Grain Belt Express Transmission Line
Environmental Impact Statement
Appendix 3.12: Visual Simulations

Continued

GRAIN BELT EXPRESS TRANSMISSION LINE PROJECT

Sun and Weather

Mostly-Cloudy

Date: **10-25-22**

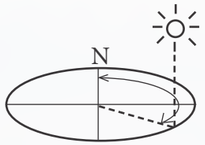
Photo Time: **12:44 PM**

Visibility:

Good — Poor

Air Quality: Good

Sun Azimuth:



189.22°

Sun Angle: **38.45°**

Lighting Angle on Project: **Side Lit**

Wind: **24 mph**

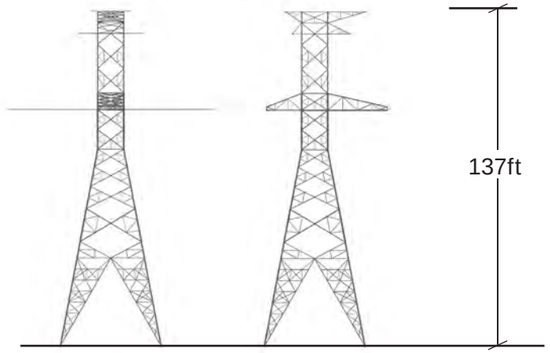
Temperature (°F): **54°F**

Simulation was prepared using information provided by client. Locations, colors, and heights may vary based on final engineering and design.

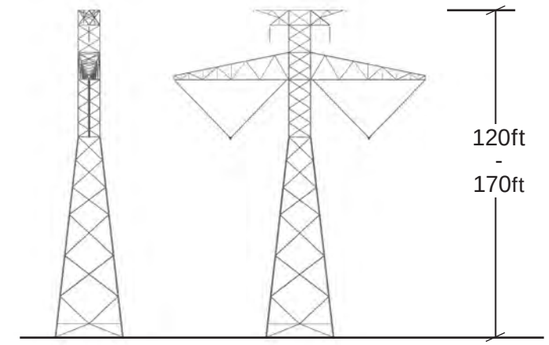
Approximate Distance to Nearest Structure: **0.61 miles**

Project Location

Self-Supporting Deadend



Self-Supporting Tangent



Structure Diagram

KOP 18 - Walters Lane

Base Photographic Documentation

County: **Russell, Kansas**

Latitude (o): **38.776**

Longitude (o): **-98.872**

Viewpoint Elevation (feet): **1757**

Camera Height (meters): **1.5**

Camera Heading (degrees): **130**

Camera Make & Model: **Canon EOS 5D Mark IV**

Camera Sensor Size (mm): **36 x 24 Full Frame**

Crop Factor: **1**

Lens Make & Model: **AF-P Nikkor**

Lens Focal Length (mm): **50**

Image Size (pixels): **6720 x 4480**

Single frame simulation approximates 50mm full frame equivalent.

Viewing Instructions: Printed at 100% the resulting simulation is 16 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed at arms length (24 inches). If viewed on a computer monitor, scale should be 100%.

Grain Belt Express
An INVENERGY TRANSMISSION Project

KOP 18: Walters Lane looking southeast - Existing Condition

KOP 18: Walters Lane looking southeast - Simulated Condition

GRAIN BELT EXPRESS TRANSMISSION LINE PROJECT

Sun and Weather

Mostly-Cloudy

Date: **10-25-22**

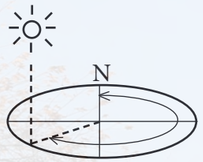
Photo Time: **5:20 PM**

Visibility:

Good — Poor

Air Quality: Good

Sun Azimuth:



243.92°

Sun Angle: **11.1°**

Lighting Angle on Project: **Side Lit**

Wind: **10 mph**

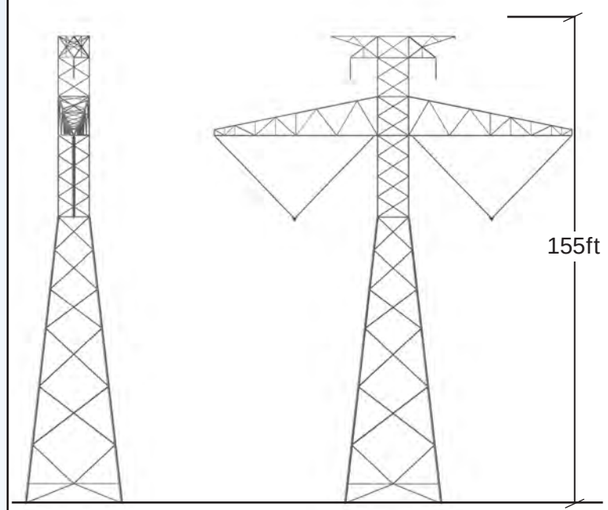
Temperature (°F): **54°F**

Simulation was prepared using information provided by client. Locations, colors, and heights may vary based on final engineering and design.

Approximate Distance to Nearest Structure: **0.15 miles**

Project Location

Self-Supporting Tangent



Structure Diagram

KOP 19 - County Route 379 (NE Estep Road)

Base Photographic Documentation

County: **Clinton, Missouri**

Latitude (o): **39.598**

Longitude (o): **-94.255**

Viewpoint Elevation (feet): **1032**

Camera Height (meters): **1.5**

Camera Heading (degrees): **15**

Camera Make & Model: **Canon EOS 5D Mark IV**

Camera Sensor Size (mm): **36 x 24 Full Frame**

Crop Factor: **1**

Lens Make & Model: **AF-P Nikkor**

Lens Focal Length (mm): **50**

Image Size (pixels): **6720 x 4480**

Single frame simulation approximates 50mm full frame equivalent.

Viewing Instructions: Printed at 100% the resulting simulation is 16 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed at arms length (24 inches). If viewed on a computer monitor, scale should be 100%.

Grain Belt Express
An INVENERGY TRANSMISSION *Project*

KOP 19: County Road 379 (NE Estep Road) looking north - Existing Condition

KOP 19: County Road 379 (NE Estep Road) looking north - Simulated Condition

GRAIN BELT EXPRESS TRANSMISSION LINE PROJECT

Sun and Weather

Sunny

Date: **10-26-22**

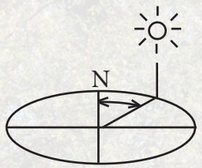
Photo Time: **9:51 AM**

Visibility:

Good — Poor

Air Quality: Good

Sun Azimuth:



128.84°

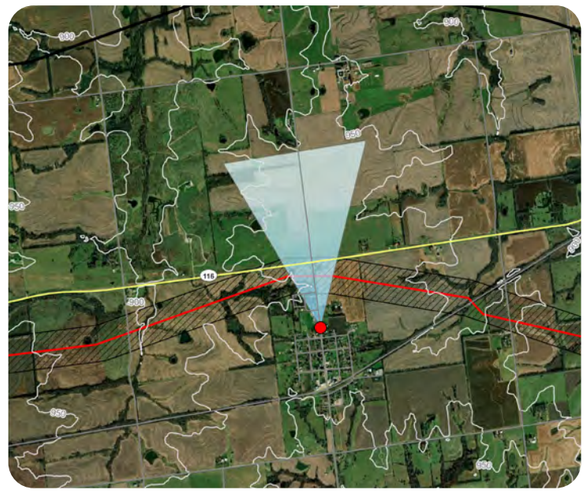
Sun Angle: **21.82°**

Lighting Angle on Project: **Side Lit**

Wind: **5 mph**

Temperature (°F): **52°F**

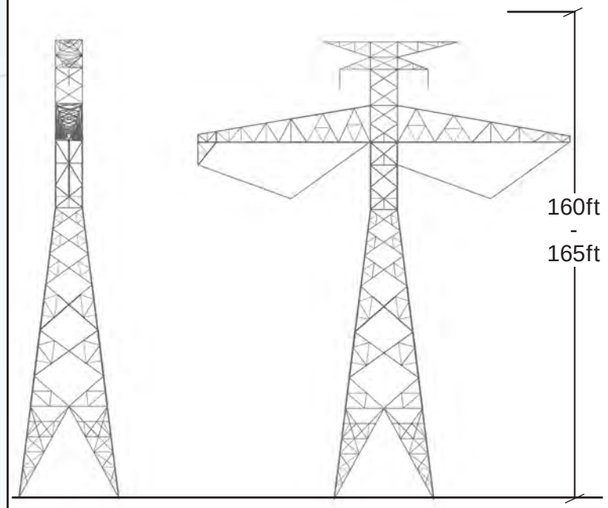
Simulation was prepared using information provided by client. Locations, colors, and heights may vary based on final engineering and design.



Approximate Distance to Nearest Structure: **0.28 miles**

Project Location

Self-Supporting Angle



Structure Diagram

KOP 20 - Main Street

Base Photographic Documentation

County: **Caldwell, Missouri**

Latitude (o): **39.563**

Longitude (o): **-93.927**

Viewpoint Elevation (feet): **981**

Camera Height (meters): **1.5**

Camera Heading (degrees): **0**

Camera Make & Model: **Canon EOS 5D Mark IV**

Camera Sensor Size (mm): **36 x 24 Full Frame**

Crop Factor: **1**

Lens Make & Model: **AF-P Nikkor**

Lens Focal Length (mm): **50**

Image Size (pixels): **6720 x 4480**

Single frame simulation approximates 50mm full frame equivalent.

Viewing Instructions: Printed at 100% the resulting simulation is 16 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed at arms length (24 inches). If viewed on a computer monitor, scale should be 100%.

Grain Belt Express
An INVENERGY TRANSMISSION *Project*

KOP 20: Main Street looking north - Existing Condition

KOP 20: Main Street looking north - Simulated Condition

This image does not represent a simulated condition. The purpose of this image is to highlight the modeled location of the structures which may otherwise be difficult for viewers to discern in the simulated condition.

KOP 20: Main Street looking north - Color Overlay

GRAIN BELT EXPRESS TRANSMISSION LINE PROJECT

Sun and Weather

Sunny

Date: **10-26-22**

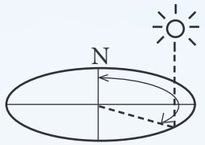
Photo Time: **11:51 AM**

Visibility:

Good — Poor

Air Quality: Good

Sun Azimuth:



158.45°

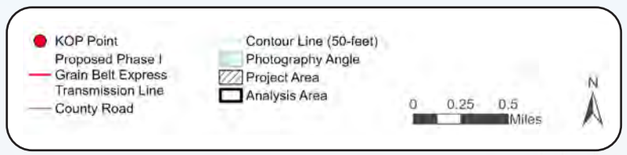
Sun Angle: **35.71°**

Lighting Angle on Project: **Front Lit**

Wind: **10 mph**

Temperature (°F): **58°F**

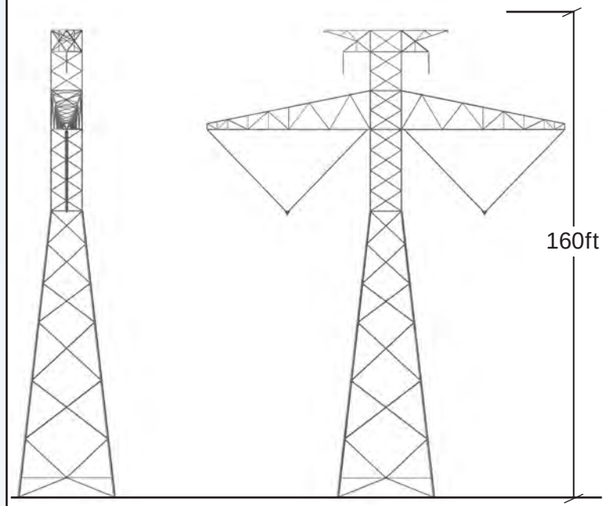
Simulation was prepared using information provided by client. Locations, colors, and heights may vary based on final engineering and design.



