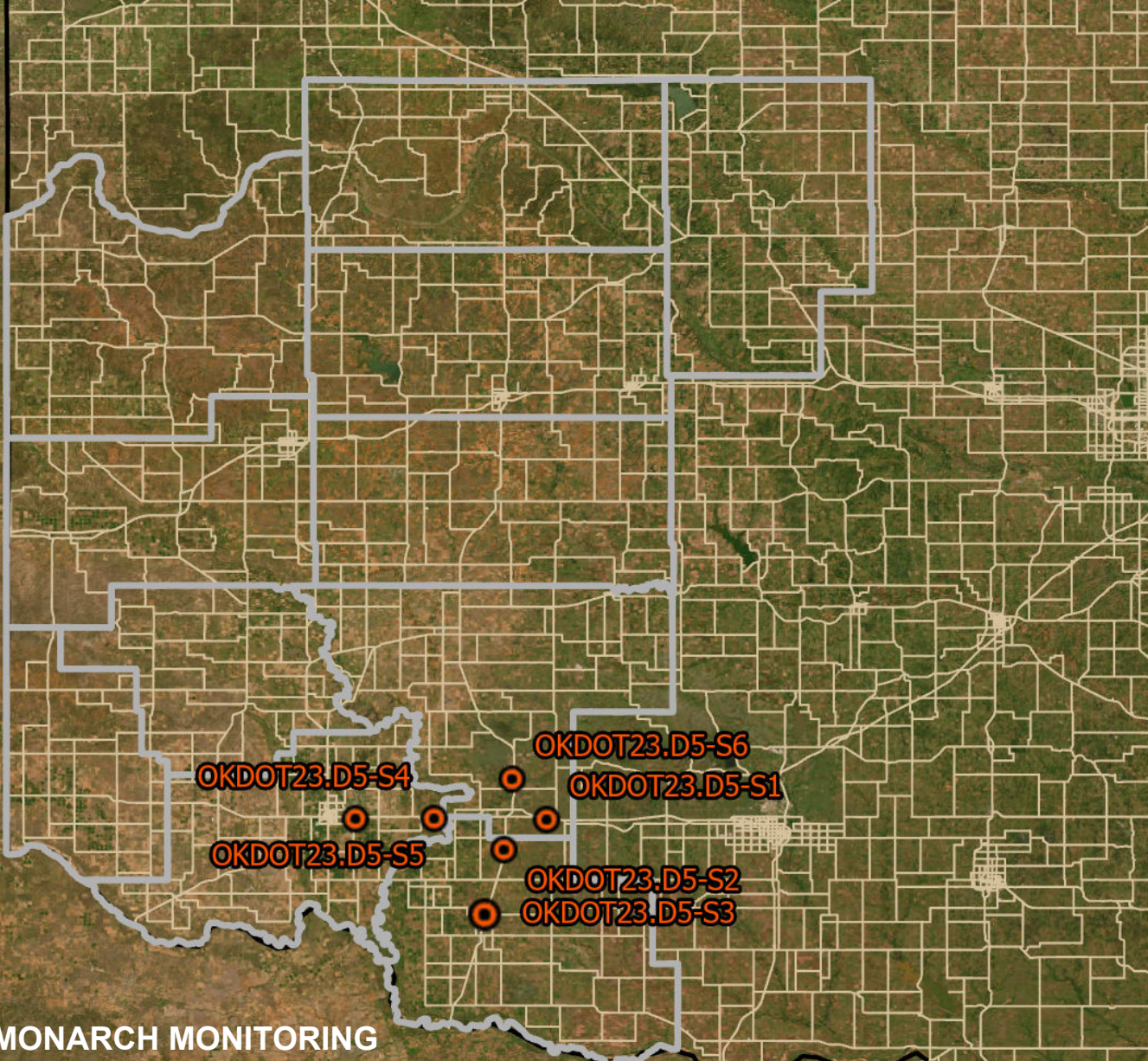
# OKDOT23.D2 MONARCH MONITORING



**OKDOT23.D3 MONARCH MONITORING**



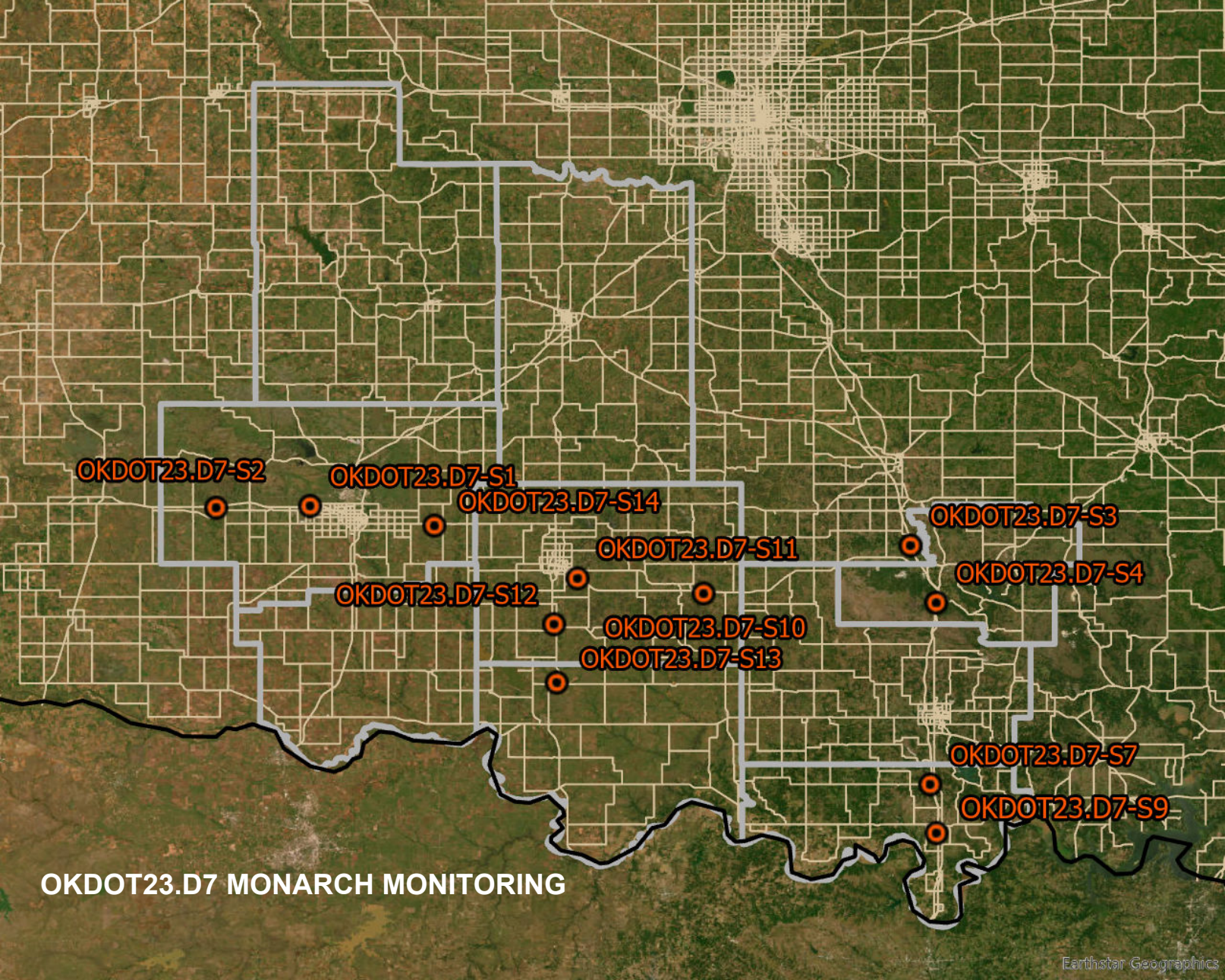
**OKDOT23.D4 MONARCH MONITORING**



**OKDOT23.D5 MONARCH