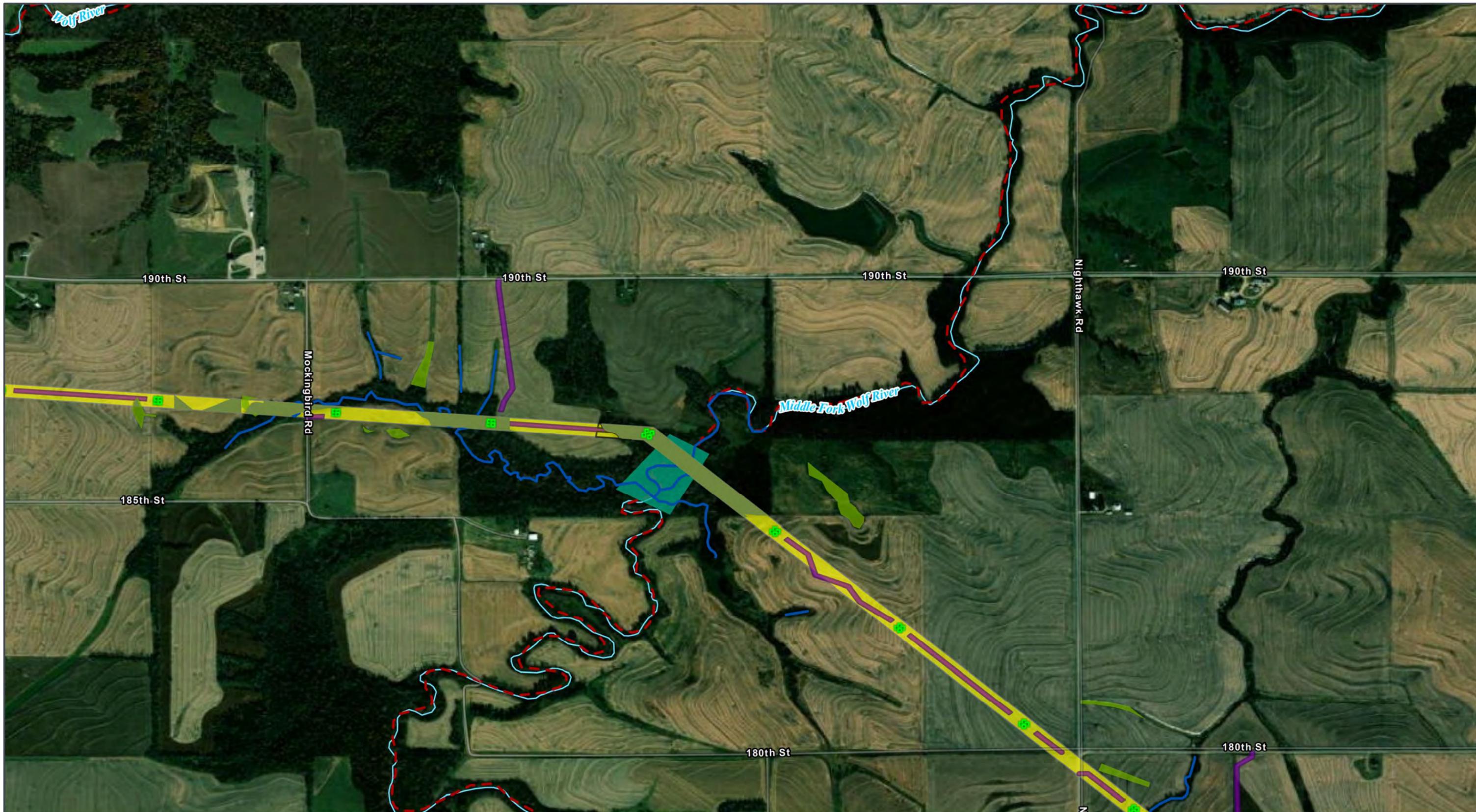


**Grain Belt Express Transmission Line  
Environmental Impact Statement  
Appendix 3.4: Wetlands and Waters Maps**

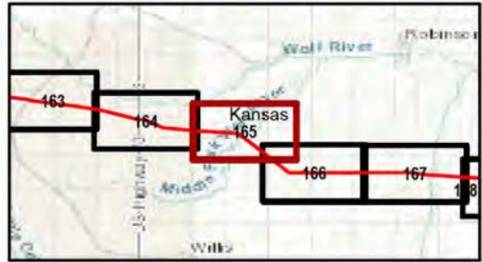
**Continued**



GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 165 of 259

- |   |   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> ROW</li> <li><b>Permanent Project Component</b></li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Transmission Structure</li> <li><b>Habitat Conversion</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: olive; border: 1px solid black; margin-right: 5px;"></span> Vegetation Clearing</li> </ul> | <ul style="list-style-type: none"> <li><b>Temporary Project Component</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Access Road</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Pull Site/Tension Site</li> <li><b>Hydrology</b></li> <li><span style="display: inline-block; width: 15px; height: 2px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> Delineated Stream</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid cyan; margin-right: 5px;"></span> NHD Stream/River</li> <li><span style="display: inline-block; width: 15px; border-bottom: 1px dashed red; margin-right: 5px;"></span> Impaired Waterway (303d)</li> <li><b>Delineated Wetland</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightgreen; border: 1px solid black; margin-right: 5px;"></span> Palustrine Emergent (PEM)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: cyan; border: 1px solid black; margin-right: 5px;"></span> Palustrine Forested (PFO)</li> </ul> |
|---|---|---|

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

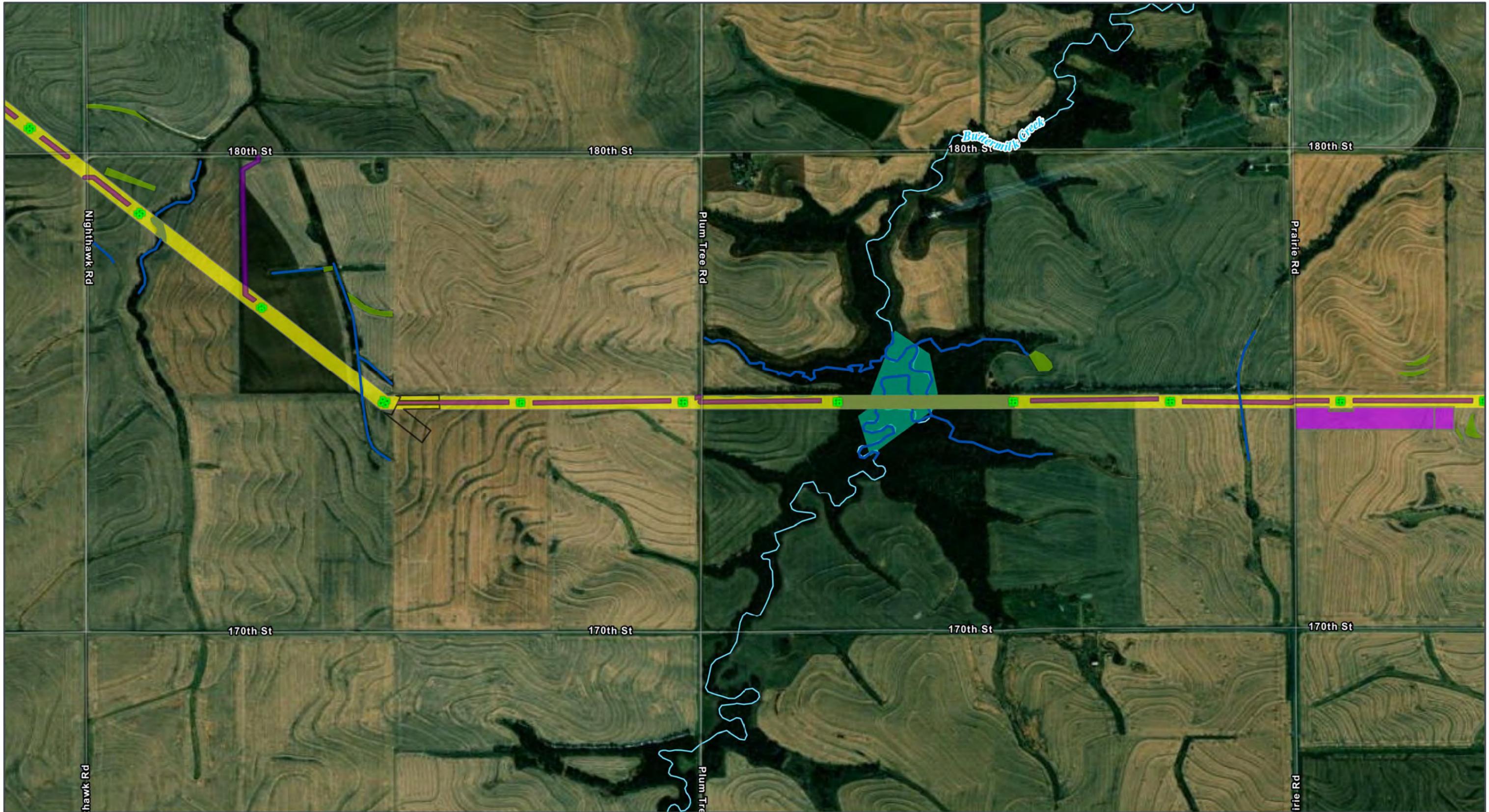


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

1:12,000

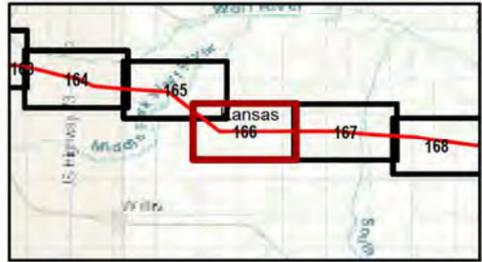
0 400 800 Feet  
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GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 166 of 259

- |                                    |                                    |                           |
|------------------------------------|------------------------------------|---------------------------|
| ROW                                | <b>Temporary Project Component</b> | NHD Stream/River          |
| <b>Permanent Project Component</b> | Access Road                        | <b>Delineated Wetland</b> |
| Transmission Structure             | Helipad / Fly Yard                 | Palustrine Emergent (PEM) |
| <b>Habitat Conversion</b>          | Pull Site/Tension Site             | Palustrine Forested (PFO) |
| Vegetation Clearing                | <b>Hydrology</b>                   |                           |
|                                    | Delineated Stream                  |                           |

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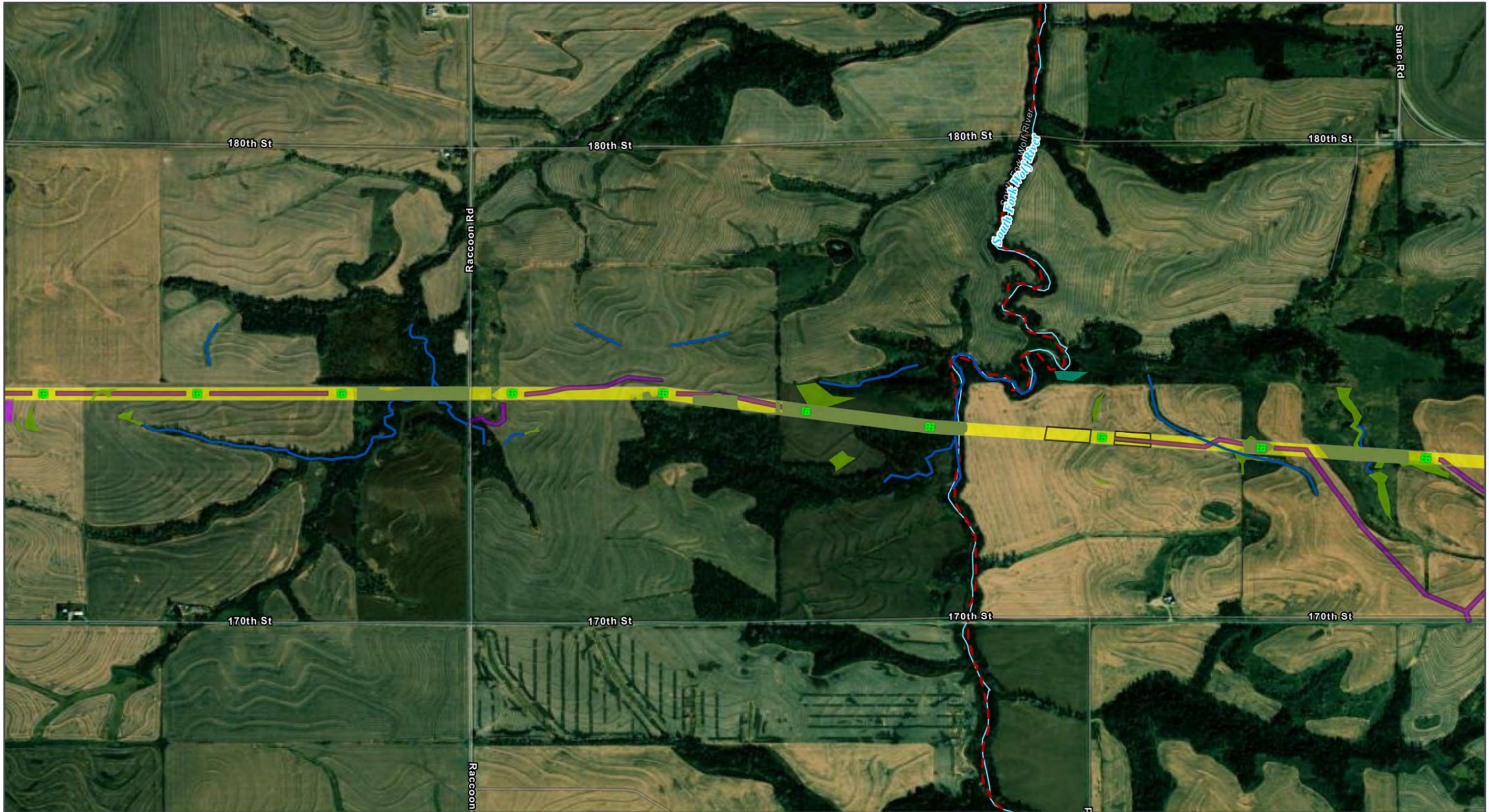


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

Kansas and Missouri

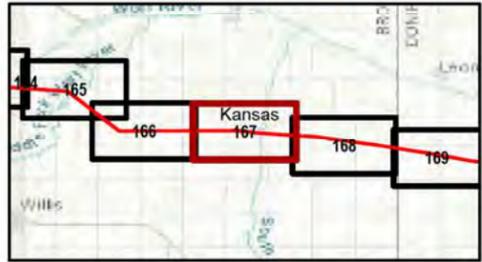


GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 167 of 259



- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> ROW</li> <li><b>Permanent Project Component</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Transmission Structure</li> <li><b>Habitat Conversion</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Vegetation Clearing</li> </ul> | <ul style="list-style-type: none"> <li><b>Temporary Project Component</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Access Road</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Helipad / Fly Yard</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Pull Site/Tension Site</li> <li><b>Hydrology</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; border-bottom: 1px solid blue; margin-right: 5px;"></span> Delineated Stream</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid cyan; margin-right: 5px;"></span> NHD Stream/River</li> <li><span style="display: inline-block; width: 15px; border-bottom: 1px dashed red; margin-right: 5px;"></span> Impaired Waterway (303d)</li> <li><b>Delineated Wetland</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightgreen; border: 1px solid black; margin-right: 5px;"></span> Palustrine Emergent (PEM)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightblue; border: 1px solid black; margin-right: 5px;"></span> Palustrine Forested (PFO)</li> </ul> |
|--|--|--|

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

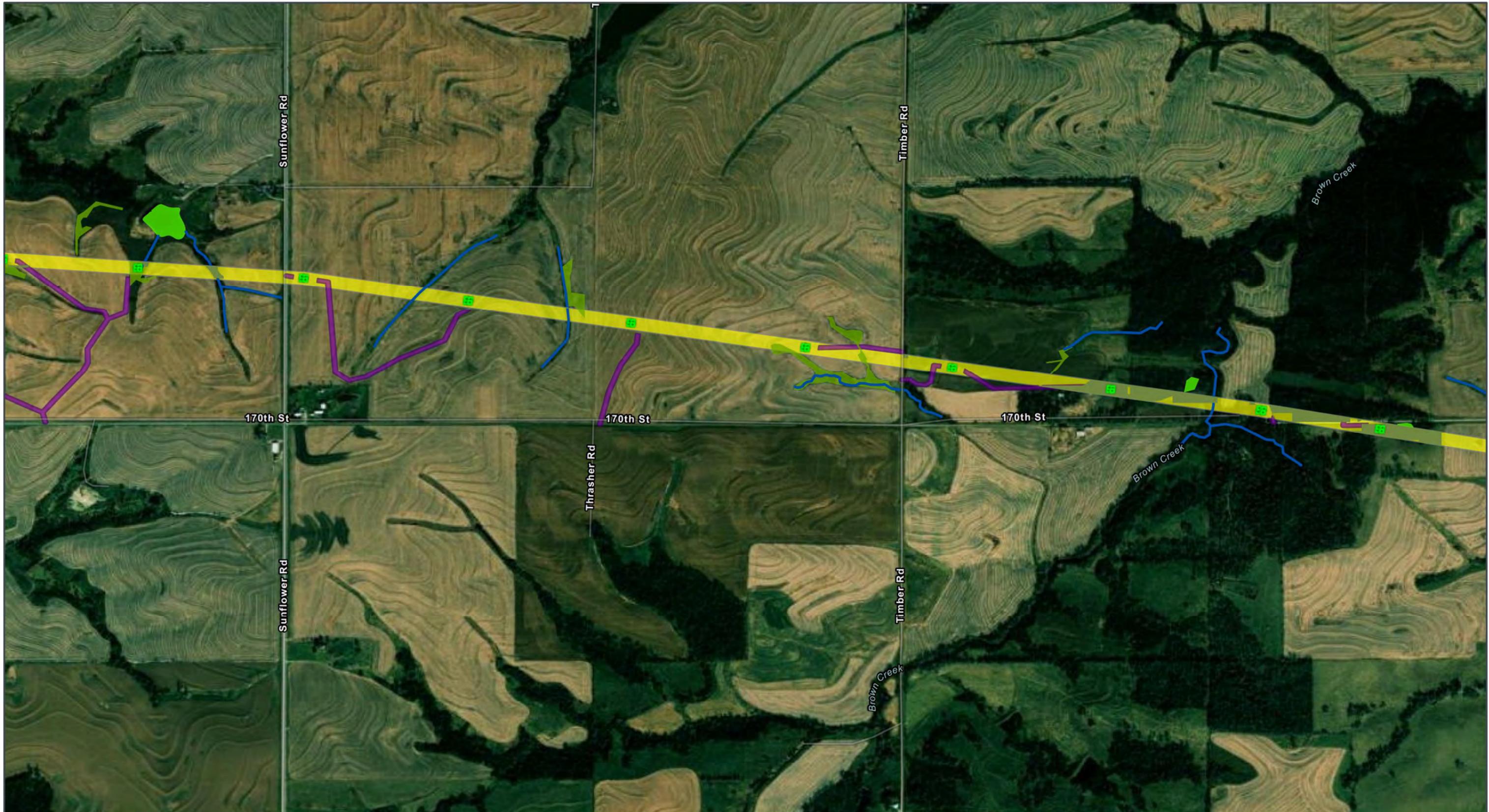


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

1:12,000

0 400 800 Feet  
0 100 200 Meters

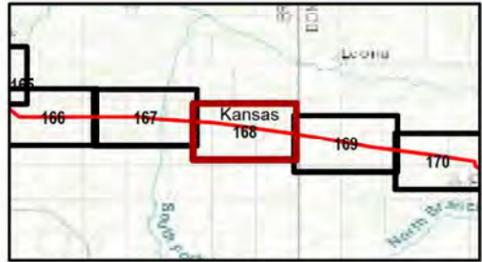


- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

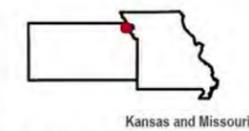
- Temporary Project Component**
- Access Road
- Hydrology**
- Delineated Stream

- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Unconsolidated Bottom (PUB)

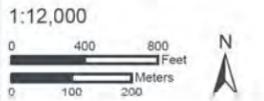
All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

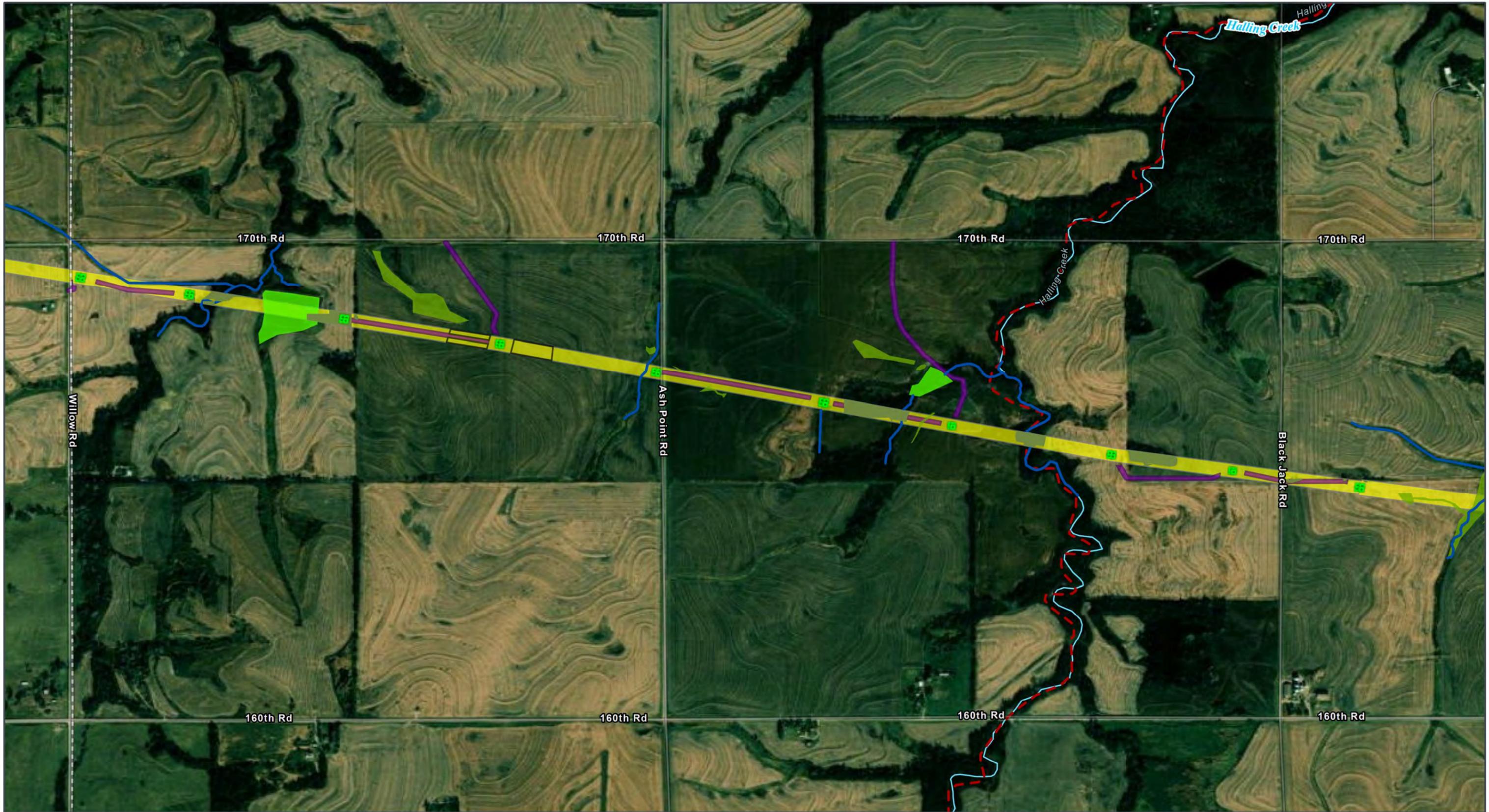


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W



Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

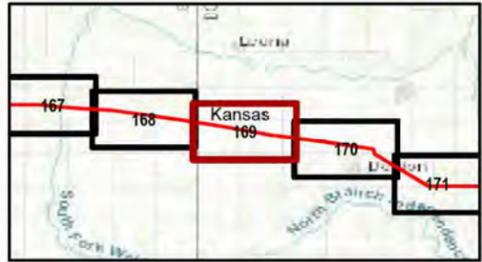




GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 169 of 259

- |   |   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> ROW</li> <li><b>Permanent Project Component</b></li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Transmission Structure</li> <li><b>Habitat Conversion</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: olive; border: 1px solid black; margin-right: 5px;"></span> Vegetation Clearing</li> </ul> | <ul style="list-style-type: none"> <li><b>Temporary Project Component</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Access Road</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Pull Site/Tension Site</li> <li><b>Hydrology</b></li> <li><span style="display: inline-block; width: 15px; height: 2px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> Delineated Stream</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid cyan; margin-right: 5px;"></span> NHD Stream/River</li> <li><span style="display: inline-block; width: 15px; border-bottom: 1px dashed red; margin-right: 5px;"></span> Impaired Waterway (303d)</li> <li><b>Delineated Wetland</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightgreen; border: 1px solid black; margin-right: 5px;"></span> Palustrine Emergent (PEM)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: limegreen; border: 1px solid black; margin-right: 5px;"></span> Palustrine Unconsolidated Bottom (PUB)</li> </ul> |
|---|---|---|

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

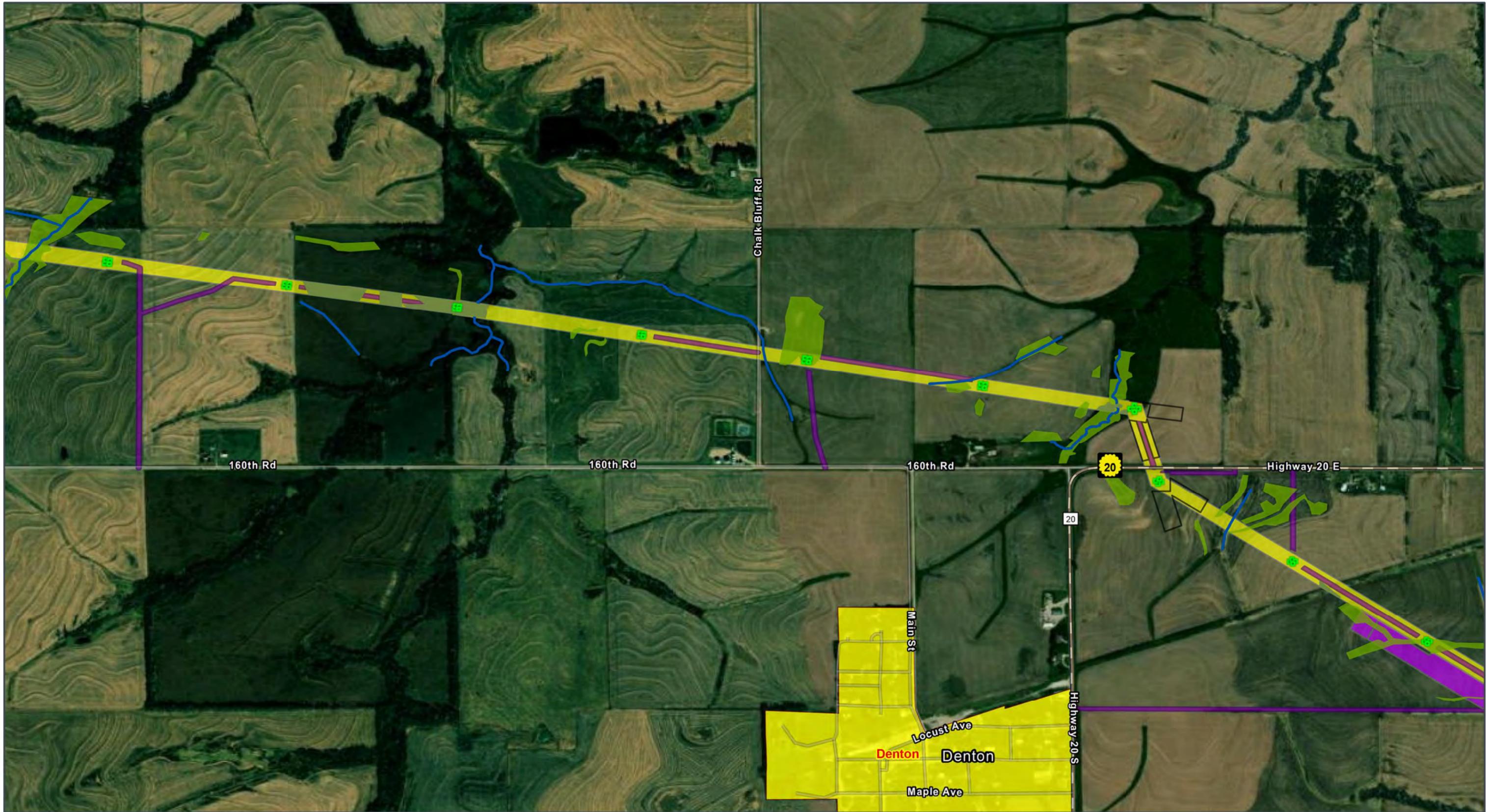


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

1:12,000

0 400 800 Feet  
0 100 200 Meters



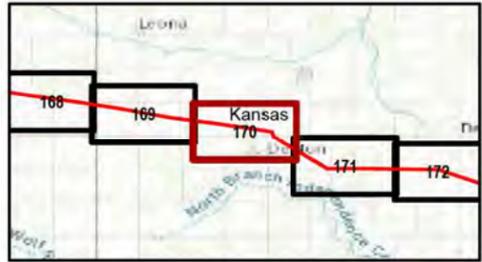
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 170 of 259

- Municipal Boundary Near the Project
- ROW
- Permanent Project Component**
- Transmission Structure

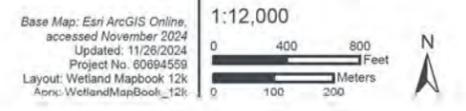
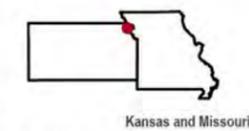
- Habitat Conversion**
- Vegetation Clearing
- Temporary Project Component**
- Access Road
- Helipad / Fly Yard
- Pull Site/Tension Site

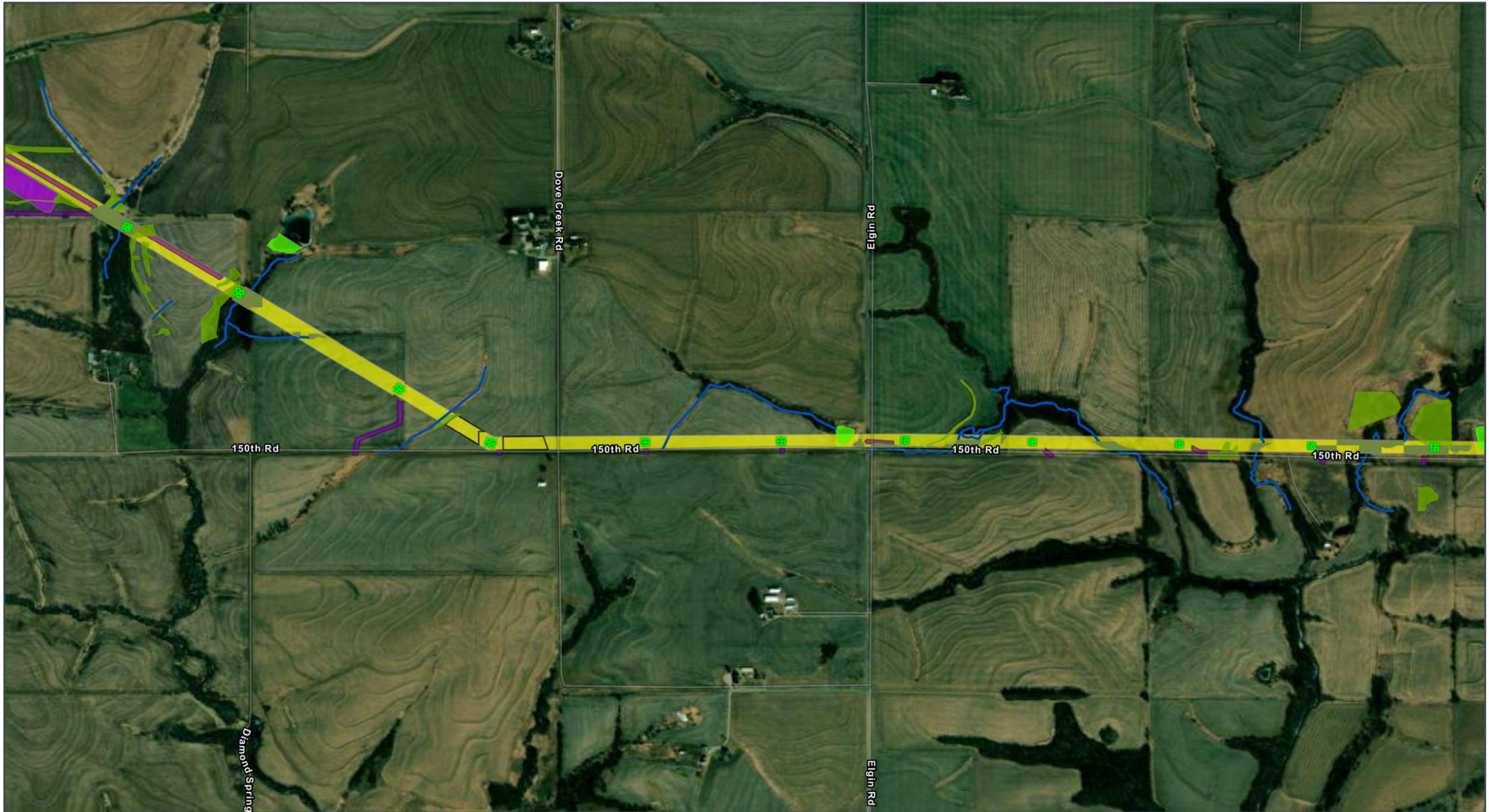
- Hydrology**
- Delineated Stream
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Transportation**
- State Highway

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W





ROW

**Permanent Project Component**

- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

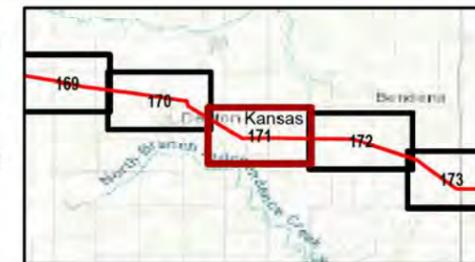
**Temporary Project Component**

- Access Road
- Helipad / Fly Yard
- Pull Site/Tension Site

**Hydrology**

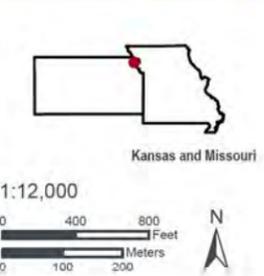
- Delineated Stream
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Unconsolidated Bottom (PUB)

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k





GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT

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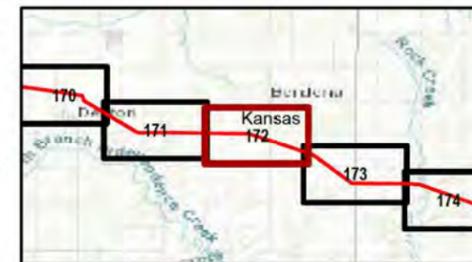


- Municipal Boundary Near the Project
- ROW
- Permanent Project Component**
- Transmission Structure
- Optical Regeneration
- OPGW Access

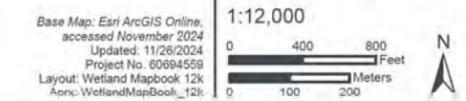
- Habitat Conversion**
- Vegetation Clearing
- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

- NHD Stream/River
- Impaired Waterway (303d)
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Unconsolidated Bottom (PUB)

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

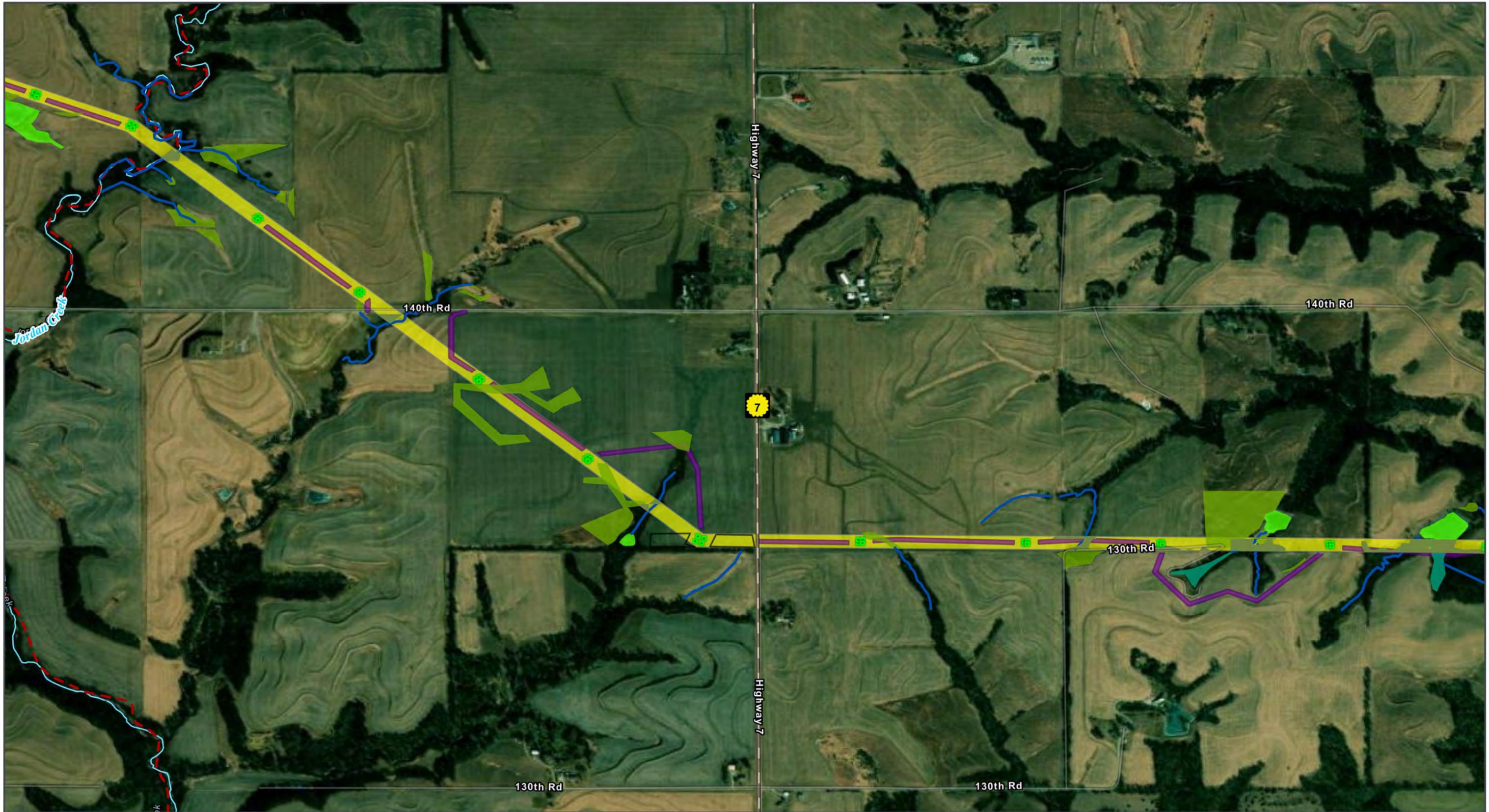


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W



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Kansas and Missouri

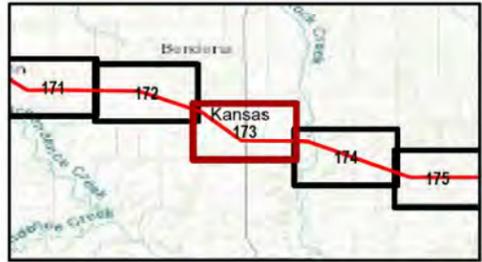
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Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 173 of 259

- |                                    |                           |  |
|------------------------------------|---------------------------|--|
| ROW                                | Pull Site/Tension Site    | Palustrine Forested (PFO)              |
| <b>Permanent Project Component</b> | <b>Hydrology</b>          | Palustrine Unconsolidated Bottom (PUB) |
| Transmission Structure             | Delineated Stream         | <b>Transportation</b>                  |
| <b>Habitat Conversion</b>          | NHD Stream/River          | State Highway                          |
| Vegetation Clearing                | Impaired Waterway (303d)  |  |
| <b>Temporary Project Component</b> | <b>Delineated Wetland</b> |  |
| Access Road                        | Palustrine Emergent (PEM) |  |

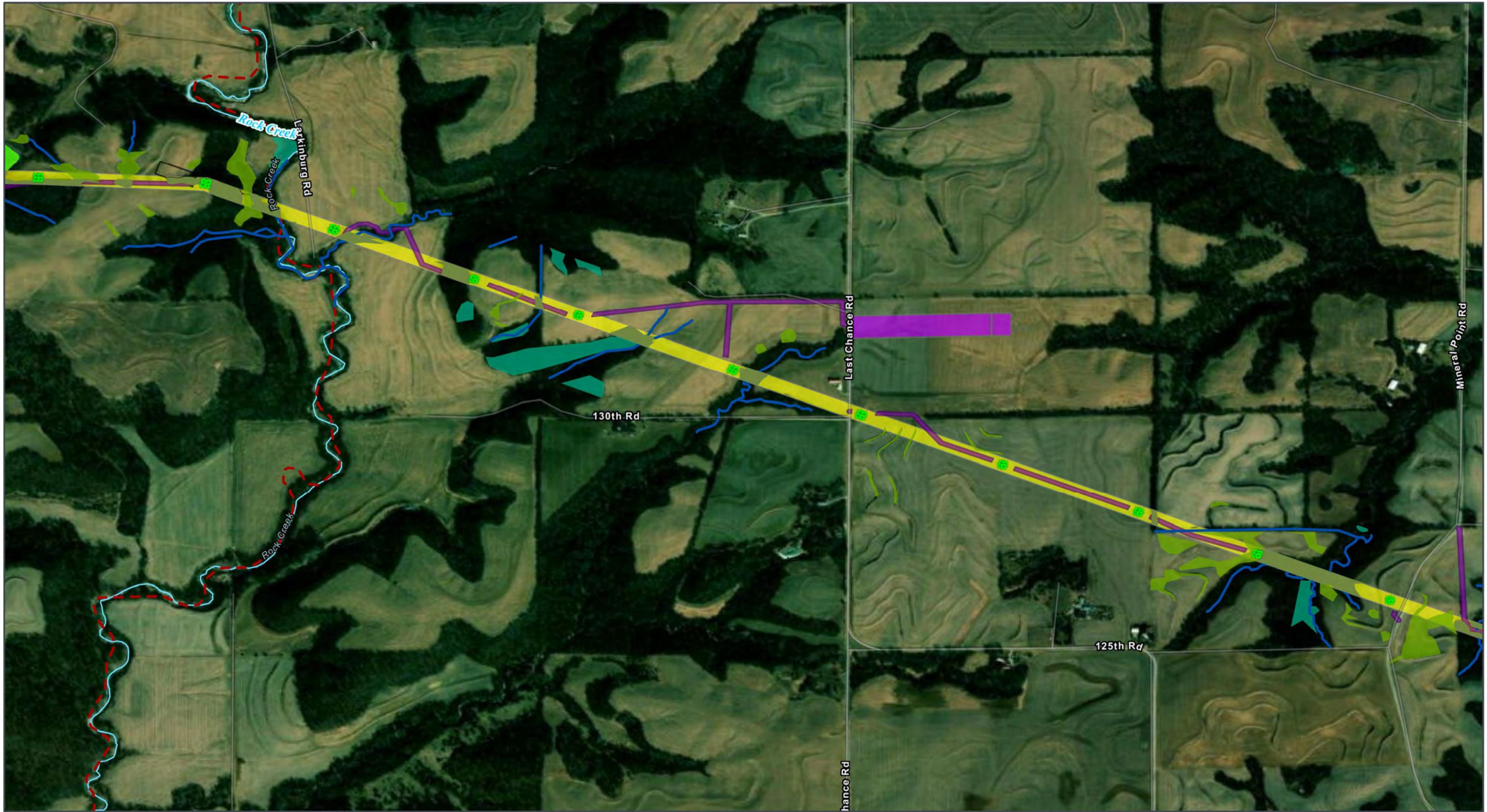
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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

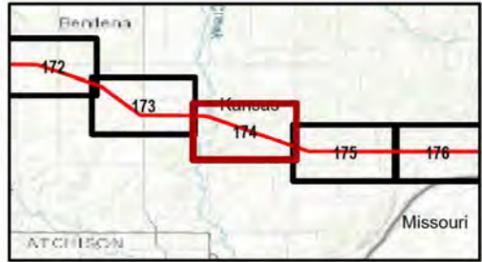
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Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



- |   |   |   |
|---|---|---|
| <p><b>Permanent Project Component</b></p> <ul style="list-style-type: none"> <li><span style="color: green;">■</span> Transmission Structure</li> </ul> <p><b>Habitat Conversion</b></p> <ul style="list-style-type: none"> <li><span style="color: olive;">■</span> Vegetation Clearing</li> </ul> | <p><b>Temporary Project Component</b></p> <ul style="list-style-type: none"> <li><span style="color: purple;">■</span> Access Road</li> <li><span style="color: magenta;">■</span> Helipad / Fly Yard</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Pull Site/Tension Site</li> </ul> <p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">—</span> Delineated Stream</li> </ul> | <ul style="list-style-type: none"> <li><span style="color: cyan;">—</span> NHD Stream/River</li> <li><span style="color: red; border-bottom: 1px dashed red;">—</span> Impaired Waterway (303d)</li> </ul> <p><b>Delineated Wetland</b></p> <ul style="list-style-type: none"> <li><span style="color: lightgreen;">■</span> Palustrine Emergent (PEM)</li> <li><span style="color: teal;">■</span> Palustrine Forested (PFO)</li> <li><span style="color: limegreen;">■</span> Palustrine Unconsolidated Bottom (PUB)</li> </ul> |
|---|---|---|

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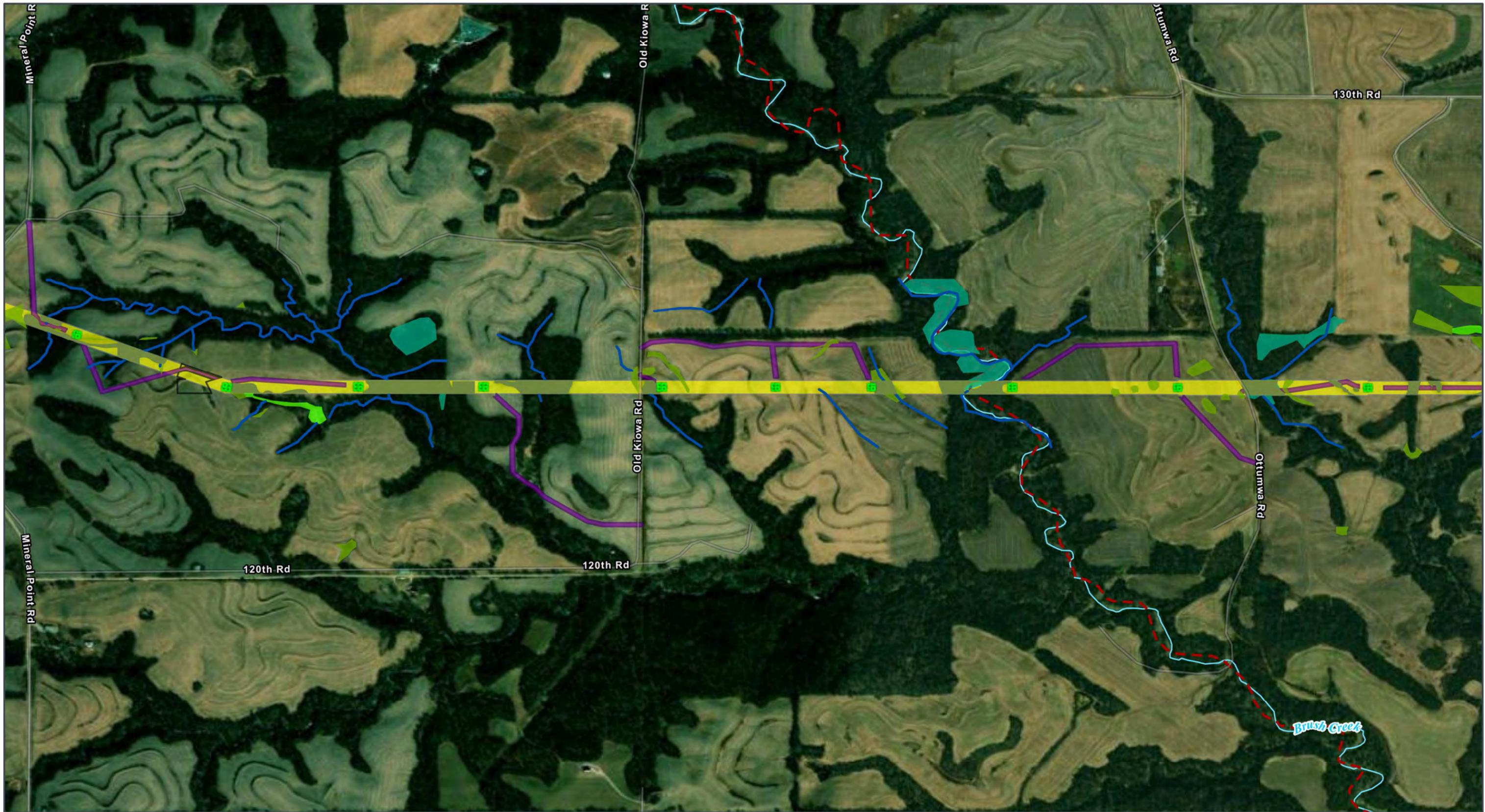


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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0 400 800 Feet  
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Kansas and Missouri

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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ROW

**Permanent Project Component**

- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

**Temporary Project Component**

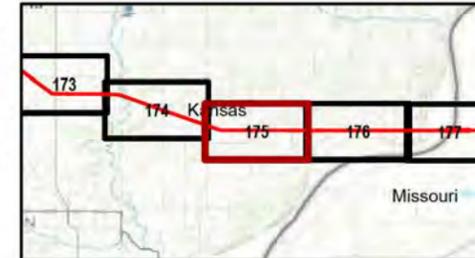
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream
- NHD Stream/River

- - - Impaired Waterway (303d)

**Delineated Wetland**

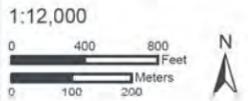
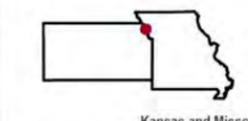
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)

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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

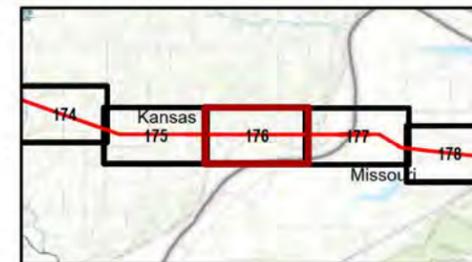




- |                                    |                                    |
|------------------------------------|------------------------------------|
| ROW                                | <b>Temporary Project Component</b> |
| <b>Permanent Project Component</b> | Access Road                        |
| Transmission Structure             | <b>Hydrology</b>                   |
| <b>Habitat Conversion</b>          | Delineated Stream                  |
| Vegetation Clearing                | NHD Stream/River                   |
|                                    | Impaired Waterway (303d)           |