Approximate Distance to Nearest Structure: **0.33 miles**

Project Location

Self-Supporting Tangent



Structure Diagram

KOP 21 - County Routes 107 and M

Base Photographic Documentation

County: **Chariton, Missouri**

Latitude (o): **39.485**

Longitude (o): **-93.222**

Viewpoint Elevation (feet): **660**

Camera Height (meters): **1.5**

Camera Heading (degrees): **70**

Camera Make & Model: **Canon EOS 5D Mark IV**

Camera Sensor Size (mm): **36 x 24 Full Frame**

Crop Factor: **1**

Lens Make & Model: **AF-P Nikkor**

Lens Focal Length (mm): **50**

Image Size (pixels): **6720 x 4480**

Single frame simulation approximates 50mm full frame equivalent.

Viewing Instructions: Printed at 100% the resulting simulation is 16 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed at arms length (24 inches). If viewed on a computer monitor, scale should be 100%.

Grain Belt Express
An INVENERGY TRANSMISSION Project

KOP 21: Intersection of County Routes 107 and M looking north - Existing Condition

KOP 21: Intersection of County Routes 107 and M looking north - Simulated Condition

GRAIN BELT EXPRESS TRANSMISSION LINE PROJECT

Sun and Weather

Mostly-Cloudy

Date: **10-26-22**

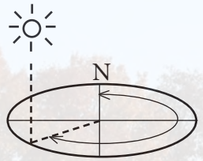
Photo Time: **3:19 PM**

Visibility:

Good — Poor

Air Quality: Good

Sun Azimuth:



218.71°

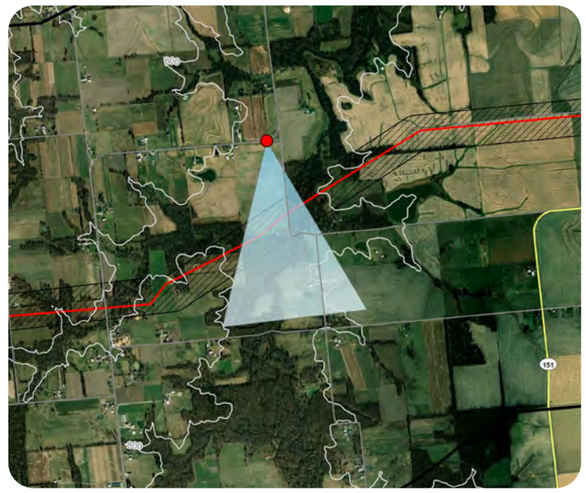
Sun Angle: **29.35°**

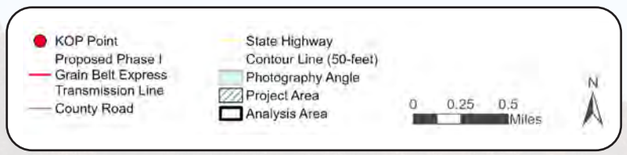
Lighting Angle on Project: **Side Lit**

Wind: **6 mph**

Temperature (°F): **62°F**

Simulation was prepared using information provided by client. Locations, colors, and heights may vary based on final engineering and design.

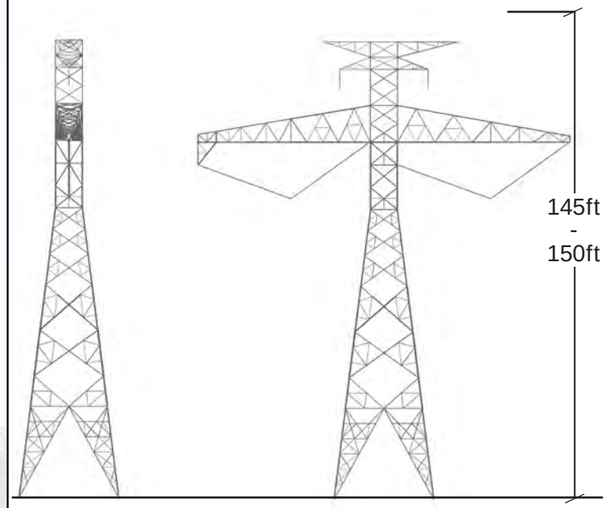




Approximate Distance to Nearest Structure: **0.38 miles**

Project Location

Self-Supporting Angle



Structure Diagram

KOP 22 - County Routes 1061 and Y

Base Photographic Documentation

County: **Monroe, Missouri**

Latitude (o): **39.368**

Longitude (o): **-92.25**

Viewpoint Elevation (feet): **780**

Camera Height (meters): **1.5**

Camera Heading (degrees): **170**

Camera Make & Model: **Canon EOS 5D Mark IV**

Camera Sensor Size (mm): **36 x 24 Full Frame**

Crop Factor: **1**

Lens Make & Model: **AF-P Nikkor**

Lens Focal Length (mm): **50**

Image Size (pixels): **6720 x 4480**

Single frame simulation approximates 50mm full frame equivalent.

Viewing Instructions: Printed at 100% the resulting simulation is 16 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed at arms length (24 inches). If viewed on a computer monitor, scale should be 100%.

Grain Belt Express
An INVENERGY TRANSMISSION *Project*

KOP 22: Intersection of County Routes 1061 and Y looking south - Existing Condition

KOP 22: Intersection of County Routes 1061 and Y looking south - Simulated Condition

GRAIN BELT EXPRESS TRANSMISSION LINE PROJECT

Sun and Weather

Mostly-Cloudy

Date: **10-27-22**

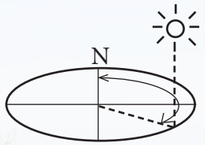
Photo Time: **12:11 PM**

Visibility:

Good — Poor

Air Quality: Good

Sun Azimuth:



164.42°

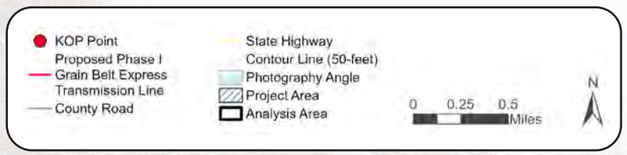
Sun Angle: **36.94°**

Lighting Angle on Project: **Front Lit**

Wind: **12 mph**

Temperature (°F): **54°F**

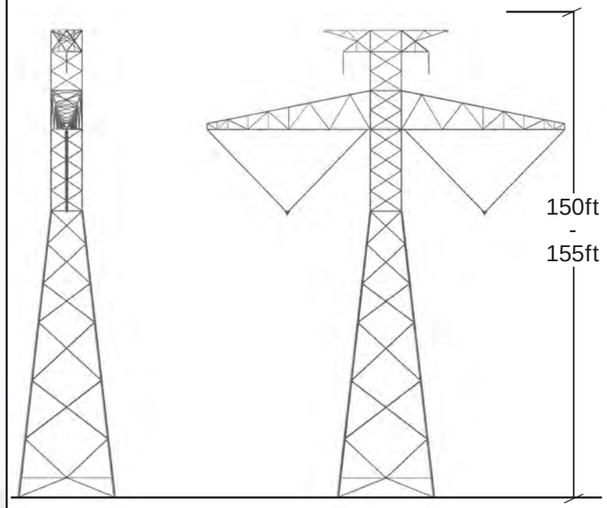
Simulation was prepared using information provided by client. Locations, colors, and heights may vary based on final engineering and design.



Approximate Distance to Nearest Structure: **0.6 miles**

Project Location

Self-Supporting Tangent



Structure Diagram

KOP 23 - Ronald and Maude Hartell Conservation Area - Hartell Lake

Base Photographic Documentation

County: **Clinton, Missouri**

Latitude (o): **39.603**

Longitude (o): **-94.402**

Viewpoint Elevation (feet): **972**

Camera Height (meters): **1.5**

Camera Heading (degrees): **335**

Camera Make & Model: **Canon EOS 5D Mark IV**

Camera Sensor Size (mm): **36 x 24 Full Frame**

Crop Factor: **1**

Lens Make & Model: **AF-P Nikkor**

Lens Focal Length (mm): **50**

Image Size (pixels): **6720 x 4480**

Single frame simulation approximates 50mm full frame equivalent.

Viewing Instructions: Printed at 100% the resulting simulation is 16 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed at arms length (24 inches). If viewed on a computer monitor, scale should be 100%.

Grain Belt Express
An INVENERGY TRANSMISSION Project

KOP 23: Ronald and Maude Hartell Conservation Area - Hartell Lake looking northwest - Existing Condition

KOP 23: Ronald and Maude Hartell Conservation Area - Hartell Lake looking northwest - Simulated Condition

This image does not represent a simulated condition. The purpose of this image is to highlight the modeled location of the structures which may otherwise be difficult for viewers to discern in the simulated condition.

KOP 23: Ronald and Maude Hartell Conservation Area - Hartell Lake looking northwest - Color Overlay

GRAIN BELT EXPRESS TRANSMISSION LINE PROJECT

Sun and Weather

Mostly-Cloudy

Date: **10-27-22**

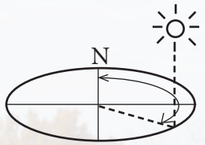
Photo Time: **12:57 PM**

Visibility:

Good — Poor

Air Quality: Good

Sun Azimuth:



178.42°

Sun Angle: **37.94°**

Lighting Angle on Project: **Side Lit**

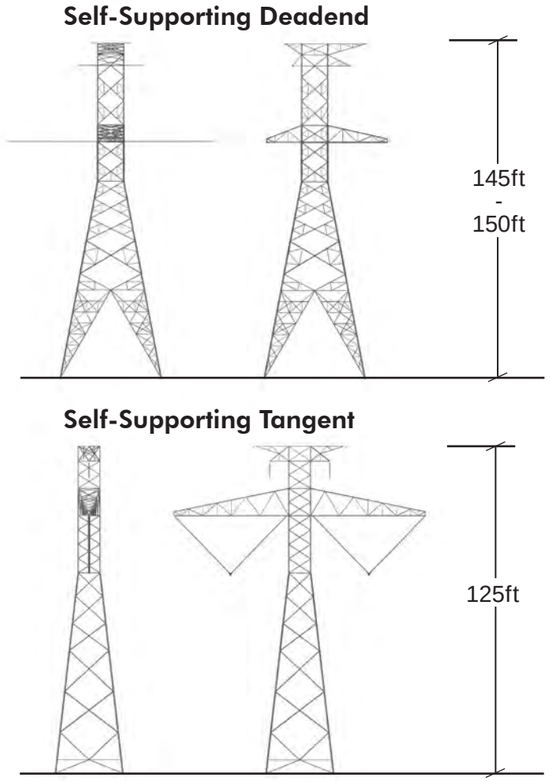
Wind: **10 mph**

Temperature (°F): **57°F**

Simulation was prepared using information provided by client. Locations, colors, and heights may vary based on final engineering and design.

Approximate Distance to Nearest Structure: **0.47 miles**

Project Location



Structure Diagram

KOP 24 - U.S. Highway 169

Base Photographic Documentation

County: **Clinton, Missouri**

Latitude (o): **39.592**

Longitude (o): **-94.571**

Viewpoint Elevation (feet): **875**

Camera Height (meters): **1.5**

Camera Heading (degrees): **310**

Camera Make & Model: **Canon EOS 5D Mark IV**

Camera Sensor Size (mm): **36 x 24 Full Frame**

Crop Factor: **1**

Lens Make & Model: **AF-P Nikkor**

Lens Focal Length (mm): **50**

Image Size (pixels): **6720 x 4480**

Single frame simulation approximates 50mm full frame equivalent.

Viewing Instructions: Printed at 100% the resulting simulation is 16 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed at arms length (24 inches). If viewed on a computer monitor, scale should be 100%.