MONITORING**



**OKDOT23. D6 MONARCH MONITORING**



OKDOT23.D7-S2

OKDOT23.D7-S1

OKDOT23.D7-S14

OKDOT23.D7-S3

OKDOT23.D7-S11

OKDOT23.D7-S4

OKDOT23.D7-S12

OKDOT23.D7-S10

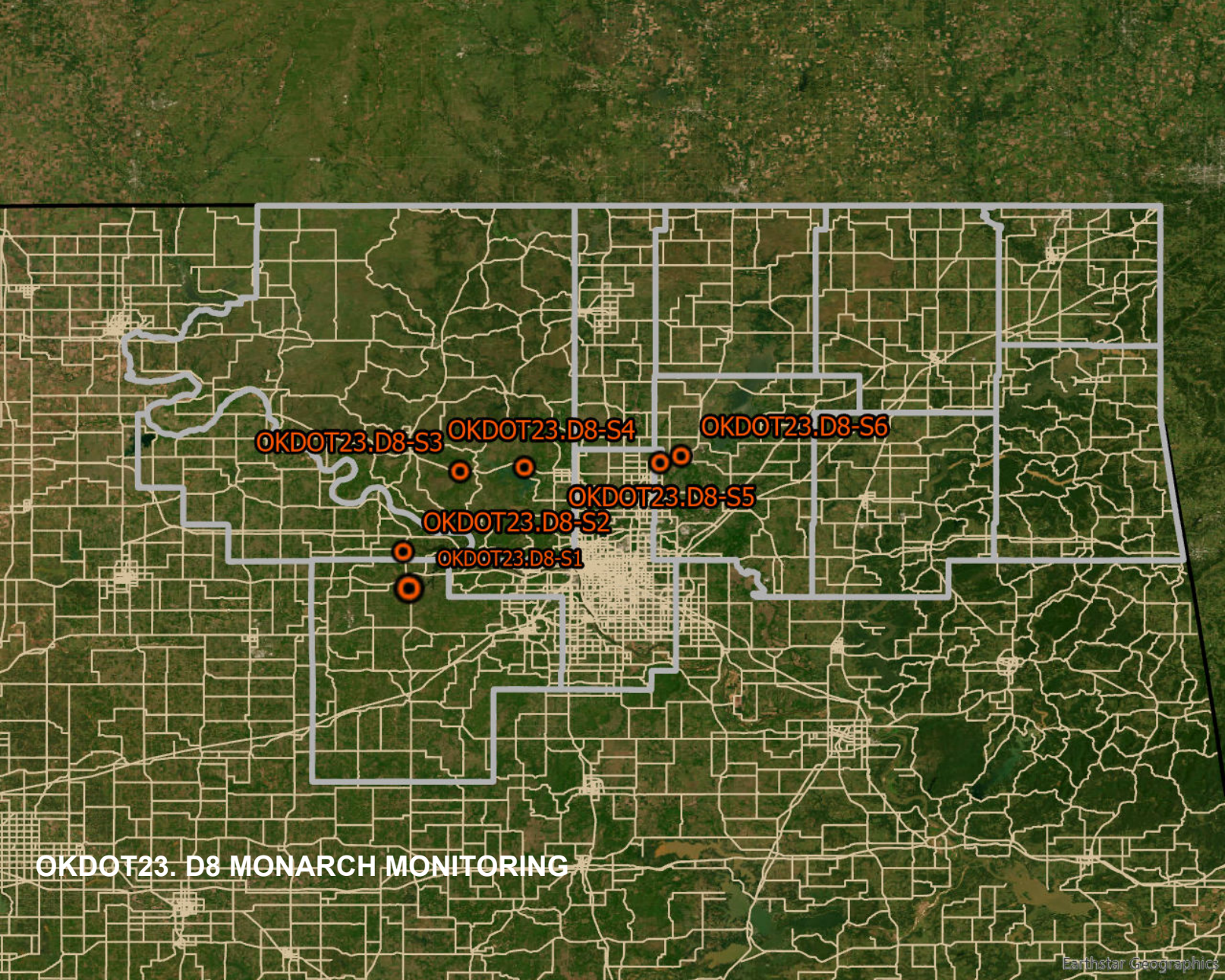
OKDOT23.D7-S13

OKDOT23.D7-S7

OKDOT23.D7-S9

**OKDOT23.D7 MONARCH MONITORING**





OKDOT23.D8-S3

OKDOT23.D8-S4

OKDOT23.D8-S6

OKDOT23.D8-S5

OKDOT23.D8-S2

OKDOT23.D8-S1

OKDOT23. D8 MONARCH MONITORING