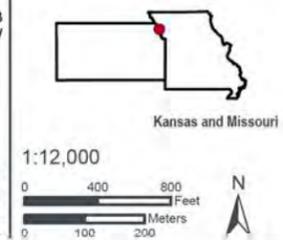
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| <b>Delineated Wetland</b>              |
| Palustrine Aquatic Bed (PAB)           |
| Palustrine Emergent (PEM)              |
| Palustrine Forested (PFO)              |
| Palustrine Unconsolidated Bottom (PUB) |

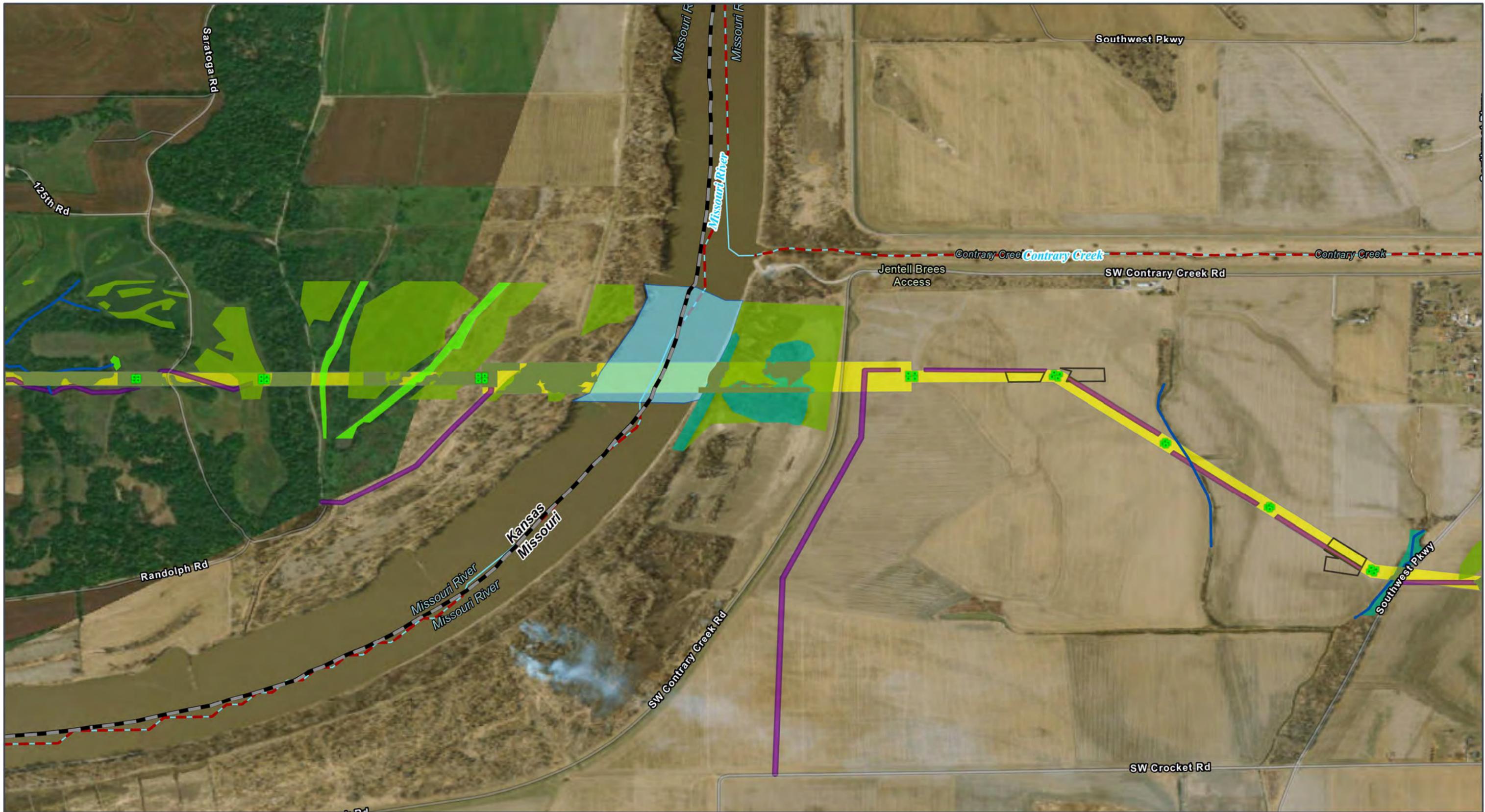
All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k





GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT

**Wetlands Map Book**

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ROW

**Permanent Project Component**

- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

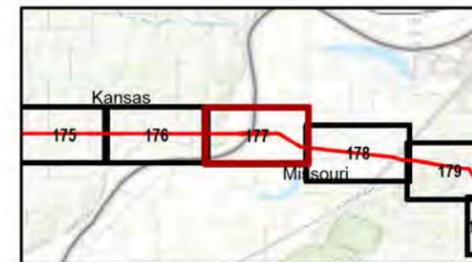
**Temporary Project Component**

- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream
- NHD Stream/River
- Impaired Waterway (303d)

**Delineated Wetland**

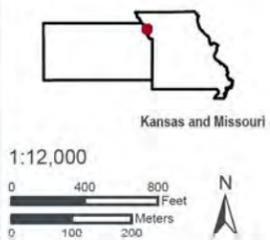
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)
- Delineated Waterbody

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

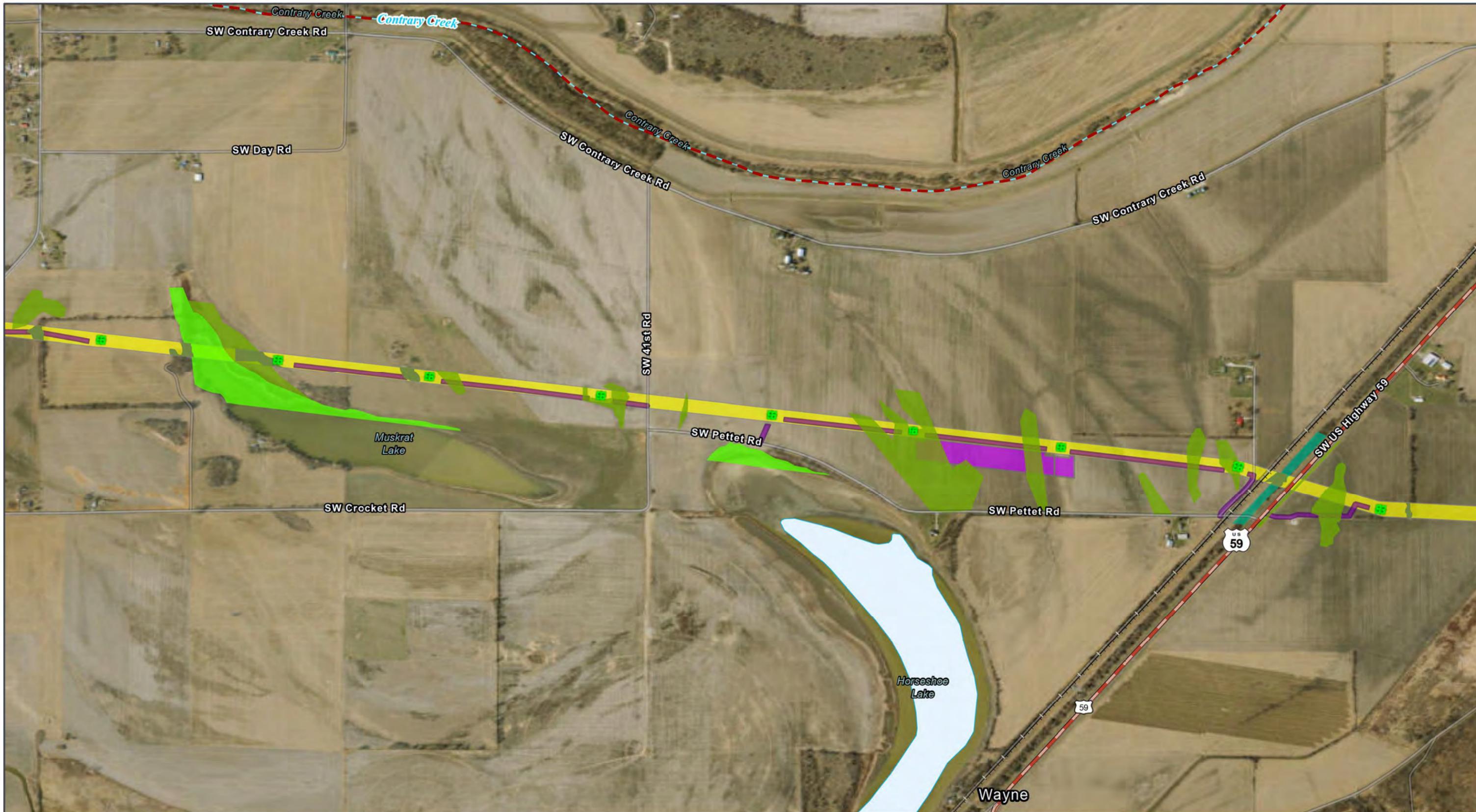


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



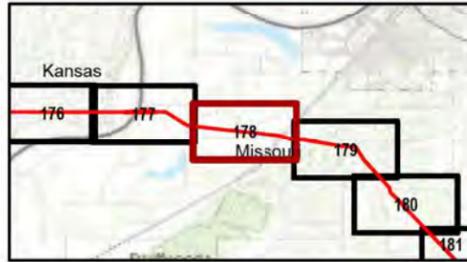
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GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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- |                                    |                           |  |
|------------------------------------|---------------------------|--|
| ROW                                | Helipad / Fly Yard        | Palustrine Unconsolidated Bottom (PUB) |
| <b>Permanent Project Component</b> | <b>Hydrology</b>          | NHD Waterbody                          |
| Transmission Structure             | NHD Stream/River          | <b>Transportation</b>                  |
| <b>Habitat Conversion</b>          | Impaired Waterway (303d)  | U.S. Highway                           |
| Vegetation Clearing                | <b>Delineated Wetland</b> | Railroad                               |
| <b>Temporary Project Component</b> | Palustrine Emergent (PEM) |  |
| Access Road                        | Palustrine Forested (PFO) |  |

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
Apn: WetlandMapBook\_12k

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GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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- |                                    |                           |  |
|------------------------------------|---------------------------|--|
| ROW                                | Pull Site/Tension Site    | Palustrine Unconsolidated Bottom (PUB) |
| <b>Permanent Project Component</b> | <b>Hydrology</b>          | Delineated Waterbody                   |
| Transmission Structure             | Delineated Stream         | <b>Transportation</b>                  |
| <b>Habitat Conversion</b>          | NHD Stream/River          | U.S. Highway                           |
| Vegetation Clearing                | Impaired Waterway (303d)  | Railroad                               |
| <b>Temporary Project Component</b> | <b>Delineated Wetland</b> |  |
| Access Road                        | Palustrine Emergent (PEM) |  |

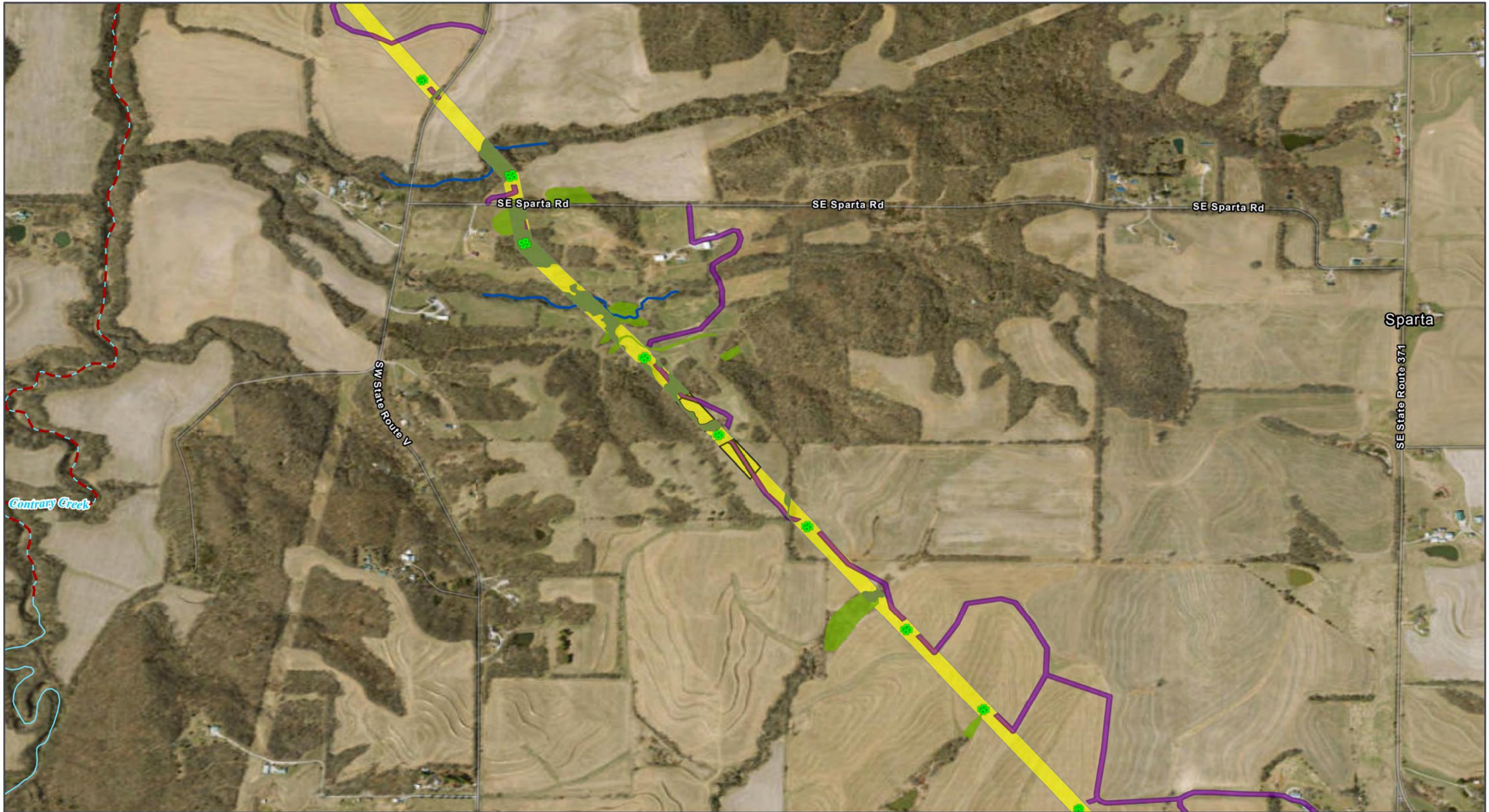
All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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ROW

**Permanent Project Component**

- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

**Temporary Project Component**

- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

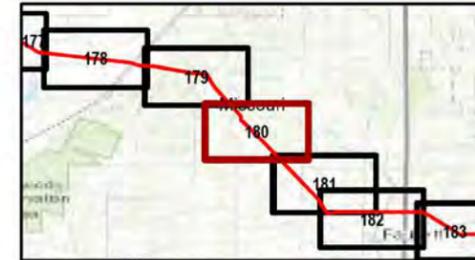
— NHD Stream/River

— Impaired Waterway (303d)

**Delineated Wetland**

■ Palustrine Emergent (PEM)

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

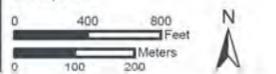


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W



Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

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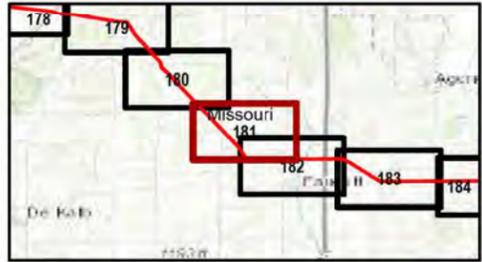




GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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- |   |   |   |
|---|---|---|
| <p><b>Permanent Project Component</b></p> <ul style="list-style-type: none"> <li><span style="color: green;">■</span> Transmission Structure</li> </ul> <p><b>Habitat Conversion</b></p> <ul style="list-style-type: none"> <li><span style="color: brown;">■</span> Vegetation Clearing</li> </ul> | <p><b>Temporary Project Component</b></p> <ul style="list-style-type: none"> <li><span style="color: purple;">■</span> Access Road</li> </ul> <p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">—</span> Delineated Stream</li> <li><span style="color: cyan;">—</span> NHD Stream/River</li> </ul> | <p><b>Delineated Wetland</b></p> <ul style="list-style-type: none"> <li><span style="color: lightgreen;">■</span> Palustrine Emergent (PEM)</li> <li><span style="color: lightblue;">■</span> Delineated Waterbody</li> </ul> |
|---|---|---|

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



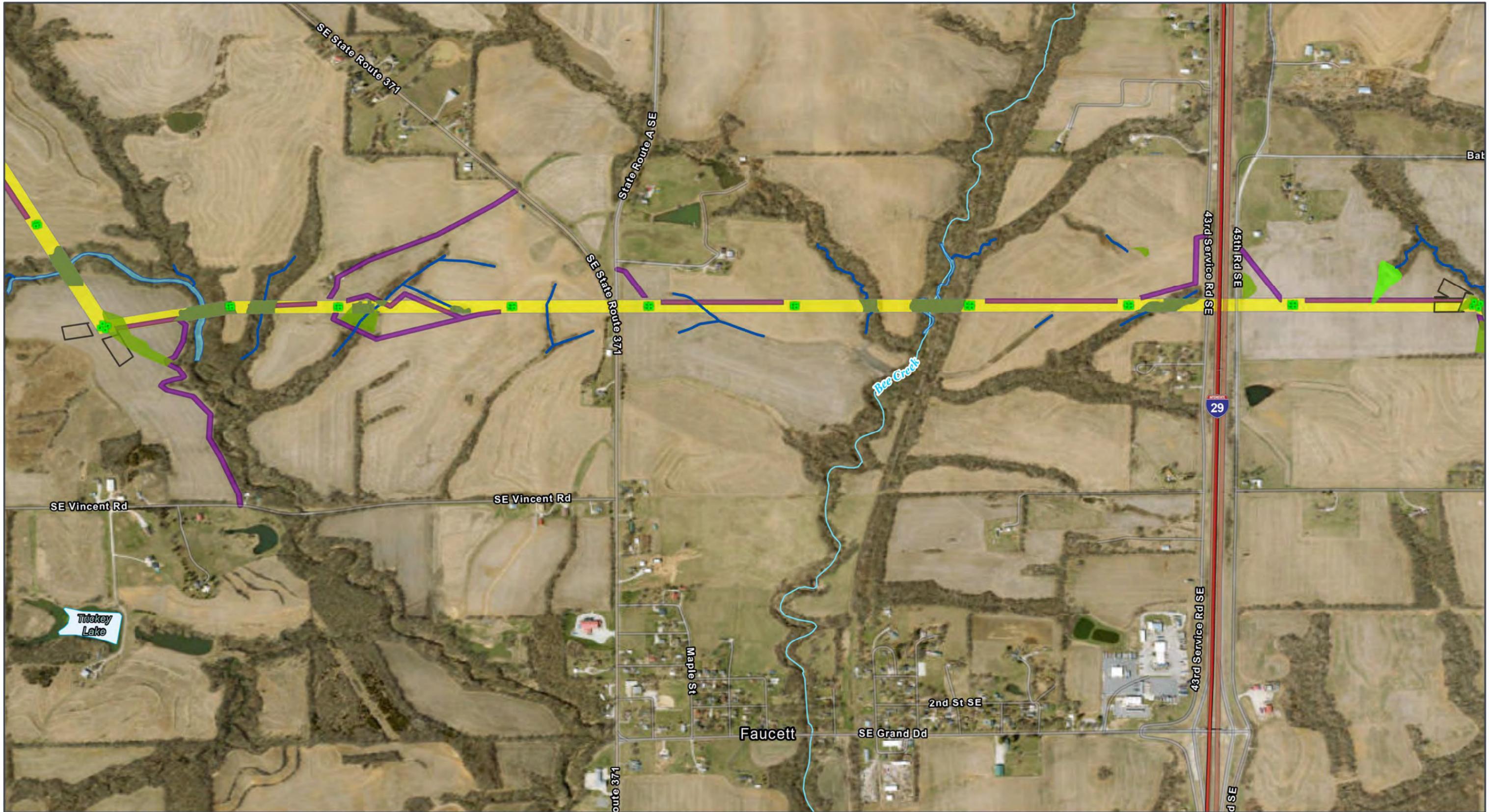
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

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0 400 800 Feet  
0 100 200 Meters

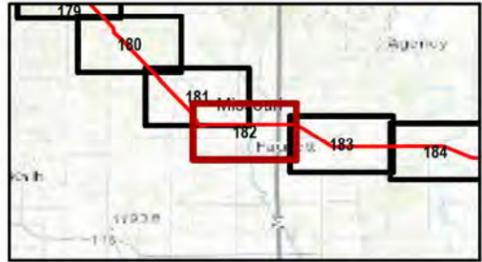
Kansas and Missouri



GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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- |                                    |                           |  |
|------------------------------------|---------------------------|--|
| ROW                                | Pull Site/Tension Site    | Palustrine Unconsolidated Bottom (PUB) |
| <b>Permanent Project Component</b> | <b>Hydrology</b>          | Delineated Waterbody                   |
| Transmission Structure             | Delineated Stream         | NHD Waterbody                          |
| <b>Habitat Conversion</b>          | NHD Stream/River          | <b>Transportation</b>                  |
| Vegetation Clearing                | <b>Delineated Wetland</b> | Interstate Highway                     |
| <b>Temporary Project Component</b> | Palustrine Emergent (PEM) |  |
| Access Road                        |                           |  |

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

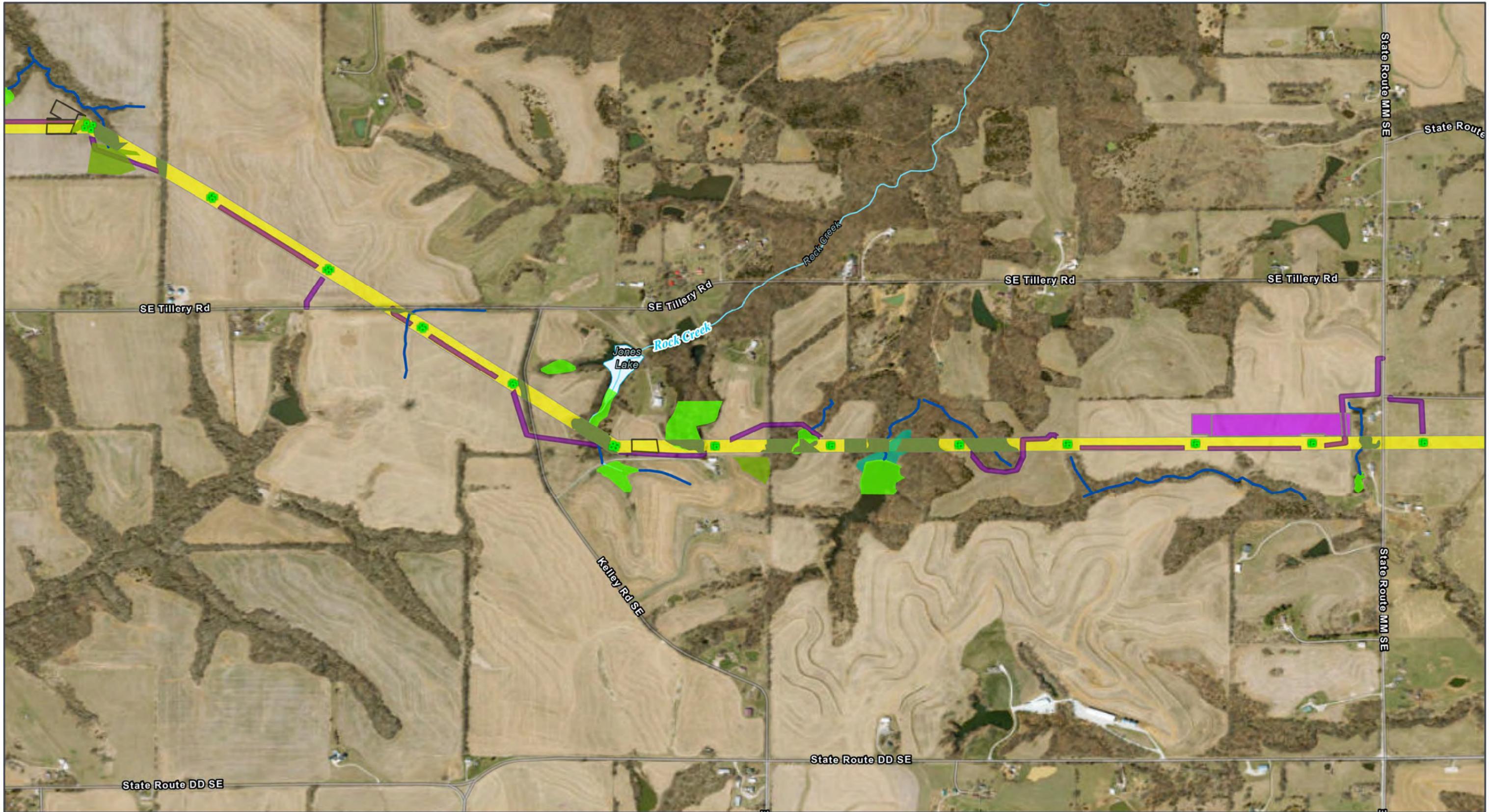


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

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0 100 200 Meters  
0 400 800 Feet



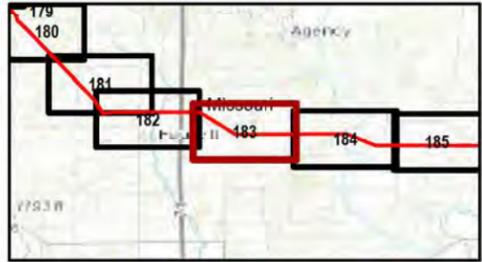
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Helipad / Fly Yard
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

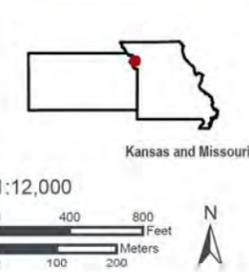
- NHD Stream/River
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)
- NHD Waterbody

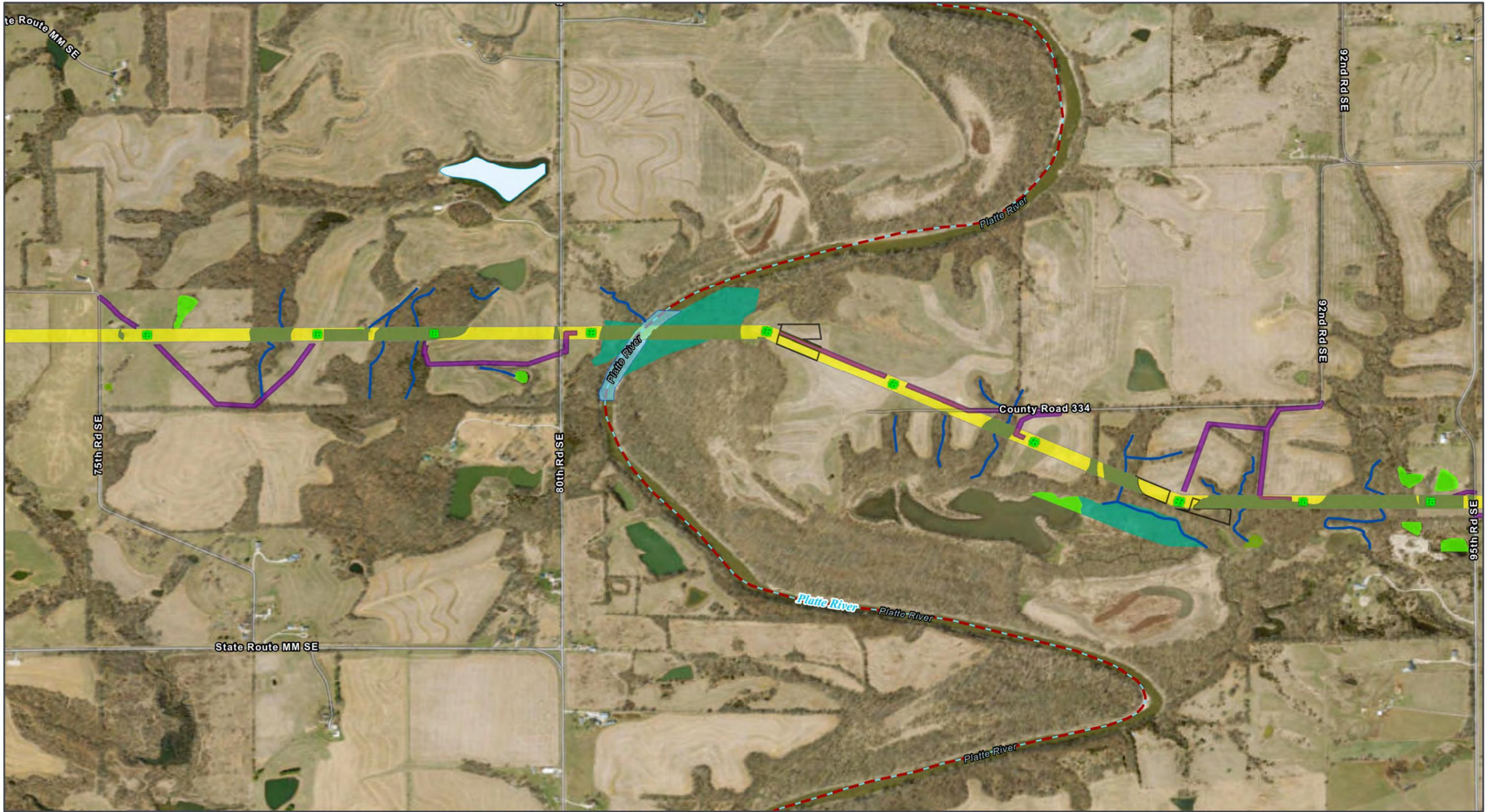
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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

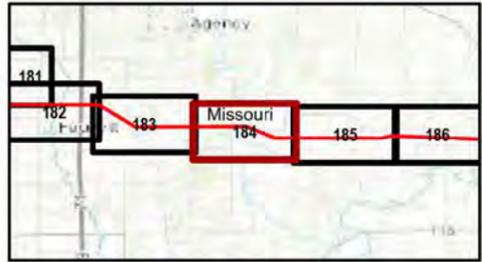




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TRANSMISSION LINE PROJECT  
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- |                                    |                           |  |
|------------------------------------|---------------------------|--|
| ROW                                | Pull Site/Tension Site    | Palustrine Forested (PFO)              |
| <b>Permanent Project Component</b> | <b>Hydrology</b>          | Palustrine Unconsolidated Bottom (PUB) |
| Transmission Structure             | Delineated Stream         | Delineated Waterbody                   |
| <b>Habitat Conversion</b>          | NHD Stream/River          | NHD Waterbody                          |
| Vegetation Clearing                | Impaired Waterway (303d)  | <b>Delineated Wetland</b>              |
| <b>Temporary Project Component</b> | Palustrine Emergent (PEM) |  |
| Access Road                        |                           |  |

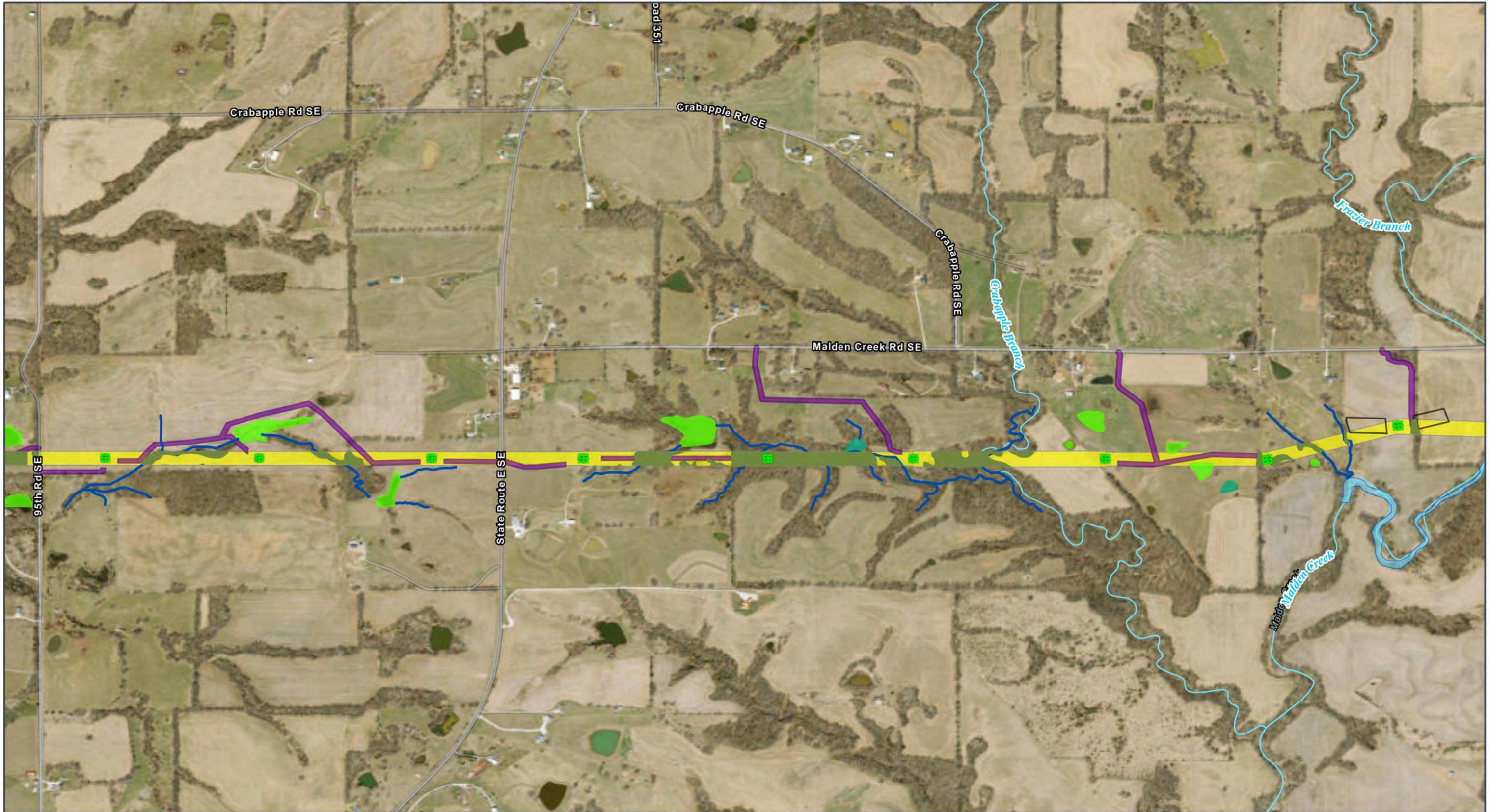
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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



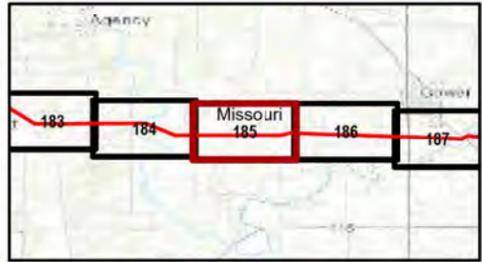
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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**ROW**  
Permanent Project Component  
Transmission Structure  
**Habitat Conversion**  
Vegetation Clearing

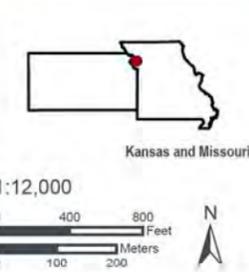
**Temporary Project Component**  
Access Road  
Pull Site/Tension Site  
**Hydrology**  
Delineated Stream  
NHD Stream/River

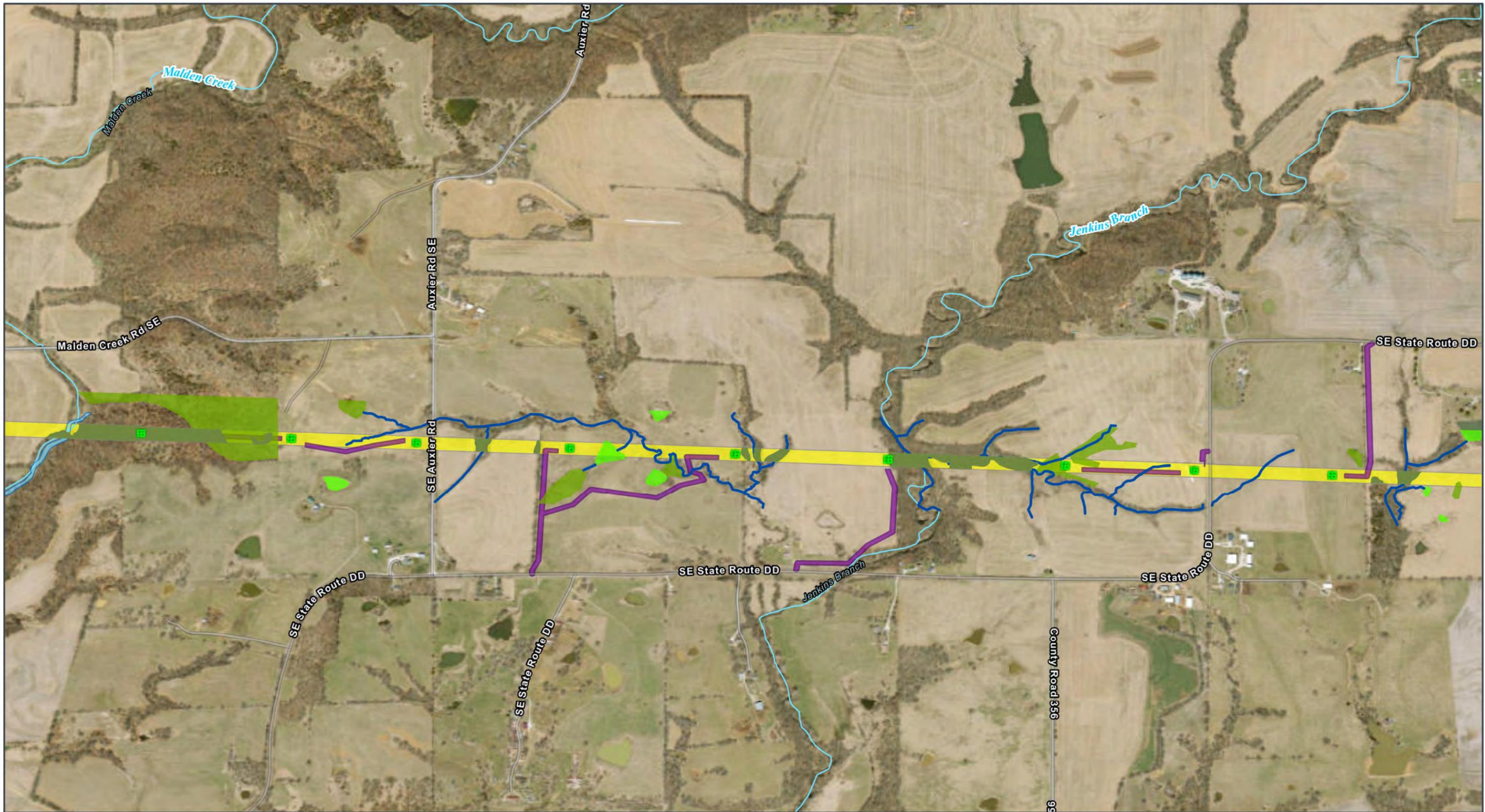
**Delineated Wetland**  
Palustrine Emergent (PEM)  
Palustrine Forested (PFO)  
Palustrine Unconsolidated Bottom (PUB)  
Delineated Waterbody

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



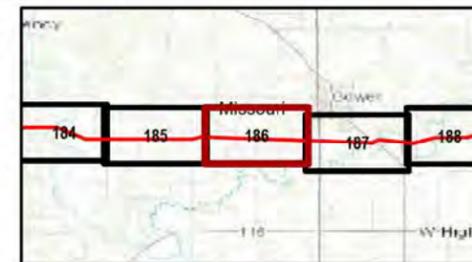
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W  
Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
ArcDoc: WetlandMapBook\_12k





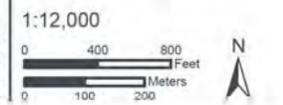
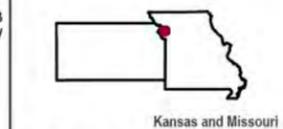
- |   |   |  |
|---|---|--|
| <p><b>ROW</b></p> <p><b>Permanent Project Component</b></p> <ul style="list-style-type: none"> <li><span style="color: green;">■</span> Transmission Structure</li> </ul> <p><b>Habitat Conversion</b></p> <ul style="list-style-type: none"> <li><span style="color: olive;">■</span> Vegetation Clearing</li> </ul> | <p><b>Temporary Project Component</b></p> <ul style="list-style-type: none"> <li><span style="color: purple;">■</span> Access Road</li> </ul> <p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">—</span> Delineated Stream</li> <li><span style="color: cyan;">—</span> NHD Stream/River</li> </ul> | <p><b>Delineated Wetland</b></p> <ul style="list-style-type: none"> <li><span style="color: lightgreen;">■</span> Palustrine Emergent (PEM)</li> <li><span style="color: limegreen;">■</span> Palustrine Unconsolidated Bottom (PUB)</li> <li><span style="color: lightblue;">■</span> Delineated Waterbody</li> </ul> |
|---|---|--|

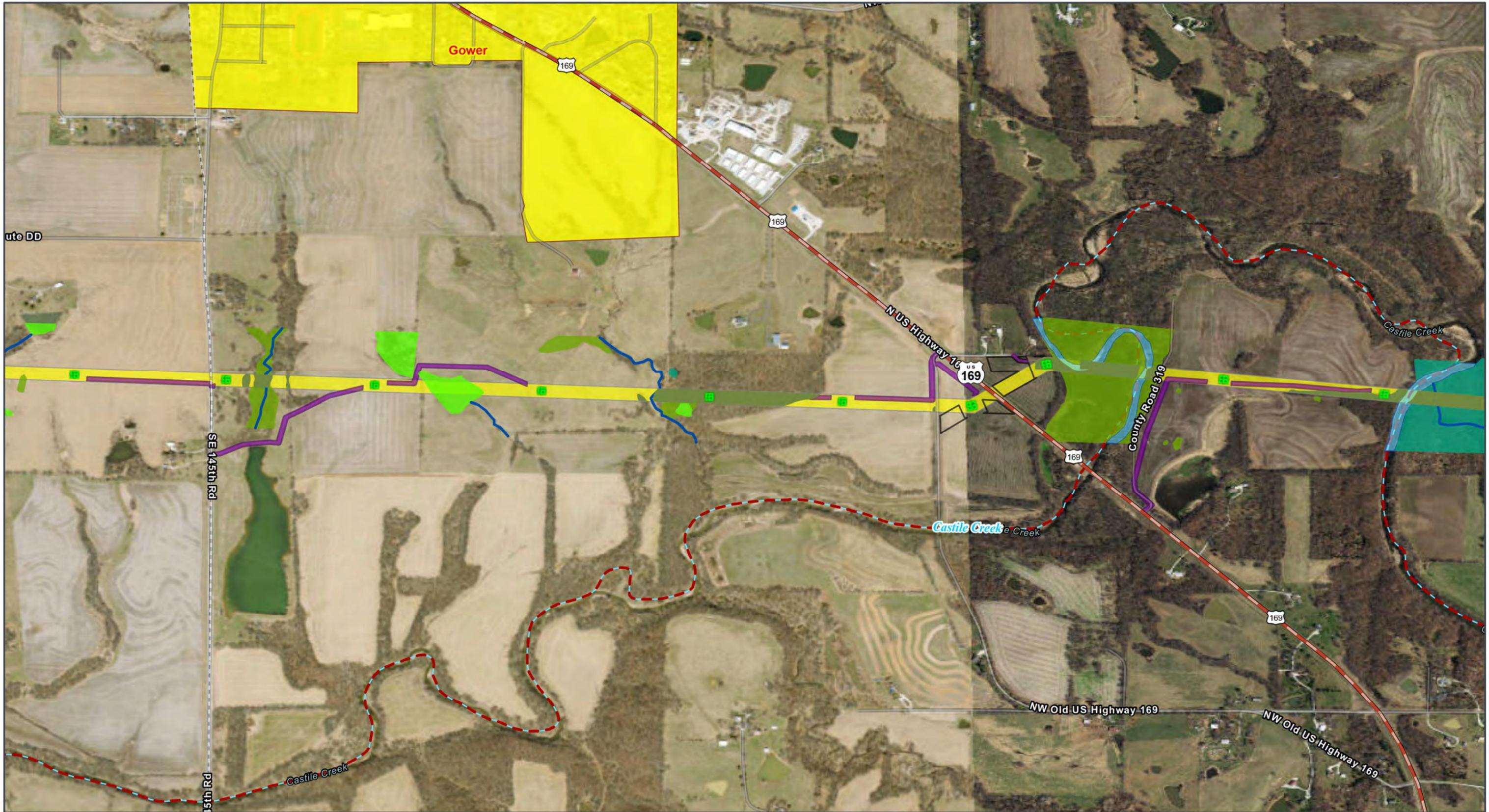
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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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Project No. 60694559  
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App: WetlandMapBook\_12k





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TRANSMISSION LINE PROJECT  
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- Municipal Boundary Near the Project
- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream
- NHD Stream/River
- Impaired Waterway (303d)

- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)
- Delineated Waterbody
- Transportation**
- U.S. Highway

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



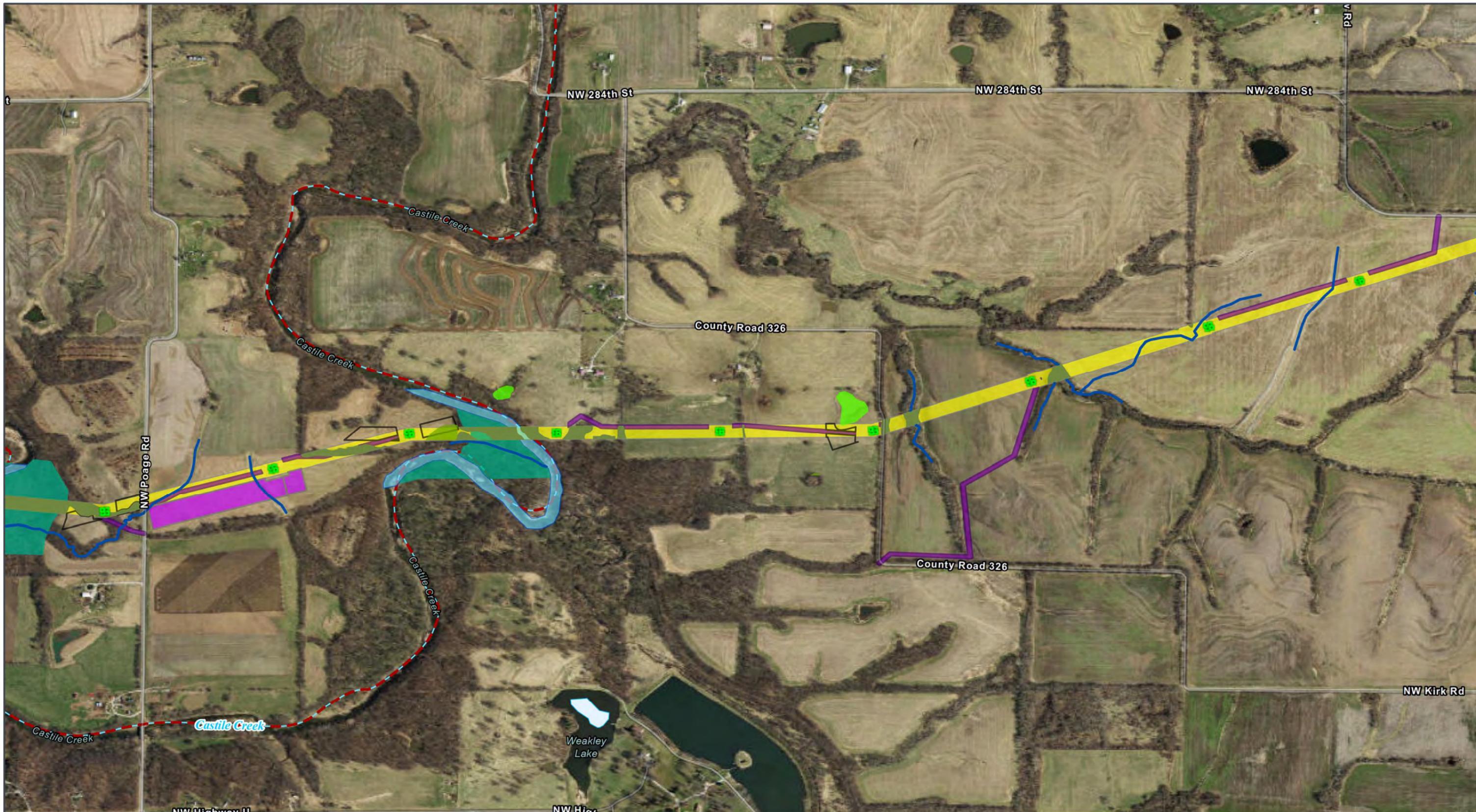
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Kansas and Missouri

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0 100 200 Meters  
0 400 800 Feet

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



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TRANSMISSION LINE PROJECT  
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- ROW
- Helipad / Fly Yard
- Pull Site/Tension Site
- Permanent Project Component
  - Transmission Structure
- Habitat Conversion
  - Vegetation Clearing
- Temporary Project Component
  - Access Road
- Hydrology
  - Delineated Stream
  - NHD Stream/River
  - Impaired Waterway (303d)

- Delineated Wetland**
- Palustrine Emergent (PEM)
  - Palustrine Forested (PFO)
  - Palustrine Unconsolidated Bottom (PUB)
  - Delineated Waterbody
  - NHD Waterbody

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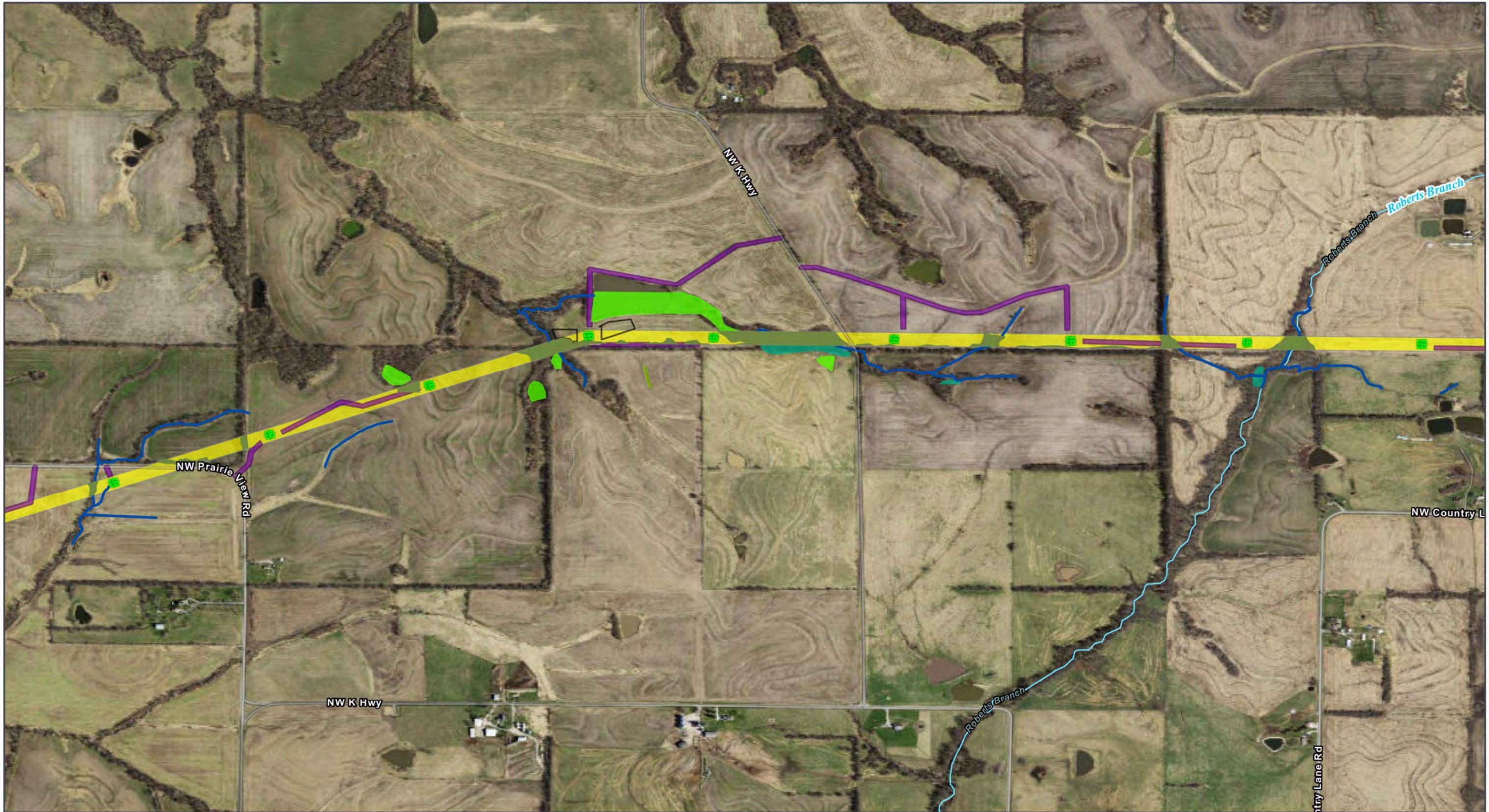