Grain Belt Express
An INVENERGY TRANSMISSION Project

KOP 24: U.S. Highway 169 looking northwest - Existing Condition

KOP 24: U.S. Highway 169 looking northwest - Simulated Condition

This image does not represent a simulated condition. The purpose of this image is to highlight the modeled location of the structures which may otherwise be difficult for viewers to discern in the simulated condition.

KOP 24: U.S. Highway 169 looking northwest - Color Overlay

GRAIN BELT EXPRESS TRANSMISSION LINE PROJECT

Sun and Weather

Mostly-Cloudy

Date: **10-27-22**

Photo Time: **1:36 PM**

Visibility:

Good — Poor

Air Quality: Good

Sun Azimuth: **190.4°**

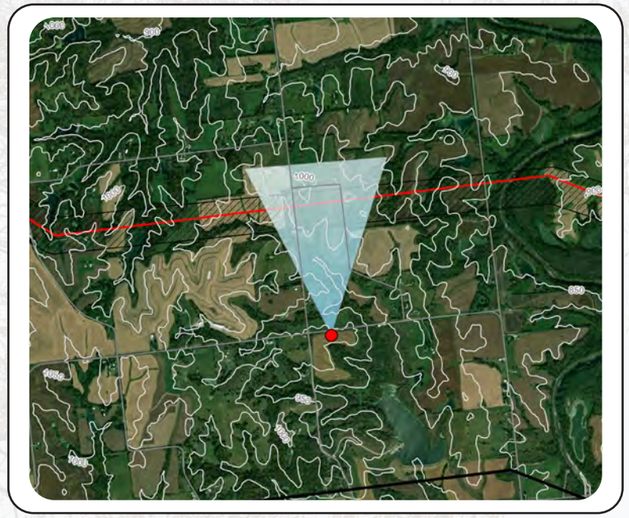
Sun Angle: **37.45°**

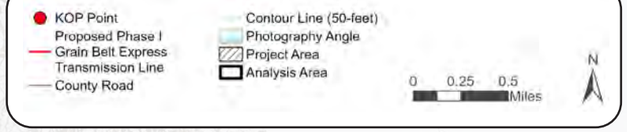
Lighting Angle on Project: **Front Lit**

Wind: **14 mph**

Temperature (°F): **63°F**

Simulation was prepared using information provided by client. Locations, colors, and heights may vary based on final engineering and design.

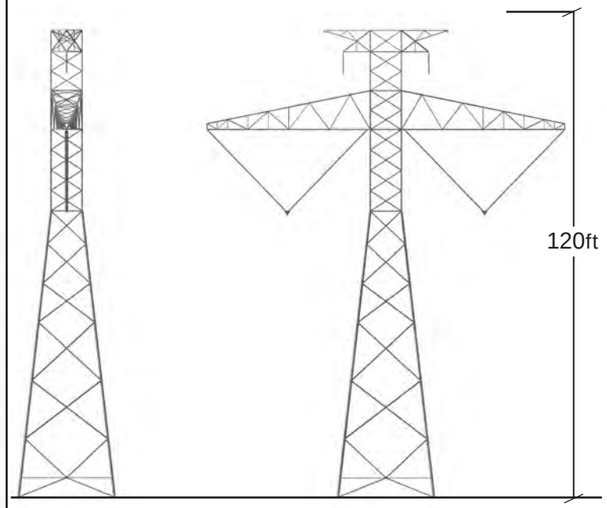




Approximate Distance to Nearest Structure: **0.73 miles**

Project Location

Self-Supporting Tangent



Structure Diagram

KOP 25 - Belcher Branch Lake Conservation Area - State Route MM SE

Base Photographic Documentation

County: **Buchanan, Missouri**

Latitude (o): **39.593**

Longitude (o): **-94.739**

Viewpoint Elevation (feet): **966**

Camera Height (meters): **1.5**

Camera Heading (degrees): **340**

Camera Make & Model: **Canon EOS 5D Mark IV**

Camera Sensor Size (mm): **36 x 24 Full Frame**

Crop Factor: **1**

Lens Make & Model: **AF-P Nikkor**

Lens Focal Length (mm): **50**

Image Size (pixels): **6720 x 4480**

Single frame simulation approximates 50mm full frame equivalent.

Viewing Instructions: Printed at 100% the resulting simulation is 16 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed at arms length (24 inches). If viewed on a computer monitor, scale should be 100%.

Grain Belt Express
An INVENERGY TRANSMISSION *Project*

KOP 25: Belcher Branch Lake Conservation Area - State Route MM SE looking north - Existing Condition

KOP 25: Belcher Branch Lake Conservation Area - State Route MM SE looking north - Simulated Condition

GRAIN BELT EXPRESS TRANSMISSION LINE PROJECT

Sun and Weather

Mostly-Cloudy

Date: **10-27-22**

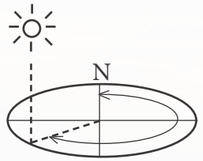
Photo Time: **2:00 PM**

Visibility:

Good — Poor

Air Quality: Good

Sun Azimuth:



197.57°

Sun Angle: **36.21°**

Lighting Angle on Project: **Back Lit**

Wind: **14 mph**

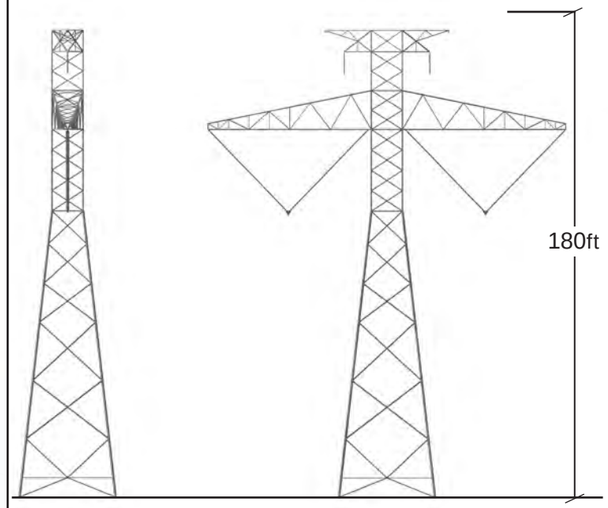
Temperature (°F): **63°F**

Simulation was prepared using information provided by client. Locations, colors, and heights may vary based on final engineering and design.

Approximate Distance to Nearest Structure: **0.27 miles**

Project Location

Self-Supporting Tangent



Structure Diagram

KOP 26 - County Route 313 (45th Road SE)

Base Photographic Documentation

County: **Buchanan, Missouri**

Latitude (o): **39.617**

Longitude (o): **-94.787**

Viewpoint Elevation (feet): **1017**

Camera Height (meters): **1.5**

Camera Heading (degrees): **180**

Camera Make & Model: **Canon EOS 5D Mark IV**

Camera Sensor Size (mm): **36 x 24 Full Frame**

Crop Factor: **1**

Lens Make & Model: **AF-P Nikkor**

Lens Focal Length (mm): **50**

Image Size (pixels): **6720 x 4480**

Single frame simulation approximates 50mm full frame equivalent.

Viewing Instructions: Printed at 100% the resulting simulation is 16 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed at arms length (24 inches). If viewed on a computer monitor, scale should be 100%.

Grain Belt Express
An INVENERGY TRANSMISSION *Project*

KOP 26: County Road 313 (45th Road SE) looking south - Existing Condition

KOP 26: County Road 313 (45th Road SE) looking south - Simulated Condition

GRAIN BELT EXPRESS TRANSMISSION LINE PROJECT

Sun and Weather

Mostly-Cloudy

Date: **10-26-22**

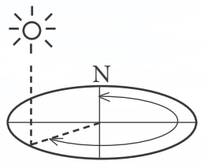
Photo Time: **4:13 PM**

Visibility:

Good — Poor

Air Quality: Good

Sun Azimuth:



232.89°

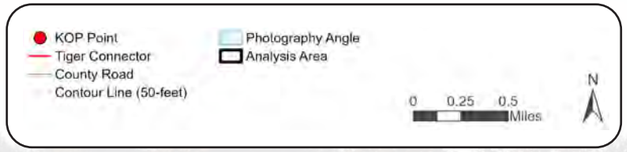
Sun Angle: **20.54°**

Lighting Angle on Project: **Side Lit**

Wind: **24 mph**

Temperature (°F): **40°F**

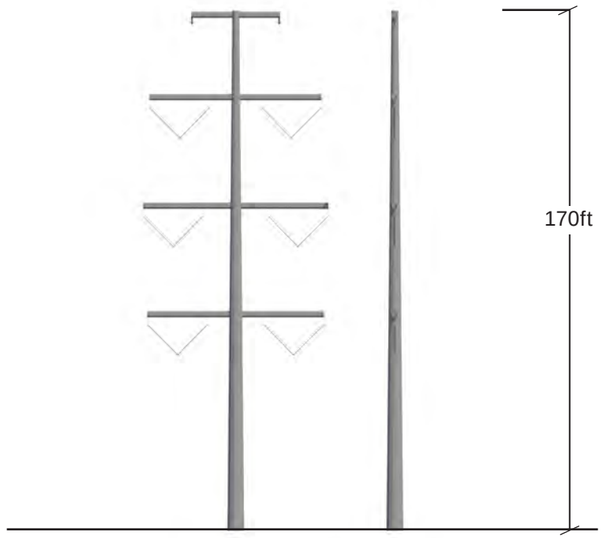
Simulation was prepared using information provided by client. Locations, colors, and heights may vary based on final engineering and design.



Approximate Distance to Nearest Structure: **0.37 miles**

Project Location

V-String Tangent Structure



Structure Diagram

KOP 27 - Intersection of Highway C and County Road 248

Base Photographic Documentation

County: **Boone, Missouri**

Latitude (o): **39.283**

Longitude (o): **-92.124**

Viewpoint Elevation (feet): **845**

Camera Height (meters): **1.5**

Camera Heading (degrees): **225**

Camera Make & Model: **Canon EOS 5D Mark IV**

Camera Sensor Size (mm): **36 x 24 Full Frame**

Crop Factor: **1**

Lens Make & Model: **AF-P Nikkor**

Lens Focal Length (mm): **50**

Image Size (pixels): **6720 x 4480**

Single frame simulation approximates 50mm full frame equivalent.

Viewing Instructions: Printed at 100% the resulting simulation is 16 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed at arms length (24 inches). If viewed on a computer monitor, scale should be 100%.

Grain Belt Express
An INVENERGY TRANSMISSION *Project*

KOP 27: Intersection of Highway C and County Road 248 looking west - Existing Condition

KOP 27: Intersection of Highway [illegible] and County Road 248 looking west - Simulated Condition

GRAIN BELT EXPRESS TRANSMISSION LINE PROJECT

Sun and Weather

Mostly-Cloudy

Date: **10-26-22**

Photo Time: **4:32 PM**

Visibility:

Good — Poor

Air Quality: Good

Sun Azimuth: **236.42°**

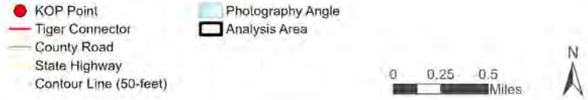
Sun Angle: **17.69°**

Lighting Angle on Project: **Side Lit**

Wind: **20 mph**

Temperature (°F): **42°F**

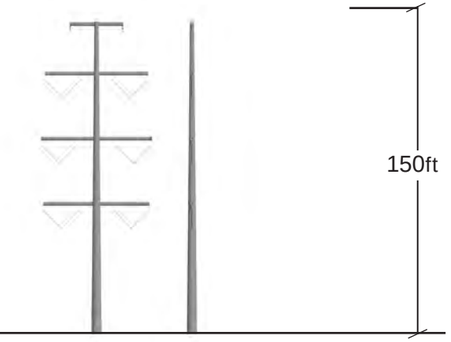
Simulation was prepared using information provided by client. Locations, colors, and heights may vary based on final engineering and design.



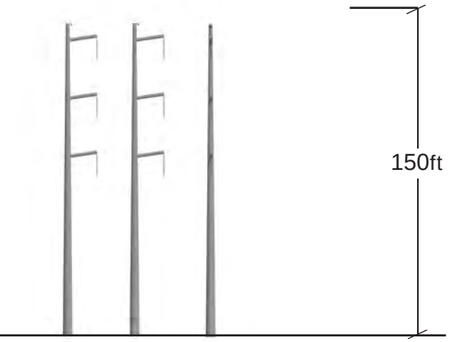
Approximate Distance to Nearest Structure: **0.45 miles**

Project Location

V-String Tangent Structure



Inline Deadend Structure



Structure Diagram

KOP 28 - Intersection of North Rangeline Road and State Route 22

Base Photographic Documentation

County: **Boone, Missouri**

Latitude (o): **39.204**

Longitude (o): **-92.086**

Viewpoint Elevation (feet): **861**

Camera Height (meters): **1.5**

Camera Heading (degrees): **90**

Camera Make & Model: **Canon EOS 5D Mark IV**

Camera Sensor Size (mm): **36 x 24 Full Frame**

Crop Factor: **1**

Lens Make & Model: **AF-P Nikkor**

Lens Focal Length (mm): **50**

Image Size (pixels): **6720 x 4480**

Single frame simulation approximates 50mm full frame equivalent.

Viewing Instructions: Printed at 100% the resulting simulation is 16 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed at arms length (24 inches). If viewed on a computer monitor, scale should be 100%.

Grain Belt Express
An INVENERGY TRANSMISSION *Project*

KOP 28: Intersection of North Rangeline Road and State Route 22 looking east - Existing Condition

KOP 28: Intersection of North Rangeline Road and State Route 22 looking east - Simulated Condition

Grain Belt Express Transmission Line
Environmental Impact Statement
Appendix 3.15: Data Characterizing Block Groups in the Environmental Justice Analysis Area

Table 1. Data Characterizing Block Groups in the Environmental Justice Analysis Area

State	County	Project Facilities in County [a]	GEOID	Population Estimate	Poverty Rate	Minority Rate	Environmental Justice Community [b]
Kansas					**12.21%**	**26.64%**	
Kansas	Ford County	HVDC Line, converter station, Ford County Interconnect	200579616001	552	6.79%	16.12%	No
Kansas	Ford County	HVDC Line, converter station, Ford County Interconnect	200579617002	965	6.00%	4.35%	No
Kansas	Ford County	HVDC Line, converter station, Ford County Interconnect	200579621022	2,076	5.08%	61.56%	**Yes**
Kansas	Hodgeman County	HVDC Line	200834611001	987	10.33%	9.22%	No
Kansas	Edwards County	HVDC Line	200479696002	696	3.23%	11.49%	No
Kansas	Edwards County	HVDC Line	200479697002	802	20.00%	35.79%	**Yes**
Kansas	Kiowa County	None	200979691001	808	1.25%	1.86%	No
Kansas	Pawnee County	HVDC Line	201459702001	1,355	8.09%	8.34%	No
Kansas	Pawnee County	HVDC Line	201459703001	791	13.98%	12.77%	No
Kansas	Pawnee County	HVDC Line	201459703002	696	1.65%	6.47%	No
Kansas	Rush County	None	201659723003	890	14.29%	3.71%	No
Kansas	Barton County	HVDC Line	200099712001	713	5.14%	4.63%	No
Kansas	Barton County	HVDC Line	200099712002	814	9.12%	3.32%	No
Kansas	Barton County	HVDC Line	200099713001	1,435	18.89%	6.62%	No
Kansas	Russell County	HVDC Line	201679738001	372	26.63%	17.47%	**Yes**
Kansas	Russell County	HVDC Line	201679738005	772	44.13%	16.32%	**Yes**
Kansas	Russell County	HVDC Line	201679738006	1,064	0.00%	5.64%	No
Kansas	Russell County	HVDC Line	201679739001	835	10.67%	8.74%	No
Kansas	Russell County	HVDC Line	201679739002	958	8.97%	1.46%	No
Kansas	Russell County	HVDC Line	201679739003	537	11.11%	1.30%	No
Kansas	Osborne County	HVDC Line	201414741001	727	15.67%	4.13%	No
Kansas	Osborne County	HVDC Line	201414741002	936	11.21%	6.20%	No
Kansas	Osborne County	HVDC Line	201414741003	1,024	16.36%	7.13%	No

State	County	Project Facilities in County [a]	GEOID	Population Estimate	Poverty Rate	Minority Rate	Environmental Justice Community [b]
Kansas	Osborne County	HVDC Line	201414741004	807	17.80%	6.07%	No
Kansas	Smith County	None	201834759002	1,105	11.99%	5.97%	No
Kansas	Mitchell County	None	201231766001	833	3.13%	2.04%	No
Kansas	Mitchell County	HVDC Line	201231767001	799	9.41%	2.88%	No
Kansas	Mitchell County	HVDC Line	201231767002	1,266	10.79%	5.21%	No
Kansas	Jewell County	None	200895763001	946	16.44%	6.34%	No
Kansas	Cloud County	HVDC Line	200299771001	932	9.64%	0.75%	No
Kansas	Cloud County	HVDC Line	200299771002	1,233	12.35%	3.81%	No
Kansas	Cloud County	HVDC Line	200299772001	1,254	2.64%	17.22%	No
Kansas	Cloud County	HVDC Line	200299772002	940	20.54%	9.26%	**Yes**
Kansas	Cloud County	HVDC Line	200299773001	818	10.51%	20.05%	No
Kansas	Cloud County	HVDC Line	200299773002	840	8.90%	7.26%	No
Kansas	Cloud County	HVDC Line	200299773003	801	5.91%	2.87%	No
Kansas	Cloud County	HVDC Line	200299773004	740	32.94%	4.86%	**Yes**
Kansas	Cloud County	HVDC Line	200299774001	576	5.81%	0.52%	No
Kansas	Republic County	None	201579781002	674	8.13%	2.82%	No
Kansas	Washington County	HVDC Line	202019786001	887	10.60%	2.59%	No
Kansas	Washington County	HVDC Line	202019786002	377	12.38%	3.71%	No
Kansas	Washington County	HVDC Line	202019787001	447	18.96%	14.32%	No
Kansas	Washington County	HVDC Line	202019787002	1,022	9.79%	0.39%	No
Kansas	Washington County	HVDC Line	202019787003	1,144	8.10%	19.06%	No
Kansas	Marshall County	HVDC Line	201170407011	816	4.60%	0.61%	No
Kansas	Marshall County	HVDC Line	201170605101	930	4.27%	2.15%	No
Kansas	Marshall County	HVDC Line	201170605102	1,730	3.80%	9.94%	No
Kansas	Marshall County	HVDC Line	201170605103	834	23.64%	5.16%	**Yes**
Kansas	Marshall County	HVDC Line	201170701822	1,304	5.18%	10.74%	No
Kansas	Marshall County	HVDC Line	201170901861	1,200	17.99%	3.92%	No
Kansas	Marshall County	HVDC Line	201170901862	823	10.10%	6.32%	No
Kansas	Nemaha County	HVDC Line	201314801001	1,712	4.91%	3.80%	No
Kansas	Nemaha County	HVDC Line	201314802001	1,116	6.74%	4.39%	No
Kansas	Nemaha County	HVDC Line	201314802002	1,174	8.42%	8.86%	No
Kansas	Nemaha County	HVDC Line	201314802003	1,166	6.33%	8.32%	No
Kansas	Nemaha County	HVDC Line	201314803001	818	3.96%	7.09%	No

State	County	Project Facilities in County [a]	GEOID	Population Estimate	Poverty Rate	Minority Rate	Environmental Justice Community [b]
Kansas	Nemaha County	HVDC Line	201314803002	880	6.41%	2.16%	No
Kansas	Nemaha County	HVDC Line	201314803003	609	10.00%	5.25%	No
Kansas	Brown County	HVDC Line	200134806001	1,216	5.75%	10.69%	No
Kansas	Brown County	HVDC Line	200134806002	789	23.41%	71.10%	**Yes**
Kansas	Brown County	HVDC Line	200134807003	1,775	3.42%	4.00%	No
Kansas	Brown County	HVDC Line	200134808001	573	10.46%	13.26%	No
Kansas	Brown County	HVDC Line	200134808002	931	10.59%	9.88%	No
Kansas	Atchison County	None	200050816003	919	3.21%	0.11%	No
Kansas	Doniphan County	HVDC Line	200430201003	695	14.49%	0.72%	No
Kansas	Doniphan County	HVDC Line	200430202003	384	9.30%	3.12%	No
Kansas	Doniphan County	HVDC Line	200430203002	589	5.67%	0.51%	No
Missouri					**13.01%**	**23.44%**	
Missouri	Buchanan County	HVDC Line	290210023001	1,294	3.49%	5.02%	No
Missouri	Buchanan County	HVDC Line	290210025003	698	18.66%	3.01%	No
Missouri	Buchanan County	HVDC Line	290210027001	716	10.92%	0.00%	No
Missouri	Buchanan County	HVDC Line	290210028001	1,081	0.00%	10.08%	No
Missouri	Buchanan County	HVDC Line	290210028002	615	9.17%	3.41%	No
Missouri	Buchanan County	HVDC Line	290210028003	1,423	9.31%	9.91%	No
Missouri	Buchanan County	HVDC Line	290210028004	415	4.37%	9.88%	No
Missouri	Buchanan County	HVDC Line	290210028005	1,061	11.26%	2.17%	No
Missouri	Buchanan County	HVDC Line	290210029001	898	32.35%	20.49%	**Yes**
Missouri	Buchanan County	HVDC Line	290210029002	848	0.64%	7.55%	No
Missouri	Buchanan County	HVDC Line	290210029003	1,548	11.07%	5.10%	No
Missouri	Clinton County	HVDC Line	290499602021	1,018	1.79%	5.70%	No
Missouri	Clinton County	HVDC Line	290499602022	1,733	7.07%	1.10%	No
Missouri	Clinton County	HVDC Line	290499602023	943	12.68%	13.04%	No
Missouri	Clinton County	HVDC Line	290499603001	402	2.09%	9.70%	No
Missouri	Clinton County	HVDC Line	290499603002	1,150	20.38%	22.26%	**Yes**
Missouri	Clinton County	HVDC Line	290499603003	1,243	10.85%	9.49%	No
Missouri	Clinton County	HVDC Line	290499603004	1,260	9.41%	16.03%	No
Missouri	Clinton County	HVDC Line	290499604001	1,062	26.91%	0.00%	**Yes**
Missouri	Clinton County	HVDC Line	290499604002	1,638	11.90%	3.30%	No
Missouri	Clinton County	HVDC Line	290499604003	1,924	13.48%	1.92%	No