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
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Layout: Wetland Mapbook 12k  
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Kansas and Missouri



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TRANSMISSION LINE PROJECT

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ROW

**Permanent Project Component**

- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

**Temporary Project Component**

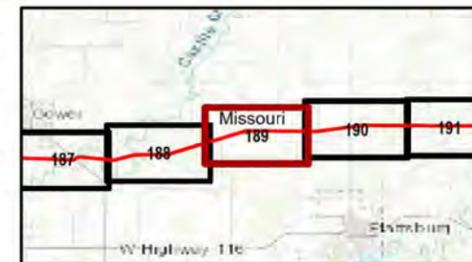
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

NHD Stream/River

**Delineated Wetland**

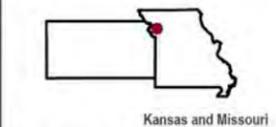
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)

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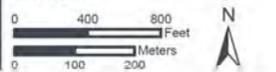


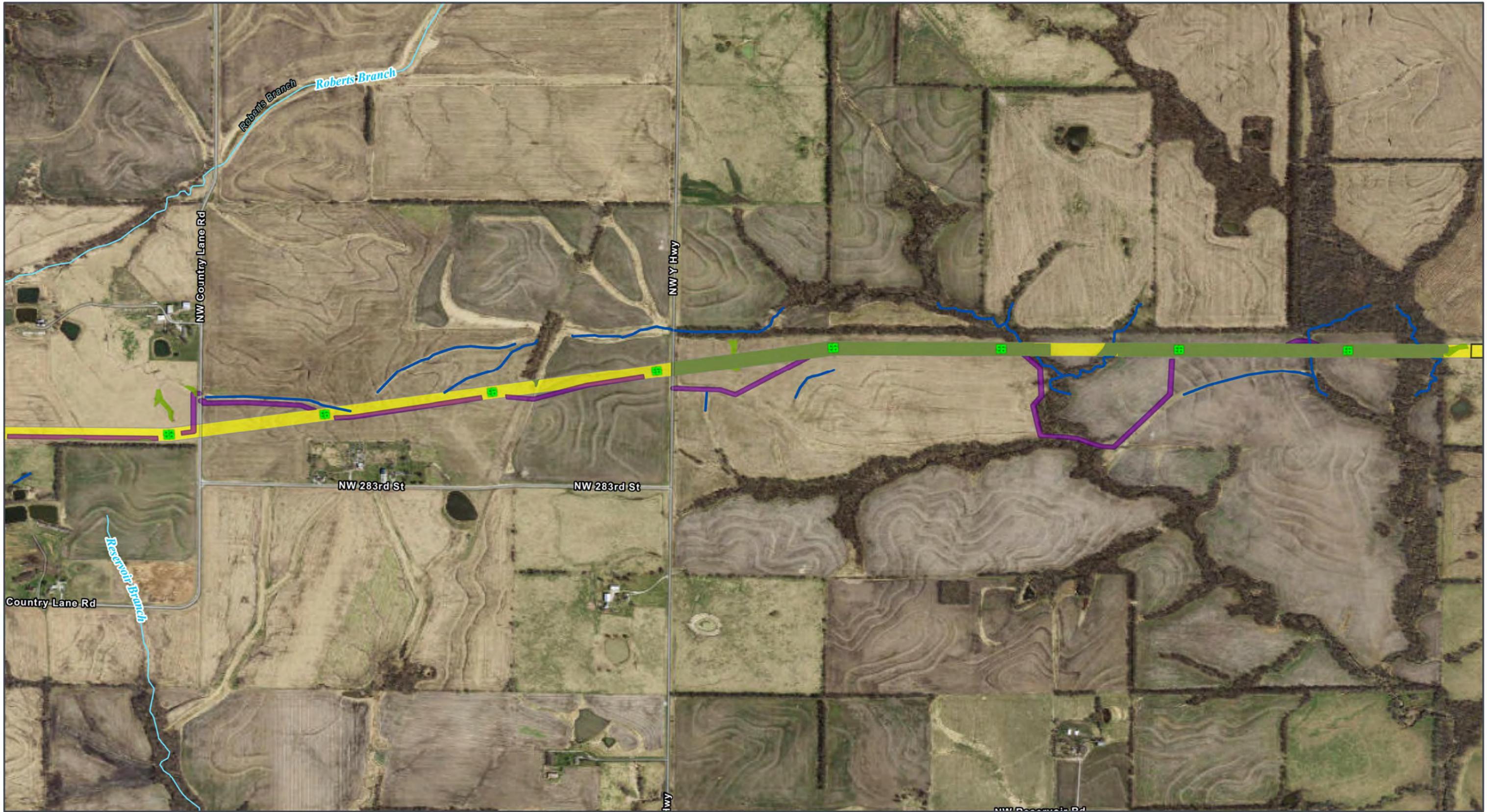
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



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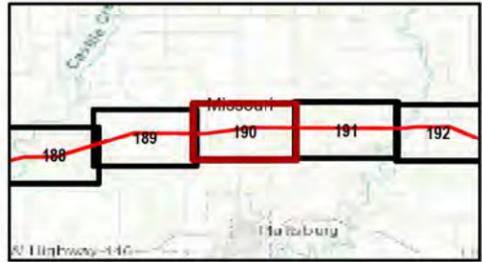




GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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- |                                    |                                    |                           |
|------------------------------------|------------------------------------|---------------------------|
| ROW                                | <b>Temporary Project Component</b> | NHD Stream/River          |
| <b>Permanent Project Component</b> | Access Road                        | <b>Delineated Wetland</b> |
| Transmission Structure             | Pull Site/Tension Site             | Palustrine Emergent (PEM) |
| <b>Habitat Conversion</b>          | <b>Hydrology</b>                   |                           |
| Vegetation Clearing                | Delineated Stream                  |                           |

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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Kansas and Missouri

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0 100 200 Meters  
0 400 800 Feet

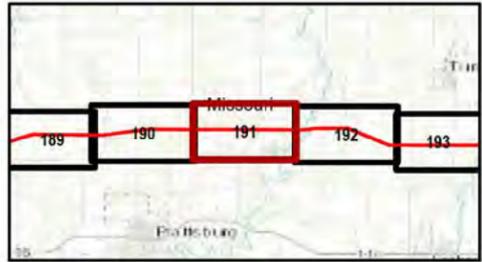
Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
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GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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- |                                    |                           |  |
|------------------------------------|---------------------------|--|
| ROW                                | Pull Site/Tension Site    | Palustrine Forested (PFO)              |
| <b>Permanent Project Component</b> | <b>Hydrology</b>          | Palustrine Unconsolidated Bottom (PUB) |
| Transmission Structure             | Delineated Stream         | Delineated Waterbody                   |
| <b>Habitat Conversion</b>          | NHD Stream/River          | NHD Waterbody                          |
| Vegetation Clearing                | Impaired Waterway (303d)  |  |
| <b>Temporary Project Component</b> | <b>Delineated Wetland</b> |  |
| Access Road                        | Palustrine Emergent (PEM) |  |

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



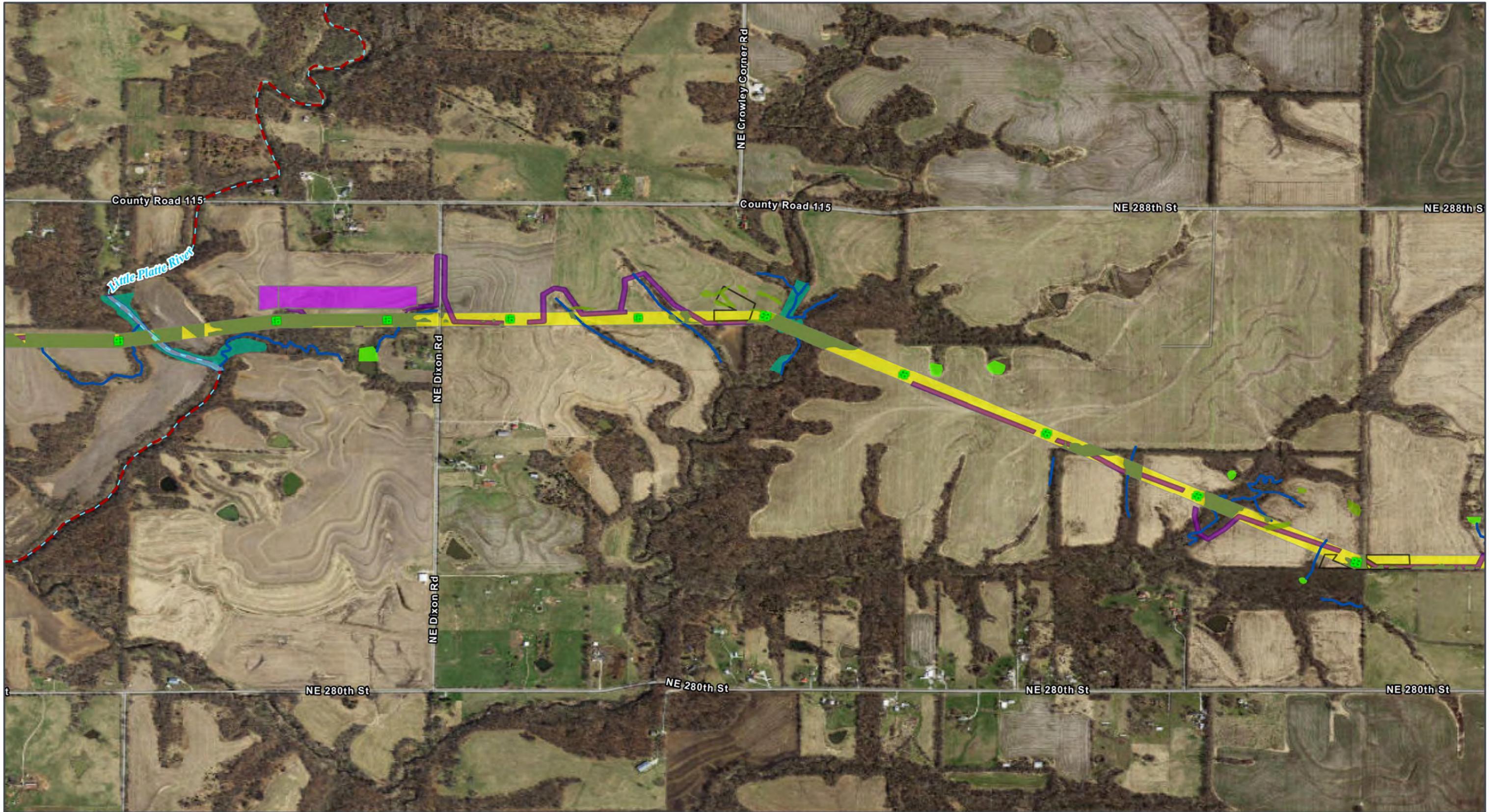
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Kansas and Missouri

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0 100 200 Meters  
0 400 800 Feet

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
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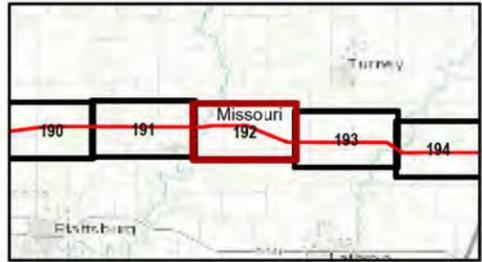


GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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- ROW
- Helipad / Fly Yard
- Pull Site/Tension Site
- Permanent Project Component
  - Transmission Structure
- Habitat Conversion
  - Vegetation Clearing
- Temporary Project Component
  - Access Road
- Hydrology
  - Delineated Stream
  - NHD Stream/River
  - Impaired Waterway (303d)

- Delineated Wetland**
- Palustrine Emergent (PEM)
  - Palustrine Forested (PFO)
  - Palustrine Unconsolidated Bottom (PUB)
  - Delineated Waterbody

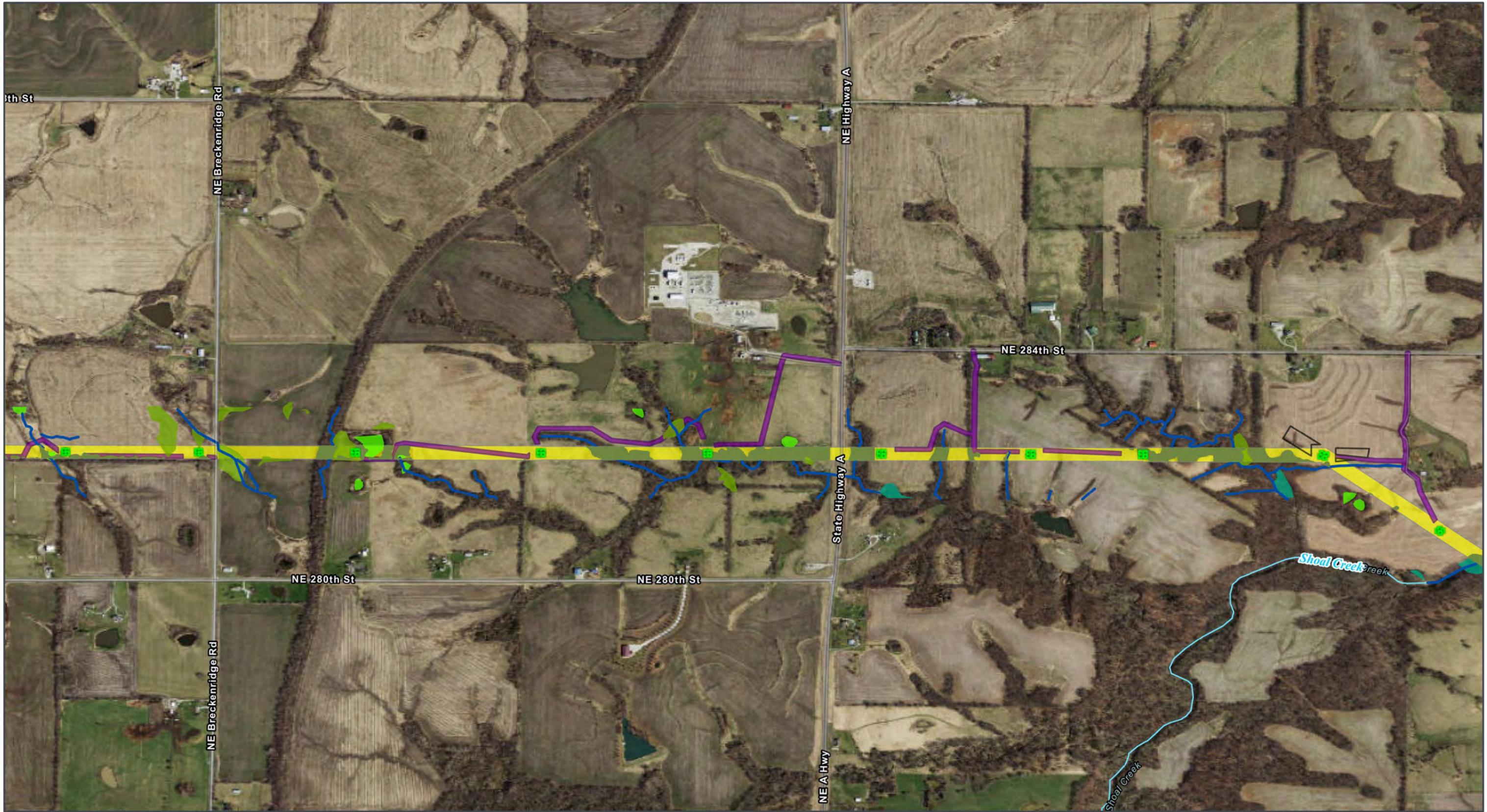
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Kansas and Missouri  
GCS North American 1983  
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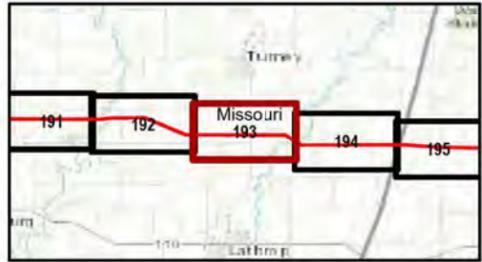
Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
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TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 193 of 259

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> ROW</li> <li><b>Permanent Project Component</b></li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Transmission Structure</li> <li><b>Habitat Conversion</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: olive; border: 1px solid black; margin-right: 5px;"></span> Vegetation Clearing</li> </ul> | <ul style="list-style-type: none"> <li><b>Temporary Project Component</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Access Road</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Pull Site/Tension Site</li> <li><b>Hydrology</b></li> <li><span style="display: inline-block; width: 15px; height: 2px; background-color: blue; margin-right: 5px;"></span> Delineated Stream</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid cyan; margin-right: 5px;"></span> NHD Stream/River</li> <li><b>Delineated Wetland</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightgreen; border: 1px solid black; margin-right: 5px;"></span> Palustrine Emergent (PEM)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightblue; border: 1px solid black; margin-right: 5px;"></span> Palustrine Forested (PFO)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: limegreen; border: 1px solid black; margin-right: 5px;"></span> Palustrine Unconsolidated Bottom (PUB)</li> </ul> |
|---|--|---|

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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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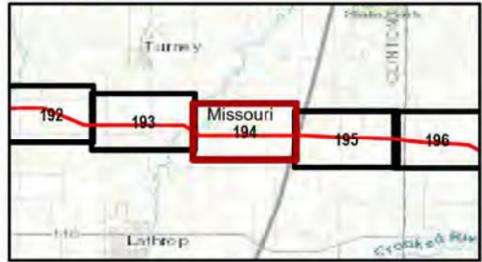
Kansas and Missouri



- ROW
- Permanent Project Component**
- Transmission Structure
- Optical Regeneration
- OPGW Access
- Habitat Conversion**
- Vegetation Clearing
- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream
- NHD Stream/River
- Impaired Waterway (303d)

- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)
- Transportation**
- Interstate Highway

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



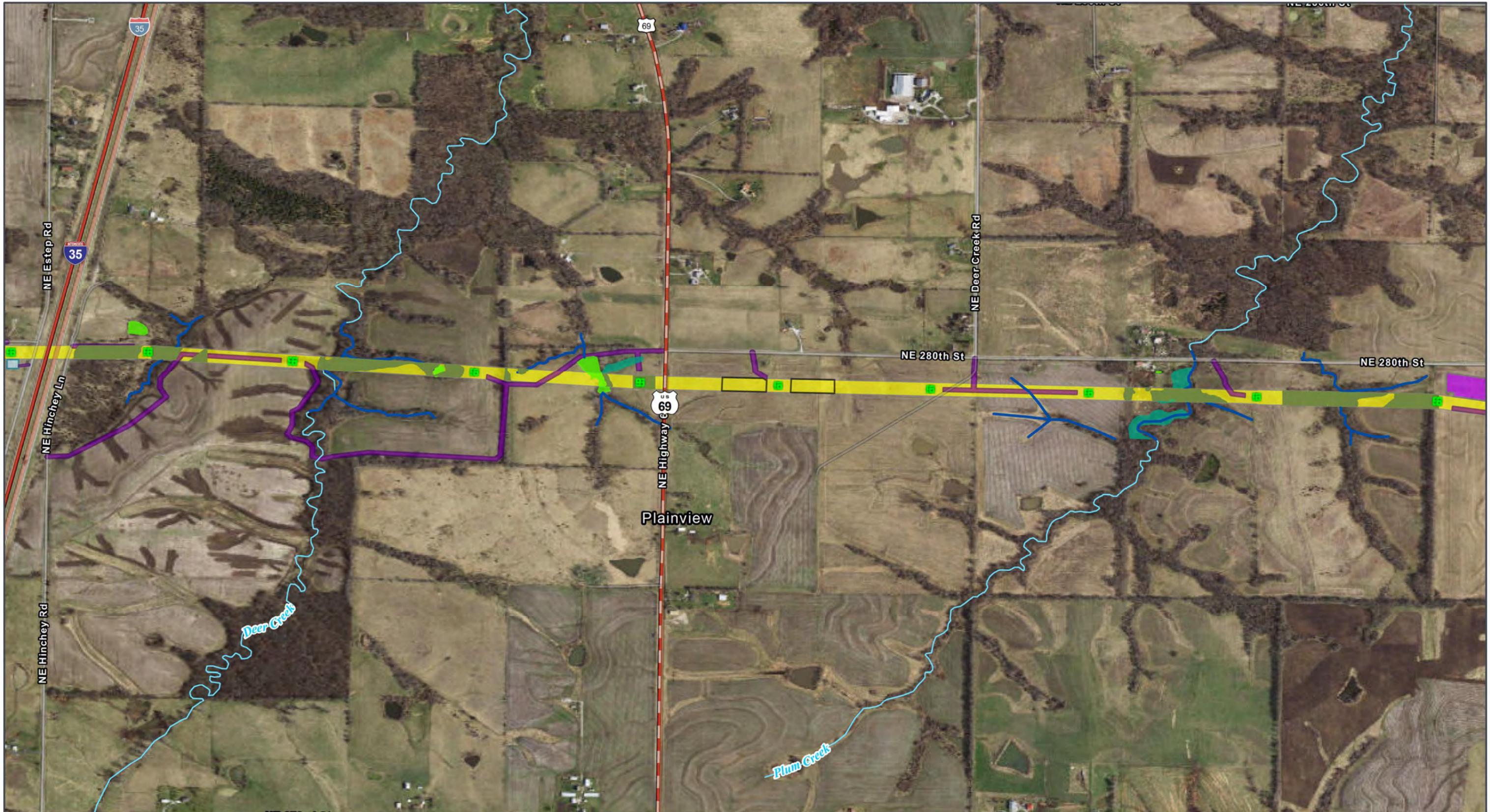
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Kansas and Missouri

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No: 60694559  
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1:12,000

0 100 200 Meters  
0 400 800 Feet



GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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Map 195 of 259



- ROW
- Permanent Project Component**
- Transmission Structure
- Optical Regeneration
- OPGW Access
- Habitat Conversion**
- Vegetation Clearing

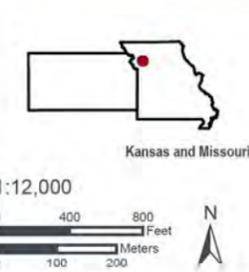
- Temporary Project Component**
- Access Road
- Helipad / Fly Yard
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream
- NHD Stream/River

- Delineated Wetland**
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)
- Transportation**
- Interstate Highway
- U.S. Highway

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Kansas and Missouri  
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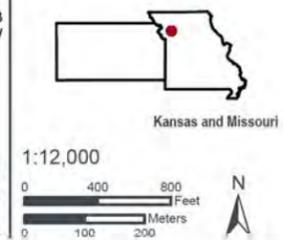
- |                                    |                                    |  |
|------------------------------------|------------------------------------|--|
| ROW                                | <b>Temporary Project Component</b> | NHD Stream/River                       |
| <b>Permanent Project Component</b> | Access Road                        | <b>Delineated Wetland</b>              |
| Transmission Structure             | Helipad / Fly Yard                 | Palustrine Emergent (PEM)              |
| <b>Habitat Conversion</b>          | Pull Site/Tension Site             | Palustrine Unconsolidated Bottom (PUB) |
| Vegetation Clearing                | <b>Hydrology</b>                   |  |
|                                    | Delineated Stream                  |  |

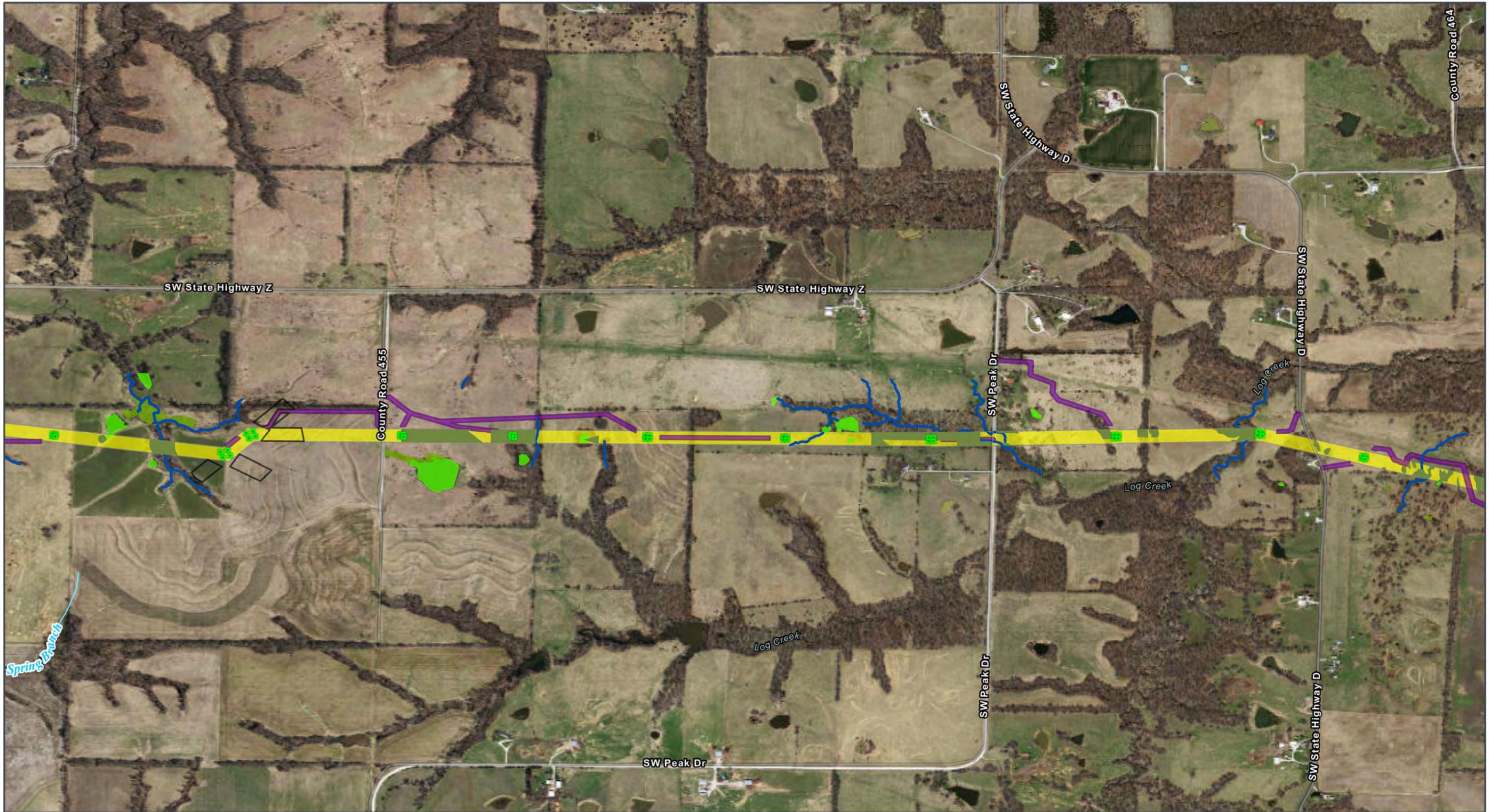
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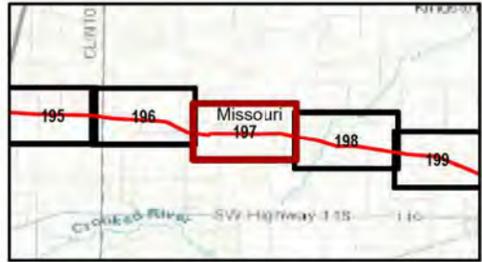
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

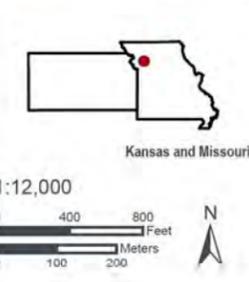
- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

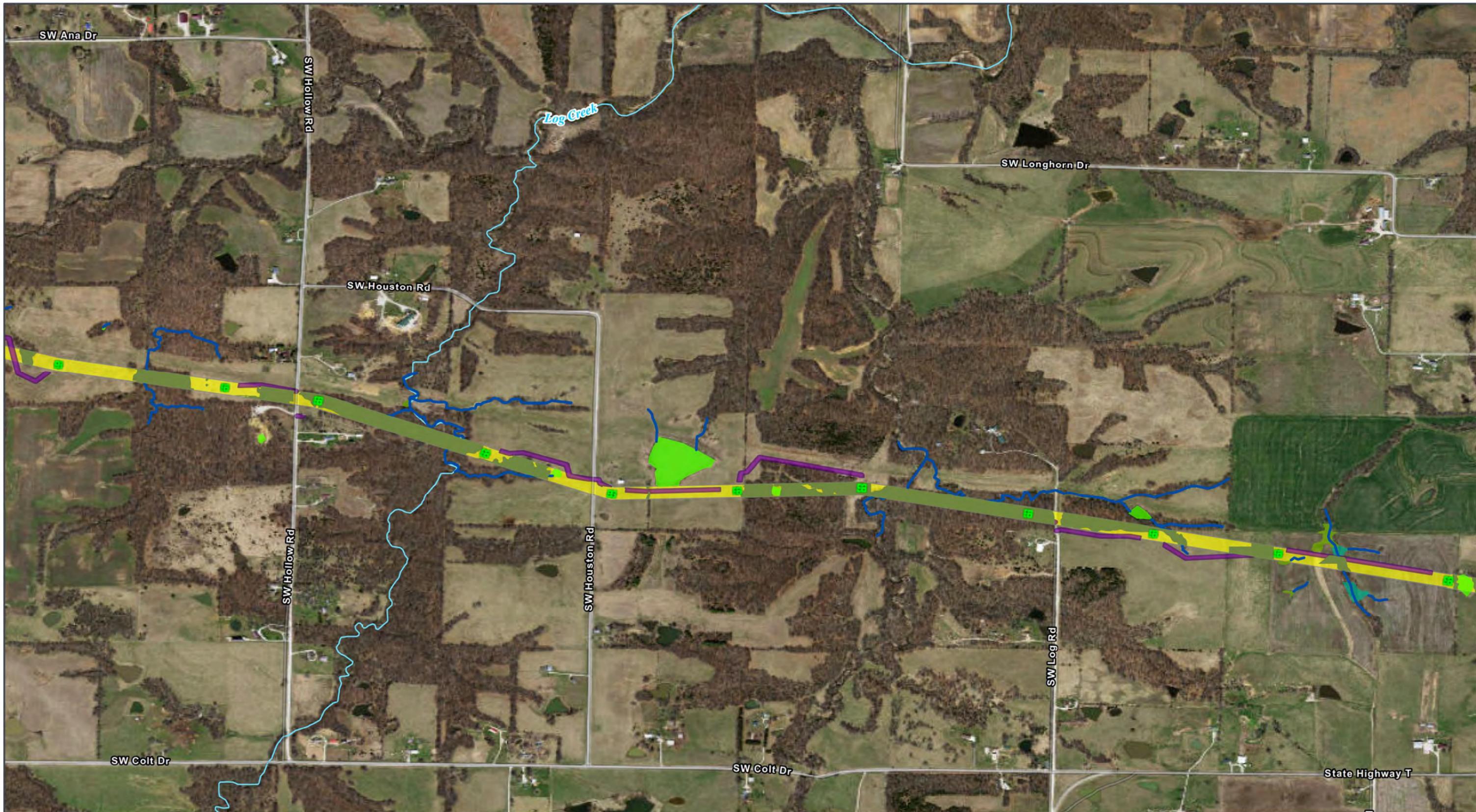
- NHD Stream/River
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Unconsolidated Bottom (PUB)

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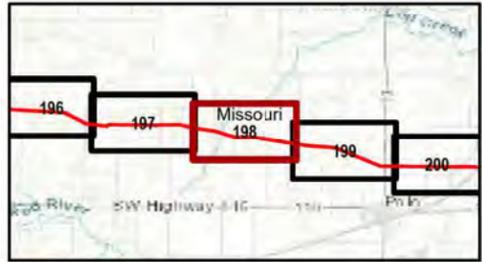
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

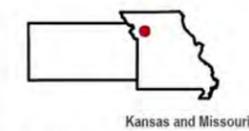
- Temporary Project Component**
- Access Road
- Hydrology**
- Delineated Stream
- NHD Stream/River

- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)

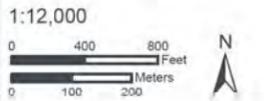
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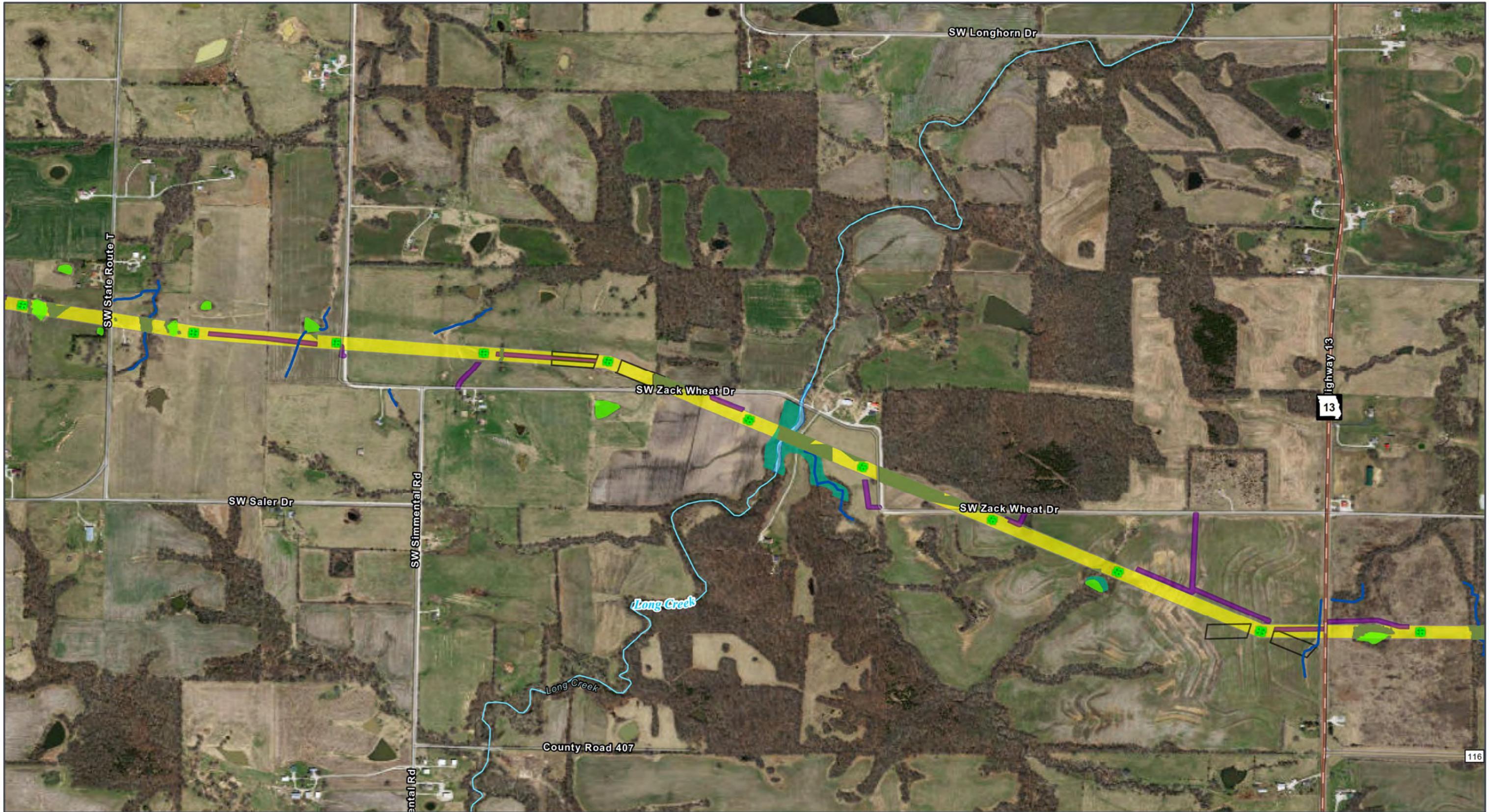


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W



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- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream
- NHD Stream/River

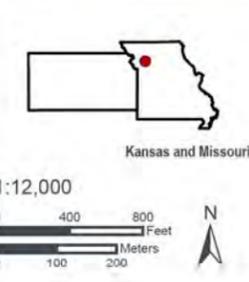
- Delineated Wetland**
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)
- Delineated Waterbody
- Transportation**
- State Highway

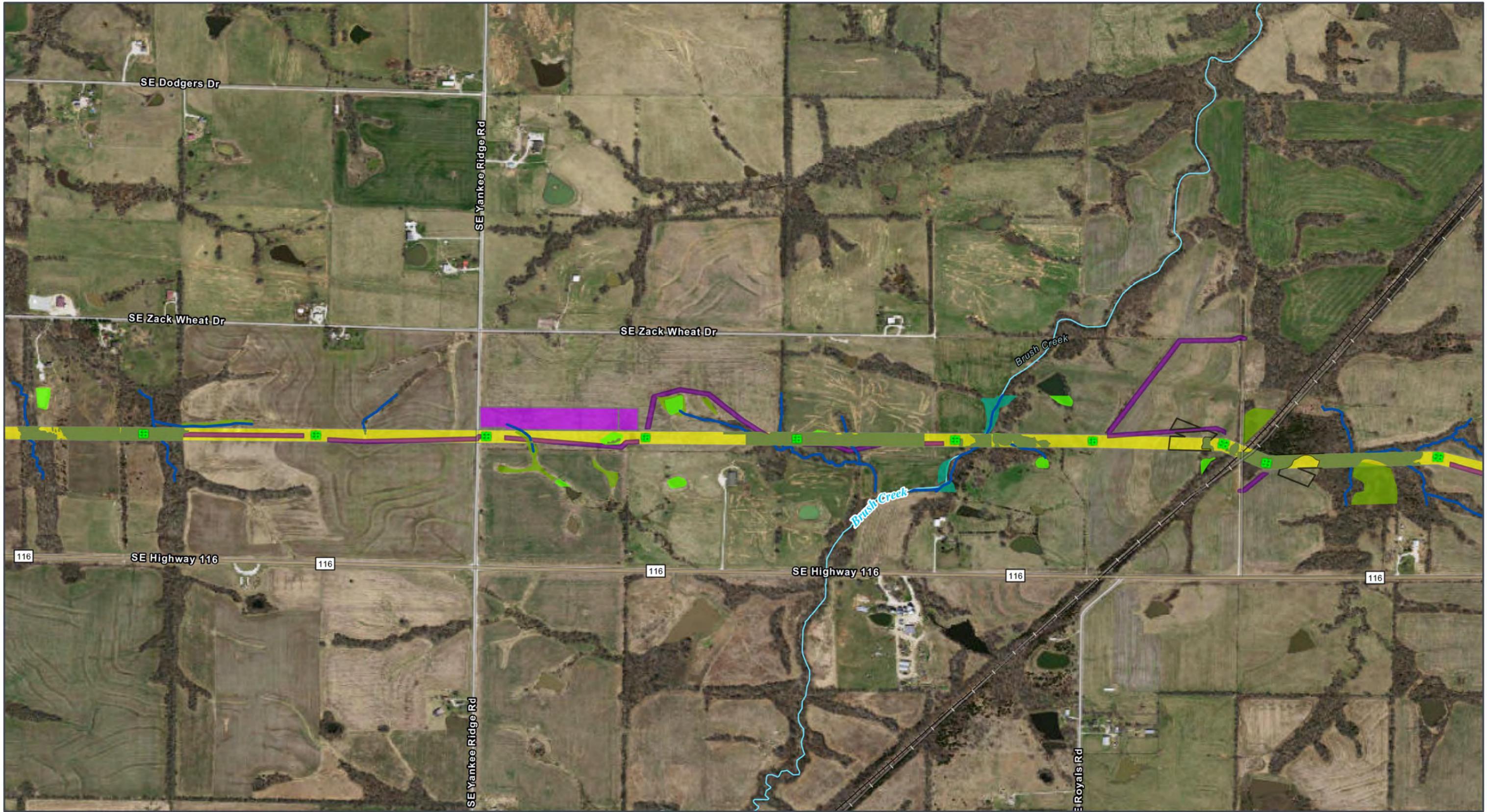
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Kansas and Missouri  
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TRANSMISSION LINE PROJECT  
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- |                                    |                           |  |
|------------------------------------|---------------------------|--|
| ROW                                | Helipad / Fly Yard        | Palustrine Forested (PFO)              |
| <b>Permanent Project Component</b> | Pull Site/Tension Site    | Palustrine Unconsolidated Bottom (PUB) |
| Transmission Structure             | <b>Hydrology</b>          | <b>Transportation</b>                  |
| <b>Habitat Conversion</b>          | Delineated Stream         | Railroad                               |
| Vegetation Clearing                | NHD Stream/River          |  |
| <b>Temporary Project Component</b> | <b>Delineated Wetland</b> |  |
| Access Road                        | Palustrine Emergent (PEM) |  |

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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

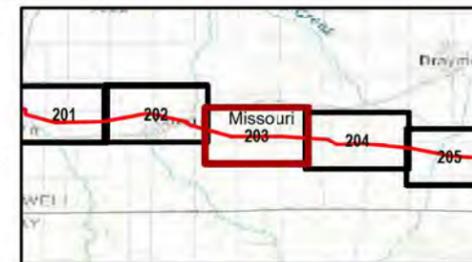
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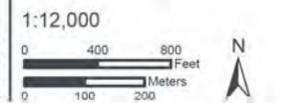
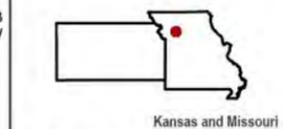
- |                                    |                                    |  |
|------------------------------------|------------------------------------|--|
| ROW                                | <b>Temporary Project Component</b> | Palustrine Scrub-Shrub (PSS)           |
| <b>Permanent Project Component</b> | Access Road                        | Palustrine Unconsolidated Bottom (PUB) |
| Transmission Structure             | Pull Site/Tension Site             | NHD Waterbody                          |
| <b>Habitat Conversion</b>          | <b>Hydrology</b>                   | <b>Transportation</b>                  |
| Vegetation Clearing                | Delineated Stream                  | Railroad                               |
|                                    | <b>Delineated Wetland</b>          |  |
|                                    | Palustrine Emergent (PEM)          |  |

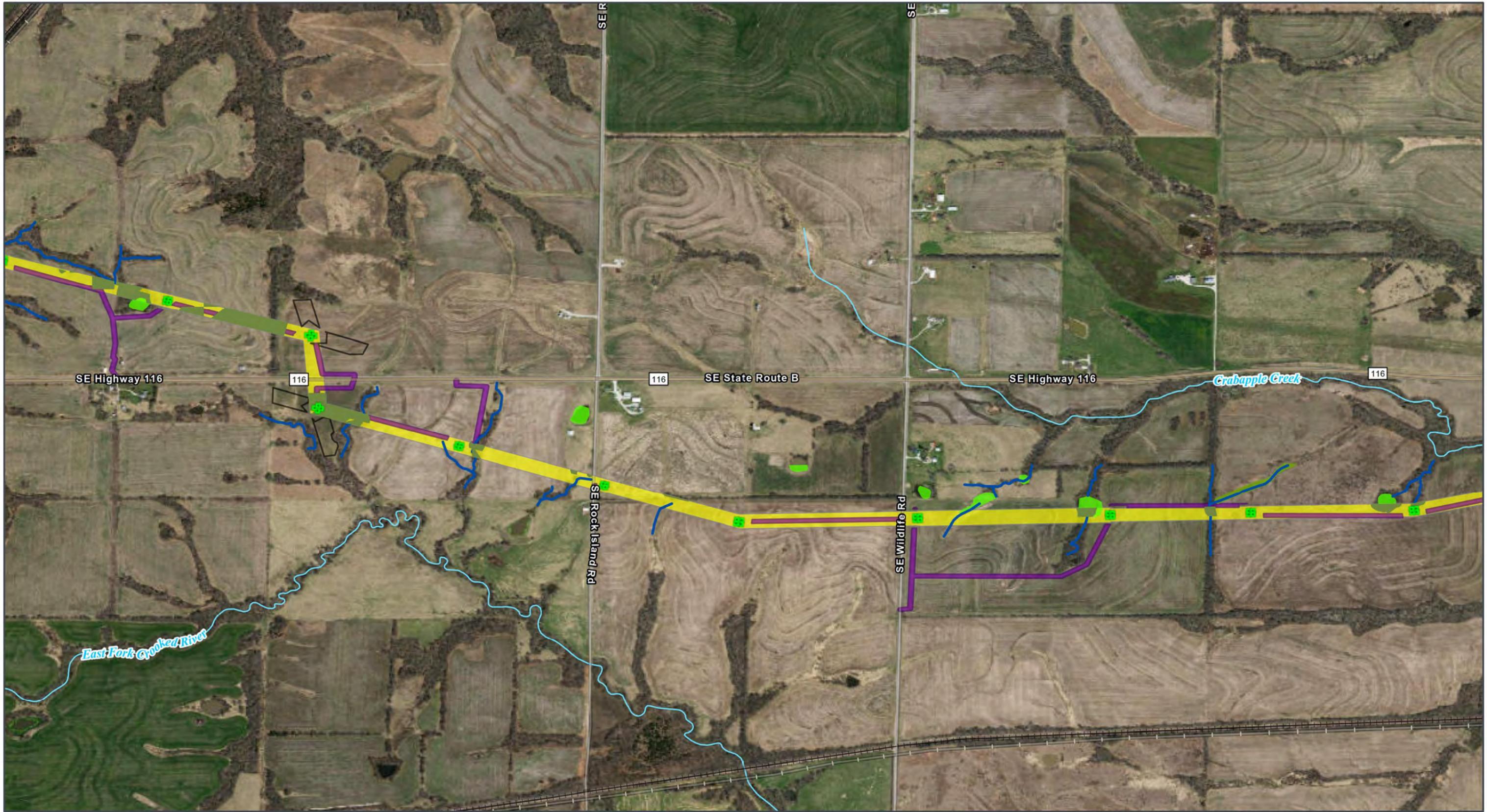
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Kansas and Missouri  
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38.3365°N 95.5783°W

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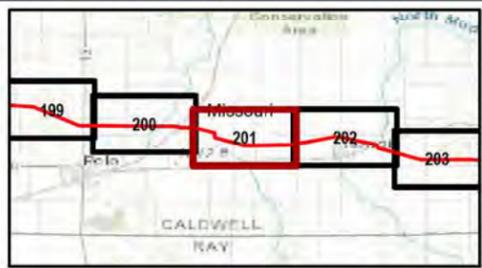
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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- ROW
- Permanent Project Component**
  - Transmission Structure
- Habitat Conversion**
  - Vegetation Clearing
- Temporary Project Component**
  - Access Road
  - Pull Site/Tension Site
- Hydrology**
  - Delineated Stream
  - NHD Stream/River

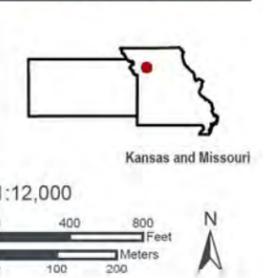
- Delineated Wetland**
  - Palustrine Emergent (PEM)
  - Palustrine Unconsolidated Bottom (PUB)
- Transportation**
  - Railroad

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TRANSMISSION LINE PROJECT  
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- Municipal Boundary Near the Project
- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream
- NHD Stream/River

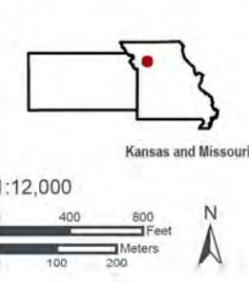
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)
- Transportation**
- Railroad

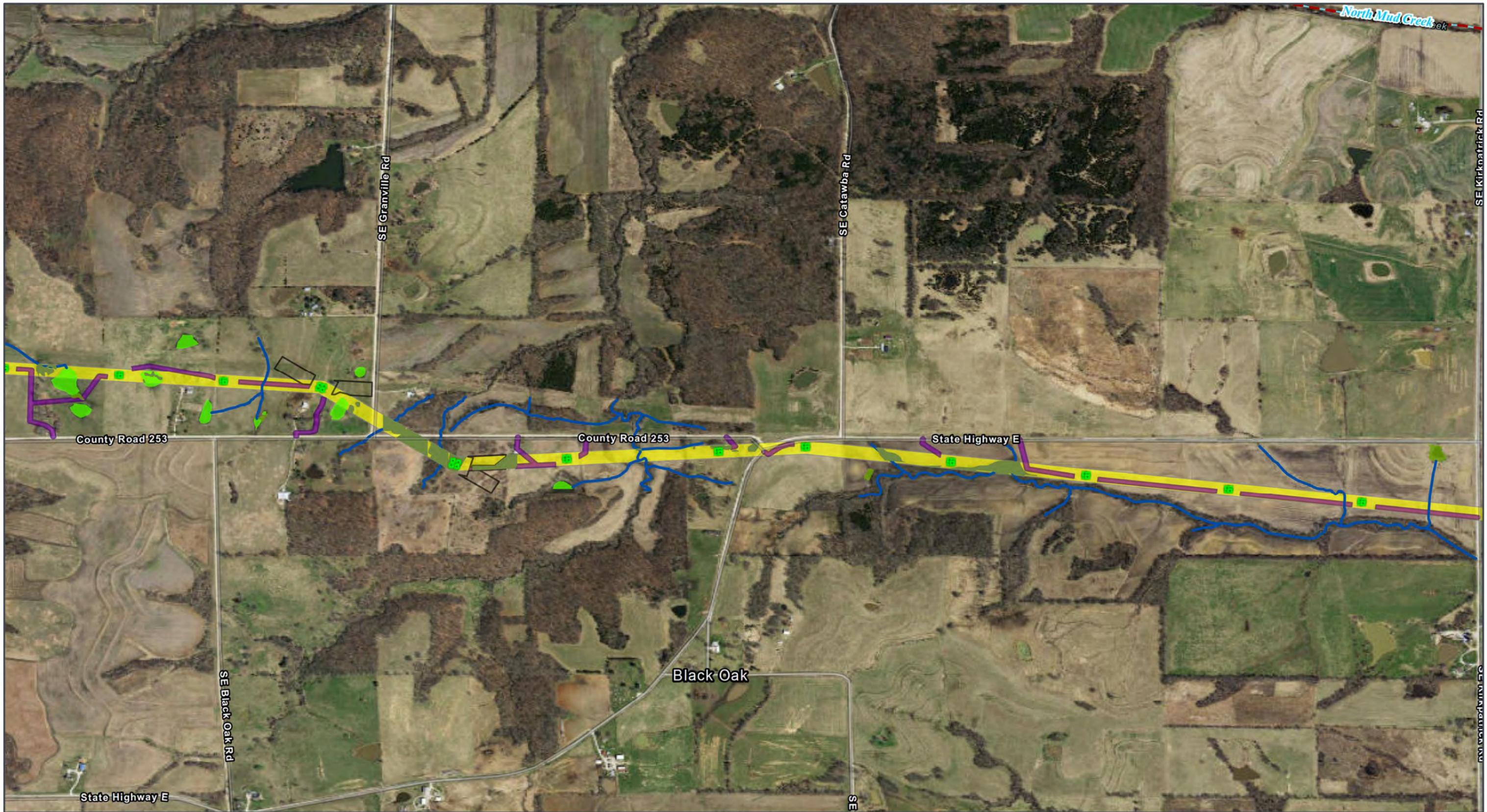
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Kansas and Missouri  
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TRANSMISSION LINE PROJECT  
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- |   |   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> ROW</li> <li><b>Permanent Project Component</b></li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Transmission Structure</li> <li><b>Habitat Conversion</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: olive; border: 1px solid black; margin-right: 5px;"></span> Vegetation Clearing</li> </ul> | <ul style="list-style-type: none"> <li><b>Temporary Project Component</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Access Road</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Pull Site/Tension Site</li> <li><b>Hydrology</b></li> <li><span style="display: inline-block; width: 15px; height: 2px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> Delineated Stream</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid cyan; margin-right: 5px;"></span> NHD Stream/River</li> <li><span style="display: inline-block; width: 15px; border-bottom: 1px dashed red; margin-right: 5px;"></span> Impaired Waterway (303d)</li> <li><b>Delineated Wetland</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightgreen; border: 1px solid black; margin-right: 5px;"></span> Palustrine Emergent (PEM)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: limegreen; border: 1px solid black; margin-right: 5px;"></span> Palustrine Unconsolidated Bottom (PUB)</li> </ul> |
|---|---|---|