State	County	Project Facilities in County [a]	GEOID	Population Estimate	Poverty Rate	Minority Rate	Environmental Justice Community [b]
Missouri	Caldwell County	HVDC Line	290259501001	532	23.87%	0.00%	**Yes**
Missouri	Caldwell County	HVDC Line	290259501003	628	10.65%	6.37%	No
Missouri	Caldwell County	HVDC Line	290259501004	766	10.05%	4.05%	No
Missouri	Caldwell County	HVDC Line	290259502011	595	10.07%	11.76%	No
Missouri	Caldwell County	HVDC Line	290259502012	1,300	13.94%	3.00%	No
Missouri	Caldwell County	HVDC Line	290259502013	1,273	9.13%	5.50%	No
Missouri	Ray County	None	291770801002	836	1.82%	3.23%	No
Missouri	Carroll County	HVDC Line	290339601001	461	9.95%	4.77%	No
Missouri	Carroll County	HVDC Line	290339601002	1,399	9.64%	2.43%	No
Missouri	Carroll County	HVDC Line	290339601003	306	6.71%	8.17%	No
Missouri	Carroll County	HVDC Line	290339602001	521	7.83%	0.77%	No
Missouri	Carroll County	HVDC Line	290339602002	678	4.02%	0.15%	No
Missouri	Chariton County	HVDC Line	290414701002	1,259	10.68%	3.26%	No
Missouri	Chariton County	HVDC Line	290414702001	502	9.94%	0.00%	No
Missouri	Chariton County	HVDC Line	290414702002	876	12.80%	9.93%	No
Missouri	Chariton County	HVDC Line	290414702003	1,048	26.52%	16.41%	**Yes**
Missouri	Chariton County	HVDC Line	290414703001	499	7.41%	0.00%	No
Missouri	Chariton County	HVDC Line	290414703002	475	14.84%	0.42%	No
Missouri	Chariton County	HVDC Line	290414703003	839	23.93%	8.22%	**Yes**
Missouri	Chariton County	HVDC Line	290414703004	935	4.23%	5.24%	No
Missouri	Randolph County	HVDC Line	291754901002	1,108	1.66%	7.58%	No
Missouri	Randolph County	HVDC Line	291754902001	429	3.87%	5.36%	No
Missouri	Randolph County	HVDC Line	291754902002	779	12.00%	2.31%	No
Missouri	Randolph County	HVDC Line	291754902003	879	10.93%	6.37%	No
Missouri	Randolph County	HVDC Line	291754902004	981	9.65%	6.73%	No
Missouri	Randolph County	HVDC Line	291754904001	1,357	5.78%	24.76%	**Yes**
Missouri	Randolph County	HVDC Line	291754904003	1,618	14.60%	31.71%	**Yes**
Missouri	Randolph County	HVDC Line	291754905003	1,574	4.41%	13.47%	No
Missouri	Randolph County	HVDC Line	291754905004	1,079	8.97%	2.87%	No
Missouri	Randolph County	HVDC Line	291754906001	2,541	13.23%	23.57%	**Yes**
Missouri	Randolph County	HVDC Line	291754906002	1,140	10.28%	4.21%	No
Missouri	Randolph County	HVDC Line	291754906003	515	14.20%	0.19%	No
Missouri	Randolph County	HVDC Line	291754906004	1,201	13.98%	3.91%	No

State	County	Project Facilities in County [a]	GEOID	Population Estimate	Poverty Rate	Minority Rate	Environmental Justice Community [b]
Missouri	Monroe County	HVDC Line, converter station, and Tiger Connector	291379602002	519	3.94%	13.87%	No
Missouri	Monroe County	HVDC Line, converter station, and Tiger Connector	291379603002	976	10.48%	1.33%	No
Missouri	Monroe County	HVDC Line, converter station, and Tiger Connector	291379603003	896	12.43%	5.13%	No
Missouri	Audrain County	Tiger Connector	290079502005	1,726	8.08%	1.74%	No
Missouri	Audrain County	Tiger Connector	290079503001	1,310	19.14%	4.73%	No
Missouri	Audrain County	Tiger Connector	290079503002	641	6.11%	22.93%	No
Missouri	Audrain County	Tiger Connector	290079503003	1,250	9.77%	8.72%	No
Missouri	Boone County	None	290190016021	1,281	1.59%	4.06%	No
Missouri	Boone County	None	290190019033	2,292	14.47%	10.34%	No
Missouri	Boone County	None	290190020001	857	21.48%	0.00%	**Yes**
Missouri	Boone County	None	290190020004	1,657	6.99%	0.00%	No
Missouri	Callaway County	Tiger Connector	290270701001	1,256	6.75%	5.65%	No
Missouri	Callaway County	Tiger Connector	290270701002	1,309	3.70%	7.79%	No
Missouri	Callaway County	Tiger Connector	290270701003	928	11.78%	0.97%	No
Missouri	Callaway County	Tiger Connector	290270705002	959	3.13%	1.46%	No

[a] *"None" indicates the Census block group (GEOID) falls within the environmental justice analysis area (which extends 3 miles from the planned Project ROW), but does not include permanent Project facilities.*

[b] *Shaded rows indicate communities of potential environmental justice concern based on the presence of a low-income or minority population. A minority environmental justice community requires that the minority population of that community either (1) exceeds 50 percent of the total population of the community or (2) is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (CEQ 1997; Federal Interagency Working Group [FIWG] 2016). A low-income community is considered one where at least 20 percent of residents were below the federal poverty threshold level.*

Sources:

U.S. Census Bureau. 2022a. American Community Survey 5-Year Estimates Ending 2020, Table B17017: Poverty Status in The Past 12 Months by Household Type by Age of Householder. Accessed October 25, 2022. https://data.census.gov/cedsci/table?q=B17017&tid=ACSDT1Y2021.B17017.

U.S. Census Bureau. 2022b. American Community Survey 5-Year Estimates Ending 2020, Table B03002: Hispanic or Latino Origin by Race. Accessed October 25, 2022. https://data.census.gov/cedsci/table?q=B03002.

Grain Belt Express Transmission Line
Environmental Impact Statement
Appendix 4: Past, Present, and Reasonably Foreseeable Future Actions Included in the Cumulative Effects Analysis

Table 1. Past, Present, and Reasonably Foreseeable Future Actions Included in the Cumulative Effects Analysis

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Kansas	Ford	Other Development	Hilmar Cheese Company production facility	Dodge City	New state-of-the-art cheese and whey protein processing plant.	Present (2022–2024)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Environmental Justice ■ Social, Economic, and Community Resources
Kansas	Ford	Wind and Solar Generation Facilities	Pioneer Creek Wind	Dodge City	Wind farm, 250 megawatt (MW), up to 90 GE wind turbines	Reasonably Foreseeable Future Action (2025)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Water Resources ■ Vegetation ■ Transportation ■ Social, Economic, and Community Resources ■ Environmental Justice
Kansas	Ford	Wind and Solar Generation Facilities	Western Plains Wind Farm	Spearville	Wind farm, 280.6 MW, 122 turbines	Present	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Vegetation ■ Wildlife ■ Water Resources ■ Cultural Resources and Native American Traditional Values ■ Special Designations ■ Transportation ■ Recreation ■ Visual Resources ■ Noise ■ Social, Economic, and Community Resources ■ Environmental Justice ■ Public Health and Safety
Kansas	Ford	Transportation Facilities	US 50/US 400 Four-Lane Expansion Project	See description	Four-lane expansion project on US 50/US 400.	Present and Reasonably Foreseeable Future Action (2022–2025)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Kansas	Ford	Transportation Facilities	Dodge City Intersection Improvement in Ford County	See description	The Dodge City intersection improvement project would rebuild or reconfigure the US 56/US 283/US 400/2nd Avenue intersection to serve current and future projected traffic demands. A roundabout with two oversized-load bypass legs in the southern two quadrants would provide the best level of service, operations, and safety for future traffic projections.	Present (2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
							■
							■
Kansas	Hodgeman	Transportation Facilities	K-156 Roadway Work	4 miles west of Jetmore, east 15 miles to Hanston	Rehabilitate roadway, including bridge extensions, and add 6-foot composite shoulders with rumble strips.	Present (2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Kansas	Russell	Recreation/Conservation	Wilson Lake Master Plan	Wilson Lake is in Russell and Lincoln Counties in the central part of Kansas. It is approximately 60 miles west of Salina, 55 miles east of Hays, and 50 miles north of Great Bend.	Unit 1 – Wildlife Refuge: Expand public access by opening/improving 193rd Road leading to wildlife refuge. A new parking lot and approximately 0.8 mile of road would be improved to allow better public/hunter access. Identify and improve infrastructure to expand grazing management opportunities to improve rangeland health and wildlife habitat. Unit 2 – Public Use: Improve road access to Duvall Cove. Unit 4 – Lucas Park: Due to rising utility costs, sustainability projects including solar power, have been proposed to offset electric costs. Anticipating catastrophic culvert failure and full replacement on main park. Unit 6 – Sylvan Park: Install vault toilet in park to meet campground standards during times of water-borne facility failure. Unit 9 – Otoe State Park: Replace/update two shower buildings with modern Americans with Disabilities Act–compliant facilities. Upgrade Coneflower, Yucca, and Sunflower campgrounds from primitive to 50 amp and water campsites. Upgrade Yarrow campground from 30-amp to 50-amp service. Unit 11 – Hell Creek State Park: Replace/update shower building with modern Americans with Disabilities Act–compliant facility. Construct new permit office. Unit 12 – One Horse Canyon/Deer Drive: Develop a viable water source for grazing lease to reduce erosion concerns due to cattle traffic. Unit 13 – Minooka Park: Encourage expansion of Marshall Cove Dock Owner's Association. Further encourage licensing of Marshall Cove area to reduce operations and maintenance costs. Replace middle ramp floating dock with a "slide-in" courtesy dock. Extend existing wave retention riprap structures at East Boat Ramp. Use riprap and other management tools to eliminate erosion concerns. Due to rising utility costs, sustainability projects, including solar power, have been proposed to offset electric costs. Convert interior asphalt camp loop roads to gravel due to budget concerns.	Present and Reasonably Foreseeable Future Action (2021–2040)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Vegetation ■ Water Resources ■ Social, Economic, Community Resources, ■ Environmental Justice
Kansas	Russell	Wind and Solar Generation Facilities	Sunflower Electric Solar	3 miles east of Russell, Kansas	Solar energy project, 20 MW	Reasonably Foreseeable Future Action (2025)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Paleontology and Soils ■ Water Resources ■ Vegetation ■ Wildlife ■ Cultural Resources and Native American Traditional Values ■ Special Designations ■ Transportation ■ Land Use ■ Recreation ■ Visual Resources ■ Noise ■ Social, Economic, and Community Resources ■ Environmental Justice ■ Public Health and Safety

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Kansas	Russell	Transportation Facilities	US 281 Reconstruction Project in Russell County	US 281 in Russell County, Kansas	The Kansas Department of Transportation has begun work on a reconstruction project on approximately 11 miles of US 281 in Russell County. The project will widen the roadway to a 30-foot paved surface with 3-foot turf shoulders, starting near Land Road and extending north to the west K-18 junction. The box bridge structure over Boswell Creek will also be replaced.	Present and Reasonably Foreseeable Future Action (2022–2025)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Vegetation ■ Water Resources ■ Social, Economic, and Community Resources ■ Environmental Justice
Kansas	Osborne	Wind and Solar Generation Facilities	Rolling Prairie Wind	No site location	Wind energy project, 255 MW	Reasonably Foreseeable Future Action (2026)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Cultural Resources and Native American Traditional Values ■ Special Designations ■ Social, Economic, and Community Resources ■ Environmental Justice
Kansas	Osborne	Transportation Facilities	Reconstruct Roadway and Bridge Replacements on US 281	US 281 in Osbourne County, Kansas	Reconstruct approximately 3.5 miles of roadway and replace a bridge on US 281.	Reasonably Foreseeable Future Action (2024)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Paleontology and Soils ■ Water Resources ■ Vegetation ■ Wildlife ■ Cultural Resources and Native American Traditional Values ■ Special Designations ■ Transportation ■ Land Use ■ Recreation ■ Visual Resources ■ Noise ■ Social, Economic, and Community Resources ■ Environmental Justice ■ Public Health and Safety
Kansas	Mitchell	Wind and Solar Generation Facilities	Beloit Solar Farm	Beloit	Solar farm, 2 MW	Present (2022–2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Kansas	Cloud	Wind and Solar Generation Facilities	Skyview Wind Project	No site location	Wind energy project, 260 MW	Reasonably Foreseeable Future Action (2026-2027)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Cultural Resources and Native American Traditional Values ■ Special Designations ■ Social, Economic, and Community Resources ■ Environmental Justice

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Kansas	Cloud	Wind and Solar Generation Facilities	Meridian Way Wind Farm	Concordia	The Meridian Way Wind Farm is a two-phase wind farm in Cloud County, 8 miles south of Concordia with installed capacity of 201 MW.	Present	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Vegetation ■ Environmental Justice
Kansas	Washington	Wind and Solar Generation Facilities	High Banks Wind Project	Belleville	Wind farm, 604 MW, 216 wind turbines. The associated 345-kV line would be 75 miles long from Republic County to the Irish Creek Wind Project substation.	Present	■ Vegetation ■ Water Resources ■ Social, Economic, and Community Resources ■ Environmental Justice
Kansas	Marshall	Recreation/Conservation	Tuttle Creek Lake Master Plan	Tuttle Creek Lake dam is located 12.3 miles upstream of the confluence of the Big Blue and Kansas Rivers. It is approximately 6 miles north of Manhattan, Kansas. Tuttle Creek Lake is located primarily in Riley and Pottawatomie Counties with the far upper end of the lake extending into Marshall County, Kansas.	-Trail renovation and expansion with additional trails and amenities. - Installation of additional playgrounds, picnic sites, and/or equipment. - Removal or rehabilitation of old disused park facilities. - Improve fishing piers/hunting access. - Reestablish lost land and conduct streambank stabilization. - Control land access and unauthorized vehicle use through additional roads/trails, parking, barriers, and signage. - Construct/install needed utilities and buildings/facilities, including multipurpose facility with new admin offices, visitor center, exhibits, and outdoor interpretive space. - Renovate and add additional campsites. - Conduct vegetation management and restoration of marsh, prairie, and grasslands. - Conduct boat ramp renovation and expand or construct additional boat ramps. - Construct a designated swim beach and swim beach renovation. - Expand archery range and range renovation and expansion. - Install a technical riding course for off-road vehicles near Lakeview Camp Loop.	Present and Reasonably Foreseeable Future Action (2022–2040)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice ■ Vegetation
Kansas	Marshall	Wind and Solar Generation Facilities	Irish Creek Wind Farm	Frankfort	The Irish Creek Wind Farm is a 300-MW wind farm in Marshall County.	Present	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Kansas	Marshall, Washington	Recreation/Conservation	Streambank stabilization	Multiple locations	Streambank stabilization	Unknown	■ Water Resources ■ Social, Economic, and Community Resources
Kansas	Nemaha	Wind and Solar Generation Facilities	Pony Express Wind Energy Center	No site location	Wind energy project, 300 MW	Reasonably Foreseeable Future Action (unknown)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Cultural Resources and Native American Traditional Values ■ Special Designations ■ Social, Economic, and Community Resources ■ Environmental Justice

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Kansas	Nemaha	Wind and Solar Generation Facilities	Soldier Creek Wind Farm	Nemaha	Project consists of 120 GE wind turbines capable of generating up to 300 MW of clean, renewable energy.	Present	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Kansas	Multiple	Other Energy Generation and Related Facilities	Existing oil and gas wells	Multiple locations	Active oil and gas wells are present	Present (in operation)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Public Health and Safety
Kansas	Multiple	Other Energy Generation and Related Facilities	Existing oil and gas pipeline infrastructure	Multiple locations	Crude oil, petroleum product, Hydrocarbon Gas Liquids, and natural gas pipelines are present	Present (in operation)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Public Health and Safety
Kansas	Multiple	Transmission Lines	Existing electric transmission infrastructure	Multiple locations	High-voltage electric transmission lines, substations, and electric distribution lines are present	Present (in operation)	■ Wildlife ■ Public Health and Safety
Missouri	Buchanan	Other Development	Missouri Air National Guard, 139th Airlift Wing, Rosecrans	St. Joseph	The U.S. Air Force proposes to relocate and expand the 139th Airlift Wing base at the Rosecrans Memorial Airport to meet flood risk management, force protection, and modernization requirements, as well as accommodate an aeromedical evacuation squadron. Under the proposed action, eight new facilities north of the existing site would be constructed in support of ultimately moving the base. The proposed action also includes three structure renovations and various pavement repairs.	Reasonably Foreseeable Future Action (completion date unknown)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Vegetation ■ Environmental Justice
Missouri	Buchanan	Transportation Facilities	Route Y Bee Creek Bridge Replacements	Bee Creek Bridges on Buchanan County	This project will replace both Bee Creek Bridges on Buchanan County Route Y. The current bridges, constructed in 1922, are listed in poor condition and have reached the end of their lifespan. This project is currently scheduled for January 2023 contractor letting with construction expected to begin in 2023. - Bee Creek Bridge: North is located north of Route 116 between Old Frame and Benner Lake Roads. This bridge will be replaced with another single-span bridge. - Bee Creek Bridge: South is located south of Route 116 near the Dearborn city limits. This bridge will be replaced by a box culvert.	Present (2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Vegetation ■ Water Resources ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Buchannan	Recreation/Conservation	2015 Bluffwoods Conservation Area Management Plan	Bluffwoods Conservation Area	- Conduct forest inventories for Compartment 1 in fiscal year 2022 and Compartment 4 in fiscal year 2034. - Monitor woodlands and forests for invasive exotic vegetation, diseases, and insects. Treat undesirable vegetation and pests to control spread. - Implement compartment-scale forest resource management plans, including timber stand improvement work, tree and shrub planting, and timber harvests. - Implement agricultural disturbances (including prescribed fire) to establish and maintain quality vegetation. - Provide diverse habitats using agricultural, mechanical, and chemical treatments; prescribed fire; and native food types, including hard tree, soft tree and shrub mast.	Present and Reasonably Foreseeable Future Action (2015–2024)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Vegetation ■ Water Resources ■ Paleontology and Soils ■ Wildlife ■ Recreation ■ Visual Resources ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Buchannan	Recreation/Conservation	2017 Pigeon Hill Conservation Area Management Plan	Pigeon Hill Conservation Area	- Implement agricultural practices for disturbance and forage variety. (Wildlife) - Treat invasive and noxious vegetation with herbicides and mechanical treatments. (Wildlife)	Present and Reasonably Foreseeable Future Action (2017–2026)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Vegetation ■ Social, Economic, and Community Resources ■ Environmental Justice

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Missouri	Buchannan	Recreation/Conservation	2017 Anthony & Beatrice Kendzora Conservation Area Management Plan	Anthony & Beatrice Kendzora Conservation Area	Plant food plots annually. Crop rotation and other techniques will be used to promote soil health. A portion of these acres will be fallowed each year to increase early successional habitat acres for wildlife. Ensure management practices are conducted in a way that minimizes the potential for soil erosion. (Wildlife) - Manage aquatic vegetation to allow reasonable shore angling by using targeted aquatic-herbicide applications. Promote beneficial aquatic plants, where appropriate and when possible, through seeding and transplants. (Fisheries) - Use additional fish stocking, as necessary, to maintain a healthy fishery. (Fisheries)	Present and Reasonably Foreseeable Future Action (2017–2026)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Vegetation ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Buchannan	Recreation/Conservation	2017 Belcher Branch Lake Conservation Area Management Plan	Belcher Branch Lake Conservation Area	- Maintain diverse habitats that will provide both annual and native food types. Use tools including, but not limited to, prescribed fire, agricultural crop permittee program, food plots, or other techniques to provide optimum deer and turkey habitat. (Wildlife) - Supplemental stock fish (e.g., channel catfish) when necessary to maintain quality angling opportunities. (Fisheries) - Plant native aquatic vegetation in pond and 55-acre lake. (Fisheries) - Treat aquatic nuisance species using tools including, but not limited to, herbicides. (Fisheries) - Install brush piles to enhance sport fish recruitment. (Fisheries) Strategy 2: Add fish holding structures in strategic locations in 55-acre lake and pond as natural fish habitat deteriorates. (Fisheries) Strategy 3: Mow/maintain the grassy areas around parking lots (areas designated for primitive camping). Mow to a shorter height than what is required for parking areas not used for camping. (Wildlife) - Increase and maintain quality nesting, brood rearing, and covey headquarters by converting and managing open lands using tool including, but not limited to, prescribed fire, herbicides, native plantings, disking, food plots, and the agriculture crop permittee program. (Wildlife) - Create and maintain soft edge habitat adjacent to open lands using tools including, but not limited to, herbicides, mechanical treatments, and prescribed fire. (Wildlife) - Implement annual disturbances to establish and maintain native vegetation. (Wildlife) - Implement management practices for disturbance and quality forage including, but not limited to, agriculture, prescribed fire, and herbicide treatment. (Wildlife) - Annually treat invasive and noxious vegetation using tools including, but not limited to, herbicides, mechanical treatments, and prescribed fire. (Wildlife) - Monitor and treat any invasive and noxious vegetation using tools including, but not limited to, herbicides, mechanical treatments, and/or prescribed fire. (Forestry) - Manage the area to benefit woodland and forest communities. Management actions include, but are not limited to, conducting forest stand improvement, prescribed burns, snag retention, and a multi-layered canopy with small gaps. Conduct management actions in accordance with the forest management plan developed based on the forest inventory. (Forestry) - Plant native trees and vegetation, as needed, to maintain adequate riparian corridors within the watershed of Belcher Branch Lake watershed. (Wildlife)	Present and Reasonably Foreseeable Future Action (2017–2026)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Cultural Resources and Native American Traditional Values ■ Special Designations ■ Wildlife ■ Recreation ■ Vegetation ■ Visual Resources ■ Noise ■ Water Resources ■ Social, Economic, and Community Resources ■ Environmental Justice

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Missouri	Buchannan	Recreation/Conservation	2018 Mark Youngdahl Urban Conservation Area Management Plan	Mark Youngdahl Urban Conservation Area	Prune trees and shrubs, as needed, to provide clearance for users and equipment, especially along foot trails and around facilities. (Forestry) - Provide diverse cool- or warm-season grassland habitat using mowing, disking, chemical treatments, or prescribed fire, as needed and practical. (Forestry) - Where practical, convert non-native grasses to native cool- or warm-season grasses and forbs. (Forestry) - Replace dead or damaged trees and shrubs. Replacement plantings will be done primarily using native species. In select circumstances, replacement planting may be non-native species that are recommended by the Department. (Forestry) - Monitor and control existing invasive plants. Invasive plant species in the area include bush honeysuckle, autumn olive, Callery pear, black locust, tree-of-heaven, chaste tree, burning bush, Johnson grass, pampas grass, fescue grass, white poplar, and sericea lespedeza. Control methods used for invasive plants may include, but are not limited to, chemical, biological, mechanical, or other means determined to be appropriate. (Forestry, Resource Science) - Monitor and control existing insect pests. Pest insects in the area include emerald ash borer. Control pest insects as warranted using pheromones, detection traps, live traps, observation, and other available resources and technologies. (Forestry, Resource Science)	Present and Reasonably Foreseeable Future Action (2018–2037)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Vegetation ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Buchannan	Recreation/Conservation	Campground renovation	Lewis and Clark State Park	The proposed project would convert 20 campsites at Lewis and Clark State Park to offer the additional amenities of 50-amp electrical services, and sewer and water connections. A small precast showerhouse is included in the proposal. Construction should not affect the rest of the campground operation.	Present (2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Vegetation ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Clinton	Recreation/Conservation	2014 Ronald and Maude Hartell Conservation Area Management Plan	Ronald and Maude Hartell Conservation Area	- Manage fields using prescribed fire, herbicides, and additional native plantings. - Strategic plantings of additional shade trees and future “hinge cut” tree around area ponds and parking lots. - Monitor and treat any exotic and noxious vegetation with herbicides, mechanical treatments, and/or prescribed fire. - Plant native aquatic vegetation for identification purposes and wetland habitat diversity. - Fish populations in Wood Duck Slough will continue to be eradicated and will be managed as a fishless, emergent wetland providing education opportunities such as invertebrate collections and the importance of wetland ecosystems. - Supplemental stocking of fish (channel catfish and hybrid bluegill) when needed to maintain quality angling opportunities. - Aquatic herbicide treatment of nuisance species when necessary. - Install brush piles to enhance sport fish recruitment and add fish holding structure in strategic locations in ponds as natural fish structure deteriorates. - Mow/maintain the grassy areas around parking lots and ponds to allow public easy access aquatic resources.	Present and Reasonably Foreseeable Future Action (2014–2024)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Vegetation ■ Paleontology and Soils ■ Water Resources ■ Wildlife ■ Recreation ■ Visual Resources ■ Noise ■ Social, Economic, and Community Resources ■ Environmental Justice