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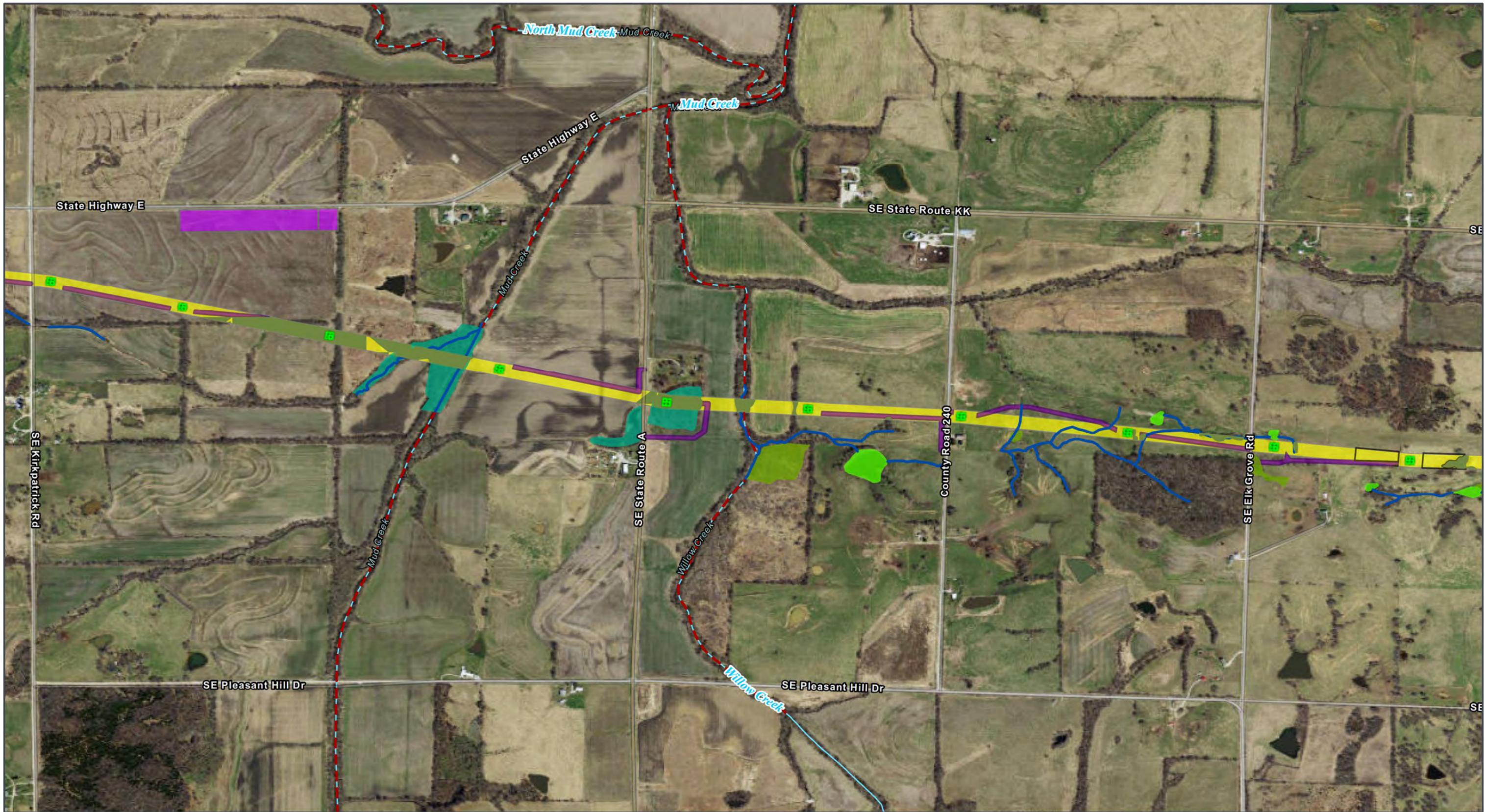


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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Kansas and Missouri



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TRANSMISSION LINE PROJECT

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ROW

**Permanent Project Component**

Transmission Structure

**Habitat Conversion**

Vegetation Clearing

**Temporary Project Component**

Access Road

Helipad / Fly Yard

Pull Site/Tension Site

**Hydrology**

Delineated Stream

NHD Stream/River

Impaired Waterway (303d)

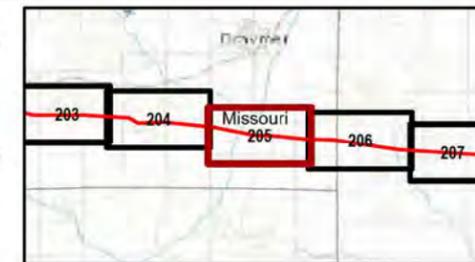
**Delineated Wetland**

Palustrine Emergent (PEM)

Palustrine Forested (PFO)

Palustrine Unconsolidated Bottom (PUB)

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

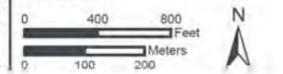


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



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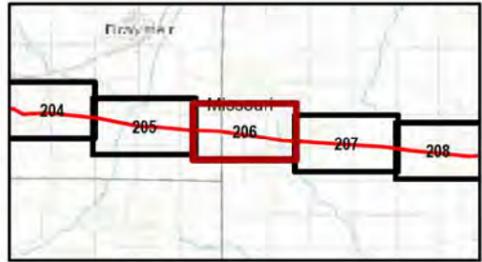


GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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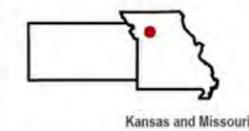
- |                                    |                                    |
|------------------------------------|------------------------------------|
| ROW                                | <b>Temporary Project Component</b> |
| <b>Permanent Project Component</b> | Access Road                        |
| Transmission Structure             | Pull Site/Tension Site             |
| <b>Habitat Conversion</b>          | <b>Hydrology</b>                   |
| Vegetation Clearing                | Delineated Stream                  |
|                                    | NHD Stream/River                   |

- |  |
|--|
| <b>Delineated Wetland</b>              |
| Palustrine Emergent (PEM)              |
| Palustrine Forested (PFO)              |
| Palustrine Unconsolidated Bottom (PUB) |
| NHD Waterbody                          |

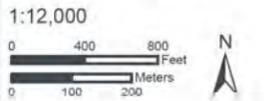
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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W



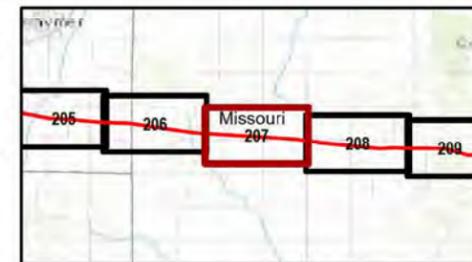
Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k





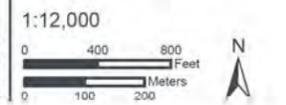
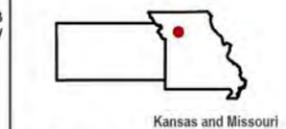
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|------------------------------------|------------------------------------|--|
| ROW                                | <b>Temporary Project Component</b> | NHD Stream/River                       |
| <b>Permanent Project Component</b> | Access Road                        | <b>Delineated Wetland</b>              |
| Transmission Structure             | Pull Site/Tension Site             | Palustrine Emergent (PEM)              |
| <b>Habitat Conversion</b>          | <b>Hydrology</b>                   | Palustrine Unconsolidated Bottom (PUB) |
| Vegetation Clearing                | Delineated Stream                  | NHD Waterbody                          |

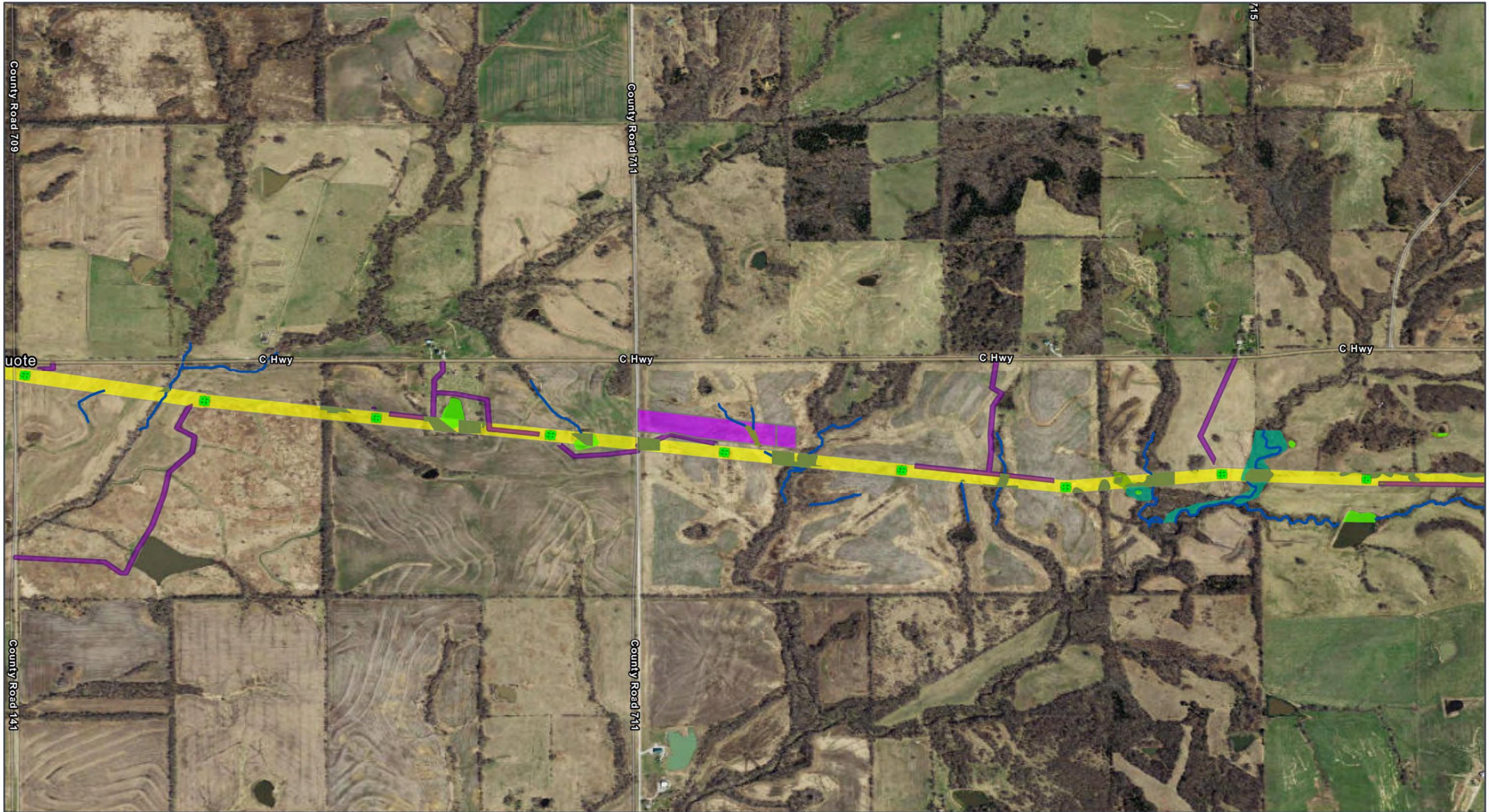
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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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TRANSMISSION LINE PROJECT  
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ROW

**Permanent Project Component**

- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

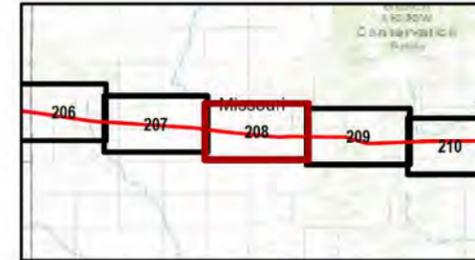
**Temporary Project Component**

- Access Road
- Helipad / Fly Yard
- Hydrology**
- Delineated Stream

**Delineated Wetland**

- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)

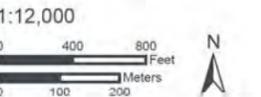
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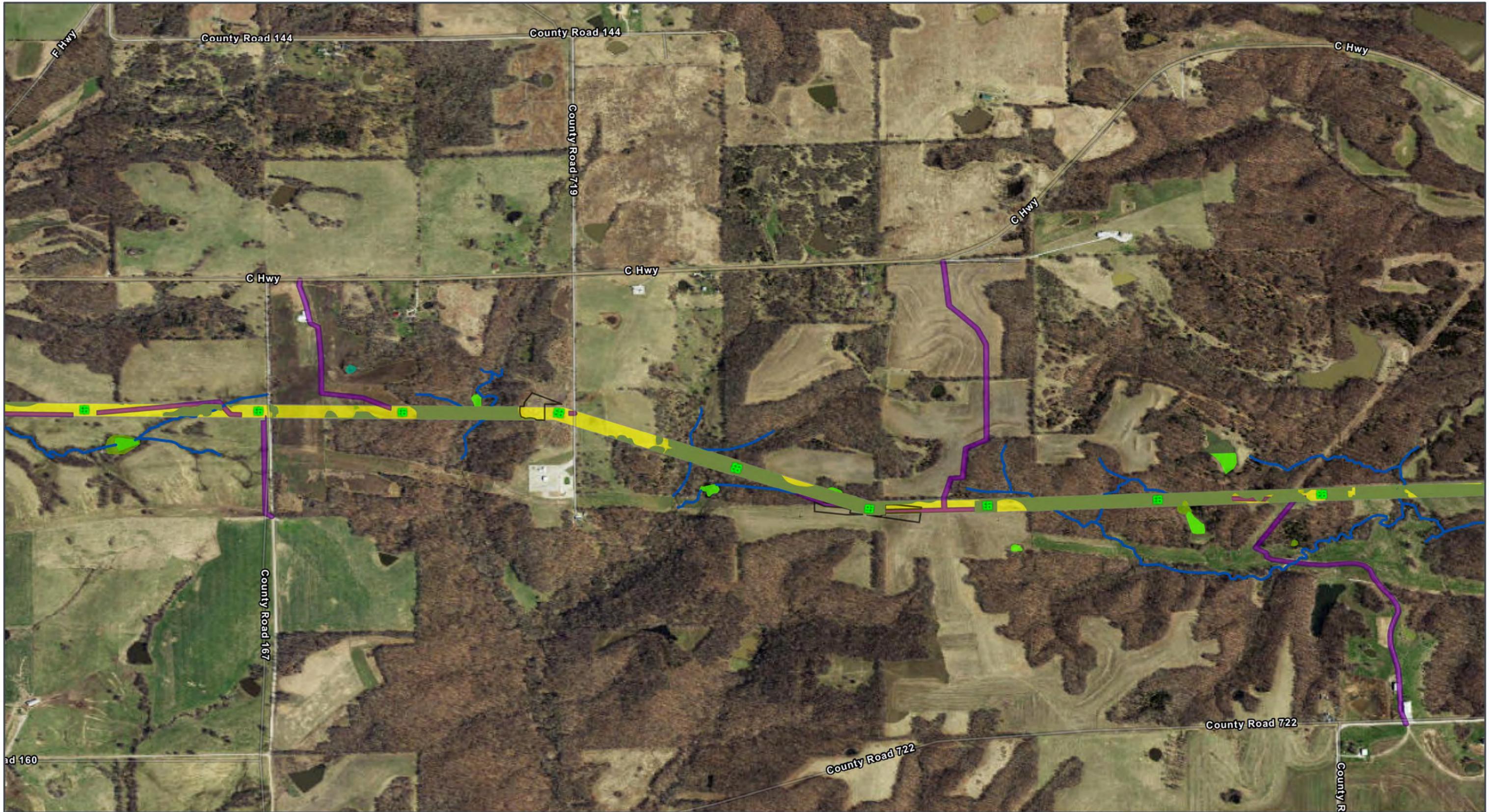


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W



Base Map: Esri ArcGIS Online,  
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- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



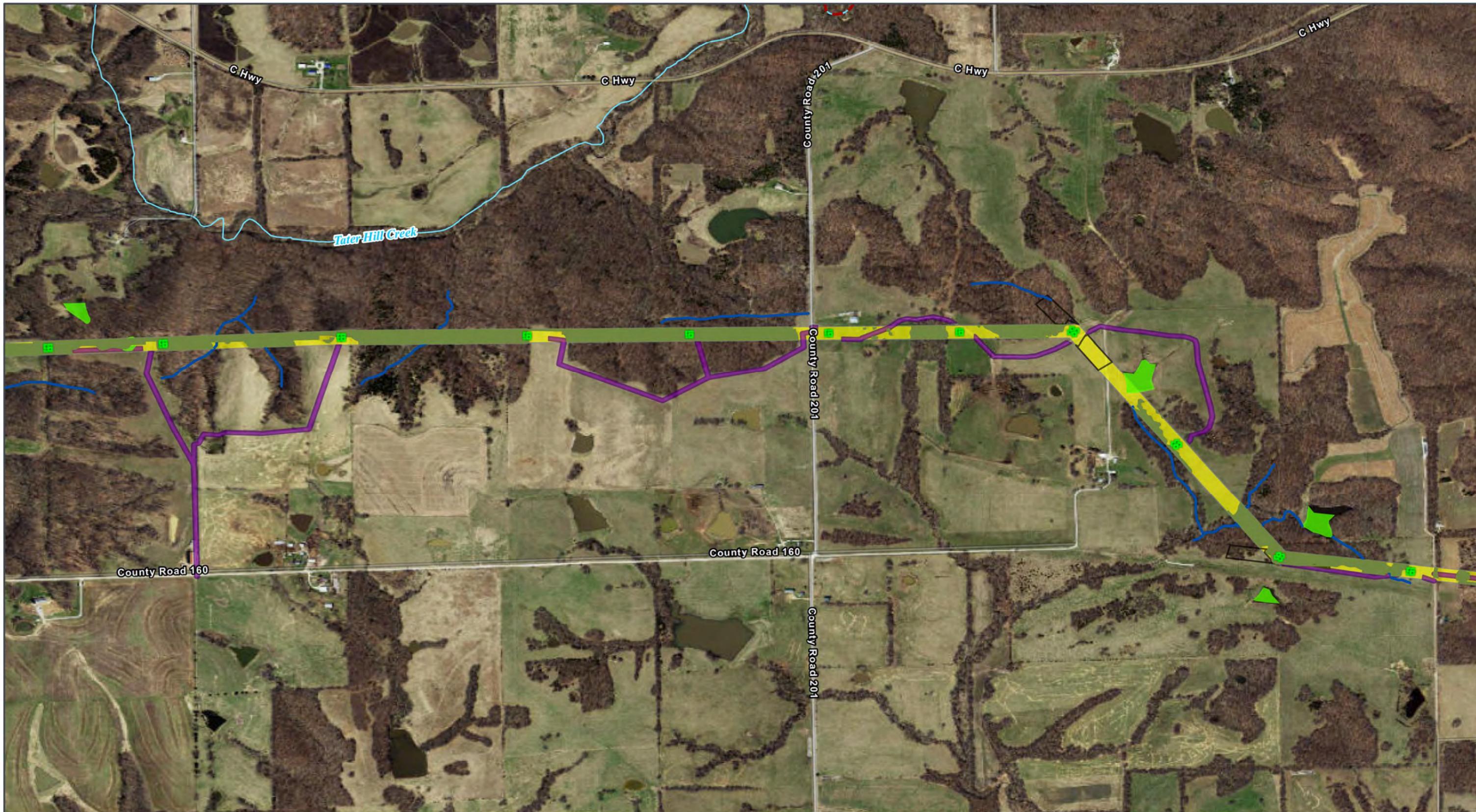
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W



Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

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0 400 800 Feet  
0 100 200 Meters



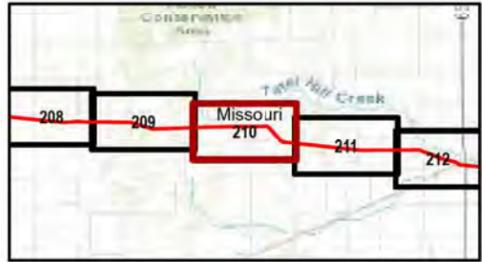
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 210 of 259

- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

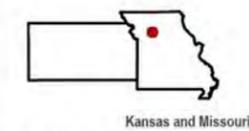
- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

- NHD Stream/River
- Impaired Waterway (303d)
- Delineated Wetland**
- Palustrine Unconsolidated Bottom (PUB)

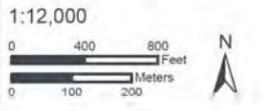
All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

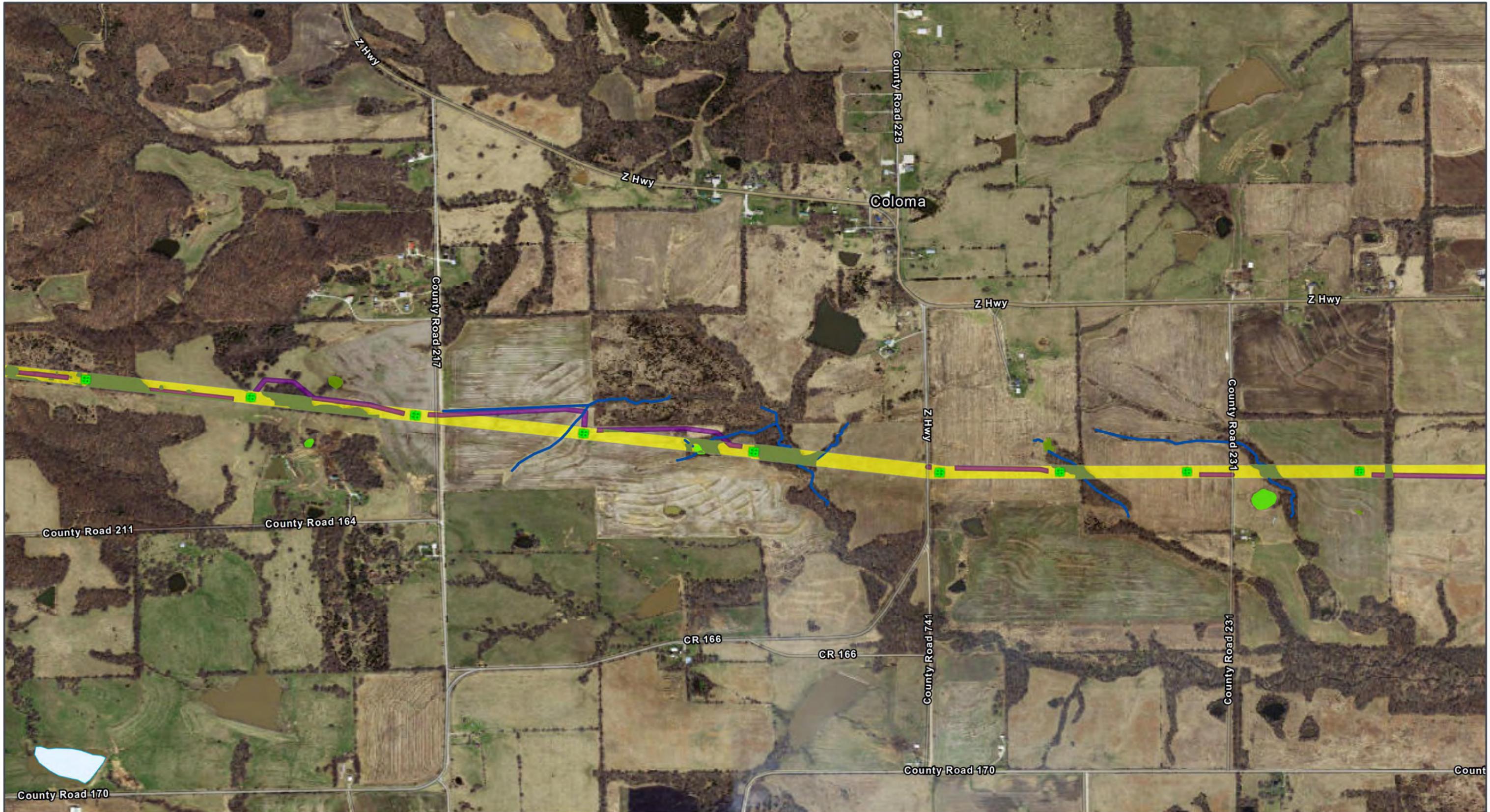


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W



Base Map: Esri ArcGIS Online,  
accessed November 2024  
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Project No. 60694559  
Layout: Wetland Mapbook 12k  
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TRANSMISSION LINE PROJECT  
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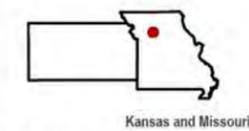
- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing
- Temporary Project Component**
- Access Road
- Hydrology**
- Delineated Stream

- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Unconsolidated Bottom (PUB)
- NHD Waterbody

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



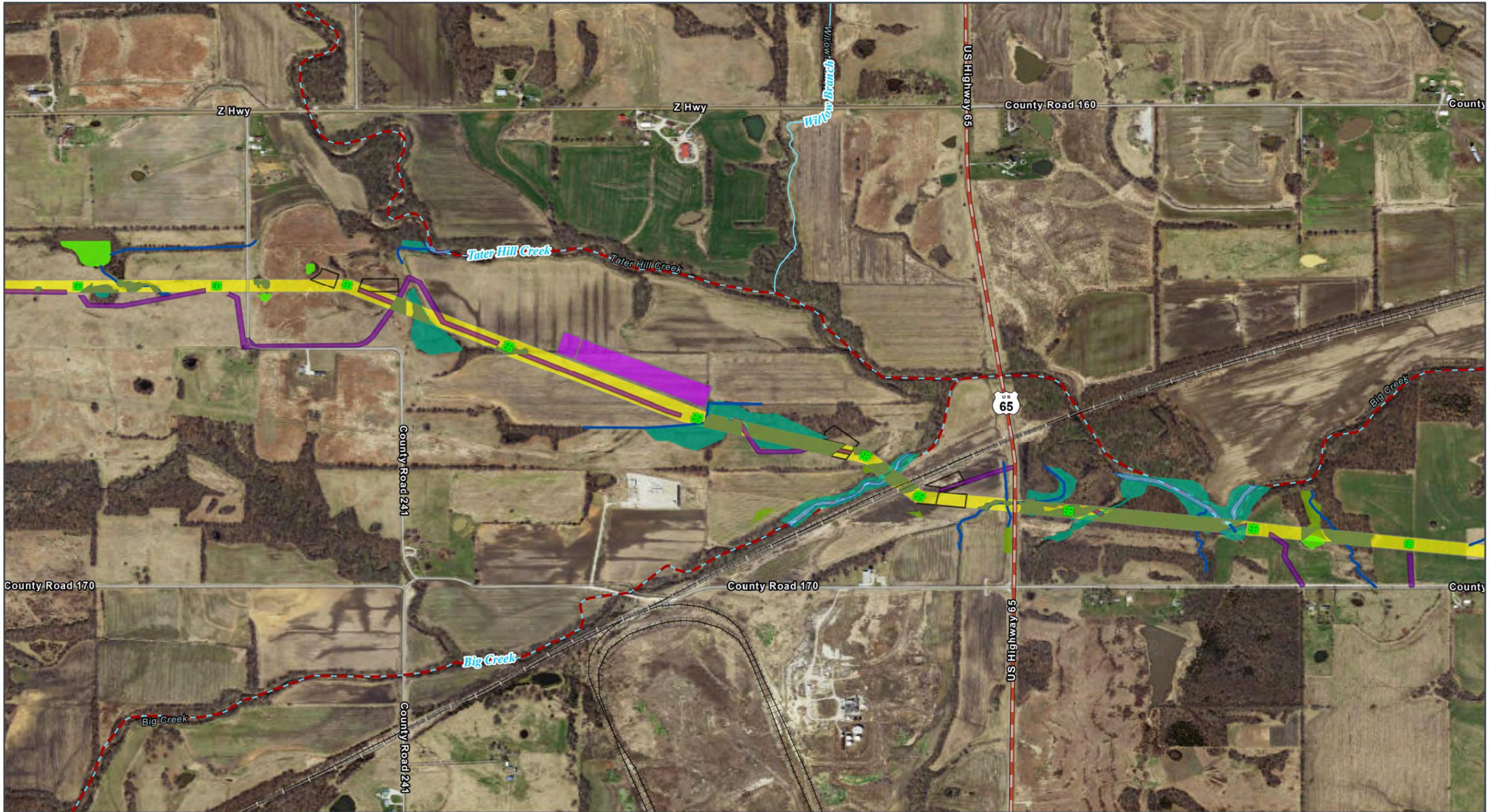
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W



Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
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App: WetlandMapBook\_12k

1:12,000

0 400 800 Feet  
0 100 200 Meters



GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Helipad / Fly Yard
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

- NHD Stream/River
- Impaired Waterway (303d)
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)

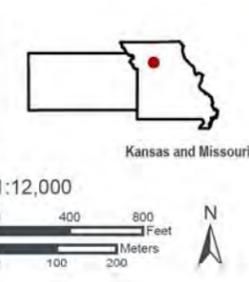
- Palustrine Unconsolidated Bottom (PUB)
- Delineated Waterbody
- Transportation**
- U.S. Highway
- Railroad

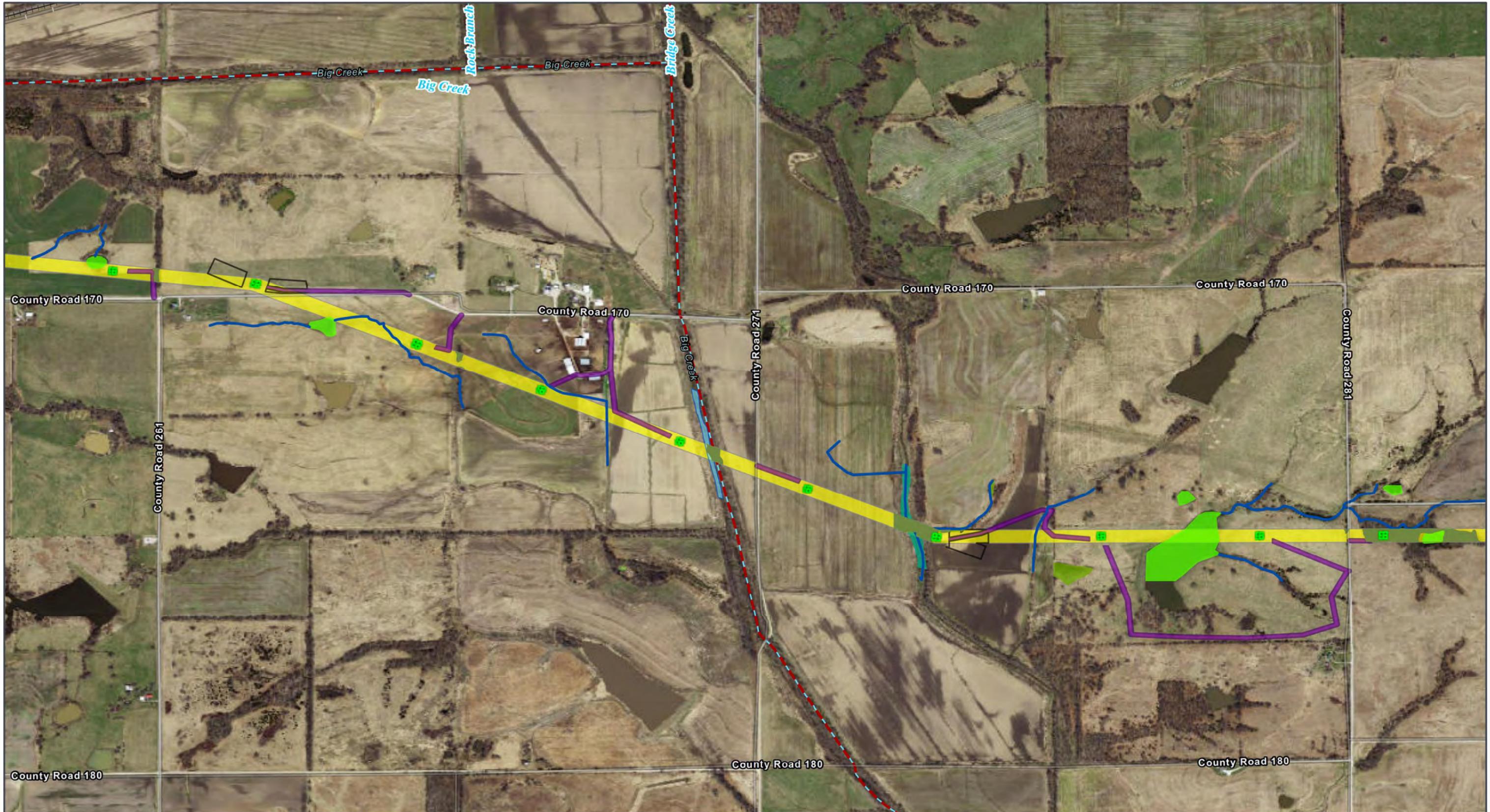
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Kansas and Missouri  
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Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

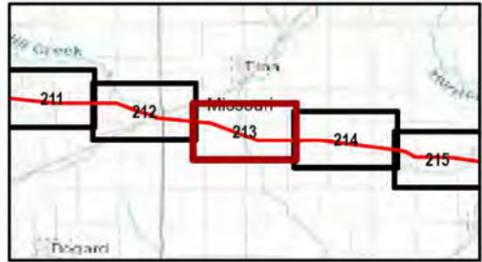




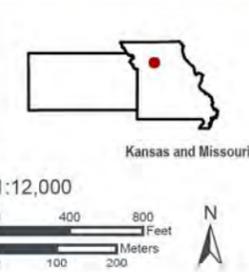
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 213 of 259

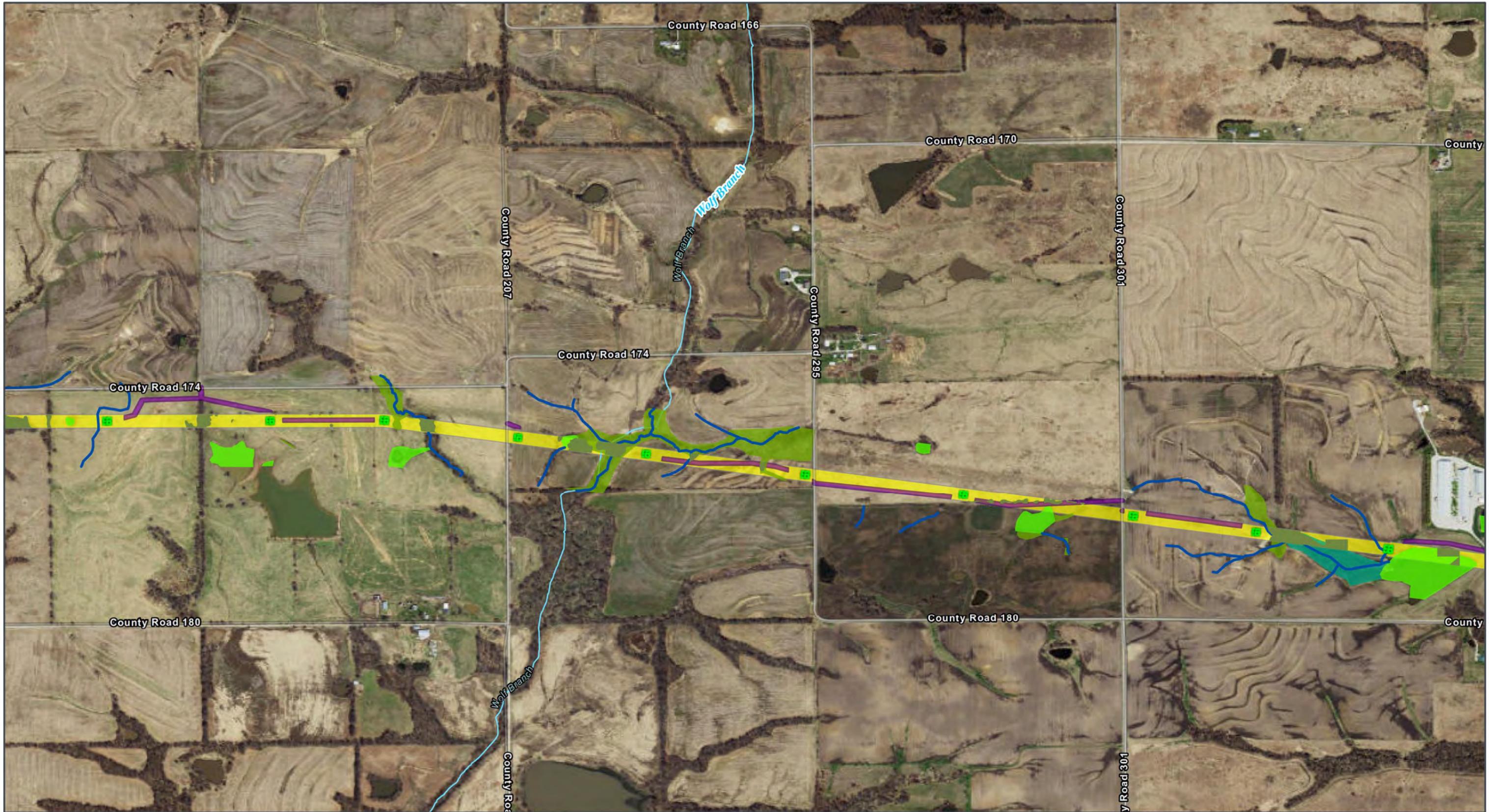
- |                                    |                           |  |
|------------------------------------|---------------------------|--|
| ROW                                | Pull Site/Tension Site    | Palustrine Forested (PFO)              |
| <b>Permanent Project Component</b> | <b>Hydrology</b>          | Palustrine Unconsolidated Bottom (PUB) |
| Transmission Structure             | Delineated Stream         | Delineated Waterbody                   |
| <b>Habitat Conversion</b>          | NHD Stream/River          | <b>Transportation</b>                  |
| Vegetation Clearing                | Impaired Waterway (303d)  | Railroad                               |
| <b>Temporary Project Component</b> | <b>Delineated Wetland</b> |  |
| Access Road                        | Palustrine Emergent (PEM) |  |

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Kansas and Missouri  
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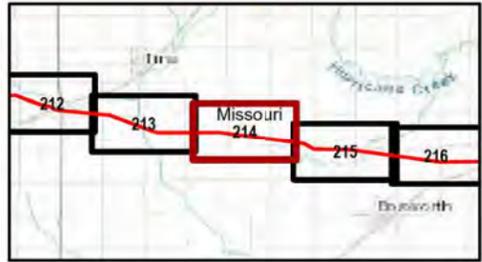
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Hydrology**
- Delineated Stream
- NHD Stream/River

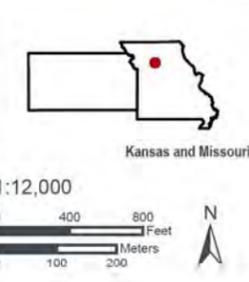
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)

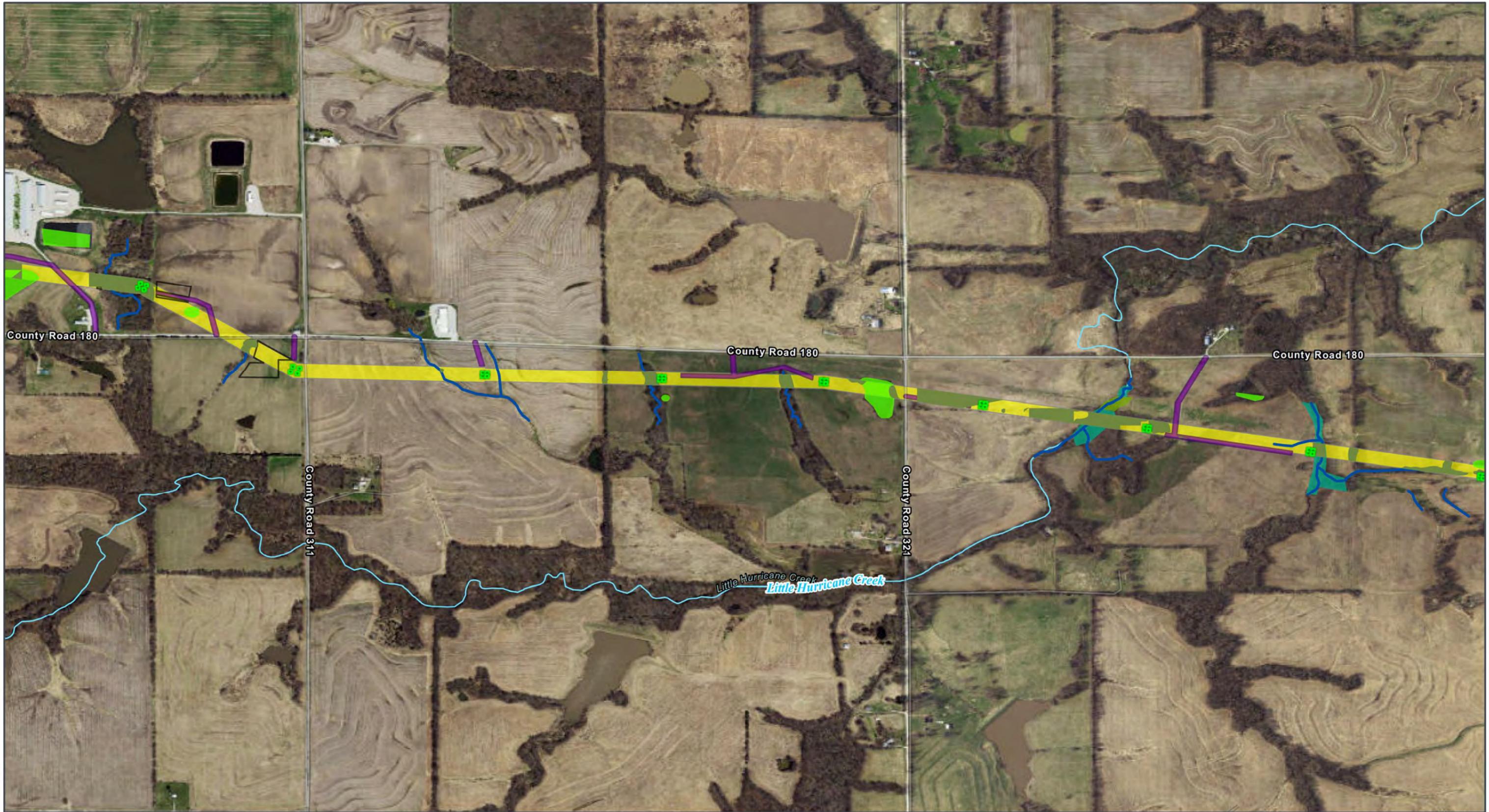
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Kansas and Missouri  
GCS North American 1983  
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TRANSMISSION LINE PROJECT  
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- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

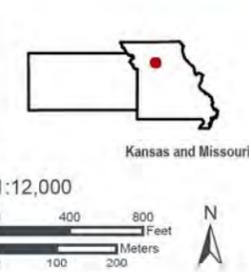
- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

- NHD Stream/River
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)

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Kansas and Missouri  
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Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

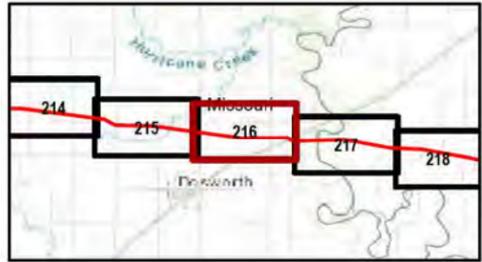




GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> ROW</li> <li><b>Permanent Project Component</b></li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Transmission Structure</li> <li><b>Habitat Conversion</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: brown; border: 1px solid black; margin-right: 5px;"></span> Vegetation Clearing</li> </ul> | <ul style="list-style-type: none"> <li><b>Temporary Project Component</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Access Road</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: pink; border: 1px solid black; margin-right: 5px;"></span> Helipad / Fly Yard</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Pull Site/Tension Site</li> <li><b>Hydrology</b></li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid blue; margin-right: 5px;"></span> Delineated Stream</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid lightblue; margin-right: 5px;"></span> NHD Stream/River</li> <li><b>Delineated Wetland</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> Palustrine Emergent (PEM)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> Palustrine Unconsolidated Bottom (PUB)</li> <li><b>Transportation</b></li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dashed black; margin-right: 5px;"></span> Railroad</li> </ul> |
|---|--|--|

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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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Base Map: Esri ArcGIS Online, accessed November 2024  
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Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

Kansas and Missouri



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TRANSMISSION LINE PROJECT  
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- Municipal Boundary Near the Project
- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream
- NHD Stream/River

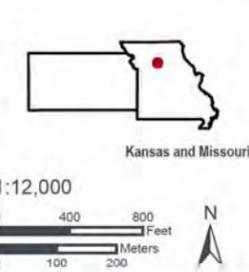
- Impaired Waterway (303d)
- Delineated Wetland**
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)
- Delineated Waterbody

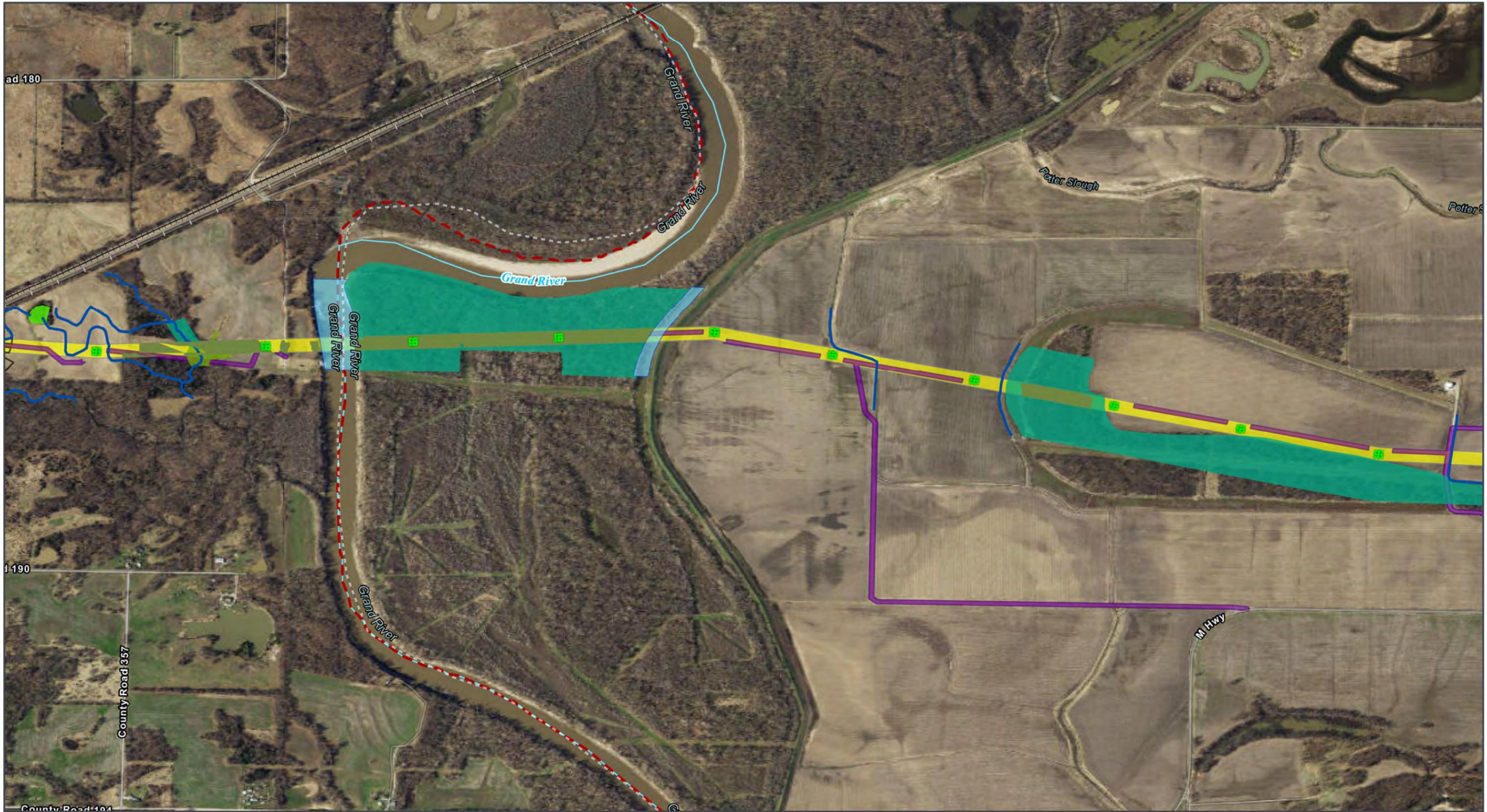
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Kansas and Missouri  
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Layout: Wetland Mapbook 12k  
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TRANSMISSION LINE PROJECT  
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- |                                    |                           |  |
|------------------------------------|---------------------------|--|
| ROW                                | Pull Site/Tension Site    | Palustrine Forested (PFO)              |
| <b>Permanent Project Component</b> | <b>Hydrology</b>          | Palustrine Unconsolidated Bottom (PUB) |
| Transmission Structure             | Delineated Stream         | Delineated Waterbody                   |
| <b>Habitat Conversion</b>          | NHD Stream/River          | <b>Transportation</b>                  |
| Vegetation Clearing                | Impaired Waterway (303d)  | Railroad                               |
| <b>Temporary Project Component</b> | <b>Delineated Wetland</b> |  |
| Access Road                        | Palustrine Emergent (PEM) |  |