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Missouri	Clinton	Transportation Facilities	US Route 69 and Route 116 Intersection Improvement Project	US Route 69 and Route 116 Intersection in Clinton County	A roundabout, including truck aprons and islands, will be constructed north of the bypass. Phase 2: Route 116 traffic will be moved to the single-lane bypass with signals at either end to regulate the flow of traffic, traffic on Route 116 will not be permitted to turn either direction onto US Route 69, both directions of US Route 69 will be closed with no access to Route 116, speeds will be greatly reduced, and drivers should expect delays. Phase 3: The south leg of US Route 69 will be constructed. Phase 3: Route 116 and US Route 69 north of Route 116 will be open to two-way traffic, and US Route 69 south of Route 116 will be closed.	Present (2022–2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Environmental Justice ■ Social, Economic, and Community Resources ■ Vegetation
Missouri	Caldwell	Recreation/Conservation	2014 Bonanza Conservation Area Management Plan	Bonanza Conservation Area	- Removal of poor-quality trees and undesirable species through timber stand improvement on sites that can be incorporated into the prescribed burning program and identified in the forest management plan. - Reduce woody plants in the understory and stimulate herbaceous groundcover. - Identify exotic and invasive species through forest inventories and by casual observations and use various treatments, as needed, for management and control of selected species. - Replace fields of fescue and smooth brome with native grasses/forbs to restore habitat for species of conservation concern and to benefit quail. - Fallow standing crop fields and plant legumes to attract insects and improve brood rearing cover for upland birds. - Manage old fields and grasslands to maintain early successional habitat. Chain saw removal and contract dozing may be required for the removal of larger trees to recapture open fields. - Establish field borders to provide transition zones for brushy winter cover. - Continue efforts to introduce diversity into the aquatic vegetation community through seeding of pickerel weed, burhead, and water plantain, and by planting pink water lilies. - Reduce or eliminate non-native and nuisance aquatic vegetation and improve angler access to and on vegetated shorelines when necessary. - Install brush piles as fish attractors in strategic locations throughout the ponds and replace older piles as they break down.	Present and Reasonably Foreseeable Future Action (2014–2024)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Vegetation ■ Water Resources ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Caldwell	Recreation/Conservation	Little Otter Creek Lake Project	Little Otter Creek Watershed, about 3 miles east of Hamilton on the south side of Highway 36	Construction of a multipurpose reservoir, including water intake structure, raw water line, fisheries and wildlife habitat enhancement, and recreation facilities	Present and Reasonably Foreseeable Future Action (2021–2024)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Vegetation ■ Social, Economic, and Community Resources ■ Environmental Justice

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Missouri	Carroll	Recreation/Conservation	2013 Bunch Hollow Conservation Area Management Plan	Bunch Hollow Conservation Area	- Maintain grassland habitats using a combination of management techniques including, but not limited to, prescribed burning, mechanical and chemical treatment to woody vegetation, disking, mowing, and overseeding. - Conduct additional inventories in 2020 (compartment 1) and 2027 (compartment 2) and implement the recommendations consistent with land type associations from these inventories. - Maintain old field habitats in various successional stages providing 30% to 50% warm and cool season grasses, 20% to 30% annual forbs, 10% to 20% shrubs, and 20% to 30% bare ground using a combination of management techniques including, but not limited to, prescribed burning, mechanical tree removal, disking, mowing, and overseeding.	Present (2013–2022)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Vegetation ■ Water Resources ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Carroll	Recreation/Conservation	2017 McKinny Conservation Area Management Plan	McKinny Conservation Area	- Maintain grassland habitats using a combination of management techniques, including, but not limited to, prescribed burning, mechanical and chemical treatment to woody vegetation, disking, mowing, and overseeding. (Wildlife) - Use a variety of sustainable forest management techniques to promote healthy forest and woodland communities, including, but not limited to, timber harvesting, forest thinning, firewood cutting, salvage cuttings, tree planting, seeding, and prescribed burning. (Forestry) - Conduct woodland burns, as appropriate, and according to the burn plans. (Wildlife) - Maintain native vegetation and promote early successional plant communities, where feasible, using a combination of techniques including, but not limited to, prescribed burning, mechanical tree removal, disking, mowing, planting of annual grain food plots, and over seeding. (Wildlife)	Present and Reasonably Foreseeable Future Action (2017–2031)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Vegetation ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Carroll	Recreation/Conservation	2019 Little Compton Lake Conservation Area Management Plan	Little Compton Lake Conservation Area	- Maintain grassland habitats using a combination of management techniques, including, but not limited to, prescribed burning, mechanical and chemical treatment of woody vegetation, disking, mowing, and overseeding. (Wildlife) - Annually treat sericea lespedeza, Johnson grass, Canada thistle, and any other invasive species. (Wildlife) - Maintain old field habitats in various successional stages, providing 30% to 50% warm- and cool-season grasses, 20% to 30% annual forbs, 10% to 20% shrubs, and 20% to 30% bare ground. Use a combination of management techniques including, but not limited to, prescribed burning, mechanical tree removal, disking, mowing, and overseeding. (Wildlife) - Conduct supplemental stocking of channel catfish to maintain quality angling opportunities. (Fisheries) - Install brush piles to enhance sport fish recruitment and add fish holding structure, as needed in Little Compton Lake as natural fish structure deteriorates. (Fisheries) - Mow/maintain grass around parking lots designated for primitive camping. (Wildlife)	Present and Reasonably Foreseeable Future Action (2019–2043)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Vegetation ■ Water Resources ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Carroll	Transportation Facilities	Carroll County Route E Bridge Replacements	See description	The Missouri Department of Transportation's planning and design teams plan to replace both the Turkey Creek and Lost Creek Bridges with wider, safer, bridges that are up to current safety standards.	Present (2022–2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Missouri	Chariton	Recreation/Conservation	2018 Yellow Creek Conservation Area Management Plan	Yellow Creek Conservation Area/Yellow Creek Natural Area	- Use a variety of sustainable forest management techniques to promote healthy forest communities, including, but not limited to, tree harvesting, forest thinning, firewood cutting, salvage cuttings, tree planting, seeding, prescribed fire, and invasive species removal. (Forestry, Wildlife) - Conduct management activities such as control of invasive species, forest thinning, and oxbow/wetland renovations that will provide habitat for a variety of species. (Forestry, Wildlife)	Present and Reasonably Foreseeable Future Action (2018–2032)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Vegetation ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Chariton	Recreation/Conservation	Administrative Headquarters and Visitor Facility	Swan Lake National Wildlife Refuge	The U.S. Fish and Wildlife Service is proposing to construct, operate, and maintain an updated administrative headquarters and Visitor Contact Station building and outdoor classroom along with adequate parking. This would include: - The extension of nearby internet, water, and electric utilities bored underground to minimize disturbance to existing forest. - The construction of an on-site gravity septic system. - Widening (and possibly paving, depending on funding) of an existing single-lane gravel road to accommodate two-way traffic. - Construction of a hard-surfaced parking area and grass or gravel overflow area. - The construction of an approximately 2,000–4,000 square-foot one-story multi-purpose facility and eventual demolition of the condemned Visitor Contact Station and hunter's headquarters site structures. This project would also include the identification of a future pond location for conservation education classes, as well as a future buried storm shelter location and the construction of an outdoor amphitheater and trails to enhance recreational opportunities and the visitor experience. This facility would serve as a visitor area, staff office, and the new hunter headquarters; in addition, a multipurpose room would be used for educational events, large meetings, training, and volunteer events.	Present and Reasonably Foreseeable Future Action (2023–2024)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Vegetation ■ Water Resources ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Chariton	Other Energy Generation and Related Facilities	City of Salisbury Plant	Salisbury	Petroleum plant, 5.2 MW	Present (in operation)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Environmental Justice

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Missouri	Randolph	Recreation/Conservation	2019 Rudolf Bennitt Conservation Area Management Plan	Rudolf Bennitt Conservation Area	- Use a variety of sustainable forest management techniques to promote healthy forest and woodland communities including, but not limited to, timber harvesting, forest thinning, firewood cutting, salvage cuttings, tree planting, seeding, and prescribed burning. (Forestry) - Promote native vegetation while suppressing any invasive species, using a variety of management techniques including, but not limited to, spraying, prescribed burning, mechanical treatments, disking, mowing, haying, grazing, and seeding. (Forestry, Wildlife) - Maintain remnant prairie and savanna species, using a variety of management techniques, including prescribed burning, as needed. (Forestry, Wildlife) - Use prescribed fire and appropriate chemical and mechanical techniques to combat invasive species. (Forestry, Wildlife) - Continue limited rotational row-cropping through the Agricultural Crop Program to maintain quality early successional habitat. (Wildlife) - Renovate ponds, as needed, and maintain as fishless to promote amphibians, reptiles, and other wildlife. Manage ponds as fishless. (Wildlife) - Enhance fishless ponds with aquatic vegetation plantings or installing basking logs where needed. (Wildlife) - Use chemical, biological, or mechanical methods to control aquatic vegetation, as deemed appropriate. (Fisheries) - Cut shoreline vegetation at existing bank-fishing areas on the dam, near boat ramp, and around the west side of the lake to keep grass and brush short for fishing. (Forestry) - Remove downed and hazard trees from trails in a timely manner and repair trails where needed. (Forestry)	Present and Reasonably Foreseeable Future Action (2019–2033)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Vegetation ■ Water Resources ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Randolph	Other Energy Generation and Related Facilities	Thomas Hill Energy Center	Clifton Hill	Coal plant, 1,133 MW	Present (in operation)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Environmental Justice
Missouri	Randolph	Other Energy Generation and Related Facilities	Moberly Power Plant	Moberly	Petroleum plant, 54 MW	Present (in operation)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Environmental Justice

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Missouri	Monroe	Transmission Lines	GBX Phase 2	See description	New transmission line extending east from the proposed HVDC converter station in Monroe County, Missouri.	Reasonably Foreseeable Future Action (unknown)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Paleontology and Soils ■ Water Resource ■ Vegetation ■ Wildlife ■ Cultural Resources and Native American Traditional Values ■ Special Designations ■ Transportation ■ Land Use ■ Recreation ■ Visual Resources ■ Noise ■ Social, Economic, and Community Resources ■ Environmental Justice ■ Public Health and Safety
Missouri	Monroe	Recreation/Conservation	National Fish Habitat Partnership Funded Project	Mark Twain Lake	Installation of artificial structures at two locations to restore approximately 60 acres of underwater fisheries habitat. The artificial structures are constructed of PVC materials and concrete that provide long-term durability, can withstand the stresses of submerged and dry environments, and are designed to reduce snagging of traditional fishing tackle and equipment. The structures would be placed at differing elevations in the reservoir basin to provide stability and integrity.	Present and Reasonably Foreseeable Future Action	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Monroe	Transportation Facilities	Bridge improvements over Brush Creek	See description	Bridge improvements over Brush Creek 1.9 miles north of Route D near Strother. Project involves bridge R0056.	Present (2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Monroe	Transportation Facilities	Bridge improvements over Milligan Creek	Milligan Creek Bridge in Monroe County	Bridge improvements over Milligan Creek 0.9 mile west of Route Y near Middle Grove. Project involves bridge T0382.	Present (2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Vegetation ■ Water Resources ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Monroe	Transportation Facilities	Bridge improvements over Middle Fork Salt River	See description	Bridge improvements over Middle Fork Salt River 0.5 mile east of Route OO near Duncans Bridge. Project involves bridge X0624.	Present (2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Monroe	Transportation Facilities	Bridge improvements over South Fork Salt River	See description	Bridge improvements over South Fork Salt River. Project involves bridge R0494.	Present (2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Missouri	Monroe	Transportation Facilities	Bridge improvements over Bee Creek	See description	Bridge improvements over Bee Creek 2.9 miles west of Route 15 near Paris. Project involves AA bridge P0826.	Present (2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Vegetation ■ Environmental Justice
Missouri	Audrain	Recreation/Conservation	Lowe, Northcutt, and Sears Conservation Areas Fifteen-Year Area Management Plan	Lowe, Northcutt, and Sears Conservation Areas	- Remove invasive vegetation, including sericea lespedeza, fescue, autumn olive, and bush honeysuckle using various techniques, including, but not limited to, mechanical or chemical means (e.g., cutting or applying herbicide), as is appropriate. - Conduct prescribed burns on a rotation dictated by site conditions to stimulate the growth of grasses and forbs and set back woody succession. (Wildlife) - Overseed native forbs to increase plant diversity for wildlife - Implementation of two to three prescribed fires, followed by a potential thinning	Present and Reasonably Foreseeable Future Action (2017–2026)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Vegetation ■ Water Resources ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Audrain	Wind and Solar Generation Facilities	Huck Finn Solar Project	Border of Ralls and Audrain Counties	Solar energy project, 200 MW	Reasonably Foreseeable Future Action	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Audrain	Transportation Facilities	Bridge improvements over Hickory Creek	1.7 miles west of Route W near Farber	Bridge improvements over Hickory Creek 1.7 miles west of Route W near Farber. Project involves bridge X0614.	Reasonably Foreseeable Future Action	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Missouri	Audrain, Monroe	Recreation/Conservation	Robert M. White II Conservation Area Management Plan	White (Robert M., II) Conservation Area	- Implement forest management practices described in the 2011 inventory prescription, including harvesting potential forest products, where possible. (Forestry) - Use prescribed fire and other techniques to develop and maintain woodland and savanna habitats. (Wildlife) - Construct fish attractors near select bank fishing locations. (Fisheries) Management Objective 2: Manage for diverse grassland and old field habitats. - Use prescribed fire as a management tool on a 3- to 5-year rotation. (Wildlife) - Enhance edge habitats by cutting trees and shrubs to maintain small game cover. (Wildlife) - Diversify plant communities by inter-seeding native forb. (Wildlife) Management Objective 3: Convert 100 crop acres to native grasses and forbs by FY2025. - Annually budget to purchase local eco-type native seed. (Wildlife) - Use herbicide treatments by permit farmer to prepare fields for planting. (Wildlife) - Overseed native grasses and forbs into soybean stubble each winter. (Wildlife) Management Objective 4: Control invasive plant species impacts. - Reduce invasive plant species (e.g., bush honeysuckle, garlic mustard, fescue, and sericea lespedeza) to levels that will have negligible impacts to natural communities. Work to keep invasive plants from establishing in new areas. Extensive control and follow-up treatment are needed on large acreages. (Wildlife)	Present and Reasonably Foreseeable Future Action (2017–2031)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Callaway	Recreation/Conservation	2015 Little Dixie Lake Conservation Area Management Plan (Updated 2019)	Little Dixie Lake Conservation Area	- Use prescribed fire to stimulate the growth of native forbs and grasses (Wildlife). - Monitor grasslands for invasive species and treat infestations with herbicides or cutting (Wildlife). - Overseed native forbs into fields to increase plant diversity (Wildlife). - Use contractors to harvest seeds for planting (Wildlife). - Mechanically remove unwanted trees and shrubs (Wildlife). - Enhance aquatic habitat by establishing desirable aquatic vegetation; removing undesirable vegetation; adding hard cover for fish, reptiles, and amphibians; reducing siltation and maintaining good water quality. (Fisheries) - Annually construct fish attractors using hardwoods, red cedar, or recycled Christmas trees. (Fisheries) - Remove vegetation from selected bank-fishing locations as needed. (Fisheries)	Present and Reasonably Foreseeable Future Action (2015–2039)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Vegetation ■ Environmental Justice

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Missouri	Callaway	Recreation/Conservation	Little Dixie Lake Conservation Area Trail Improvements	Little Dixie Lake Conservation Area	The Missouri Department of Conservation is implementing a 5-year plan to optimize hiking and multi-use trails at Little Dixie Lake Conservation Area. Conservation staff will conduct work in phases to minimize interruptions to area use and to enhance visitors' experience in nature. - Several sections of redundant trails will be replaced with new loops near higher-use locations and will tie-in to existing nature trails that surround the Little Dixie Lake. - To improve safety and enhance user experience, several bridges and sections of trail that are difficult to maintain will be removed from the network. - Renovations will offer improved hiking loops near parking lots and enhanced maintenance of multi-use trails around the lake. New and existing trails will be blazed with color-coded markers and will create more options for visitors.	Present and Reasonably Foreseeable Future Action (2021–2026)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Vegetation ■ Environmental Justice
Missouri	Callaway	Wind and Solar Generation Facilities	Guthrie Solar Project	Callaway County	Solar energy project, 100 MW	Reasonably Foreseeable Future Action	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Callaway	Wind and Solar Generation Facilities	Ranger Power Show Me State Solar Project	Callaway County	Solar energy project, 250 MW.	Reasonably Foreseeable Future Action	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Callaway	Transportation Facilities	Holts Summit Road Improvements for Pro Foods Systems Expansions	Holts Summit	Mid-MO RPC assisted Holts Summit with securing a Community Development Block Grants (CDBG) for the construction of Industrial Drive widening of N. Greenway Drive in order to accommodate expansions at Pro Food Systems.	Reasonably Foreseeable Future Action	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Callaway	Transportation Facilities	U.S. Route 54/Old Jefferson City Road Intersection Improvements	Old Jefferson City Road/County Road 306	The addition of acceleration and deceleration lanes, installation of offset left turn lanes, and removal of the crossover on U.S. Route 54 at the intersection with Old Jefferson City Road/County Road 306 will help improve safety and traffic flow.	Reasonably Foreseeable Future Action	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Callaway	Transportation Facilities	U.S. Route 54 Improvements	North Jefferson City	This project was identified and has been added to the STIP through the High Priority Unfunded Needs process. Around 56,000 vehicles utilize this corridor of Route 54, between Route 63 and Main Street, every day. The changes proposed in this project would benefit these motorists by creating a safer, more efficient and more reliable traffic flow.	Reasonably Foreseeable Future Action (2024)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Callaway	Other Development	Dogwood Park Planned Unit Development	Jefferson City	Multi-family residential development in a high-density plan.	Reasonably Foreseeable Future Action	■ Air Quality, Greenhouse Gas Emissions, and Climate Change
Missouri	Callaway	Other Development	Holts Summit Inflow and Infiltration Mitigation	Holts Summit	Mid‐MO RPC is serving as grant administrator for the City of Holts Summit for a $315,000 Community Development Block Grant that Mid‐MO RPC helped the city secure to fix in‐flow and infiltration issues in two of the city's older subdivisions.	Reasonably Foreseeable Future Action	■ Social, Economic, and Community Resources

State	County	Project Category	Project Name	Project Location	Project Description	Timing (Past, Present, or Reasonably Foreseeable Future)	Resource Potentially Impacted
Missouri	Montgomery	Transportation Facilities	Route 19 and I-70 Interchange Improvements	Montgomery	Replace poor conditioned bridge on Route 19 over I-70, as well as redesign the local interchange	Reasonably Foreseeable Future Action	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Paleontology and Soils ■ Water Resources ■ Transportation ■ Visual Resources ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Montgomery	Transportation Facilities	I-70 Resurfacing	Williamsburg - Jonesburg	Resurfacing project of 32 mile stretch of I-70	Reasonably Foreseeable Future Action	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Montgomery	Transportation Facilities	Improve I-70 East	New Florence, Truesdale, Wentzville	The Missouri Department of Transportation is re-evaluating the findings of that 2005 Interstate 70 Environmental Study by reviewing more than 30 miles of I-70 in Montgomery County, Warren County, and western St Charles County. The re-evaluation is necessary to identify changes to existing road conditions, possible solutions, potential impacts, and related mitigation measures since the environmental work was done nearly 20 years ago.	Reasonably Foreseeable Future Action (2024)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Paleontology and Soils ■ Water Resources ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Montgomery	Transportation Facilities	Mineola Hill Climbing Lanes Design-Build	Mineola Hill	Construct eastbound and westbound truck climbing lanes near Mineola Hill to enable traffic to flow more safely and efficiently and to replace the bridges within the project limits to accommodate the climbing lanes.	Reasonably Foreseeable Future Action	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Montgomery	Other Development	City of Jonesburg Wastewater Project	City of Jonesburg	The project consists of repairs to the collection system, purchase of 17 acres of land surrounding the lagoon, and necessary upgrades to address needs and requirements.	Reasonably Foreseeable Future Action	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Social, Economic, and Community Resources
Missouri	Callaway, Audrain, and Monroe	Transmission Lines	Kingdom City - Santa Fe Transmission Line	Kingdom City to Auxvasse to Salt River to Mexico to Santa Fe, Missouri	rebuild of 33.55 miles of 1950s vintage transmission lines on existing right-of-way.	Present (2022–2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Transportation ■ Public Health and Safety ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Multiple	Other Energy Generation and Related Facilities	Existing oil and gas pipeline infrastructure	Multiple locations	Crude oil, petroleum product, Hydrocarbon Gas Liquids, and natural gas pipelines are present	Present	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Public Health and Safety
Missouri	Multiple	Transportation Facilities	Fixing Access to Rural Missouri (FARM) Bridge Program	Multiple locations	The FARM Bridge Program replaced 31 rural bridges in northern Missouri using a $20.8 million grant from the Federal Highway Administration and $5.2 million from the Missouri Department of Transportation. All the bridges were weight-restricted, supported by timber piles, in poor condition and one lane, but carry two-way traffic. Twenty bridges still need to be replaced.	Present (2022–2023)	■ Air Quality, Greenhouse Gas Emissions, and Climate Change ■ Water Resources ■ Vegetation ■ Social, Economic, and Community Resources ■ Environmental Justice
Missouri	Multiple	Transmission Lines	Existing electric transmission infrastructure	Multiple locations	High-voltage electric transmission lines, substations, and electric distribution lines are present	Present	■ Wildlife ■ Public Health and Safety

Sources: SWCA resource area reports 2023; Invenergy 2023; Boonslick Regional Planning Commission 2023; City of Fulton 2023; City of Holts Summit 2023. City of Jefferson 2023; City of Jonesburg 2023; City of Mokane 2023; Mid-MO Regional Planning Commission 2023; MoDOT 2023a, 2023b, 2023c, 2023d; NextEra Energy Resources, LLC 2023a, 2023b.

FY: fiscal year, MW: megawatt, O&M: operations and maintenance, PVC: polyvinyl chloride