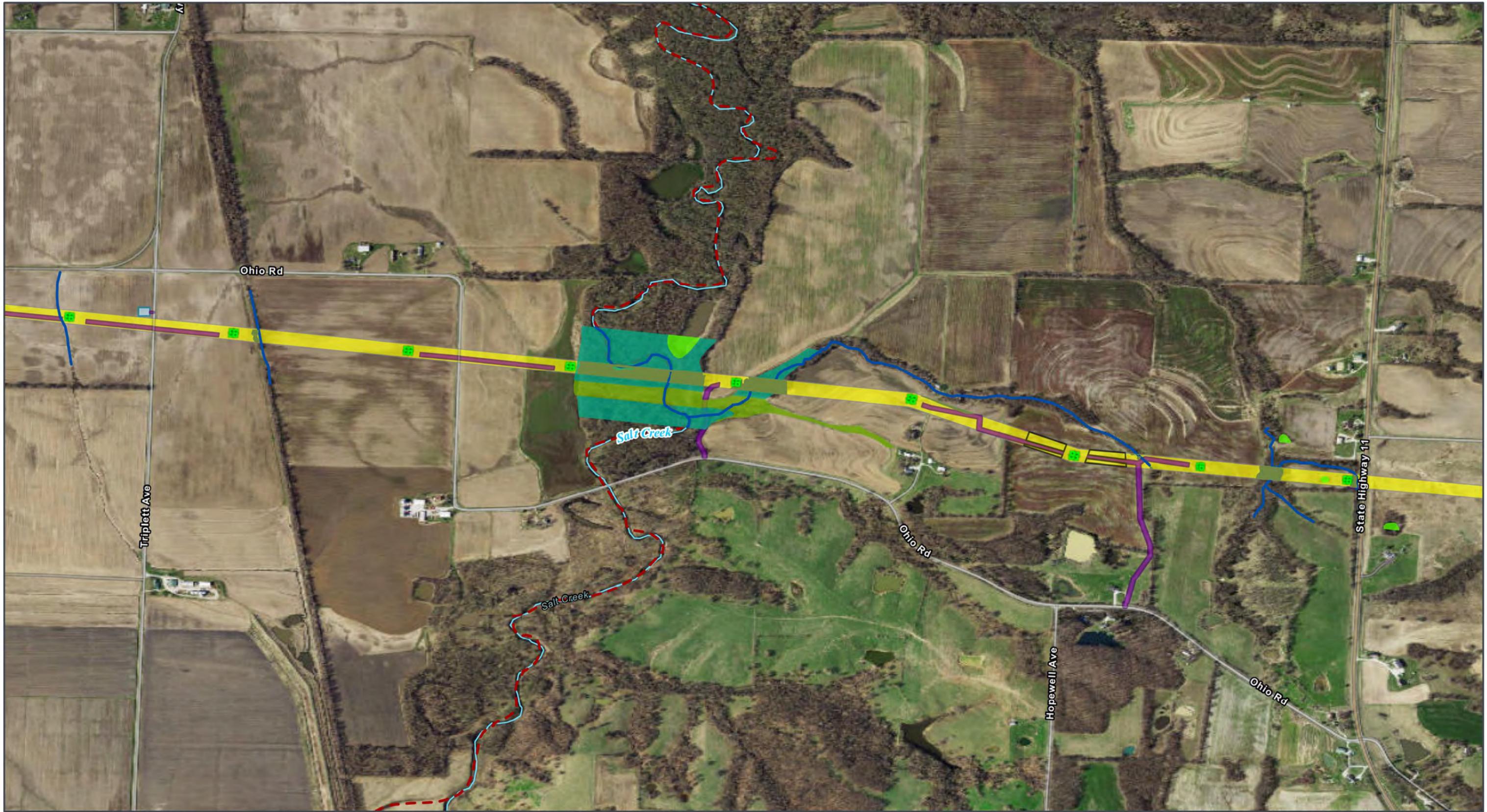
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Kansas and Missouri  
GCS North American 1983  
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Base Map: Esri ArcGIS Online, accessed November 2024  
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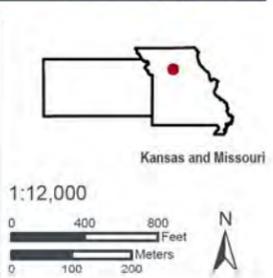
- |  |  |   |
|--|--|---|
| <p><b>ROW</b></p> <p><b>Permanent Project Component</b></p> <ul style="list-style-type: none"> <li> Transmission Structure</li> <li> Optical Regeneration</li> <li> OPGW Access</li> </ul> | <p><b>Habitat Conversion</b></p> <ul style="list-style-type: none"> <li> Vegetation Clearing</li> </ul> <p><b>Temporary Project Component</b></p> <ul style="list-style-type: none"> <li> Access Road</li> <li> Pull Site/Tension Site</li> </ul> <p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li> Delineated Stream</li> </ul> | <ul style="list-style-type: none"> <li> NHD Stream/River</li> <li> Impaired Waterway (303d)</li> </ul> <p><b>Delineated Wetland</b></p> <ul style="list-style-type: none"> <li> Palustrine Emergent (PEM)</li> <li> Palustrine Forested (PFO)</li> <li> Palustrine Unconsolidated Bottom (PUB)</li> </ul> |
|--|--|---|

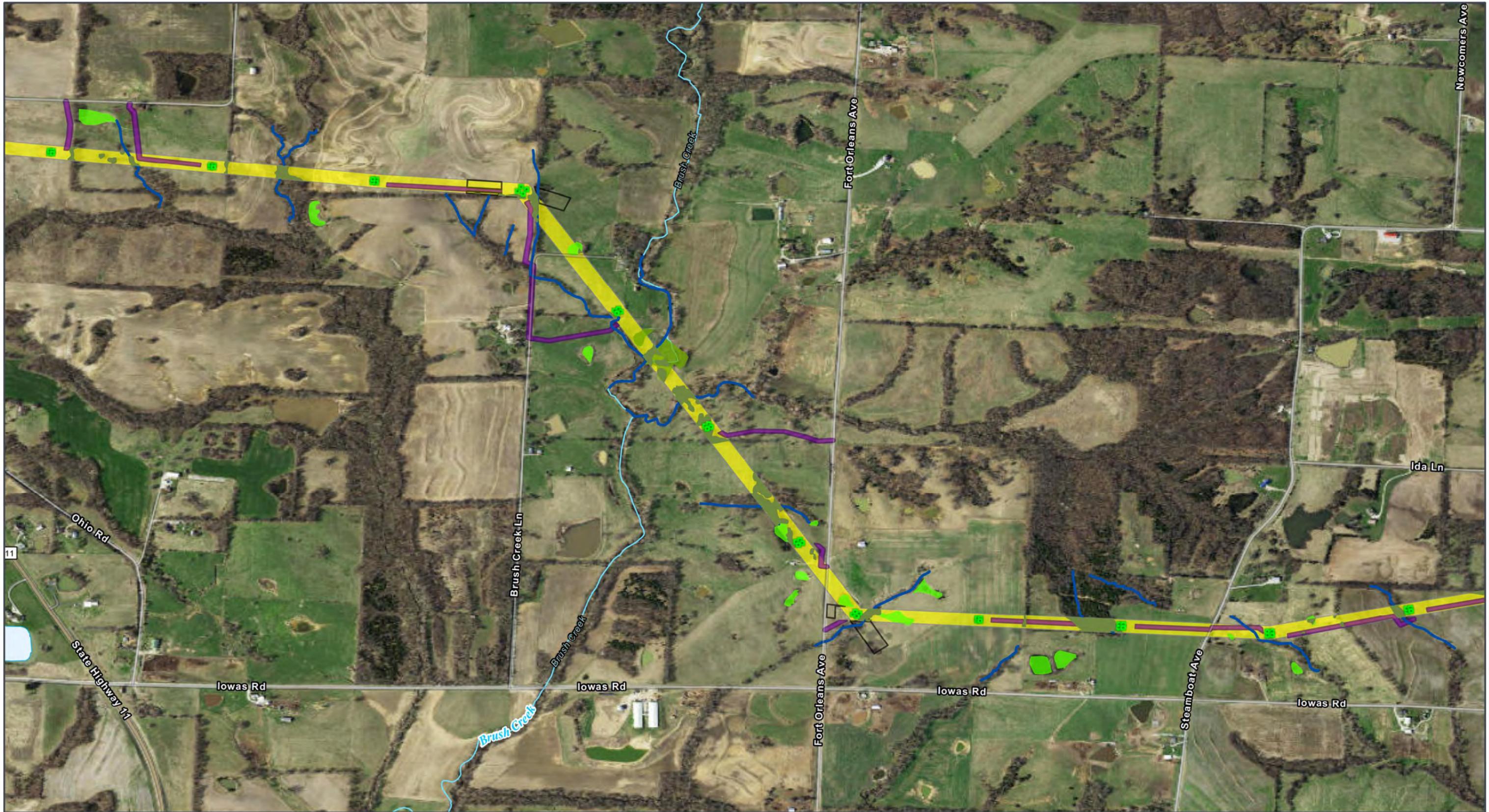
All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k





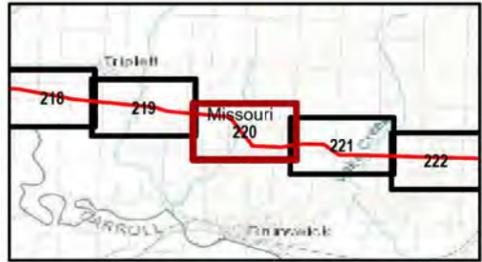
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 220 of 259

- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

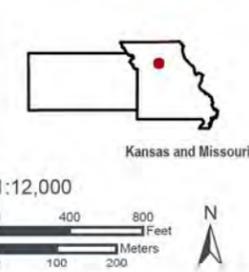
- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

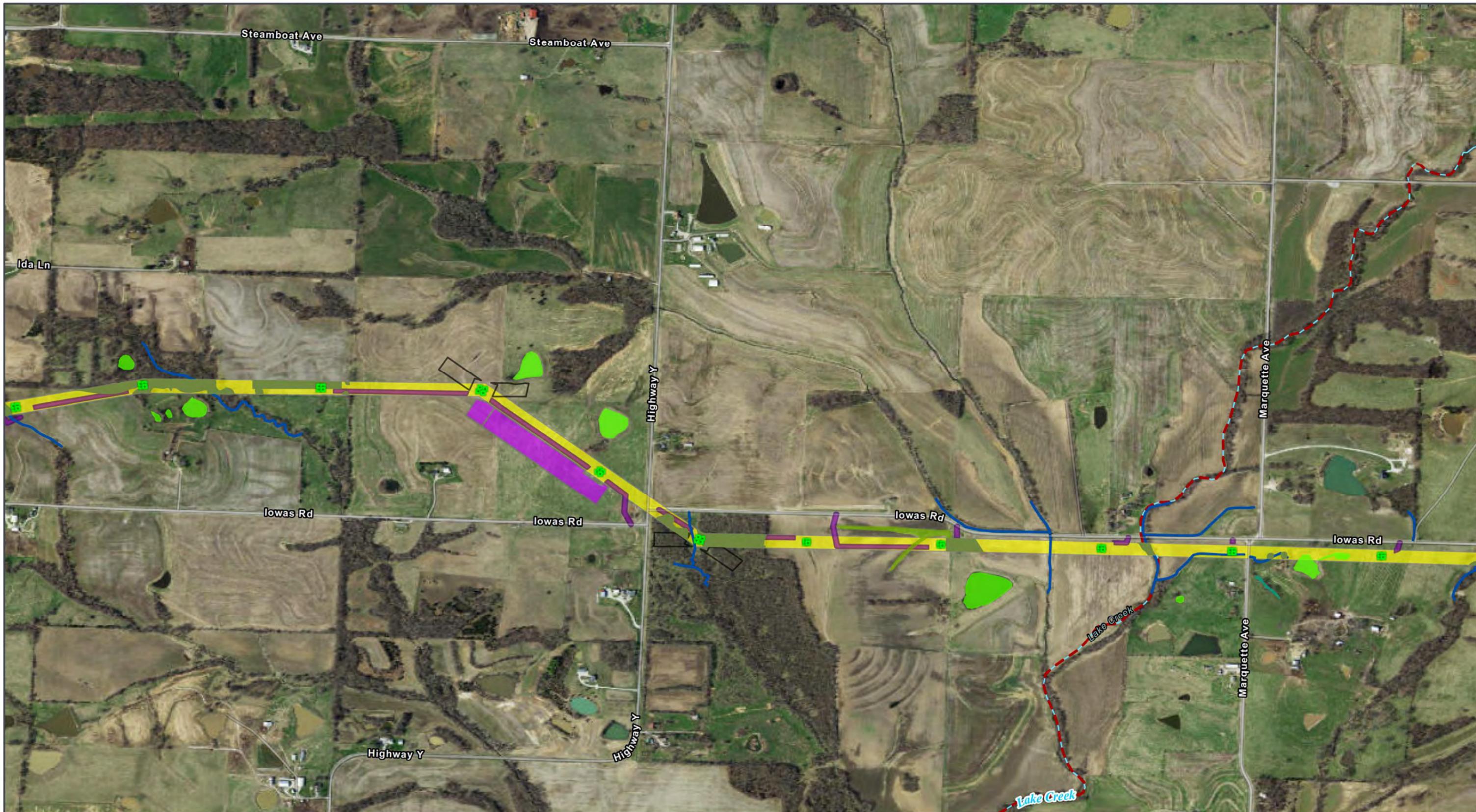
- NHD Stream/River
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Unconsolidated Bottom (PUB)
- NHD Waterbody

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Kansas and Missouri  
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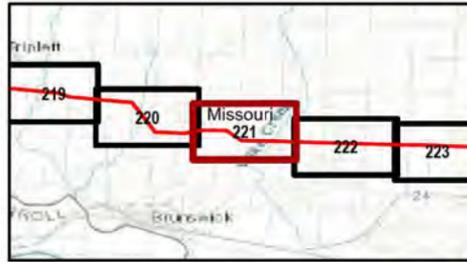
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 221 of 259

- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

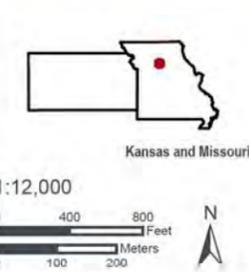
- Temporary Project Component**
- Access Road
- Helipad / Fly Yard
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

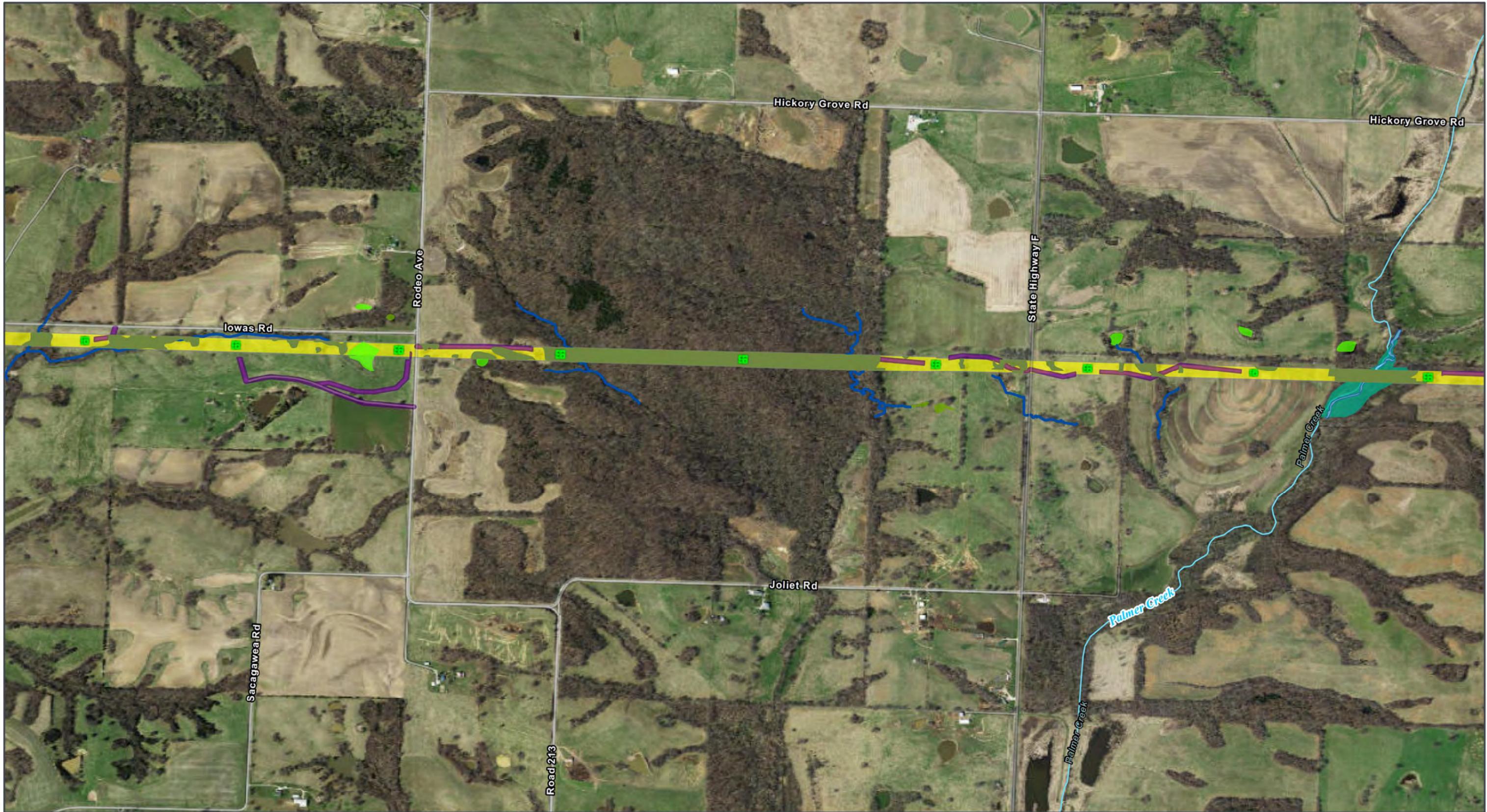
- NHD Stream/River
- Impaired Waterway (303d)
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)

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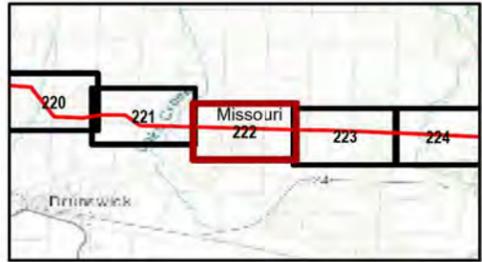
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 222 of 259

- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Hydrology**
- Delineated Stream
- NHD Stream/River

- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)
- Delineated Waterbody

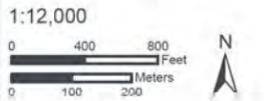
All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

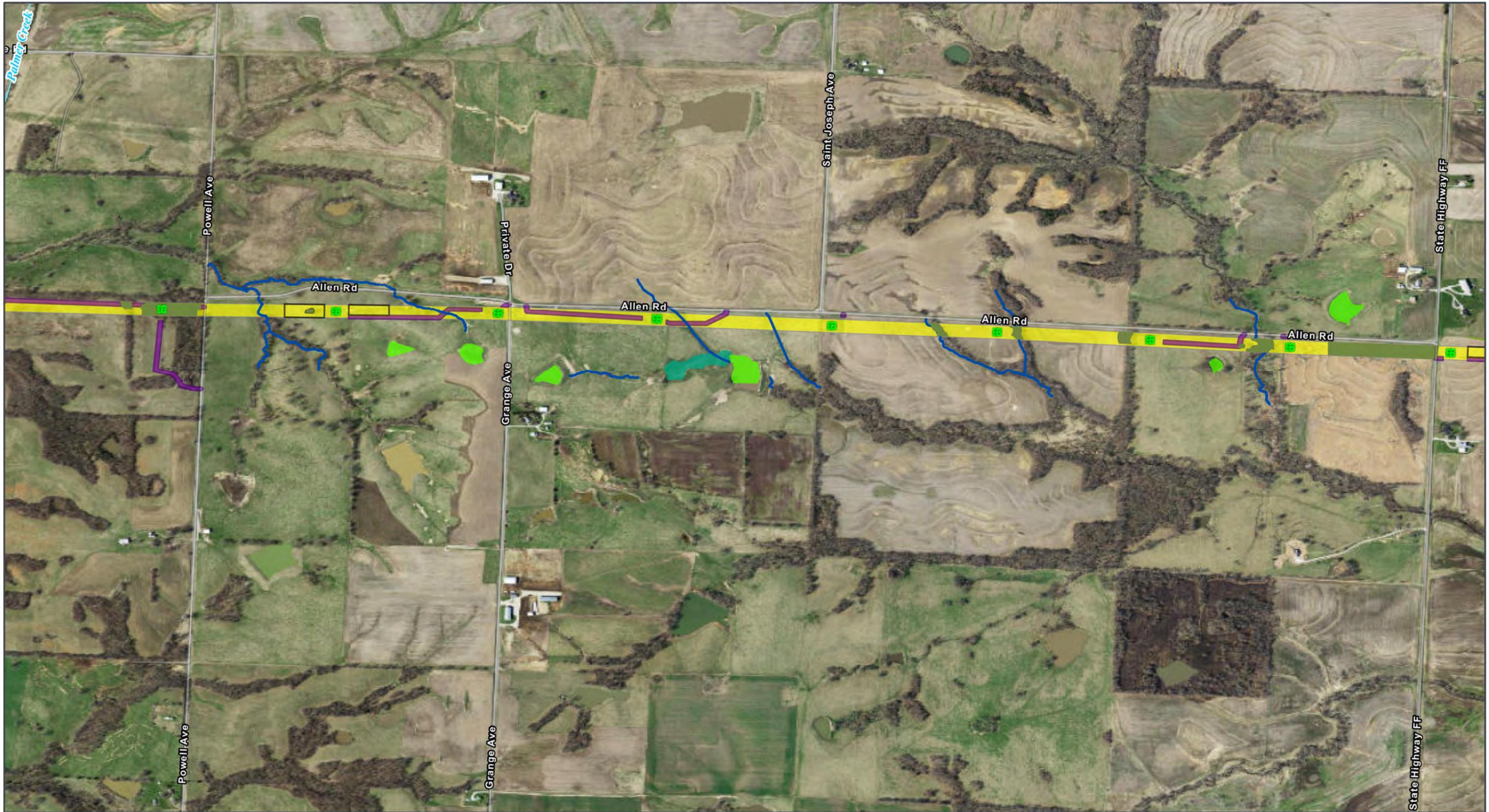


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W



Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k





- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> ROW</li> <li><b>Permanent Project Component</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Transmission Structure</li> <li><b>Habitat Conversion</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: olive; border: 1px solid black; margin-right: 5px;"></span> Vegetation Clearing</li> </ul> | <ul style="list-style-type: none"> <li><b>Temporary Project Component</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Access Road</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Pull Site/Tension Site</li> <li><b>Hydrology</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> Delineated Stream</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; border-bottom: 1px solid blue; margin-right: 5px;"></span> NHD Stream/River</li> <li><b>Delineated Wetland</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightgreen; border: 1px solid black; margin-right: 5px;"></span> Palustrine Emergent (PEM)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: teal; border: 1px solid black; margin-right: 5px;"></span> Palustrine Forested (PFO)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: limegreen; border: 1px solid black; margin-right: 5px;"></span> Palustrine Unconsolidated Bottom (PUB)</li> </ul> |
|---|--|--|

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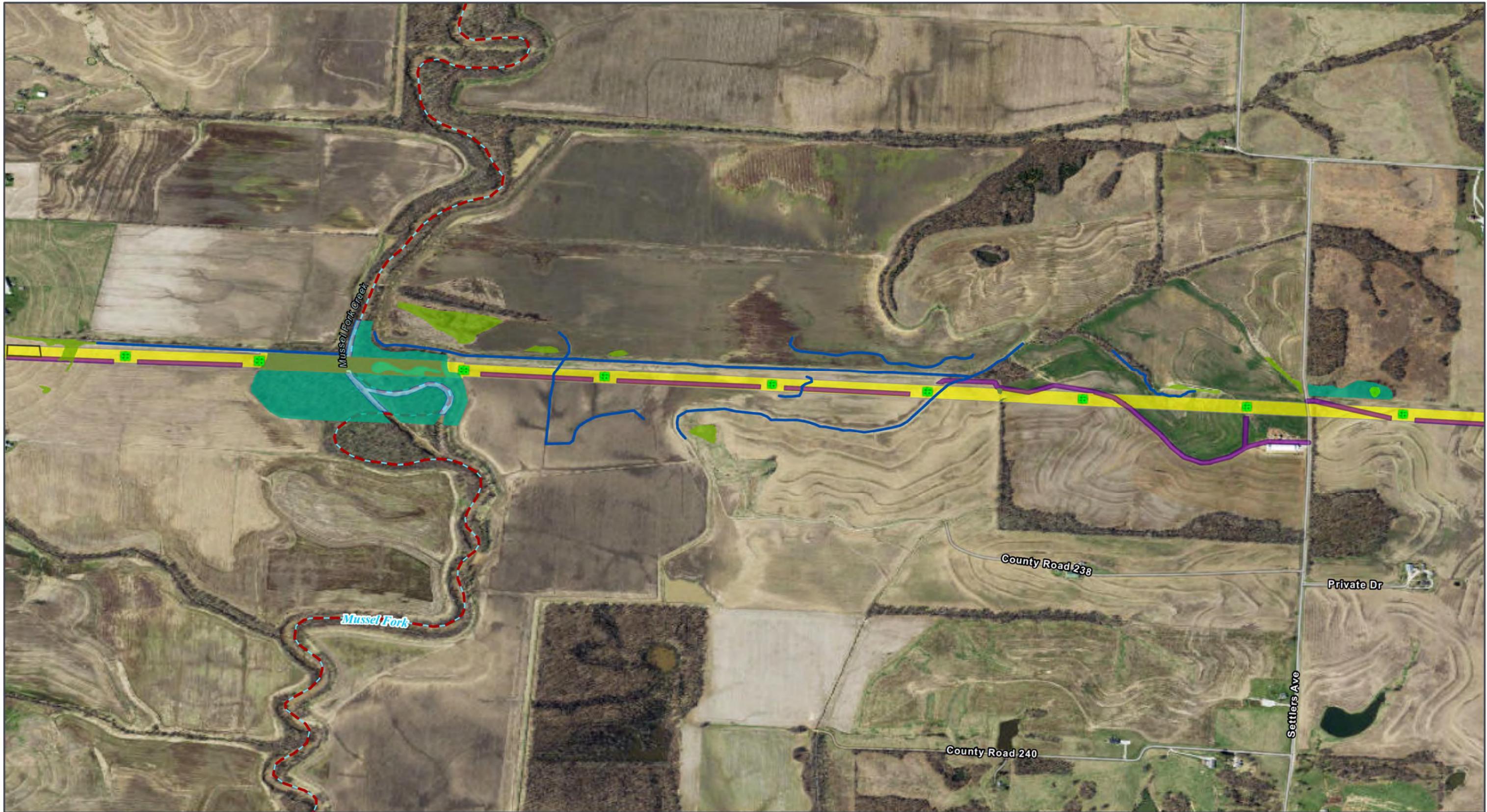
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Kansas and Missouri

1:12,000

0 100 200 Meters  
0 400 800 Feet

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
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- ROW

- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
  - Pull Site/Tension Site
- Hydrology**
- Delineated Stream
  - NHD Stream/River
  - Impaired Waterway (303d)

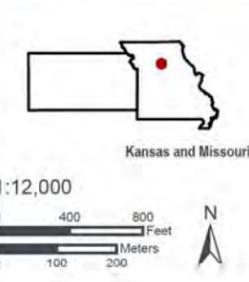
- Delineated Wetland**
- Palustrine Emergent (PEM)
  - Palustrine Forested (PFO)
  - Palustrine Unconsolidated Bottom (PUB)
  - Delineated Waterbody

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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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Layout: Wetland Mapbook 12k  
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GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 225 of 259

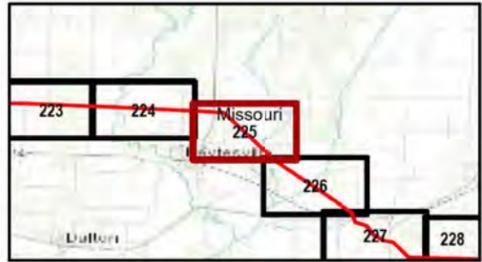
- Municipal Boundary Near the Project
- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Helipad / Fly Yard
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

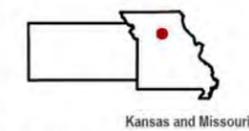
- NHD Stream/River
- Impaired Waterway (303d)
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Scrub-Shrub (PSS)

- Palustrine Unconsolidated Bottom (PUB)
- Delineated Waterbody
- Transportation**
- State Highway

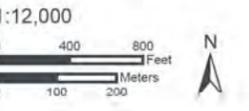
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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W



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Project No. 60694559  
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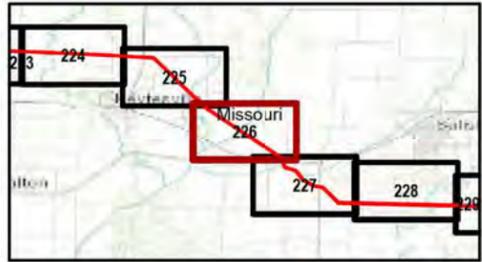




GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 226 of 259

- |                                    |                           |  |
|------------------------------------|---------------------------|--|
| ROW                                | Pull Site/Tension Site    | Palustrine Forested (PFO)              |
| <b>Permanent Project Component</b> | <b>Hydrology</b>          | Palustrine Scrub-Shrub (PSS)           |
| Transmission Structure             | Delineated Stream         | Palustrine Unconsolidated Bottom (PUB) |
| <b>Habitat Conversion</b>          | NHD Stream/River          | Delineated Waterbody                   |
| Vegetation Clearing                | Impaired Waterway (303d)  | <b>Transportation</b>                  |
| <b>Temporary Project Component</b> | <b>Delineated Wetland</b> | U.S. Highway                           |
| Access Road                        | Palustrine Emergent (PEM) |  |

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Kansas and Missouri  
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Base Map: Esri ArcGIS Online, accessed November 2024  
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Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

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GRAIN BELT EXPRESS TRANSMISSION LINE PROJECT

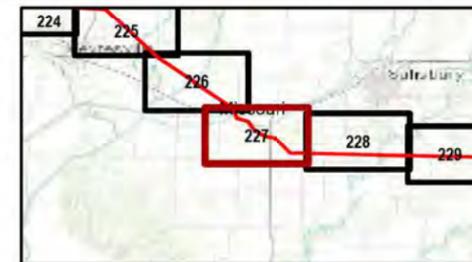
**Wetlands Map Book**

Map 227 of 259

- |                                    |                           |  |
|------------------------------------|---------------------------|--|
| ROW                                | Pull Site/Tension Site    | Palustrine Unconsolidated Bottom (PUB) |
| <b>Permanent Project Component</b> | <b>Hydrology</b>          | NHD Waterbody                          |
| Transmission Structure             | Delineated Stream         | <b>Transportation</b>                  |
| <b>Habitat Conversion</b>          | NHD Stream/River          | U.S. Highway                           |
| Vegetation Clearing                | <b>Delineated Wetland</b> | State Highway                          |
| <b>Temporary Project Component</b> | Palustrine Emergent (PEM) | Railroad                               |
| Access Road                        | Palustrine Forested (PFO) |  |

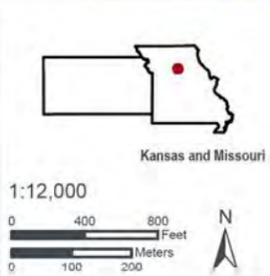
- Hydrology**
- Delineated Stream
  - NHD Stream/River
- Delineated Wetland**
- Palustrine Emergent (PEM)
  - Palustrine Forested (PFO)
- Transportation**
- U.S. Highway
  - State Highway
  - Railroad

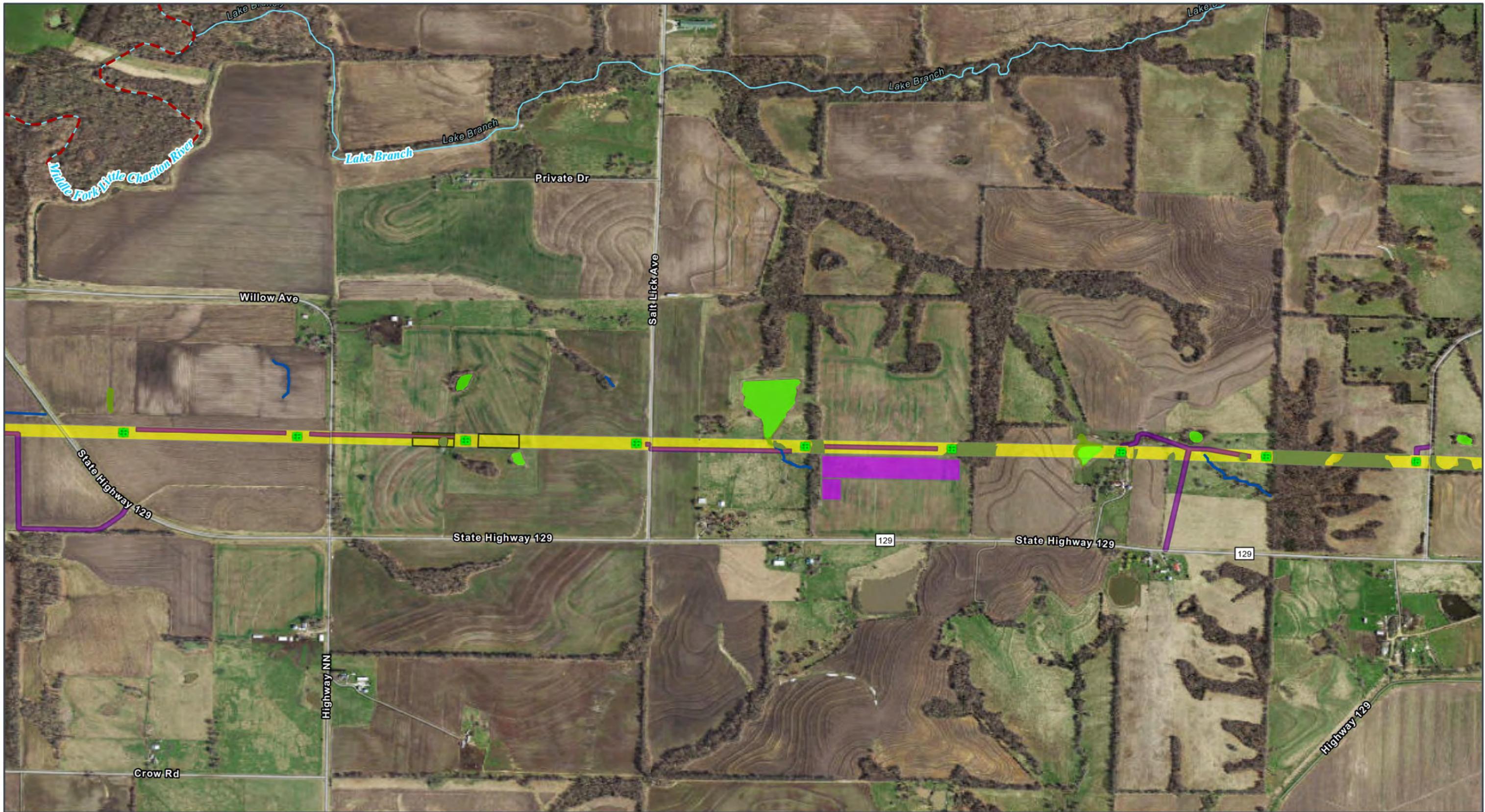
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Kansas and Missouri  
 GCS North American 1983  
 38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online, accessed November 2024  
 Updated: 11/26/2024  
 Project No. 60694559  
 Layout: Wetland Mapbook 12k  
 App: WetlandMapBook\_12k

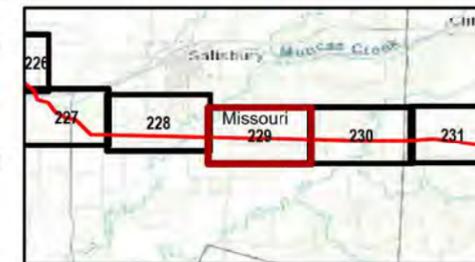




GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 228 of 259

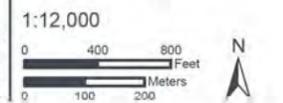
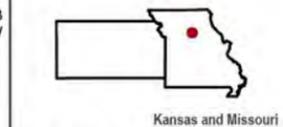
- |   |   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> ROW</li> <li><b>Permanent Project Component</b></li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Transmission Structure</li> <li><b>Habitat Conversion</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: olive; border: 1px solid black; margin-right: 5px;"></span> Vegetation Clearing</li> </ul> | <ul style="list-style-type: none"> <li><b>Temporary Project Component</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Access Road</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: magenta; border: 1px solid black; margin-right: 5px;"></span> Helipad / Fly Yard</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Pull Site/Tension Site</li> <li><b>Hydrology</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> Delineated Stream</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid cyan; margin-right: 5px;"></span> NHD Stream/River</li> <li><span style="display: inline-block; width: 15px; border-bottom: 1px dashed red; margin-right: 5px;"></span> Impaired Waterway (303d)</li> <li><b>Delineated Wetland</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightgreen; border: 1px solid black; margin-right: 5px;"></span> Palustrine Emergent (PEM)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: limegreen; border: 1px solid black; margin-right: 5px;"></span> Palustrine Unconsolidated Bottom (PUB)</li> </ul> |
|---|---|---|

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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
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TRANSMISSION LINE PROJECT  
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- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Hydrology**
- Delineated Stream
- NHD Stream/River
- Impaired Waterway (303d)

- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)
- Delineated Waterbody

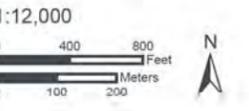
All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

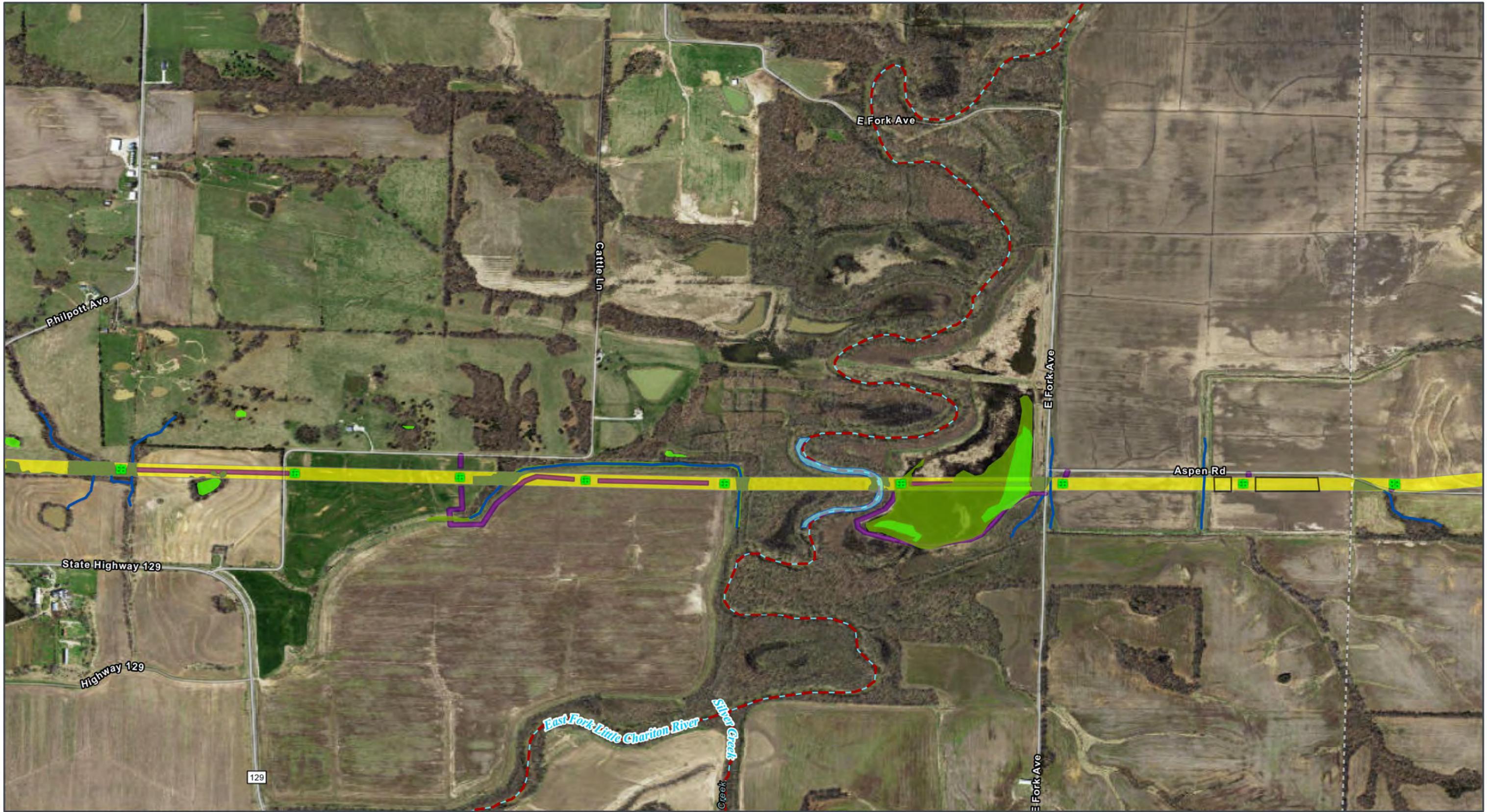


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W



Base Map: Esri ArcGIS Online,  
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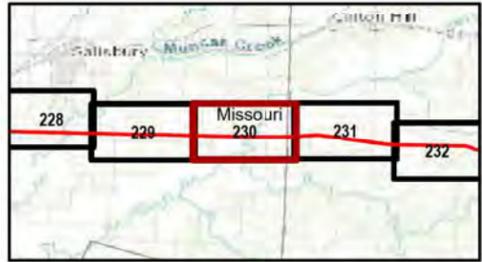


GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 230 of 259

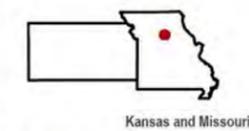
- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing
- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream
- NHD Stream/River

- Impaired Waterway (303d)
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Unconsolidated Bottom (PUB)
- Delineated Waterbody

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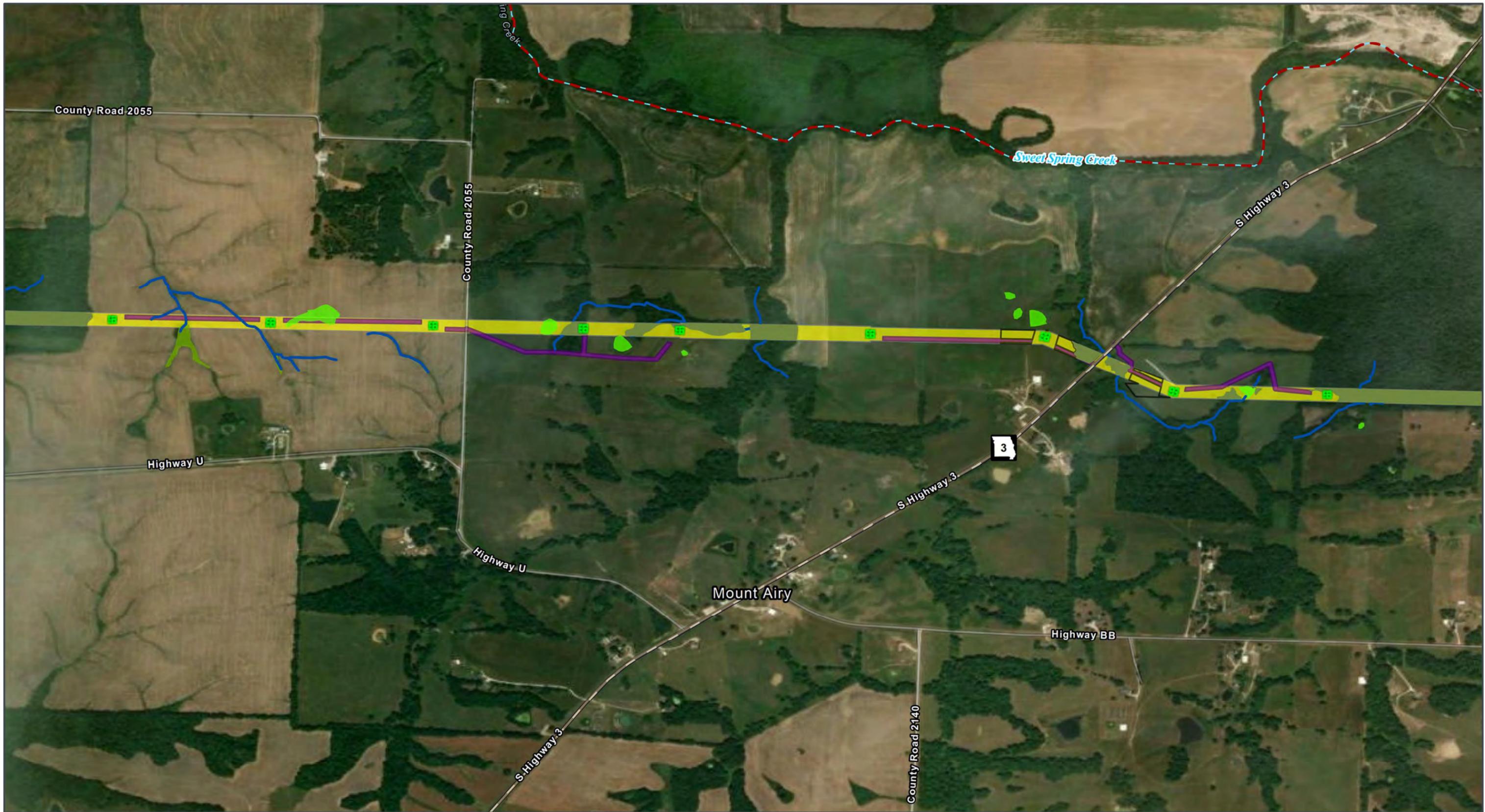
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W



Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

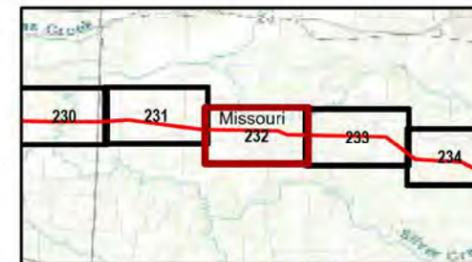
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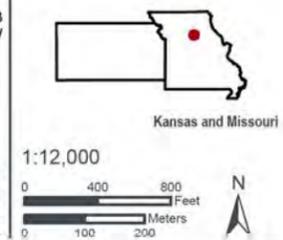
- |                                    |                           |  |
|------------------------------------|---------------------------|--|
| ROW                                | Pull Site/Tension Site    | Palustrine Unconsolidated Bottom (PUB) |
| <b>Permanent Project Component</b> | <b>Hydrology</b>          | NHD Waterbody                          |
| Transmission Structure             | Delineated Stream         | <b>Transportation</b>                  |
| <b>Habitat Conversion</b>          | NHD Stream/River          | State Highway                          |
| Vegetation Clearing                | Impaired Waterway (303d)  | <b>Delineated Wetland</b>              |
| <b>Temporary Project Component</b> | Palustrine Emergent (PEM) |  |
| Access Road                        |                           |  |

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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

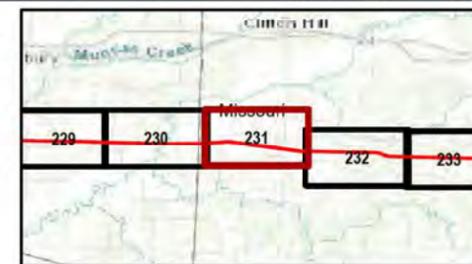
Base Map: Esri ArcGIS Online,  
accessed November 2024  
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Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k





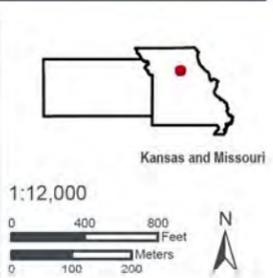
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|---|--|--|
| <p><b>ROW</b></p> <p><b>Permanent Project Component</b></p> <ul style="list-style-type: none"> <li> Transmission Structure</li> </ul> <p><b>Habitat Conversion</b></p> <ul style="list-style-type: none"> <li> Vegetation Clearing</li> </ul> | <p><b>Temporary Project Component</b></p> <ul style="list-style-type: none"> <li> Access Road</li> <li> Pull Site/Tension Site</li> </ul> <p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li> Delineated Stream</li> </ul> | <p><b>Delineated Wetland</b></p> <ul style="list-style-type: none"> <li> Palustrine Emergent (PEM)</li> <li> Palustrine Forested (PFO)</li> <li> Palustrine Unconsolidated Bottom (PUB)</li> <li> NHD Waterbody</li> </ul> |
|---|--|--|

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
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GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing
- Temporary Project Component**
- Access Road
- Helipad / Fly Yard
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream
- NHD Stream/River
- Impaired Waterway (303d)

- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Unconsolidated Bottom (PUB)
- NHD Waterbody
- Transportation**
- State Highway

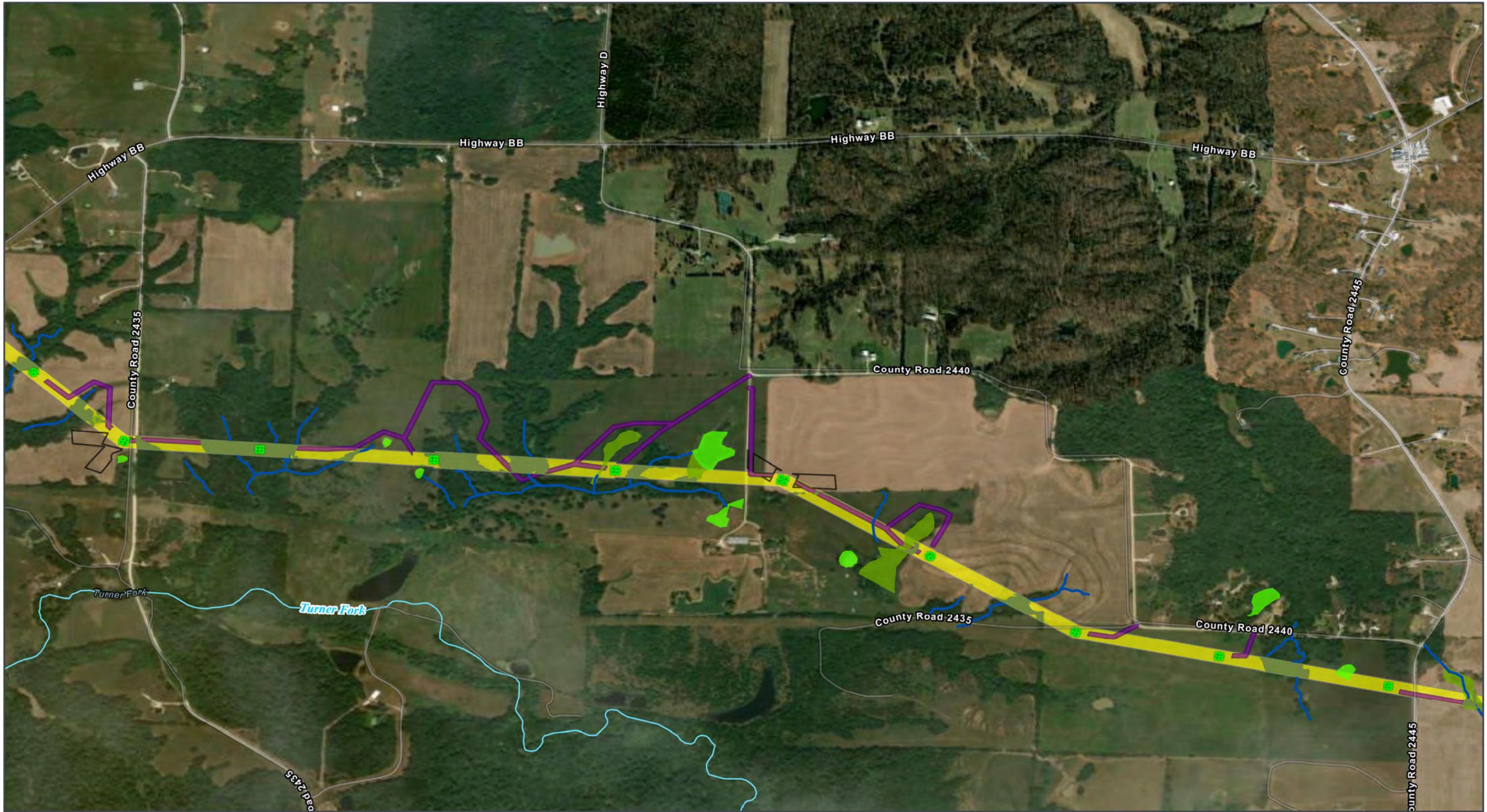
All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



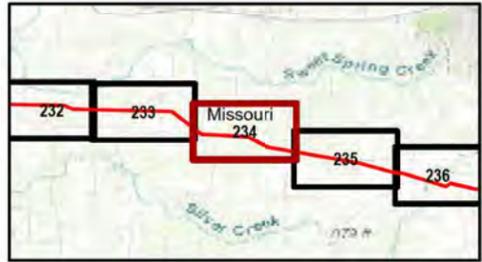
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
Map 234 of 259

- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

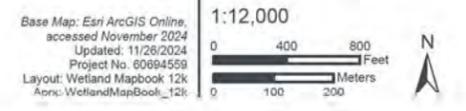
- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

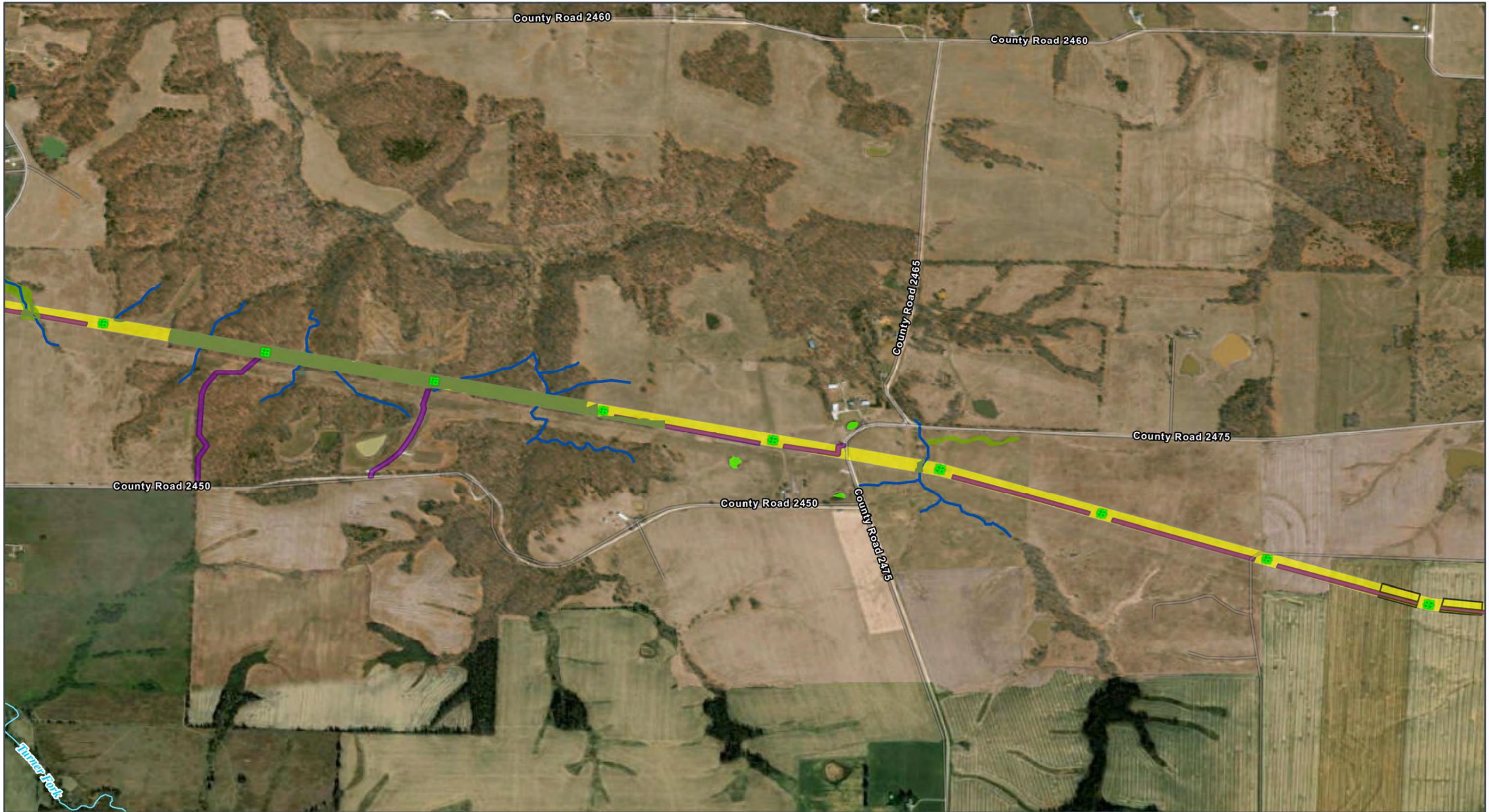
- NHD Stream/River
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Unconsolidated Bottom (PUB)

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W





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TRANSMISSION LINE PROJECT  
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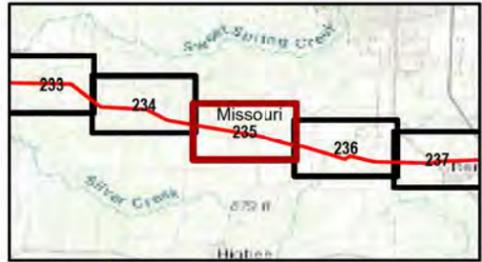


- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream

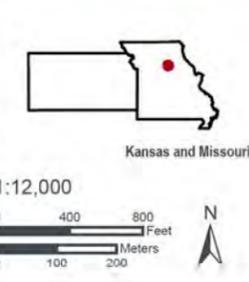
- NHD Stream/River
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Unconsolidated Bottom (PUB)

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

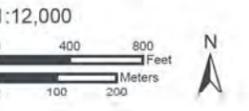


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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- Municipal Boundary Near the Project
- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream
- NHD Stream/River

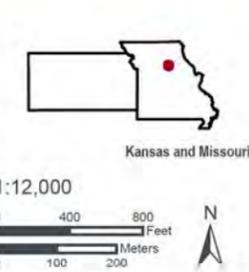
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Unconsolidated Bottom (PUB)
- Transportation**
- U.S. Highway
- Railroad

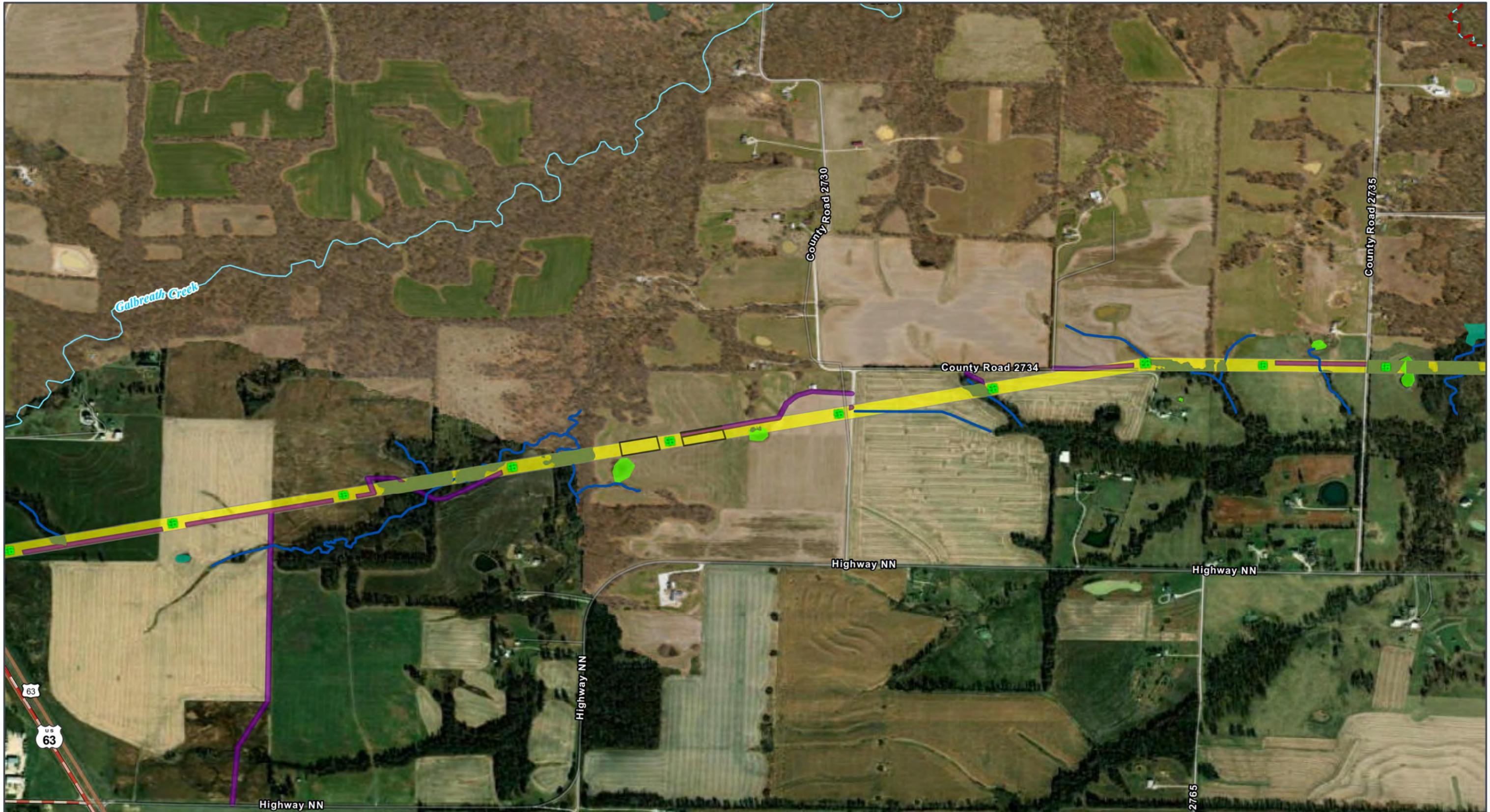
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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
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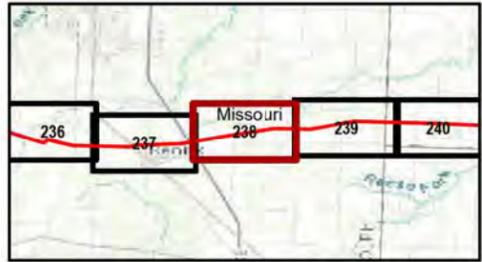




GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> ROW</li> <li><b>Permanent Project Component</b></li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Transmission Structure</li> <li><b>Habitat Conversion</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: olive; border: 1px solid black; margin-right: 5px;"></span> Vegetation Clearing</li> </ul> | <ul style="list-style-type: none"> <li><b>Temporary Project Component</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Access Road</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Pull Site/Tension Site</li> <li><b>Hydrology</b></li> <li><span style="display: inline-block; width: 15px; height: 2px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> Delineated Stream</li> <li><span style="display: inline-block; width: 15px; height: 2px; background-color: cyan; border: 1px solid black; margin-right: 5px;"></span> NHD Stream/River</li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; border-bottom: 1px dashed red; margin-right: 5px;"></span> Impaired Waterway (303d)</li> <li><b>Delineated Wetland</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightblue; border: 1px solid black; margin-right: 5px;"></span> Palustrine Forested (PFO)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightgreen; border: 1px solid black; margin-right: 5px;"></span> Palustrine Unconsolidated Bottom (PUB)</li> <li><b>Transportation</b></li> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid red; margin-right: 5px;"></span> U.S. Highway</li> </ul> |
|---|--|---|

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

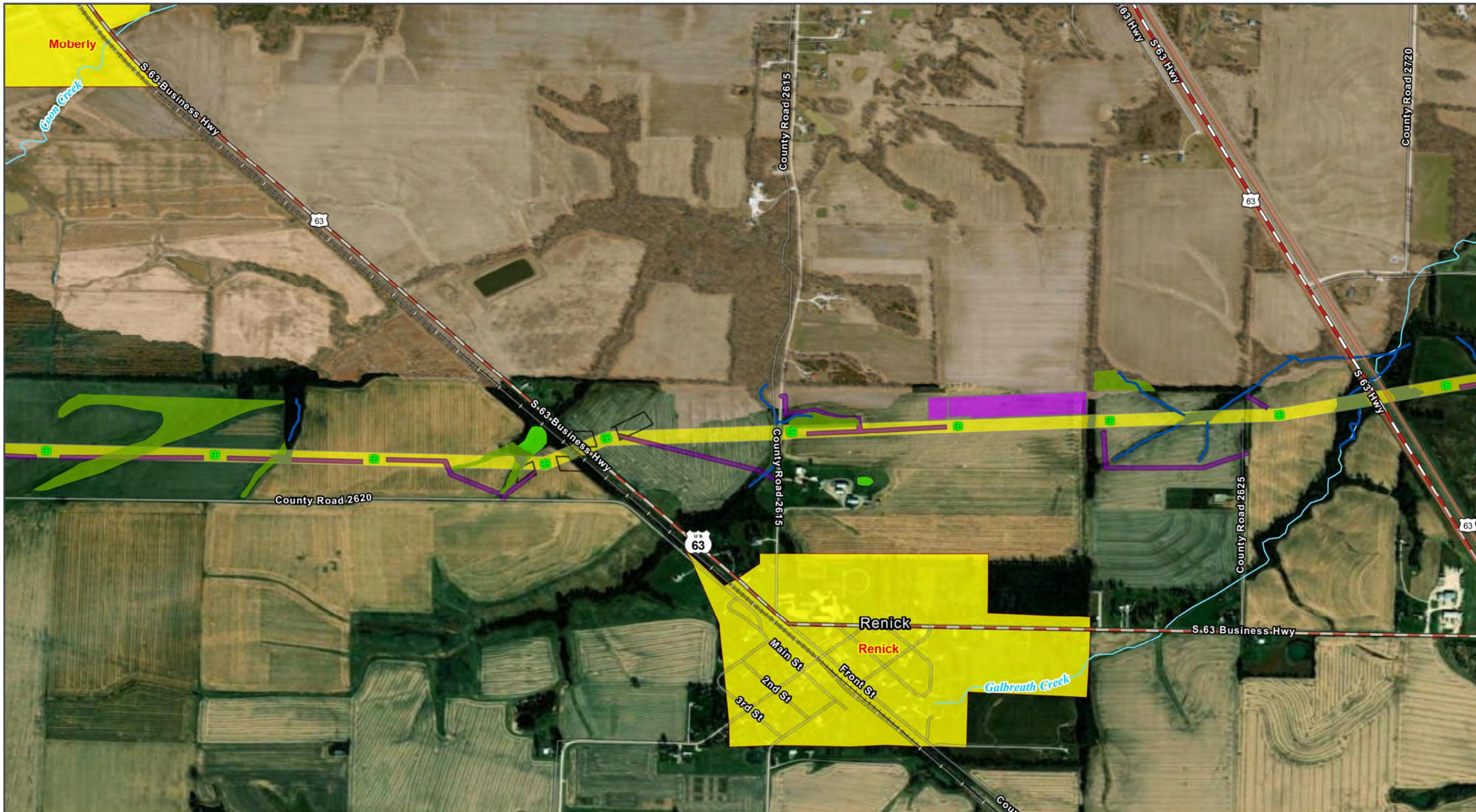
Kansas and Missouri

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0 400 800 Feet

0 100 200 Meters

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
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TRANSMISSION LINE PROJECT  
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- Municipal Boundary Near the Project
- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Helipad / Fly Yard
- Pull Site/Tension Site
- Hydrology**
- Delineated Stream
- NHD Stream/River

- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Unconsolidated Bottom (PUB)
- Transportation**
- U.S. Highway
- Railroad

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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Kansas and Missouri

1:12,000

0 100 200 Meters  
0 400 800 Feet

Base Map: Esri ArcGIS Online, accessed November 2024  
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Project No. 60694559  
Layout: Wetland Mapbook 12k  
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GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> ROW</li> <li><b>Permanent Project Component</b></li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Transmission Structure</li> <li><b>Habitat Conversion</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: olive; border: 1px solid black; margin-right: 5px;"></span> Vegetation Clearing</li> </ul> | <p><b>Temporary Project Component</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Access Road</li> <li><b>Hydrology</b></li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid blue; margin-right: 5px;"></span> Delineated Stream</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid cyan; margin-right: 5px;"></span> NHD Stream/River</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dashed red; margin-right: 5px;"></span> Impaired Waterway (303d)</li> </ul> |
|---|--|

- Delineated Wetland**
- Palustrine Emergent (PEM)
  - Palustrine Forested (PFO)
  - Palustrine Unconsolidated Bottom (PUB)

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Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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|------------------------------------|------------------------------------|--|
| ROW                                | <b>Temporary Project Component</b> | NHD Stream/River                       |
| <b>Permanent Project Component</b> | Access Road                        | <b>Delineated Wetland</b>              |
| Transmission Structure             | Pull Site/Tension Site             | Palustrine Unconsolidated Bottom (PUB) |
| <b>Habitat Conversion</b>          | <b>Hydrology</b>                   |  |
| Vegetation Clearing                | Delineated Stream                  |  |

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



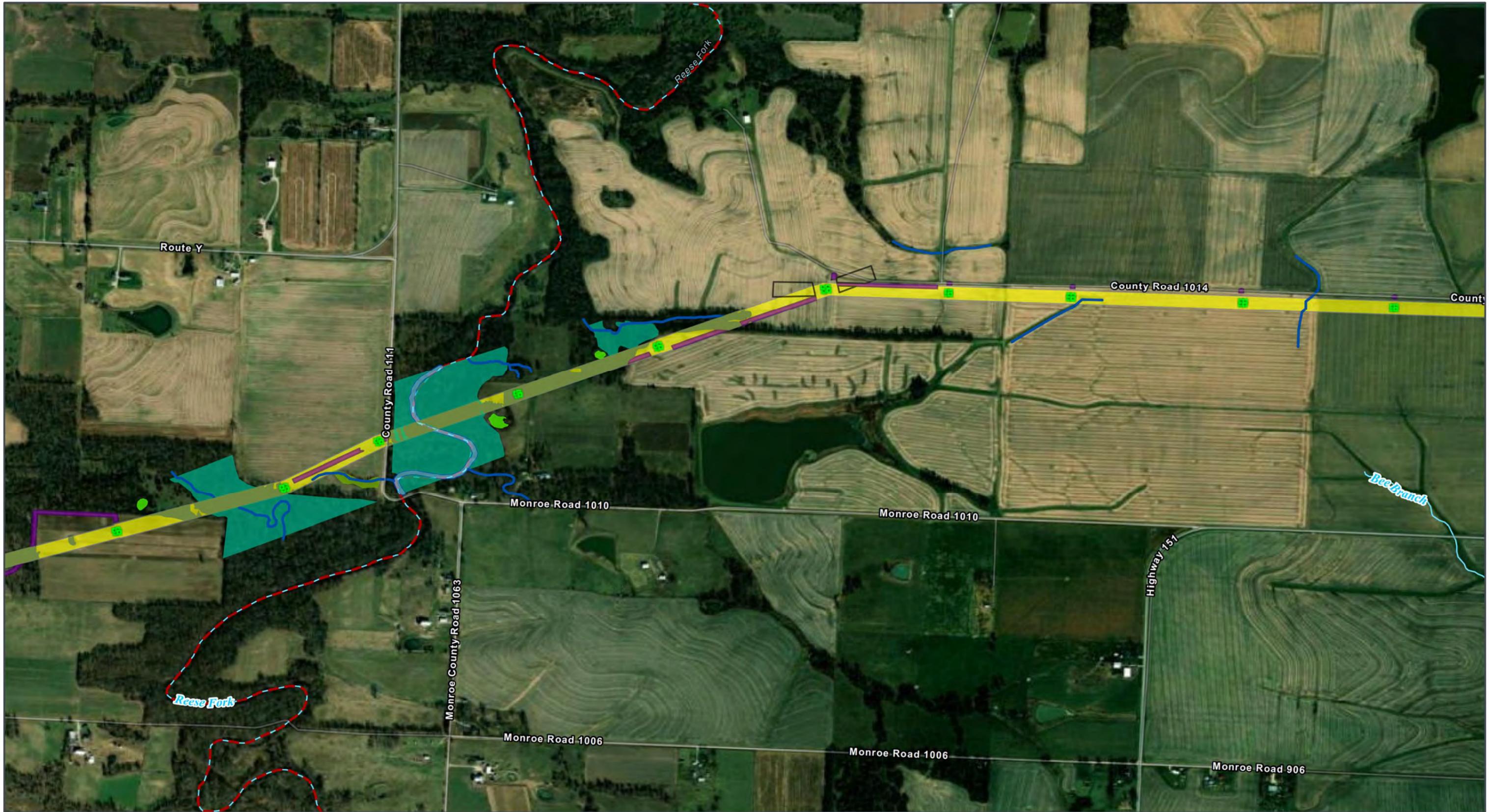
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Kansas and Missouri

1:12,000

0 100 200 Meters  
0 400 800 Feet

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

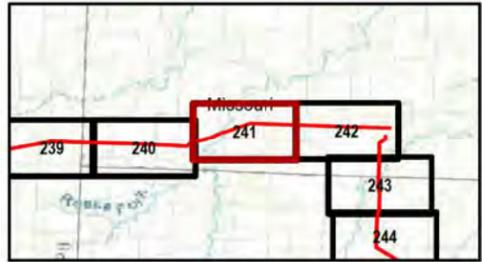


GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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- |   |   |
|---|---|
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|---|---|

- Delineated Wetland**
- Palustrine Emergent (PEM)
  - Palustrine Forested (PFO)
  - Palustrine Unconsolidated Bottom (PUB)
  - Delineated Waterbody

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

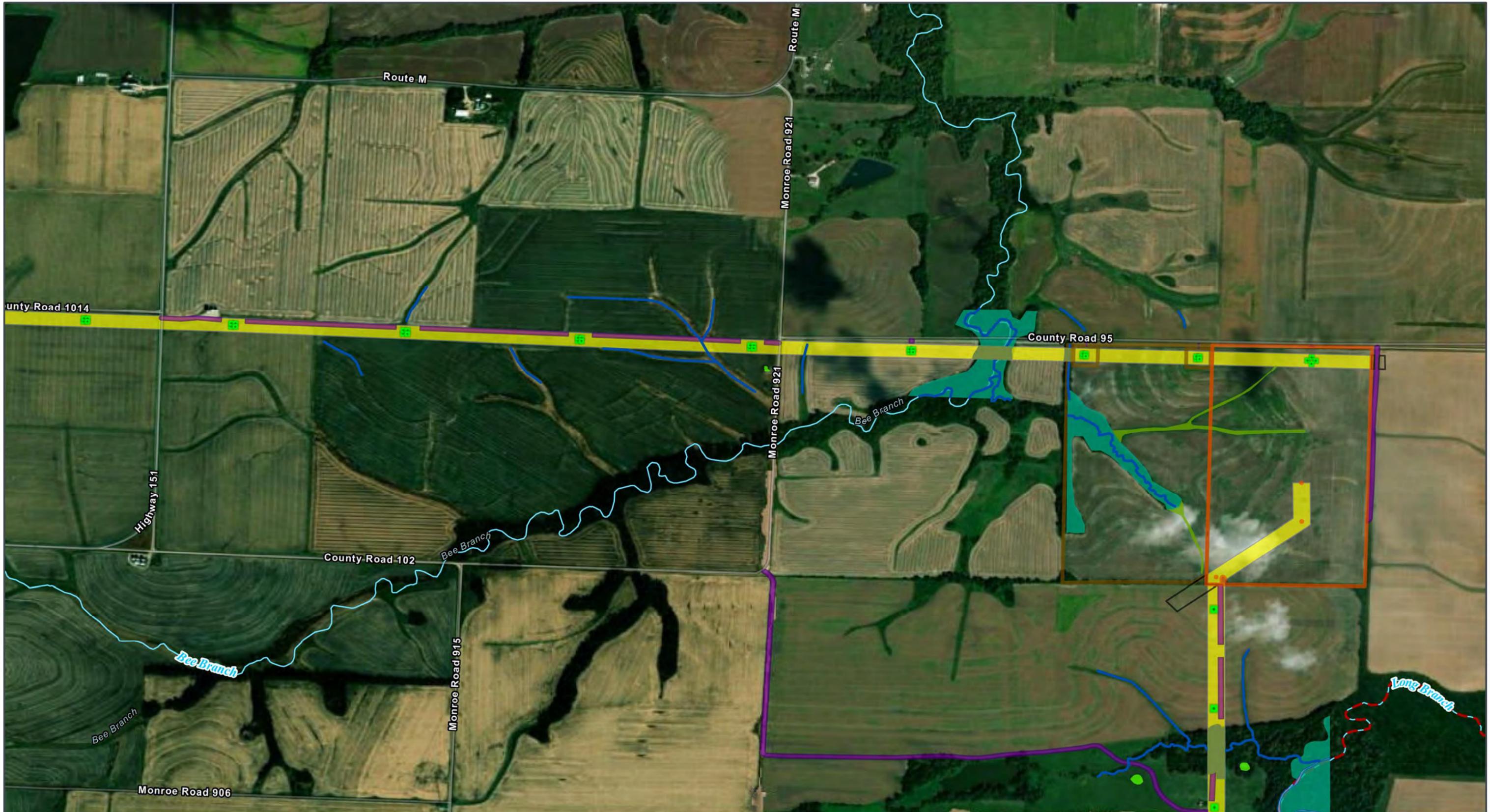


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

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Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

Kansas and Missouri



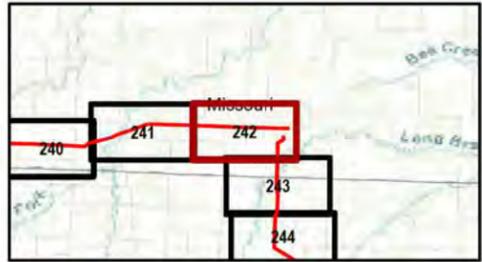
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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- ROW
  - Permanent Project Component**
  - Transmission Structure
  - Converter Station
  - Habitat Conversion**
  - Vegetation Clearing
- Temporary Project Component**
  - Access Road
  - Converter Station
  - Pull Site/Tension Site
  - Hydrology**
  - Delineated Stream
  - NHD Stream/River

- Impaired Waterway (303d)
- Delineated Stream
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)
- Delineated Waterbody

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Kansas and Missouri  
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38.3365°N 95.5783°W

1:12,000

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TRANSMISSION LINE PROJECT  
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ROW

**Permanent Project Component**

- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

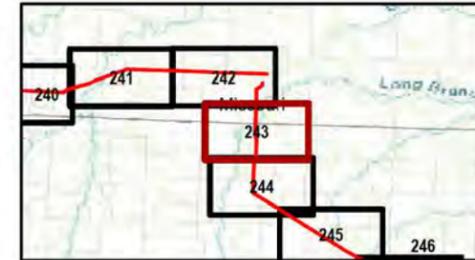
**Temporary Project Component**

- Access Road
- Hydrology**
- NHD Stream/River
- Impaired Waterway (303d)
- Delineated Stream

**Delineated Wetland**

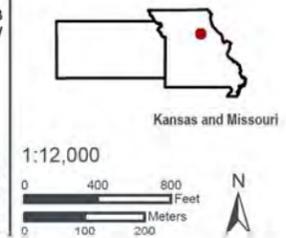
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)
- Delineated Waterbody

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Kansas and Missouri  
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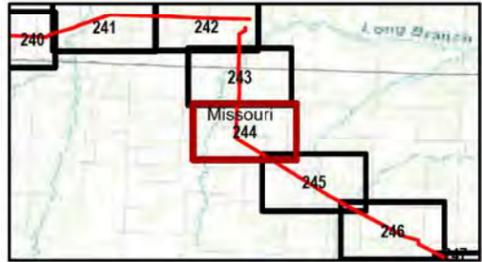
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- NHD Stream/River
- Impaired Waterway (303d)
- Delineated Stream

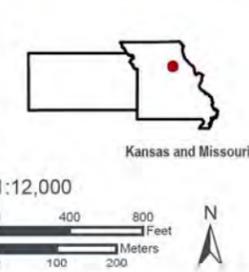
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Scrub-Shrub (PSS)
- Palustrine Unconsolidated Bottom (PUB)

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Kansas and Missouri  
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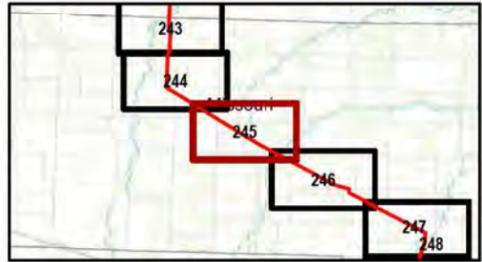
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Hydrology**
- NHD Stream/River
- Delineated Stream

- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)

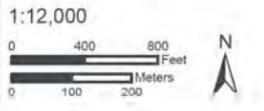
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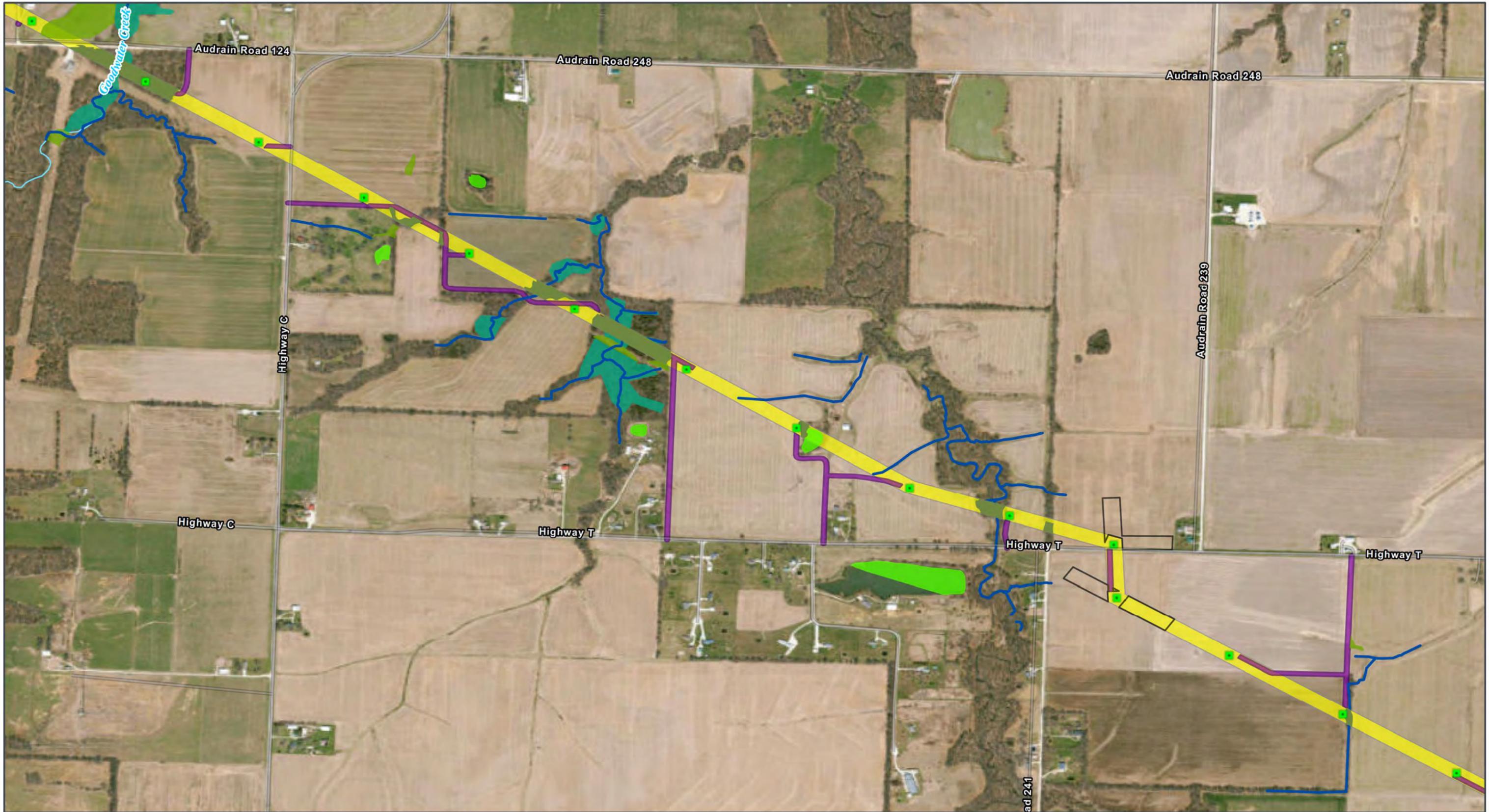


Kansas and Missouri  
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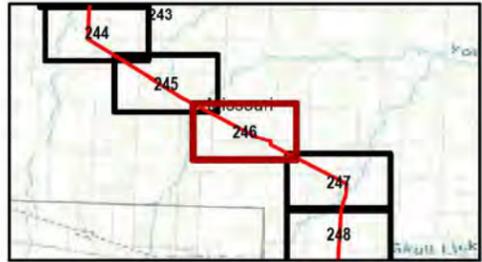




GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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- |                        |                                    |                        |  |
|------------------------|------------------------------------|------------------------|--|
| ROW                    | <b>Permanent Project Component</b> | Access Road            | Delineated Stream                      |
| Transmission Structure | <b>Habitat Conversion</b>          | Pull Site/Tension Site | <b>Delineated Wetland</b>              |
| Vegetation Clearing    |                                    | <b>Hydrology</b>       | Palustrine Emergent (PEM)              |
|                        |                                    | NHD Stream/River       | Palustrine Forested (PFO)              |
|                        |                                    |                        | Palustrine Unconsolidated Bottom (PUB) |

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



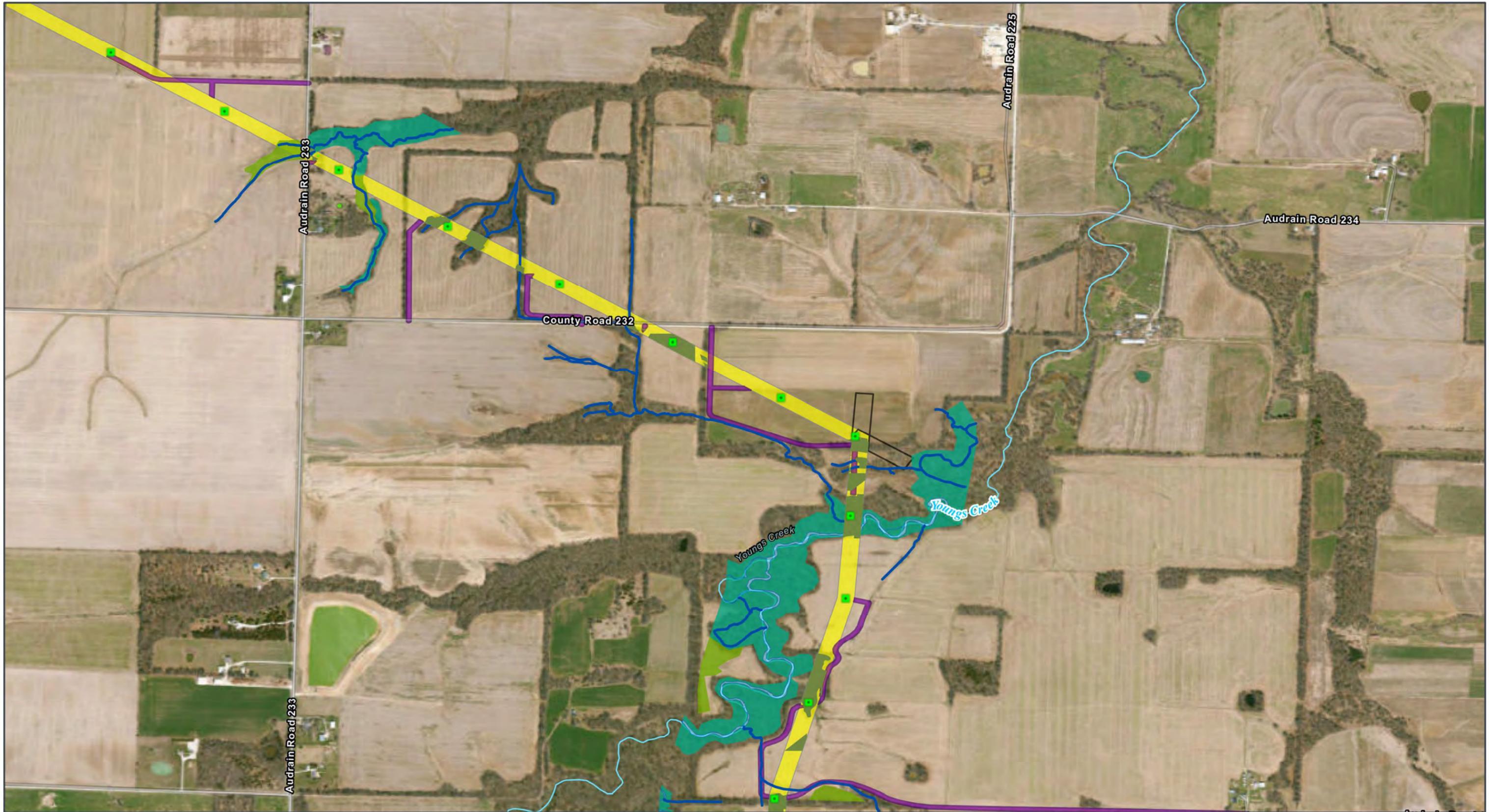
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Kansas and Missouri

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Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



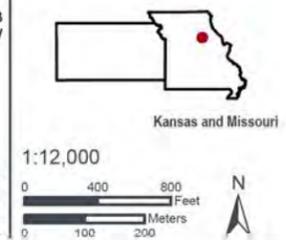
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|---|--|---|
| <p><b>ROW</b></p> <p><b>Permanent Project Component</b></p> <ul style="list-style-type: none"> <li><span style="color: green;">■</span> Transmission Structure</li> </ul> <p><b>Habitat Conversion</b></p> <ul style="list-style-type: none"> <li><span style="color: brown;">■</span> Vegetation Clearing</li> </ul> | <p><b>Temporary Project Component</b></p> <ul style="list-style-type: none"> <li><span style="color: purple;">■</span> Access Road</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Pull Site/Tension Site</li> </ul> <p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">—</span> NHD Stream/River</li> <li><span style="color: blue;">—</span> Delineated Stream</li> </ul> | <p><b>Delineated Wetland</b></p> <ul style="list-style-type: none"> <li><span style="color: lightgreen;">■</span> Palustrine Emergent (PEM)</li> <li><span style="color: teal;">■</span> Palustrine Forested (PFO)</li> <li><span style="color: yellowgreen;">■</span> Palustrine Unconsolidated Bottom (PUB)</li> <li><span style="color: lightblue;">■</span> Delineated Waterbody</li> </ul> |
|---|--|---|

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



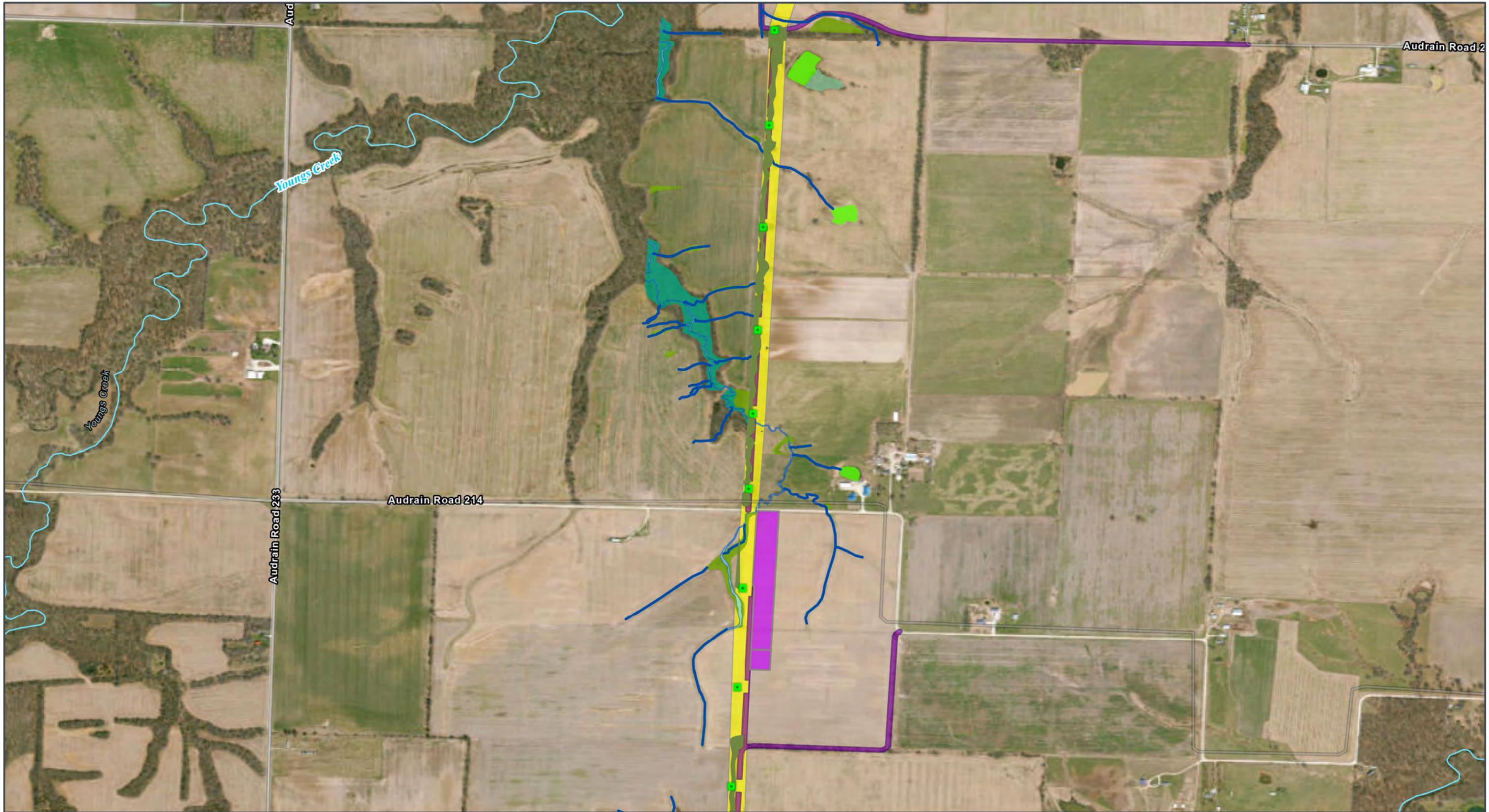
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



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Kansas and Missouri



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TRANSMISSION LINE PROJECT  
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ROW

**Permanent Project Component**

- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

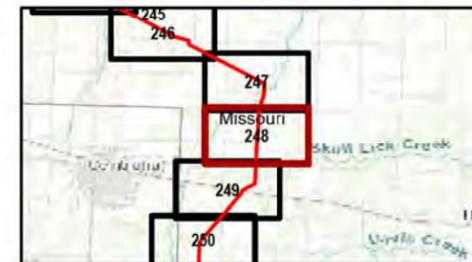
**Temporary Project Component**

- Access Road
- Helipad / Fly Yard
- Hydrology**
- NHD Stream/River
- Delineated Stream

**Delineated Wetland**

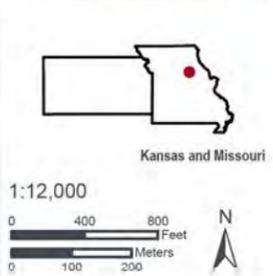
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Scrub-Shrub (PSS)
- Palustrine Unconsolidated Bottom (PUB)
- Delineated Waterbody

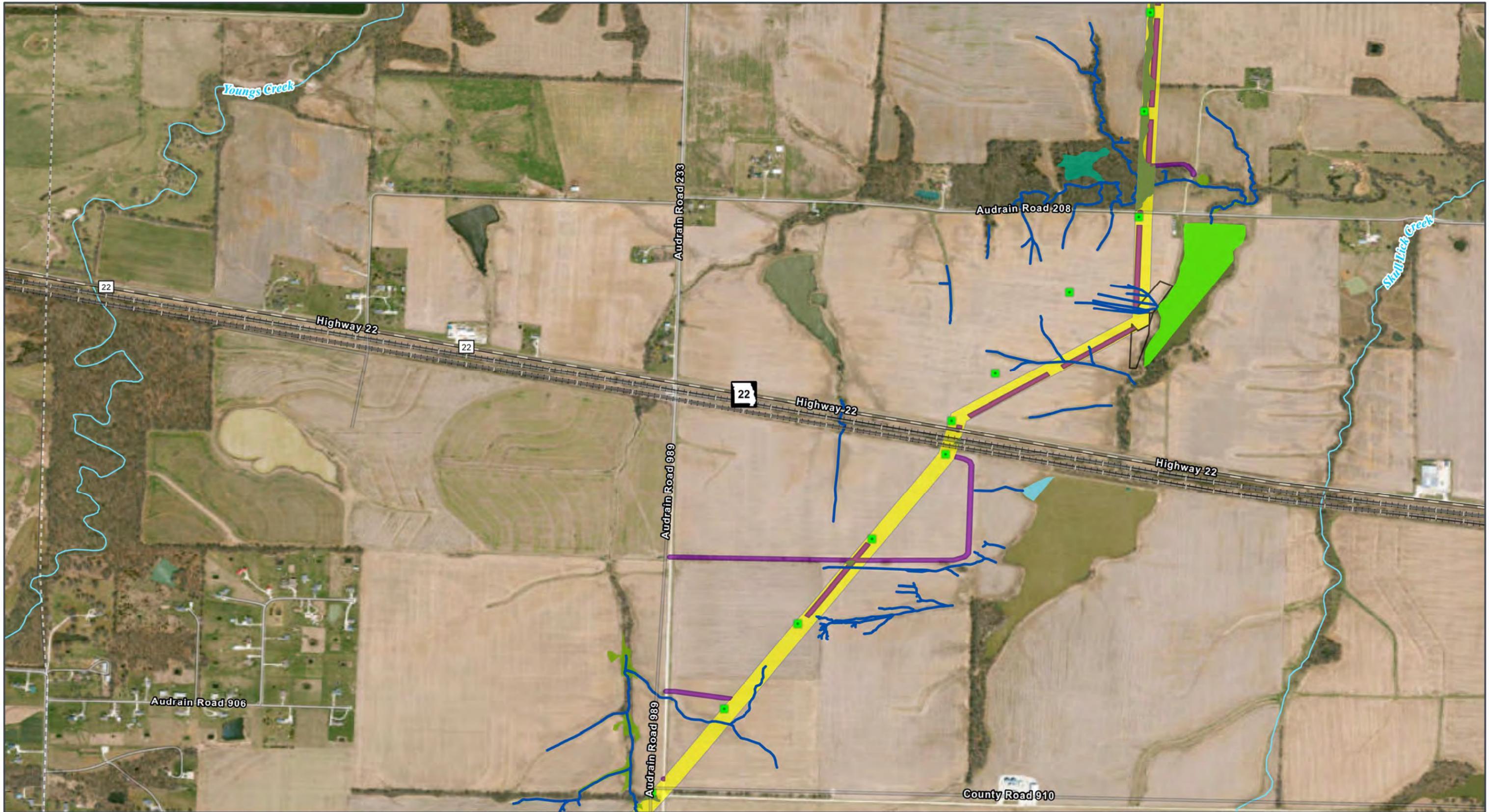
All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
accessed November 2024  
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Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k





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TRANSMISSION LINE PROJECT  
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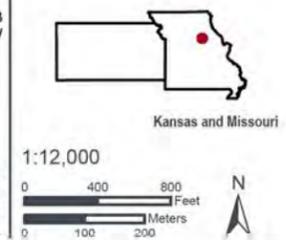
- |                                    |  |  |
|------------------------------------|--|--|
| ROW                                | Pull Site/Tension Site                 | Palustrine Emergent (PEM)              |
| <b>Permanent Project Component</b> | <b>Hydrology</b>                       | Palustrine Forested (PFO)              |
| Transmission Structure             | NHD Stream/River                       | Palustrine Unconsolidated Bottom (PUB) |
| <b>Habitat Conversion</b>          | Delineated Stream                      | <b>Transportation</b>                  |
| Vegetation Clearing                | <b>Delineated Wetland</b>              | State Highway                          |
| <b>Temporary Project Component</b> | Lacustrine Unconsolidated Bottom (L1U) | Railroad                               |
| Access Road                        |  |  |

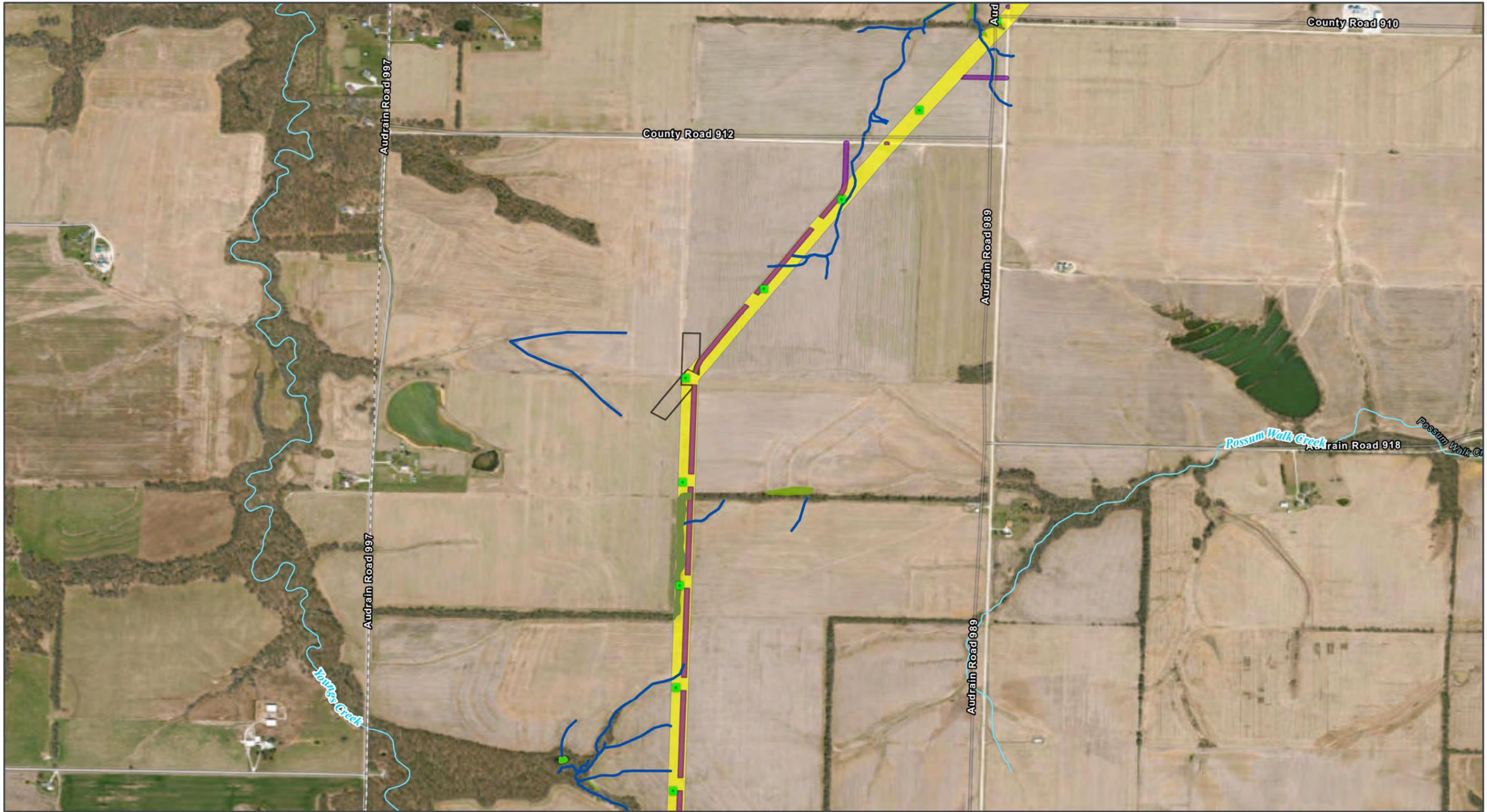
All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
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Updated: 11/26/2024  
Project No. 60694559  
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Apn: WetlandMapBook\_12k

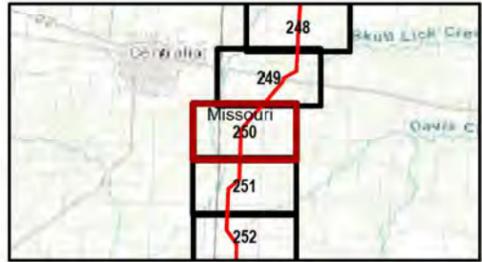




GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
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- |                                    |                                    |  |
|------------------------------------|------------------------------------|--|
| ROW                                | <b>Temporary Project Component</b> | Delineated Stream                      |
| <b>Permanent Project Component</b> | Access Road                        | <b>Delineated Wetland</b>              |
| Transmission Structure             | Pull Site/Tension Site             | Palustrine Emergent (PEM)              |
| <b>Habitat Conversion</b>          | <b>Hydrology</b>                   | Palustrine Unconsolidated Bottom (PUB) |
| Vegetation Clearing                | NHD Stream/River                   |  |

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



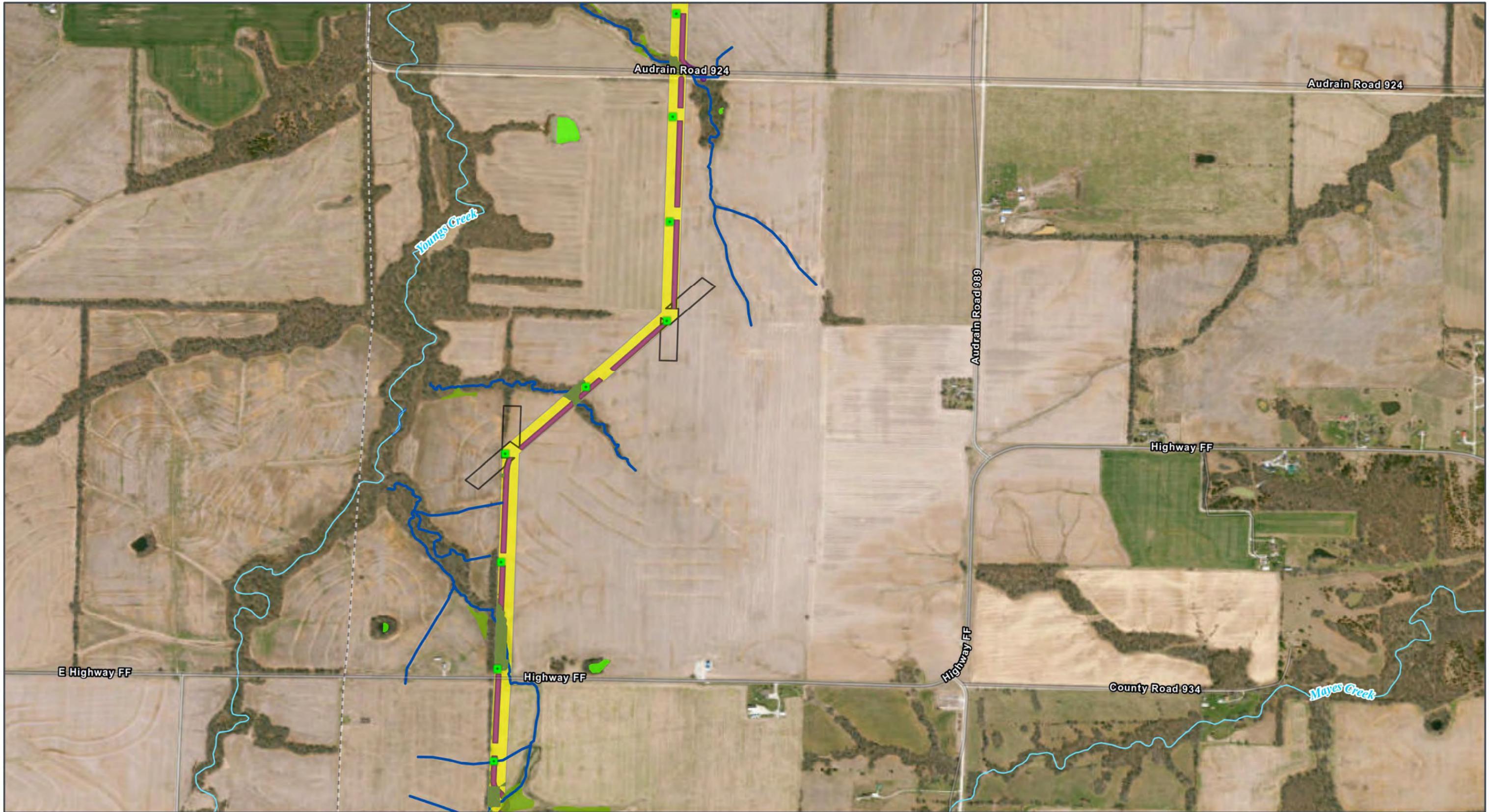
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38.3365°N 95.5783°W

Kansas and Missouri

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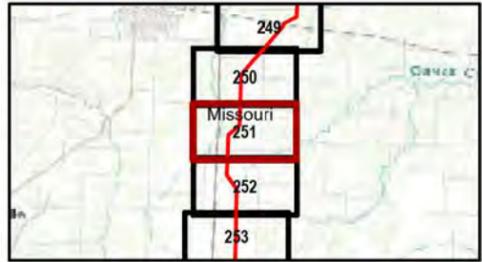
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Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



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TRANSMISSION LINE PROJECT  
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- |                                    |                                    |  |
|------------------------------------|------------------------------------|--|
| ROW                                | <b>Temporary Project Component</b> | Delineated Stream                      |
| <b>Permanent Project Component</b> | Access Road                        | <b>Delineated Wetland</b>              |
| Transmission Structure             | Pull Site/Tension Site             | Palustrine Emergent (PEM)              |
| <b>Habitat Conversion</b>          | <b>Hydrology</b>                   | Palustrine Unconsolidated Bottom (PUB) |
| Vegetation Clearing                | NHD Stream/River                   | Delineated Waterbody                   |

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

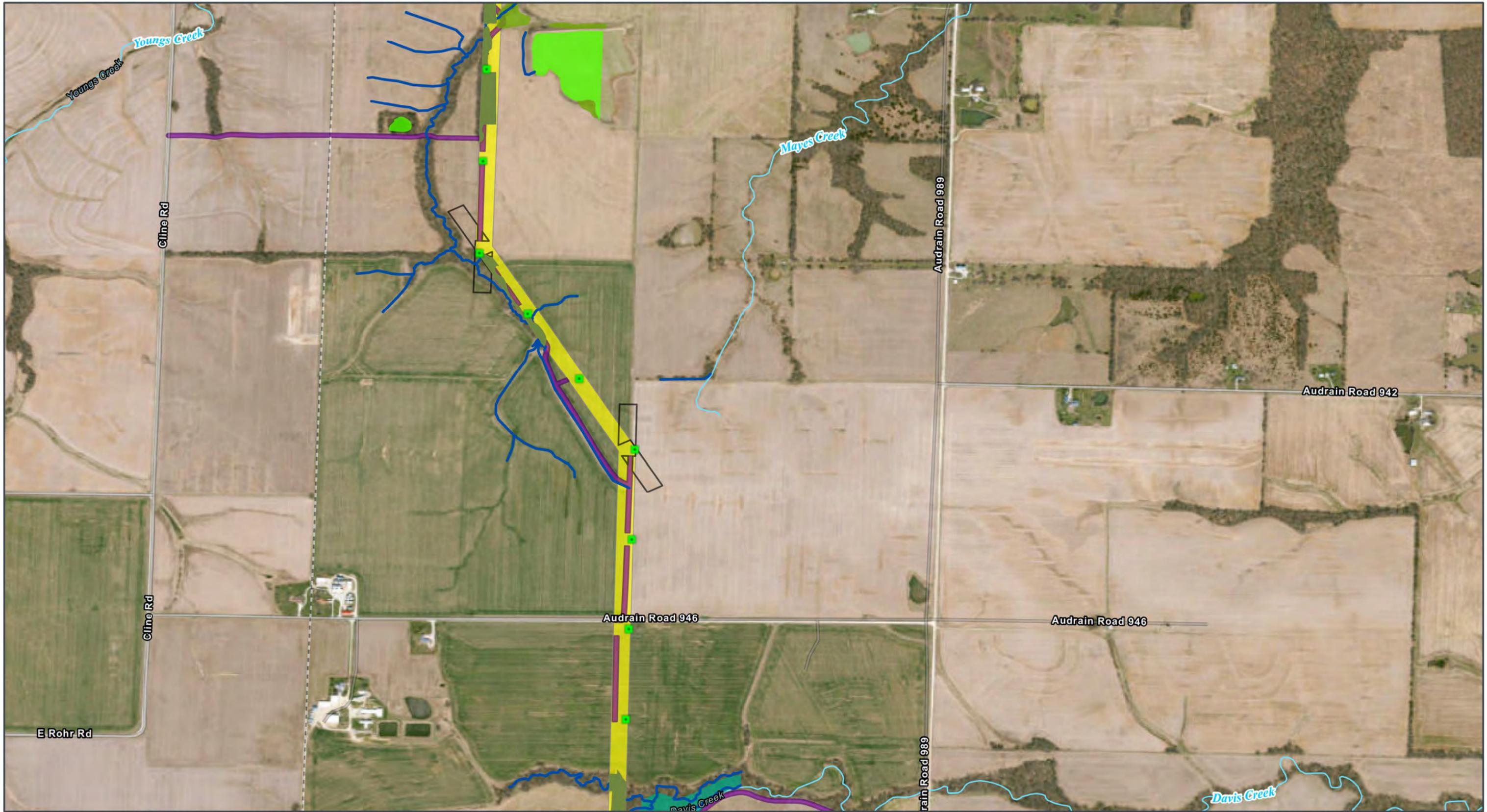


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

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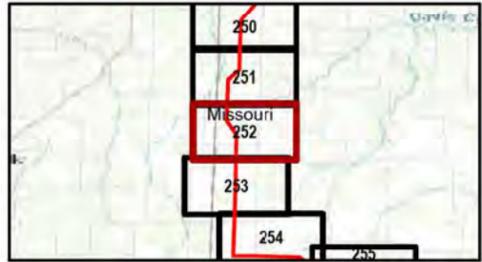
GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**Wetlands Map Book**  
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- ROW
- Permanent Project Component**
- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

- Temporary Project Component**
- Access Road
- Pull Site/Tension Site
- Hydrology**
- NHD Stream/River

- Delineated Stream
- Delineated Wetland**
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
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Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

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TRANSMISSION LINE PROJECT  
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ROW

**Permanent Project Component**

- Transmission Structure
- Habitat Conversion**
- Vegetation Clearing

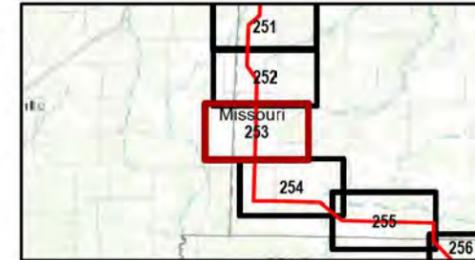
**Temporary Project Component**

- Access Road
- Hydrology**
- NHD Stream/River
- Delineated Stream

**Delineated Wetland**

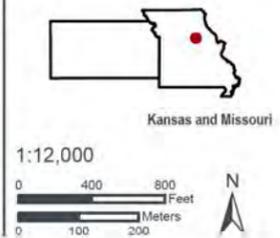
- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)
- NHD Waterbody

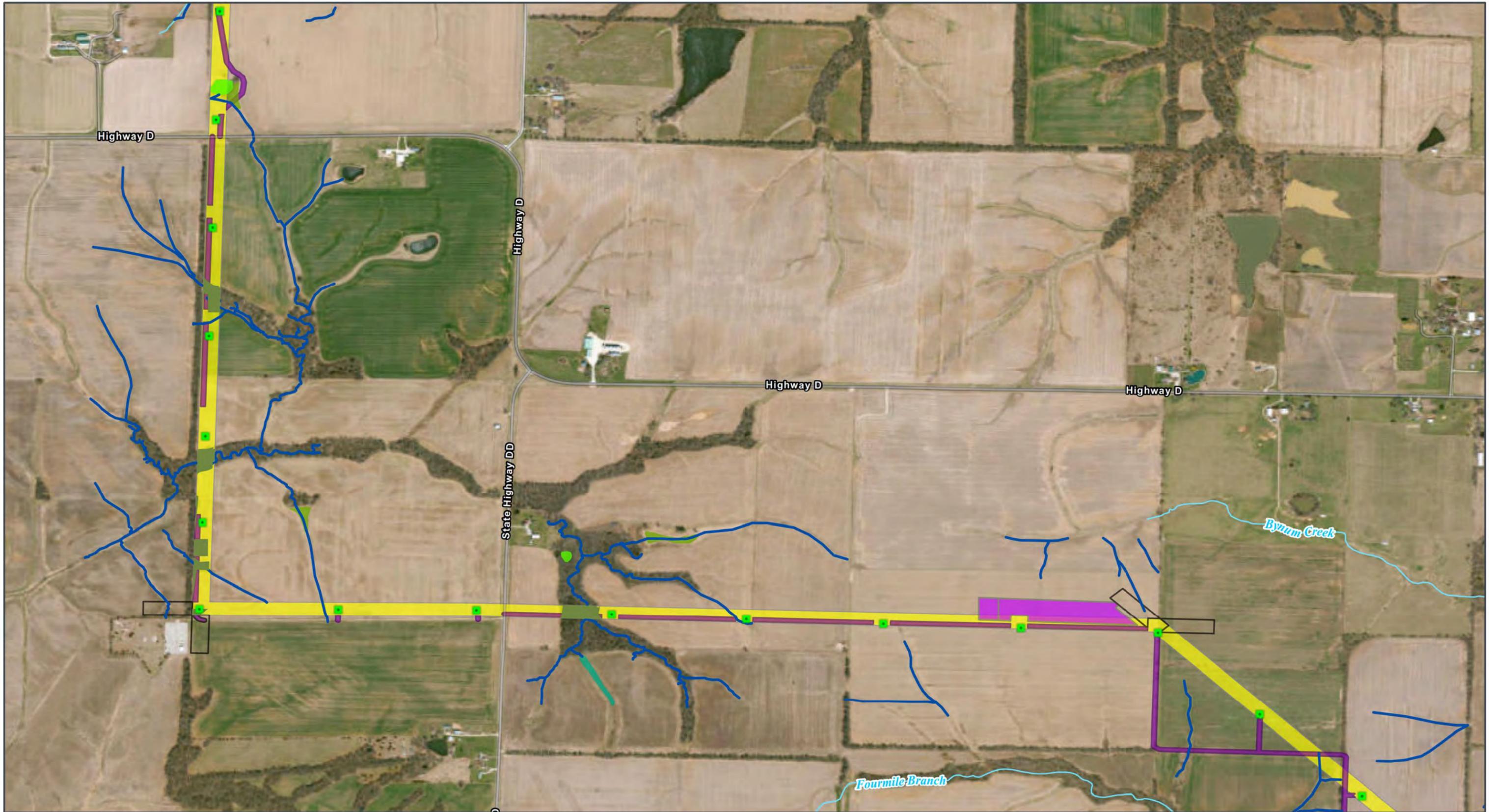
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Kansas and Missouri  
GCS North American 1983  
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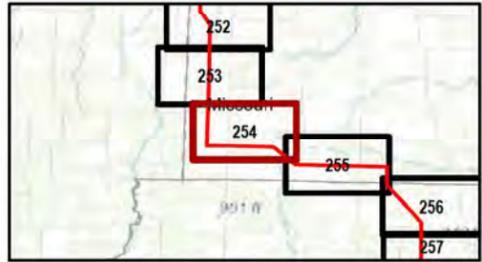
Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k





<p><b>ROW</b></p> <p><b>Permanent Project Component</b></p> <ul style="list-style-type: none"> <li><span style="color: green;">■</span> Transmission Structure</li> </ul> <p><b>Habitat Conversion</b></p> <ul style="list-style-type: none"> <li><span style="color: brown;">■</span> Vegetation Clearing</li> </ul>	<p><b>Temporary Project Component</b></p> <ul style="list-style-type: none"> <li><span style="color: purple;">■</span> Access Road</li> <li><span style="color: magenta;">■</span> Helipad / Fly Yard</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Pull Site/Tension Site</li> </ul> <p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">—</span> NHD Stream/River</li> </ul>	<p><b>Delineated Stream</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">—</span> Delineated Stream</li> </ul> <p><b>Delineated Wetland</b></p> <ul style="list-style-type: none"> <li><span style="color: lightgreen;">■</span> Palustrine Emergent (PEM)</li> <li><span style="color: teal;">■</span> Palustrine Forested (PFO)</li> <li><span style="color: yellowgreen;">■</span> Palustrine Unconsolidated Bottom (PUB)</li> </ul>
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All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



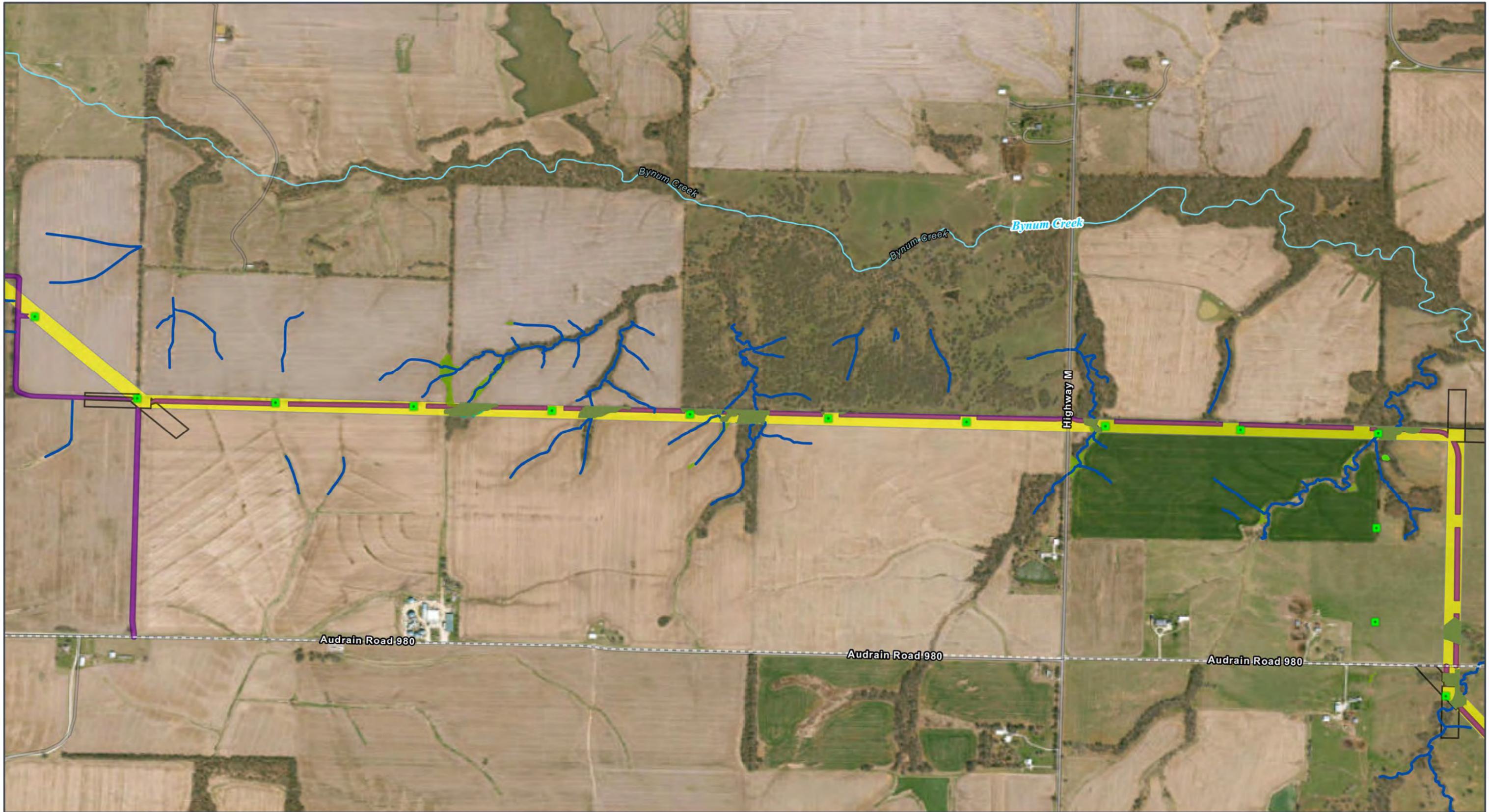
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Kansas and Missouri

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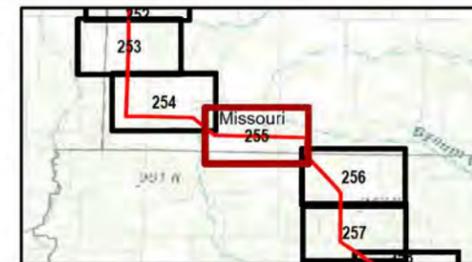
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Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



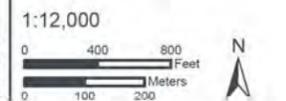
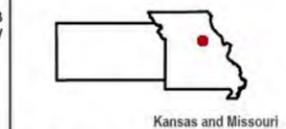
- |   |   |  |
|---|---|--|
| <p><b>ROW</b></p> <p><b>Permanent Project Component</b></p> <ul style="list-style-type: none"> <li><span style="color: green;">■</span> Transmission Structure</li> </ul> <p><b>Habitat Conversion</b></p> <ul style="list-style-type: none"> <li><span style="color: brown;">■</span> Vegetation Clearing</li> </ul> | <p><b>Temporary Project Component</b></p> <ul style="list-style-type: none"> <li><span style="color: purple;">■</span> Access Road</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Pull Site/Tension Site</li> </ul> <p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li><span style="color: cyan;">—</span> NHD Stream/River</li> </ul> | <p><b>Delineated Stream</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">—</span> Delineated Stream</li> </ul> <p><b>Delineated Wetland</b></p> <ul style="list-style-type: none"> <li><span style="color: lightgreen;">■</span> Palustrine Emergent (PEM)</li> <li><span style="color: teal;">■</span> Palustrine Forested (PFO)</li> <li><span style="color: limegreen;">■</span> Palustrine Unconsolidated Bottom (PUB)</li> </ul> |
|---|---|--|

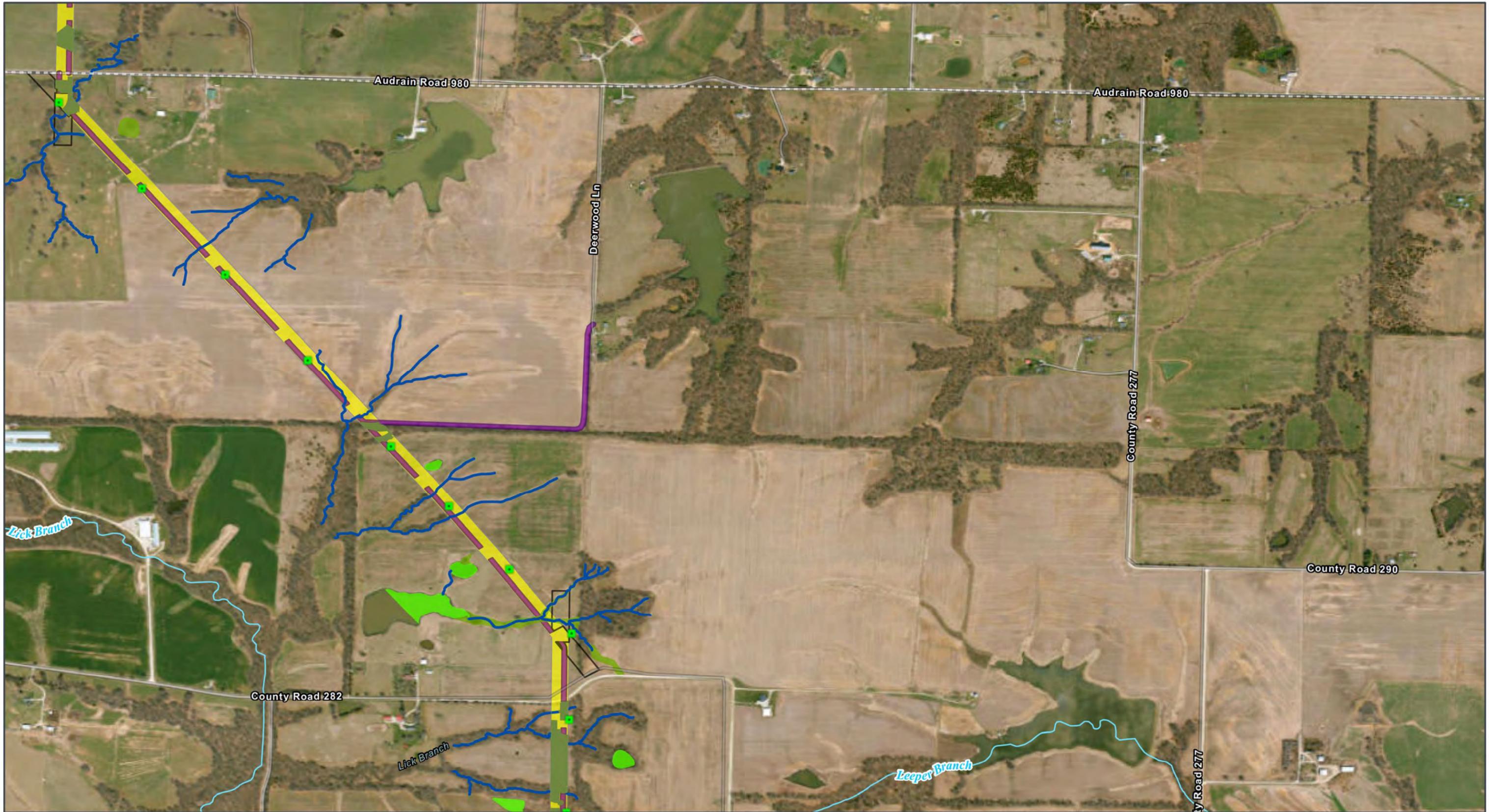
All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

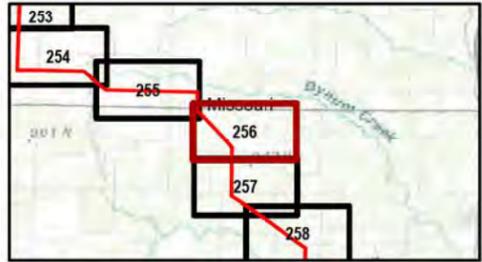




GRAIN BELT EXPRESS  
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- |                                    |                                    |  |
|------------------------------------|------------------------------------|--|
| ROW                                | <b>Temporary Project Component</b> | Delineated Stream                      |
| <b>Permanent Project Component</b> | Access Road                        | <b>Delineated Wetland</b>              |
| Transmission Structure             | Pull Site/Tension Site             | Palustrine Emergent (PEM)              |
| <b>Habitat Conversion</b>          | <b>Hydrology</b>                   | Palustrine Unconsolidated Bottom (PUB) |
| Vegetation Clearing                | NHD Stream/River                   |  |

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



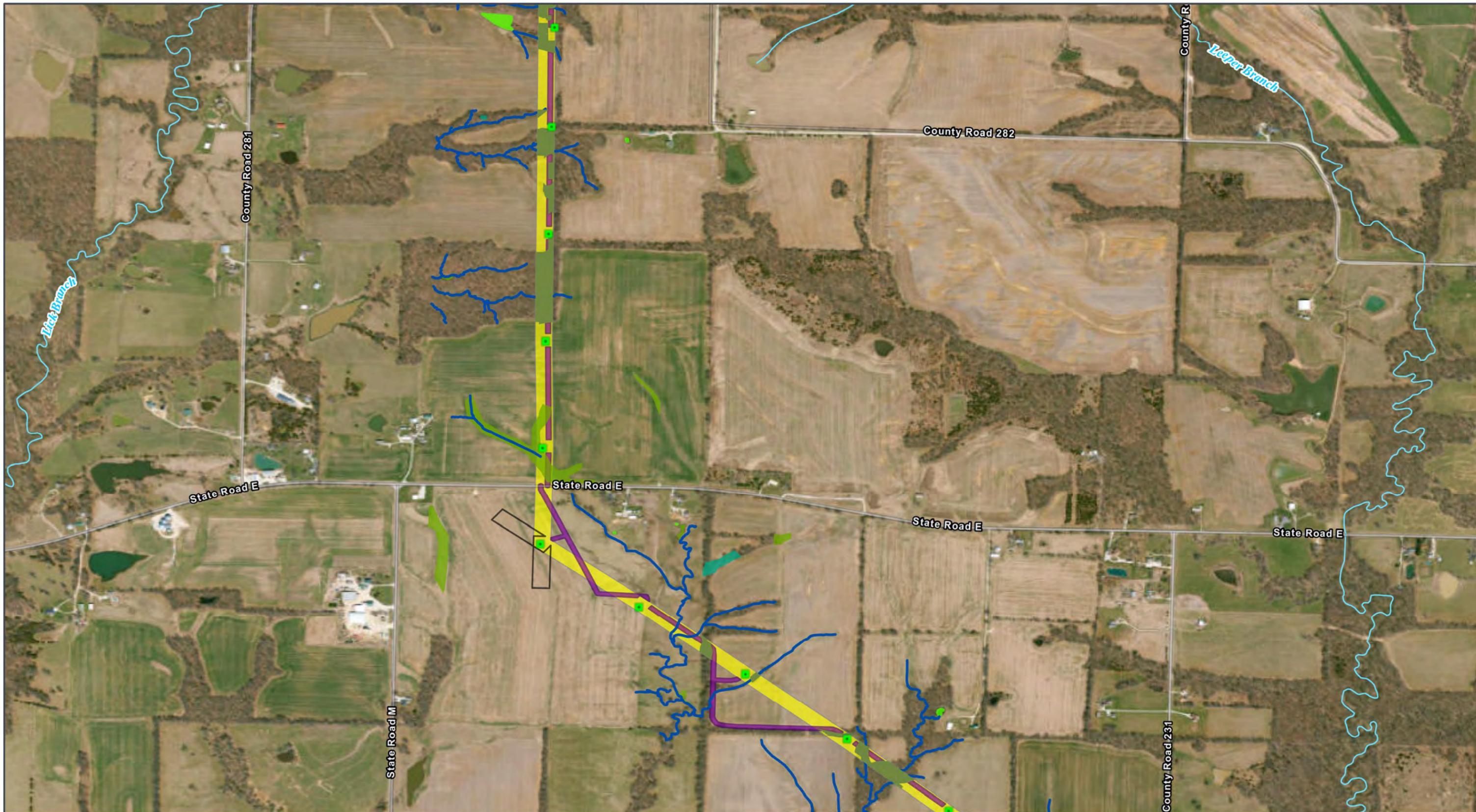
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Kansas and Missouri

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0 400 800 Feet

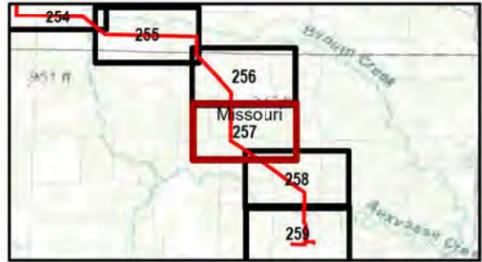
Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k



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TRANSMISSION LINE PROJECT  
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- |                                    |                                    |  |
|------------------------------------|------------------------------------|--|
| ROW                                | <b>Temporary Project Component</b> | Delineated Stream                      |
| <b>Permanent Project Component</b> | Access Road                        | <b>Delineated Wetland</b>              |
| Transmission Structure             | Pull Site/Tension Site             | Palustrine Emergent (PEM)              |
| <b>Habitat Conversion</b>          | <b>Hydrology</b>                   | Palustrine Forested (PFO)              |
| Vegetation Clearing                | NHD Stream/River                   | Palustrine Unconsolidated Bottom (PUB) |

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



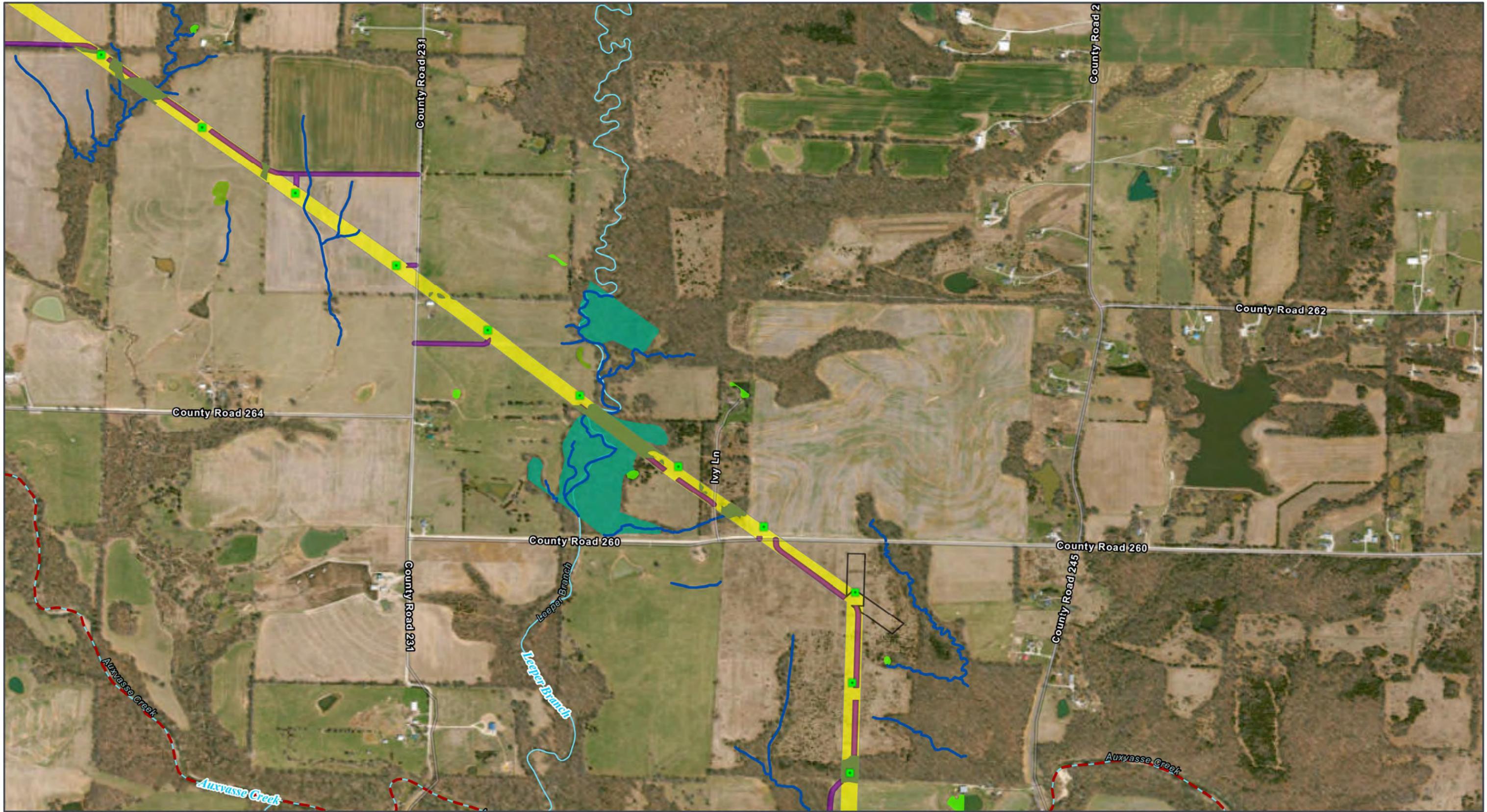
Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Kansas and Missouri

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0 400 800 Feet

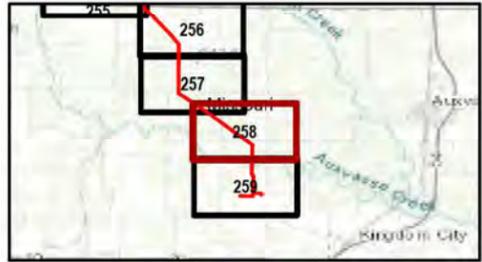
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App: WetlandMapBook\_12k



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TRANSMISSION LINE PROJECT  
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- |                                    |                                    |  |
|------------------------------------|------------------------------------|--|
| ROW                                | <b>Temporary Project Component</b> | Delineated Stream                      |
| <b>Permanent Project Component</b> | Access Road                        | <b>Delineated Wetland</b>              |
| Transmission Structure             | Pull Site/Tension Site             | Palustrine Emergent (PEM)              |
| <b>Habitat Conversion</b>          | <b>Hydrology</b>                   | Palustrine Forested (PFO)              |
| Vegetation Clearing                | NHD Stream/River                   | Palustrine Unconsolidated Bottom (PUB) |
|                                    | Impaired Waterway (303d)           |  |

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented

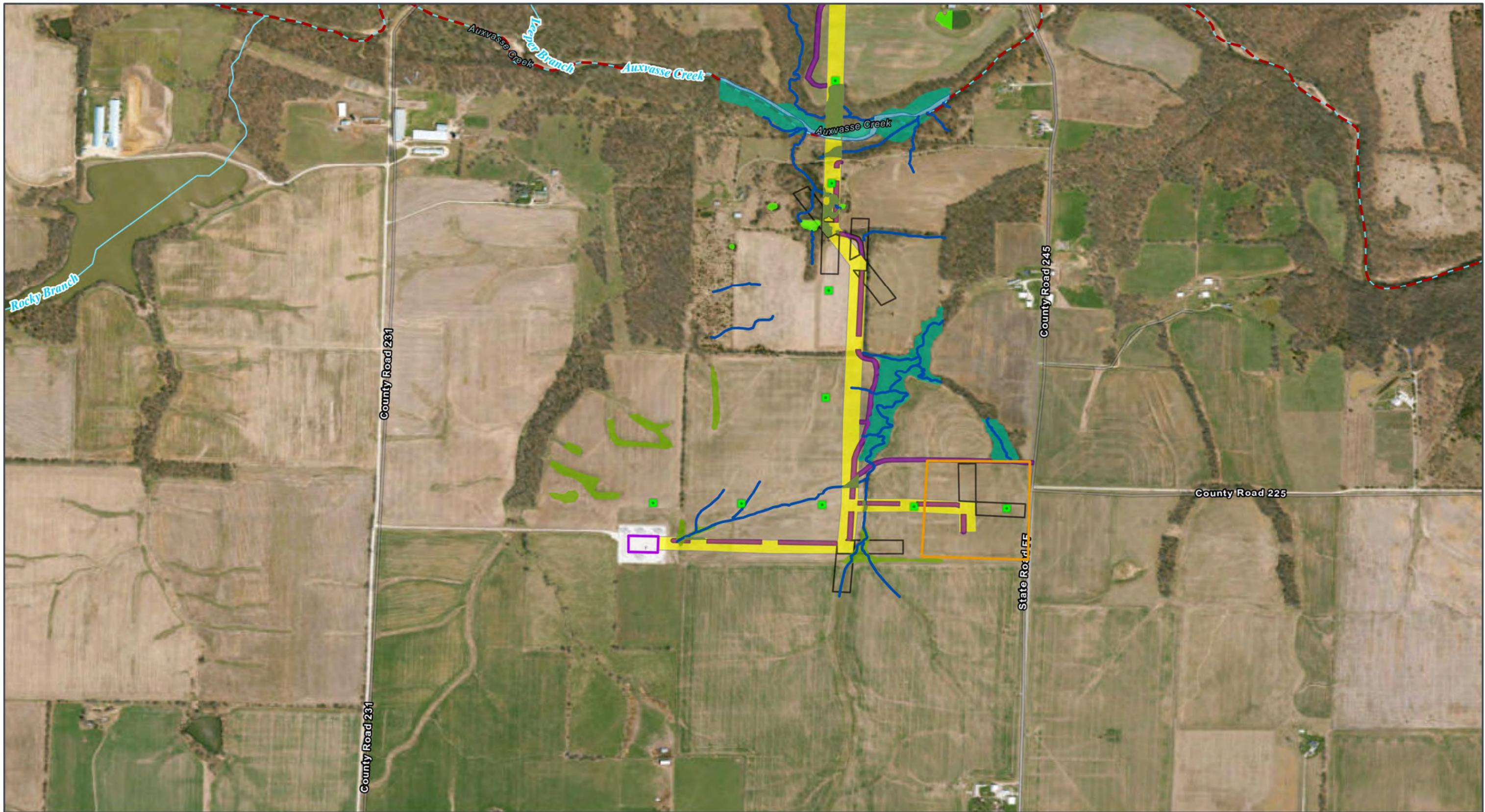


Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook 12k  
App: WetlandMapBook\_12k

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GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT

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- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li> Existing Burns Substation</li> <li> Existing McCredie Substation</li> <li> ROW</li> <li><b>Permanent Project Component</b></li> <li> Transmission Structure</li> <li><b>Habitat Conversion</b></li> <li> Vegetation Clearing</li> </ul> | <p><b>Temporary Project Component</b></p> <ul style="list-style-type: none"> <li> Access Road</li> <li> Pull Site/Tension Site</li> <li><b>Hydrology</b></li> <li> NHD Stream/River</li> <li> Impaired Waterway (303d)</li> <li> Delineated Stream</li> </ul> |
|---|---|

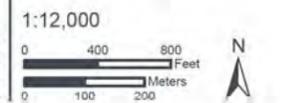
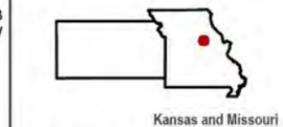
- Delineated Wetland**
- Palustrine Emergent (PEM)
  - Palustrine Forested (PFO)
  - Palustrine Unconsolidated Bottom (PUB)
  - Delineated Waterbody

All disturbance areas are likely an over-estimation of direct impacts and based on assumptions presented in the Chapter 2 disturbance model (Table 2-1). These impact areas will be refined and finalized once field surveys are complete and avoidance and/or mitigation measures are implemented



Kansas and Missouri  
GCS North American 1983  
38.3365°N 95.5783°W

Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No. 60694559  
Layout: Wetland Mapbook\_12k  
App: WetlandMapBook\_12k



**Grain Belt Express Transmission Line  
Environmental Impact Statement**

**Appendix 3.6-1: Cultural Resources Present in  
the Analysis Areas**

**Table 1. State-Inventoried Archaeological Sites in the Archaeological Analysis Area**

<b>Site ID</b>	<b>Location</b>	<b>Site Type/Function/Cultural Affiliation</b>	<b>National Register of Historic Places Status</b>
14DP0118	Doniphan County, Kansas	Precontact - Isolated Findspot; Historic - Agrarian	Unknown
14RU0004	Russell County, Kansas	Precontact - Village Site	Unknown
14WH0340	Washington County, Kansas	Precontact - Unknown Function	Unknown
23CY0127	Callaway County, Missouri	Precontact - Habitation Site	Unknown
23CW1041	Caldwell County, Missouri	Historic - 19th/20th Century Dump Site	Unknown
23CW0060	Caldwell County, Missouri	Historic - Late 19th Century Farmstead	Not Evaluated
23CW0058	Caldwell County, Missouri	Historic - 20th Century Farmstead	Not Evaluated
23CW0061	Caldwell County, Missouri	Historic - Indeterminate Scatter	Not Evaluated
23CA1171	Carroll County, Missouri	Precontact - Unknown Function	Not Eligible
23CA1172	Carroll County, Missouri	Precontact - Unknown Function	Unknown
23CA0104	Carroll County, Missouri	Precontact - Unknown Function	Unknown
23CH0073	Chariton County, Missouri	Precontact - Habitation; Historic-Artifact Scatter	Unknown
23CH1349	Chariton County, Missouri	Precontact - Lithic Scatter; Historic - 19th-20th Century Habitation	Unknown
23MN1182	Monroe County, Missouri	Precontact - Habitation	Not Evaluated
23MN1183	Monroe County, Missouri	Precontact - Habitation	Not Evaluated
23CY0127	Callaway County, Missouri	Precontact - Habitation Site	Unknown

Source: Kansas Historical Society 2023a; Missouri State Historic Preservation Office 2023

**Table 2. Archaeological Resources Identified Within the Archaeological Analysis Area of the HVDC Converter Station Sites**

<b>Resource ID</b>	<b>County</b>	<b>Resource Type</b>	<b>Resource Address/ Description</b>	<b>National Register of Historic Places Status</b>
Field ID MO-024-001	Monroe County, MO	Archaeological Site	Historic-era Artifact Scatter	Recommended Not Eligible
Field ID MO-024-002	Monroe County, MO	Archaeological Site	Historic-era Artifact Scatter	Recommended Not Eligible
Field ID MO-024-003	Monroe County, MO	Archaeological Site	Precontact Isolated Findspot	Recommended Not Eligible
Field ID FO-001-001	Ford County, KS	Archaeological Site	Precontact Isolated Findspot	Recommended Not Eligible
Field ID FO-001-002	Ford County, KS	Archaeological Site	Historic Surface and Plowzone Artifact Scatter, Late Nineteenth- Twentieth Century Occupation	Recommended Not Eligible
Field ID FO-001-003	Ford County, KS	Archaeological Site	Precontact Isolated Findspot	Recommended Not Eligible
Field ID FO-001-004	Ford County, KS	Archaeological Site	Precontact Isolated Findspot	Recommended Not Eligible
Field ID FO-001-005	Ford County, KS	Archaeological Site	Precontact Isolated Findspot	Recommended Not Eligible
Field ID FO-001-006	Ford County, KS	Archaeological Site	Precontact Isolated Findspot	Recommended Not Eligible

Source: AECOM 2023a, 2023b

**Table 3. State-Inventoried Historic Aboveground Resources in the Historic Built Environment Analysis Area**

Resource ID	Resource Name	Address	Resource Type/ Date	National Register of Historic Places Status
057-1370	Israel Farm	Garrett Road, Bellefont, Ford County, Kansas	Farmstead, circa 1920	Not Assessed
047-0000-0008	Little Coon Creek Masonry Arch Bridge	00 40th Avenue, Offerle, Edwards County, Kansas	Stone Arch Bridge, circa 1935, possible CCC construction	Potentially Eligible
047-0000-00003	St. Peter and St. Paul Church	00 70th Road, Kinsley, Edwards County, Kansas	Church, circa 1892	Not Assessed
047-0000-00004	St. Peter and St. Paul School	00 G Road, Kinsley, Edwards County, Kansas	Religious School, Construction Date Unknown	Not Assessed
091-1774	Farmstead	18385 US 169, Olathe, Russell County, Kansas	Farmstead, circa 1920	Unknown
123-0000-00228	Brown's Creek Tributary Masonry Arch Bridge	00 Road B, Beloit, Mitchell County, Kansas	Stone Arch Bridge, circa 1936	Listed
123-0000-00217	Cather Farm	2312 K-14 Hwy, Beloit, Mitchell County, Kansas	Farmstead, circa 1900	Listed
123-253	Black Barn	2409 340 RD, Beloit, Mitchell County, Kansas	Farmstead, circa 1900	Not Assessed
029-107	Wolf Creek Bridge	00 K-28 Highway, Concordia, Cloud County, Kansas	Concrete Bridge, circa 1960	Not Assessed (Scheduled for Demolition)
029-109	POW Camp Concordia – Stone Guard Tower	1501 Union Road, Concordia, Cloud County, Kansas	WWII POW Camp Stone Tower, circa 1943	Not Assessed
029-1120-0017	POW Camp Concordia	1555 Union Road, Concordia, Cloud County, Kansas	WWII POW Camp	Not Eligible
029-45	POW Camp Concordia – Building T-9	1541 UTE Street, Concordia, Cloud County, Kansas	WWII POW Camp Warehouse, circa 1942	State Listed
201-86	Stone Culvert	Between 4th and 5th Roads, Sheridan Township, Washington County, Kansas	Stone Culvert, circa 1920	Not Assessed (Likely Demolished)
117-0000-00019	Life Schoolhouse	1299 19th Terrace Beattie, Marshall County, Kansas	One-Room Schoolhouse, circa 1860	Not Eligible
013-215	Tyler Bridge	00 Bobcat Road, Brown County, Kansas	Truss Bridge, circa 1905	Demolished
013-247	Coral Berry Road Concrete Bridge	00 Coral Berry Road Fairview, Brown County, Kansas	Concrete Bridge, circa 1930	Not Assessed

<b>Resource ID</b>	<b>Resource Name</b>	<b>Address</b>	<b>Resource Type/ Date</b>	<b>National Register of Historic Places Status</b>
013-252	Tributary to Wolf River Concrete Bridge	00 Kingfisher Road, Hiawatha, Brown County, Kansas	Concrete Bridge, circa 1900	Not Assessed
043-578	Denton RWD #3 Water Tower	00 Ashland Street, Denton, Doniphan County, Kansas	Water Tower, circa 1966	Not Assessed
043-0000-00199	St. Benedict's Church	684 St. Benedict's Road, Bendena, Doniphan County, Kansas	Church, circa 1903	Listed
043-0000-00200	St. Benedict's Rectory	684 St. Benedict's Road, Bendena, Doniphan County, Kansas	Church Rectory, circa 1903	Not Assessed

Source: *Kansas Historical Society 2023b*

CCC: *Civilian Conservation Corps*; POW: *Prisoner of War*; RWD: *Rural Water District*; WWII: *World War II*

**Table 4. Historic Aboveground Resources Identified Within the Historic Built Environment Analysis Area of the HVDC Converter Station Sites**

<b>Resource ID</b>	<b>Resource Type</b>	<b>Resource Address/Description</b>	<b>National Register of Historic Places Status</b>
Field ID MN-AS-001-001	Agricultural Complex	Farmstead, circa 1900-1920, at 16019 State Highway M	Recommended Not Eligible
Field ID MN-AS-001-002	Agricultural Complex	Farmhouse and Garage, circa 1965, at County Road 921 S	Recommended Not Eligible
Field ID MN-AS-001-003	Agricultural Complex	Farmstead, circa 1900, at State Highway M, East of County Road 921	Recommended Not Eligible
Field ID MN-AS-001-004	Agricultural Complex	Farmstead, circa 1900-1950s, at 16667 State Highway M	Recommended Not Eligible
Field ID MN-AS-001-005	Agricultural Complex	Farmstead, circa 1900-1960s, at County Road 916 of State Highway M	Recommended Not Eligible
Field ID MN-AS-001-006	Agricultural Complex	Farmstead, circa 1900 and 1950s, at County Road 959 S of State Highway M	Recommended Not Eligible
Field ID MN-AS-001-007	Agricultural Complex	Farmstead, circa 1940s-1970s, at County Road 959 N of Audrain Road 156	Recommended Not Eligible
Field ID MN-AS-001-008	Agricultural Complex	Farmstead, circa 1945-1970s, at 16946 Audrain Road 156	Recommended Not Eligible
Field ID MN-AS-001-009	Agricultural Complex	Farmstead, circa 1949-1970s, North of Audrain Road 156	Recommended Not Eligible
Field ID 01	Agricultural Complex	Farmstead, circa 1900-1960s, at 11747 117 Road	Recommended Not Eligible
Field ID 02	Agricultural Complex	Farmstead, circa 1950-1978, at 11712 117 Road	Recommended Not Eligible
Field ID 03	Agricultural Complex	Auxiliary Farm Equipment, circa 1970s, on East Side of 117 Road	Recommended Not Eligible
Field ID 04	Agricultural Complex	Farmstead, circa 1910s-1920s and 1970s, at 119 Road and Saddle Road	Recommended Not Eligible
Field ID 05	Agricultural Complex	Farmstead, circa 1900-1940, South Side of Saddle Road	Recommended Not Eligible

Source: AECOM 2023c, 2023d

**Table 5. National Historic Sites and National Historic Trail Properties within the Historic Built Environment and Native American Traditional Values Analysis Areas**

Resource Name	Type	Location Relative to Project
Fort Larned NHS	Frontier Military Fort, circa 1859-1878	1.2 miles from the planned Project ROW and Pawnee County, Kansas
Santa Fe NHT	Historic Trail, circa 1821-1880	Within the planned Project ROW in Ford County, Kansas; visible from the planned Project ROW in Pawnee County, Kansas
Oregon NHT	Historic Trail, circa 1810	Within the planned Project ROW in Marshall County, Kansas
California NHT	Historic Trail, circa 1841	Within the planned Project ROW in Marshall County, Kansas; visible from the planned Project ROW in Brown County, Kansas
Pony Express NHT	Historic Trail, circa 1860	Within the planned Project ROW in Nemaha County, Kansas; visible from the planned Project ROW in Doniphan County, Kansas
Lewis and Clark NHT	Historic Trail, circa 1803-1806	Within the planned Project ROW at the Kansas/Missouri border

Source: National Park Service 2023

NHS: National Historic Site; NHT: National Historic Trail

## REFERENCES

- AECOM. 2023a. *Grain Belt Express Transmission Line, Phase I Archaeological Survey, Proposed Converter Station, Ford County, Kansas.*
- AECOM. 2023b. *Grain Belt Express Transmission Line, Phase I Archaeological Survey, Proposed Converter Station, Monroe County, Missouri.*
- AECOM. 2023c. *Grain Belt Express Transmission Line, Architectural Reconnaissance Survey, Proposed Converter Station, Ford County, Kansas.*
- AECOM. 2023d. *Grain Belt Express Transmission Line, Architectural Reconnaissance Survey. Proposed Converter Station, Monroe County, Missouri.*
- Kansas Historical Society. 2023a. *Archaeological Inventory.* Accessed March 13, 2023. Confidential.
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- National Park Service. 2023 *National Trails System.* Accessed March 15, 2023. <https://www.nps.gov/subjects/nationaltrailssystem/national-historic-trails.htm>.

**Grain Belt Express Transmission Line  
Environmental Impact Statement  
Appendix 3.6-2: Tribal Consultation**

## 1. TRIBAL CONSULTATION

Consideration of Native American tribal thoughts and concerns represents a critical component of the affected environment for cultural resources. Under Section 106 of the National Historic Preservation Act (NHPA), consultation with potential tribal nations is fundamental to identifying and, where necessary, minimizing the potential for impacts on tribal properties, including Traditional Cultural Properties. Preliminary outreach to tribal entities who have interest in the region crossed by Project activities was initiated by Department of Energy's (DOE) Loan Program Office (LPO) in late 2022, through invitation to participate on the Project with the 34 tribal entities. Those tribal entities include the following:

- Absentee-Shawnee Tribe of Indians of Oklahoma
- Apache Tribe of Oklahoma
- Caddo Nation of Oklahoma
- Cheyenne and Arapaho Tribes, Oklahoma
- Comanche Nation, Oklahoma
- Delaware Nation, Oklahoma
- Delaware Tribe of Indians
- Eastern Shawnee Tribe of Oklahoma
- Fort Sill Apache Tribe of Oklahoma
- Ho-Chunk Nation of Wisconsin
- Iowa Tribe of Kansas and Nebraska
- Iowa Tribe of Oklahoma
- Kaw Nation, Oklahoma
- Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas
- Kickapoo Tribe of Oklahoma
- Kiowa Indian Tribe of Oklahoma
- Miami Tribe of Oklahoma
- Northern Arapaho Tribe of the Wind River Reservation, Wyoming
- Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana
- Oglala Sioux Tribe
- Omaha Tribe of Nebraska
- Otoe-Missouria Tribe of Indians, Oklahoma
- Pawnee Nation of Oklahoma
- Ponca Tribe of Indians of Oklahoma
- Ponca Tribe of Nebraska
- Prairie Band Potawatomi Nation
- Sac & Fox Nation of Missouri in Kansas and Nebraska
- Sac & Fox Nation, Oklahoma
- Sac & Fox Tribe of the Mississippi in Iowa

- Seneca-Cayuga Nation
- Shawnee Tribe
- The Osage Nation
- Wichita and Affiliated Tribes (Wichita, Keechi, Waco & Tawakonie), Oklahoma
- Wyandotte Nation

## 2. STATUS OF TRIBAL CONSULTATION

To date, DOE LPO has received response from eight tribes, requesting participation in the Project.

- Delaware Nation, Oklahoma
- Iowa Tribe of Kansas and Nebraska
- Northern Arapaho Tribe of the Wind River Reservation, Wyoming
- Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana
- Pawnee Nation of Oklahoma
- Ponca Tribe of Indians of Oklahoma
- Osage Nation
- Wichita and Affiliated Tribes (Wichita, Keechi, Waco, & Tawakonie), Oklahoma

Records of the Project prior to its acquisition by Invenergy Transmission LLC indicate that there was limited correspondence with Native American tribes during the Project's route selection process. The Applicant under Invenergy Transmission LLC ownership began engaging with tribes in June 2021. The Applicant conferred with U.S. Army Corps of Engineers archaeological staff, the Kansas and Missouri State Historic Preservation Offices (SHPO), and National Parks Service (NPS) to identify tribes with potential interest in the Project area. The Applicant invited twenty-two tribes to engage on the Project and hosted an August 2021 introduction meeting that three tribes attended (Wichita and Affiliated Tribes, Iowa Tribe of Kansas and Nebraska, and The Osage Nation). Pawnee Nation could not attend the meeting but requested Project information. During this meeting, and in follow-up correspondence, the Applicant requested that the Tribes review project information and design and provide input regarding tribal interests, including Tribal Historic Preservation Office records and areas of interest in the vicinity of the Project corridor. In response to this request, the Osage Nation provided several Areas of Interest (AOIs) and Areas of Avoidance (AOAs), and Pawnee Nation provided AOIs. No specific AOIs or AOAs were received from other Tribes.

The Applicant invited all tribes to take part in cultural resources field surveys. Representatives from two tribes (Iowa Tribe of Kansas and Nebraska and the Kiowa Indian Tribe of Oklahoma) assisted in the 2021 archaeological field survey. The Applicant extended an invitation to tribes when re-initiating field survey in 2022; however, none of the tribes had availability and/or expressed interest.

On December 28, 2022, DOE LPO issued consultation letters to 34 federally recognized Tribes notifying them of the Project and providing the opportunity to participate in the NEPA process and NHPA Section 106 consultation process, as well as engage DOE LPO in formal government-to-government consultation. The following eight federally recognized Tribes accepted DOE LPO's invitation to consult: Delaware Nation, Oklahoma; Iowa Tribe of Kansas and Nebraska; Northern Arapaho Tribe of the Wind River Reservation, Wyoming; Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana; Pawnee Nation of Oklahoma; Ponca Tribe of Indians of Oklahoma; The Osage Nation; and Wichita and Affiliated Tribes (Wichita, Keechi, Waco & Tawakonie), Oklahoma.

In February 2024, the Applicant initiated outreach to the eight tribes that are consulting on the Project, for the purpose of seeking information about areas of interest (AOIs) and areas of avoidance (AOAs) within the proposed Tiger Connector corridor and associated property parcels. Four tribes responded to the request. The Iowa Tribe of Kansas and Nebraska noted that any known resources of interest to the tribe in that geography would be included in the Missouri SHPO records. The Northern Cheyenne Tribe and Pawnee Nation both indicated that the Tiger Connector is outside of their cultural landscape. The Osage Nation identified an AOI. No additional AOAs were identified for the Tiger Connector.

In March 2024, the Applicant initiated outreach to the eight tribes that are consulting on the Project, for the purpose of sharing locations of contemplated laydown and material yards in Kansas and Missouri and to identify if any of the contemplated yards intersect tribal AOIs and AOAs. Four tribes (Iowa Tribe of Kansas and Nebraska, Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Pawnee Nation, and The Osage Nation) responded to the request. The Pawnee Nation and The Osage Nation identified AOIs that intersect with contemplated yards and requested that the Applicant conduct archaeological surveys if continuing to consider those yards. None of the tribes identified AOAs that intersect the contemplated yards. The Applicant invited all tribes to take part in cultural resources field surveys.

In April 2024, the Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation expressed interest in taking part in the Project's archaeological field survey in Kansas and the Applicant continues to follow up with that tribe to coordinate logistics and schedule before the tribal members engage in survey. The Osage Nation is monitoring archaeological surveys within its identified AOI (approximately 45 percent of the Project). The Osage Nation monitoring activities have been ongoing since October 2023. At the request of The Osage Nation, the Applicant, together with DOE LPO, developed archaeological survey methods for areas outside of Osage Nation AOIs that are memorialized in a work plan that was reviewed and approved by The Osage Nation.

**Grain Belt Express Transmission Line  
Environmental Impact Statement  
Appendix 3.10: National Land Cover Database  
Maps**



**GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
National Land Cover  
Database**

Map 1 of 61



- Proposed Grain Belt Express Phase 1 Converter Station
- Existing Saddle Substation
- Proposed Grain Belt Express Phase 1 Ford County Interconnect ROW

- Proposed Grain Belt Express Phase 1 HVDC Line ROW
- Land Use Analysis Area
- National Land Cover Dataset**
- Barren Land
- Cultivated Crops

- Deciduous Forest
- Developed, High Intensity
- Developed, Medium Intensity
- Developed, Low Intensity

- Developed, Open Space
- Emergent Herbaceous Wetlands
- Evergreen Forest
- Grassland/Herbaceous
- Mixed Forest

- Open Water
- Pasture/Hay
- Shrub/Scrub
- Woody Wetlands



Ford County, Kansas  
GCS North American 1983  
37.6699°N 99.6375°W



Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No: 68102  
Layout: GBX\_LandUse\_NLCD  
Apoc:

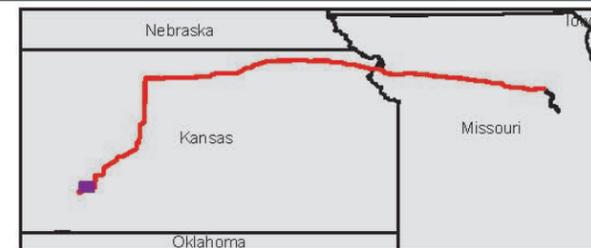
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GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**National Land Cover  
Database**  
Map 2 of 61

- |   |                             |                              |                |
|---|-----------------------------|------------------------------|----------------|
| Proposed Grain Belt Express Phase 1 HVDC Line ROW | Deciduous Forest            | Developed, Open Space        | Mixed Forest   |
| Land Use Analysis Area                            | Developed, High Intensity   | Emergent Herbaceous Wetlands | Open Water     |
| <b>National Land Cover Dataset</b>                | Developed, Medium Intensity | Evergreen Forest             | Pasture/Hay    |
| Cultivated Crops                                  | Developed, Low Intensity    | Grassland/Herbaceous         | Shrub/Scrub    |
|   |                             |                              | Woody Wetlands |

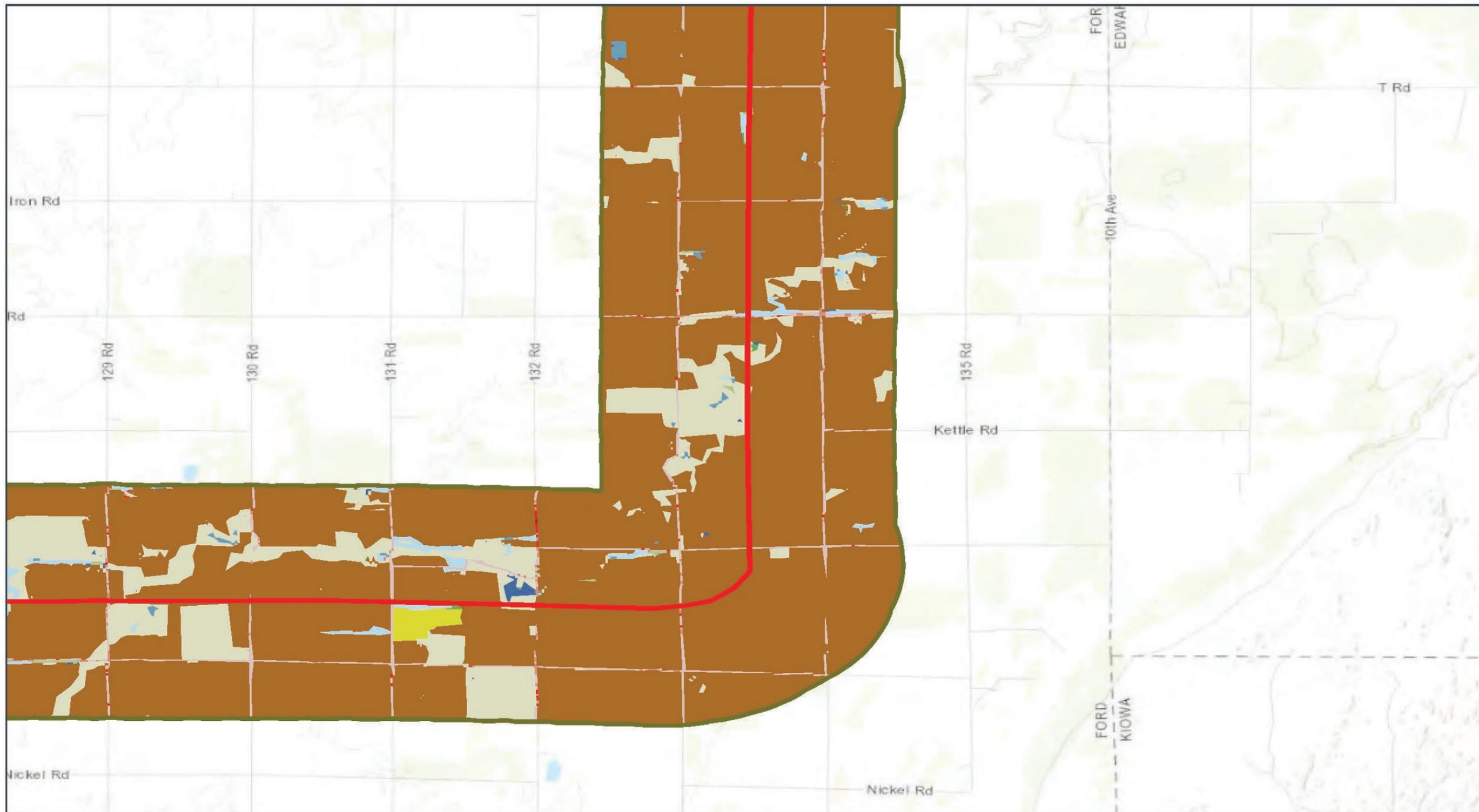


Ford County, Kansas  
GCS North American 1983  
37.747°N 99.7449°W



Base Map: Esri ArcGIS Online, accessed November 2024  
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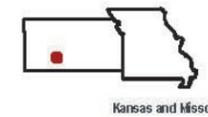


GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**National Land Cover  
Database**  
Map 3 of 61

- |   |                             |                              |                      |
|---|-----------------------------|------------------------------|----------------------|
| Proposed Grain Belt Express Phase 1 HVDC Line ROW | Deciduous Forest            | Developed, Low Intensity     | Grassland/Herbaceous |
| Land Use Analysis Area                            | Developed, High Intensity   | Developed, Open Space        | Mixed Forest         |
| <b>National Land Cover Dataset</b>                | Developed, Medium Intensity | Emergent Herbaceous Wetlands | Open Water           |
| Cultivated Crops                                  |                             | Pasture/Hay                  | Woody Wetlands       |



Ford County, Kansas  
GCS North American 1983  
37.7661°N 99.6059°W



Base Map: Esri ArcGIS Online,  
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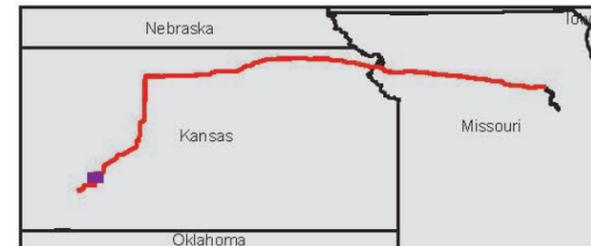




**GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
National Land Cover  
Database**

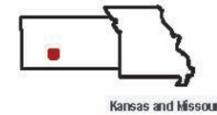
Map 4 of 61

- |   |                             |                              |                |
|---|-----------------------------|------------------------------|----------------|
| Proposed Grain Belt Express Phase 1 HVDC Line ROW | Cultivated Crops            | Developed, Open Space        | Mixed Forest   |
| Land Use Analysis Area                            | Developed, High Intensity   | Emergent Herbaceous Wetlands | Open Water     |
| <b>National Land Cover Dataset</b>                | Developed, Medium Intensity | Evergreen Forest             | Pasture/Hay    |
| Barren Land                                       | Developed, Low Intensity    | Grassland/Herbaceous         | Shrub/Scrub    |
|   |                             |                              | Woody Wetlands |



Ford and Hodgeman Counties,  
Kansas

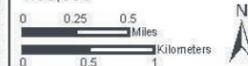
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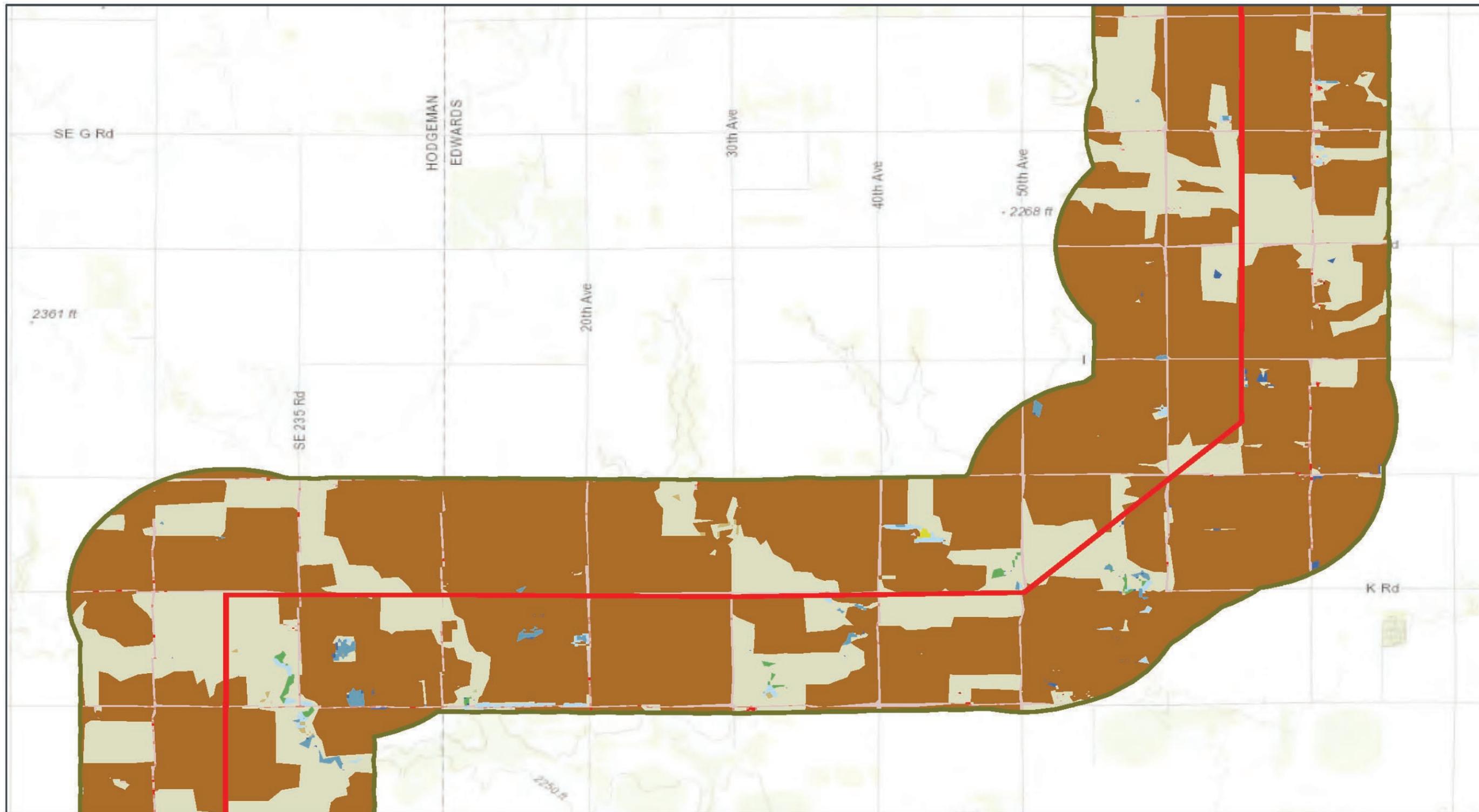


Kansas and Missouri

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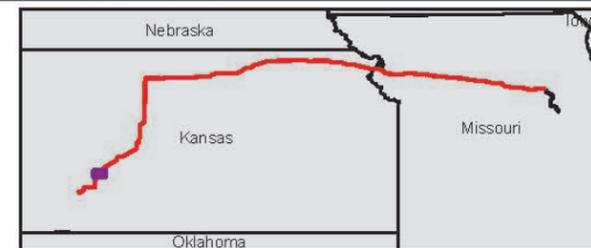
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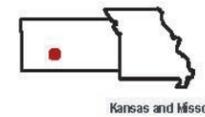


GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**National Land Cover  
Database**  
Map 5 of 61

- |   |                             |                              |                |
|---|-----------------------------|------------------------------|----------------|
| Proposed Grain Belt Express Phase 1 HVDC Line ROW | Deciduous Forest            | Developed, Open Space        | Open Water     |
| Land Use Analysis Area                            | Developed, High Intensity   | Emergent Herbaceous Wetlands | Pasture/Hay    |
| <b>National Land Cover Dataset</b>                | Developed, Medium Intensity | Grassland/Herbaceous         | Shrub/Scrub    |
| Cultivated Crops                                  | Developed, Low Intensity    | Mixed Forest                 | Woody Wetlands |

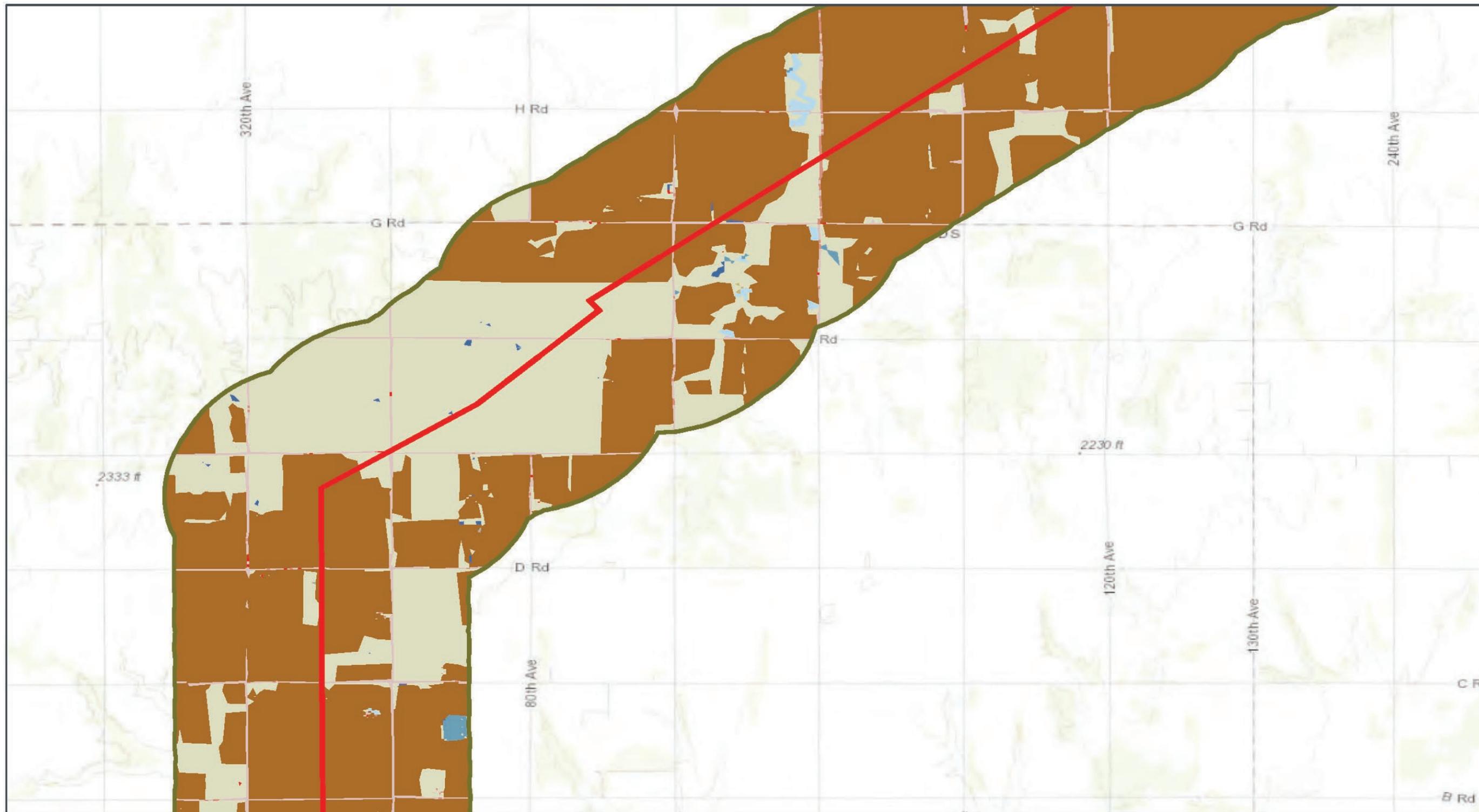


Hodgeman and Edwards  
Counties, Kansas  
GCS North American 1983  
37.9651°N 99.5312°W



Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No: 68102  
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0 0.5 1 Kilometers



GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**National Land Cover  
Database**  
Map 6 of 61

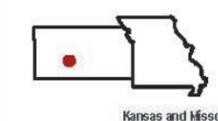
- Proposed Grain Belt Express Phase 1 HVDC Line ROW
- Land Use Analysis Area

**National Land Cover Dataset**

- |                             |                              |                      |
|-----------------------------|------------------------------|----------------------|
| Barren Land                 | Developed, Low Intensity     | Grassland/Herbaceous |
| Cultivated Crops            | Developed, Open Space        | Open Water           |
| Developed, Medium Intensity | Emergent Herbaceous Wetlands | Shrub/Scrub          |
|                             | Woody Wetlands               |                      |



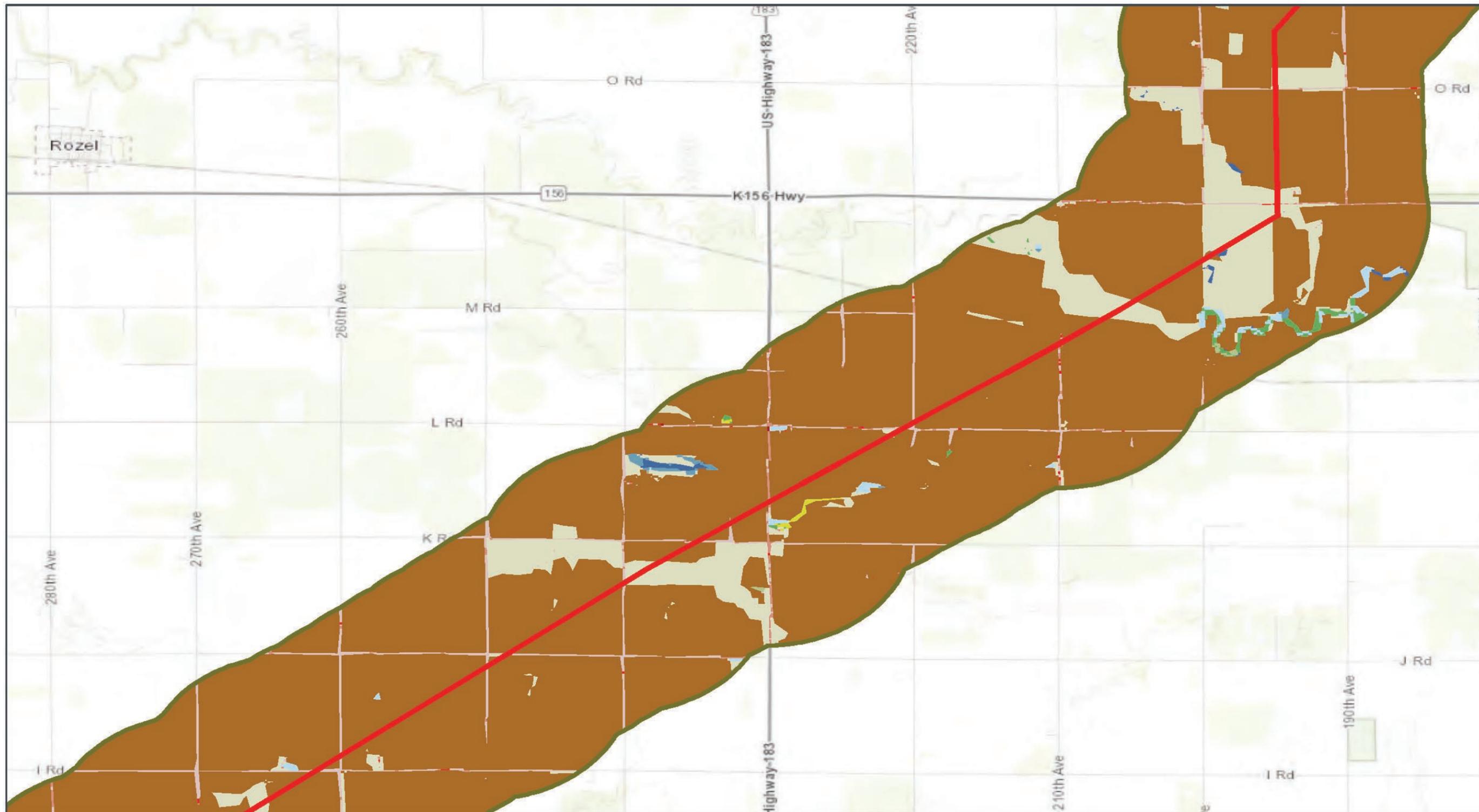
Edwards and Pawnee Counties,  
Kansas  
GCS North American 1983  
36.0644°N 99.4145°W



Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No: 68102  
Layout: GBX\_LandUse\_NLCD  
Apoc: 0

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0 0.25 0.5 Miles  
0 0.5 1 Kilometers



GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**National Land Cover  
Database**  
Map 7 of 61

- |   |                             |                              |                      |
|---|-----------------------------|------------------------------|----------------------|
| Proposed Grain Belt Express Phase 1 HVDC Line ROW | Cultivated Crops            | Developed, Low Intensity     | Grassland/Herbaceous |
| Land Use Analysis Area                            | Deciduous Forest            | Developed, Open Space        | Mixed Forest         |
| National Land Cover Dataset                       | Developed, High Intensity   | Emergent Herbaceous Wetlands | Open Water           |
| Barren Land                                       | Developed, Medium Intensity | Pasture/Hay                  | Woody Wetlands       |

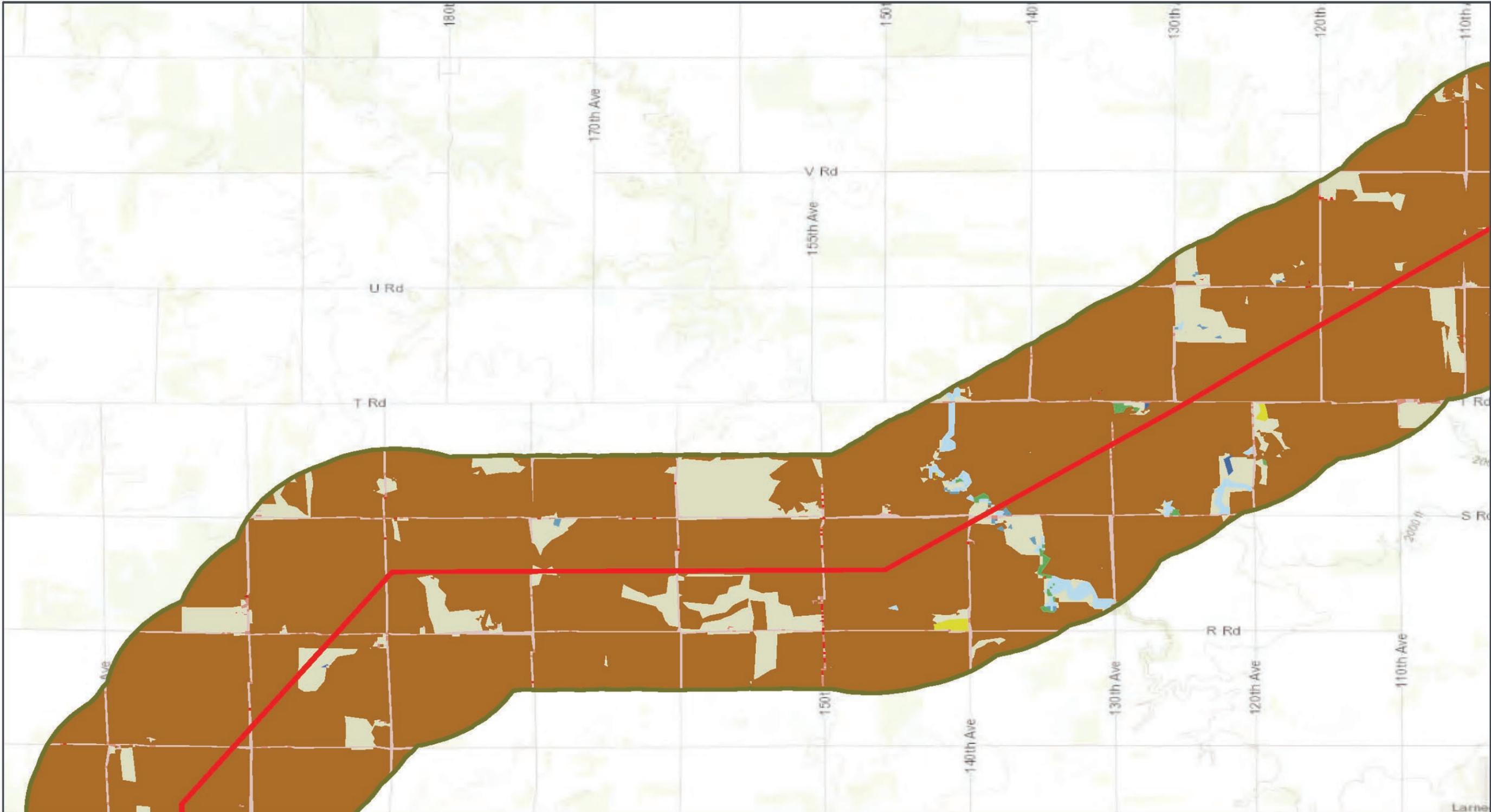


Pawnee County, Kansas  
GCS North American 1983  
38.1625°N 99.317°W



Base Map: Esri ArcGIS Online, accessed November 2024  
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0 0.25 0.5 Miles  
0 0.5 1 Kilometers



**GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
National Land Cover  
Database**

Map 8 of 61



- |   |                             |                              |                      |
|---|-----------------------------|------------------------------|----------------------|
| Proposed Grain Belt Express Phase 1 HVDC Line ROW | Deciduous Forest            | Developed, Low Intensity     | Grassland/Herbaceous |
| Land Use Analysis Area                            | Developed, High Intensity   | Developed, Open Space        | Open Water           |
| <b>National Land Cover Dataset</b>                | Developed, Medium Intensity | Emergent Herbaceous Wetlands | Pasture/Hay          |
| Cultivated Crops                                  |                             | Woody Wetlands               |                      |



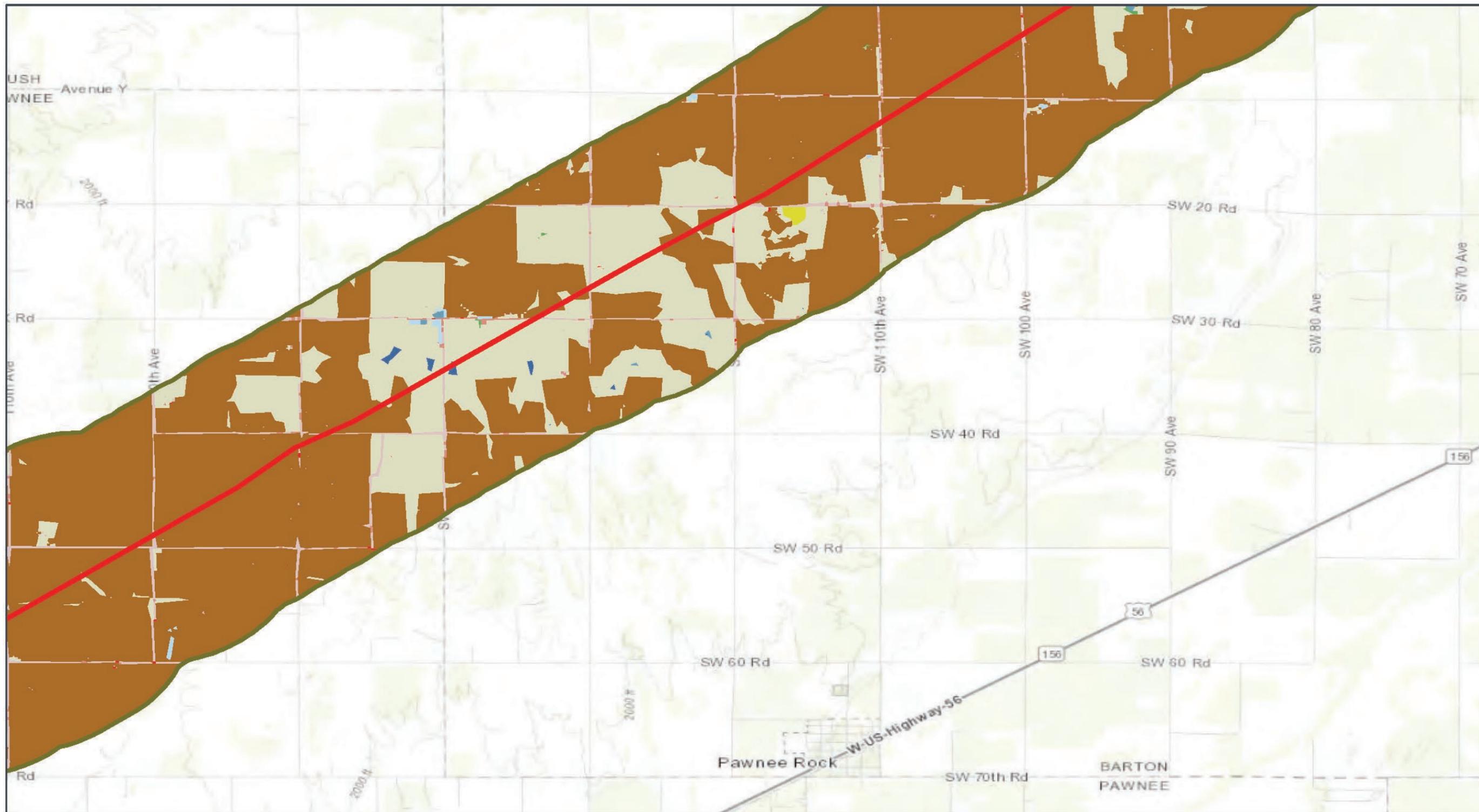
Pawnee County, Kansas  
GCS North American 1983  
36.2605°N 99.1786°W



Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No: 68102  
Layout: GBX\_LandUse\_NLCD  
Apoc: 1

1:50,000

0 0.25 0.5 Miles  
0 0.5 1 Kilometers



GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**National Land Cover  
Database**  
Map 9 of 61

- |   |                             |                              |                |
|---|-----------------------------|------------------------------|----------------|
| Proposed Grain Belt Express Phase 1 HVDC Line ROW | Deciduous Forest            | Developed, Open Space        | Open Water     |
| Land Use Analysis Area                            | Developed, Medium Intensity | Emergent Herbaceous Wetlands | Pasture/Hay    |
| <b>National Land Cover Dataset</b>                | Developed, Low Intensity    | Grassland/Herbaceous         | Woody Wetlands |
| Cultivated Crops                                  | Mixed Forest                |                              |                |

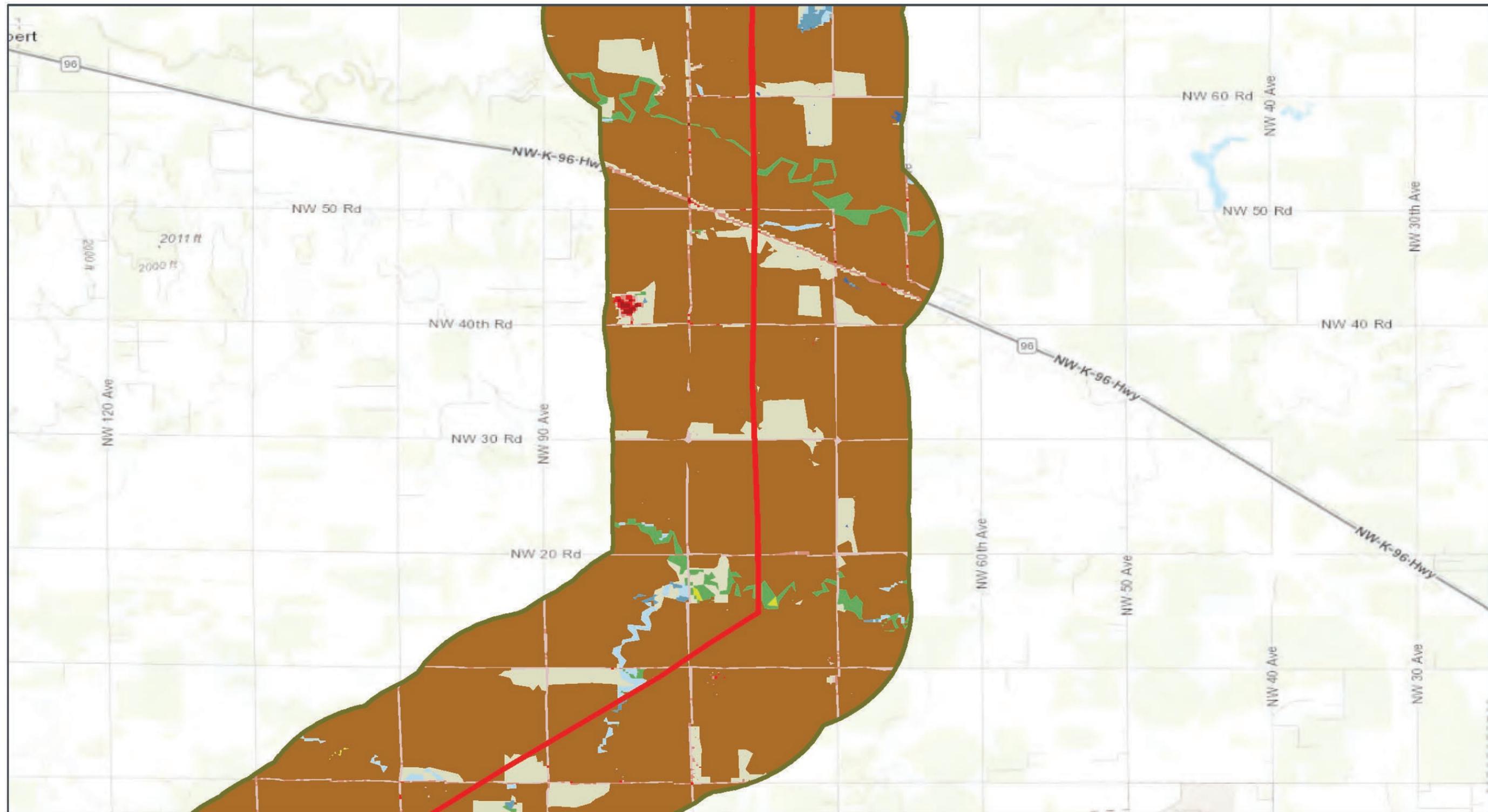


Pawnee and Barton Counties,  
Kansas  
GCS North American 1983  
36.3076°N 96.9938°W



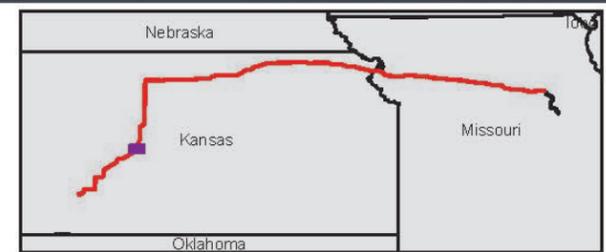
Base Map: Esri ArcGIS Online,  
accessed November 2024  
Updated: 11/26/2024  
Project No: 68102  
Layout: GBX\_LandUse\_NLCD  
Apoc: 0

1:50,000  
0 0.25 0.5 Miles  
0 0.5 1 Kilometers



GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**National Land Cover  
Database**  
Map 10 of 61

- |   |                             |                              |                      |
|---|-----------------------------|------------------------------|----------------------|
| Proposed Grain Belt Express Phase 1 HVDC Line ROW | Cultivated Crops            | Developed, Low Intensity     | Grassland/Herbaceous |
| Land Use Analysis Area                            | Deciduous Forest            | Developed, Open Space        | Open Water           |
| <b>National Land Cover Dataset</b>                | Developed, High Intensity   | Emergent Herbaceous Wetlands | Pasture/Hay          |
| Barren Land                                       | Developed, Medium Intensity | Woody Wetlands               |                      |

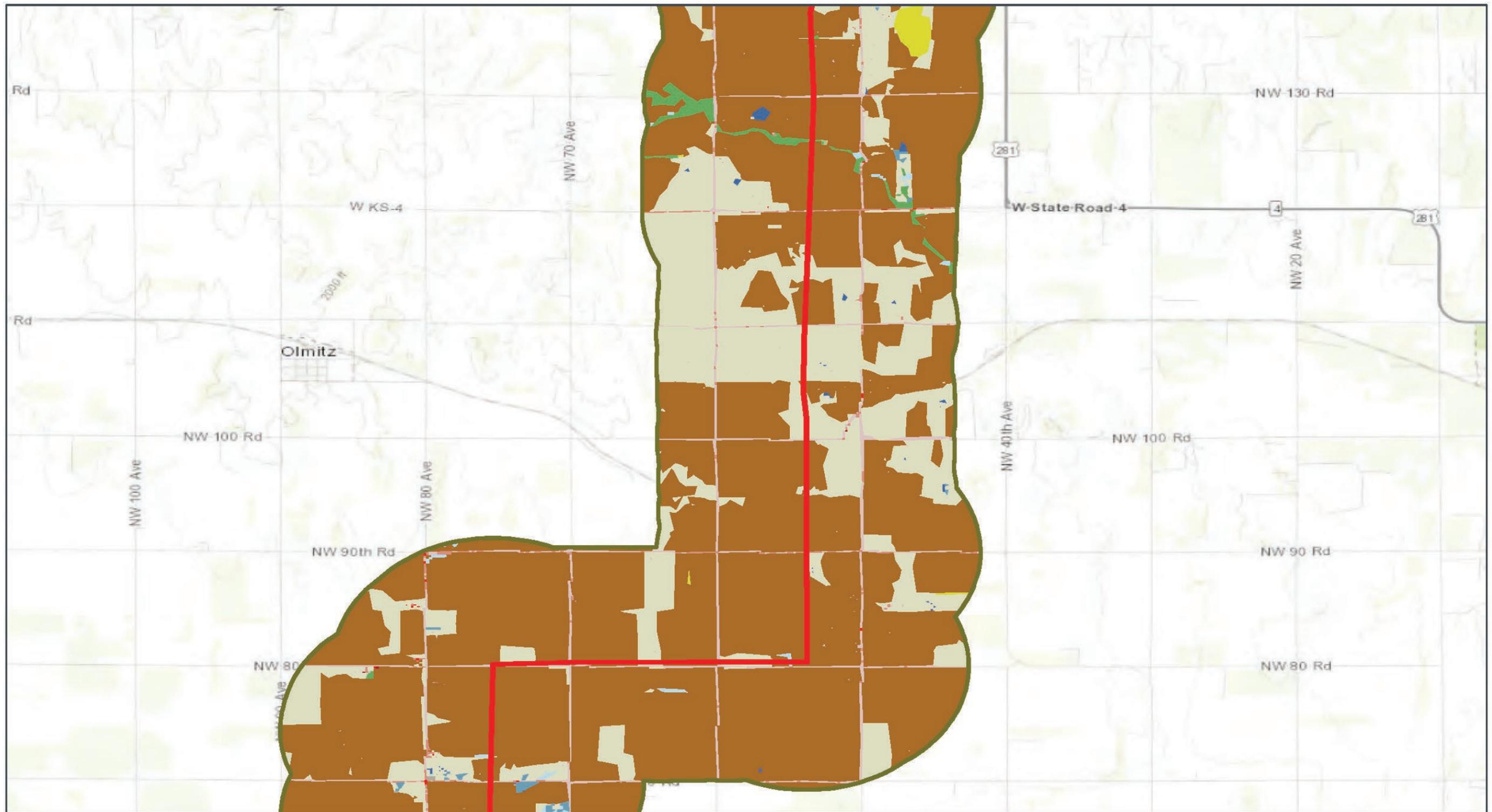


Barton County, Kansas  
GCS North American 1983  
38.409°N 98.9148°W

Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No: 68102  
Layout: GBX\_LandUse\_NLCD  
Apoc:

1:50,000

0 0.25 0.5 Miles  
0 0.5 1 Kilometers

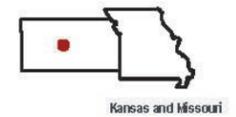


GRAIN BELT EXPRESS  
TRANSMISSION LINE PROJECT  
**National Land Cover  
Database**  
Map 11 of 61

- |   |                             |                              |                      |
|---|-----------------------------|------------------------------|----------------------|
| Proposed Grain Belt Express Phase 1 HVDC Line ROW | Cultivated Crops            | Developed, Low Intensity     | Grassland/Herbaceous |
| Land Use Analysis Area                            | Deciduous Forest            | Developed, Open Space        | Mixed Forest         |
| <b>National Land Cover Dataset</b>                | Developed, High Intensity   | Emergent Herbaceous Wetlands | Open Water           |
| Barren Land                                       | Developed, Medium Intensity | Pasture/Hay                  | Woody Wetlands       |



Barton County, Kansas  
GCS North American 1983  
38.5105°N 98.8817°W



Base Map: Esri ArcGIS Online, accessed November 2024  
Updated: 11/26/2024  
Project No: 68102  
Layout: GBX\_LandUse\_NLCD  
Apoc: 0

1:50,000  
0 0.25 0.5 Miles  
0 0.5 1 Kilometers