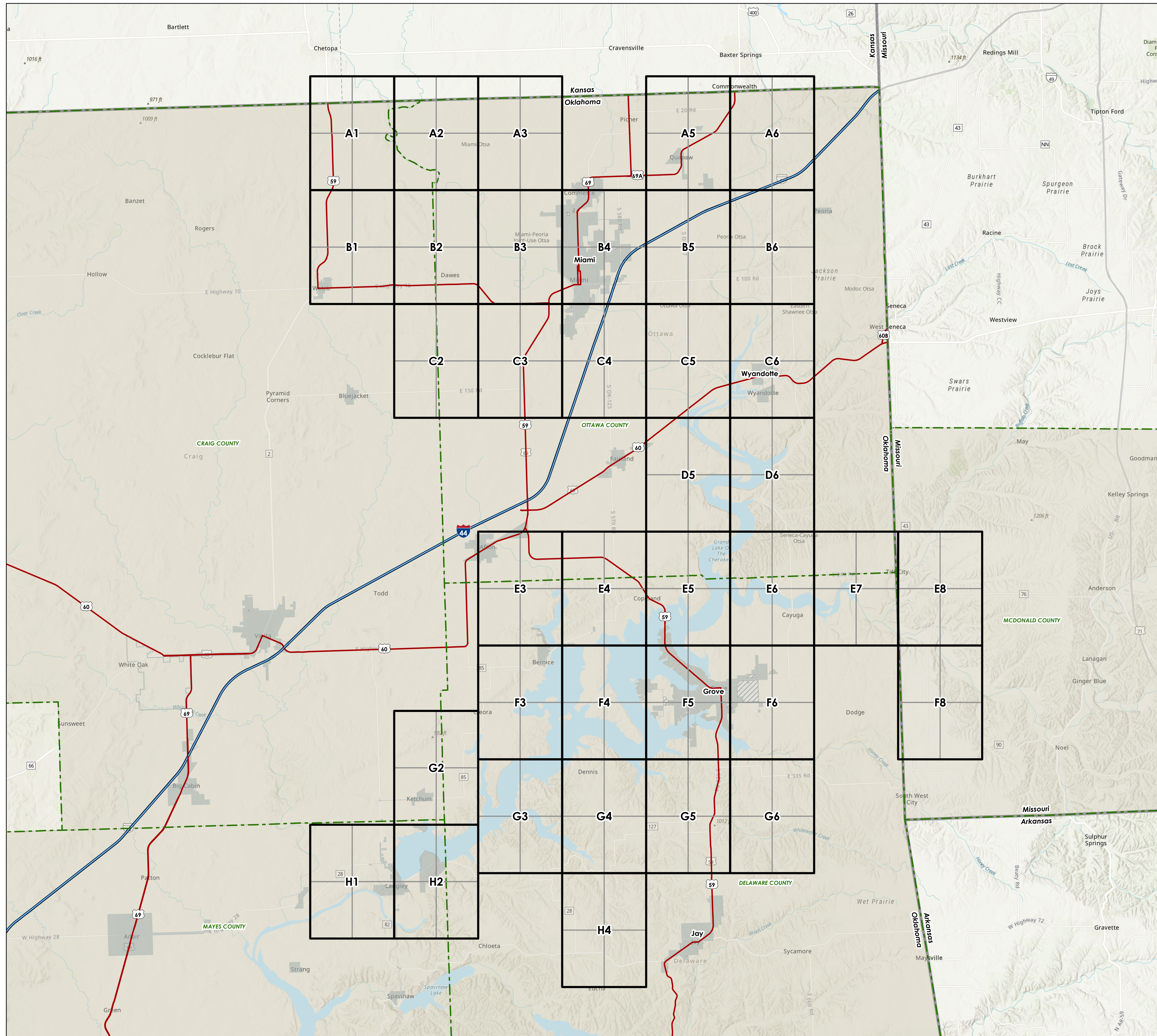

APPENDIX F.3:
JULY 2007 EVENT INUNDATION MAPS

Upstream Model Results Overview Map

Pensacola Dam
 GRAND RIVER DAM AUTHORITY
 September 2021

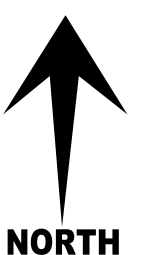
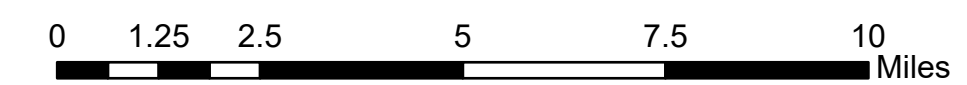
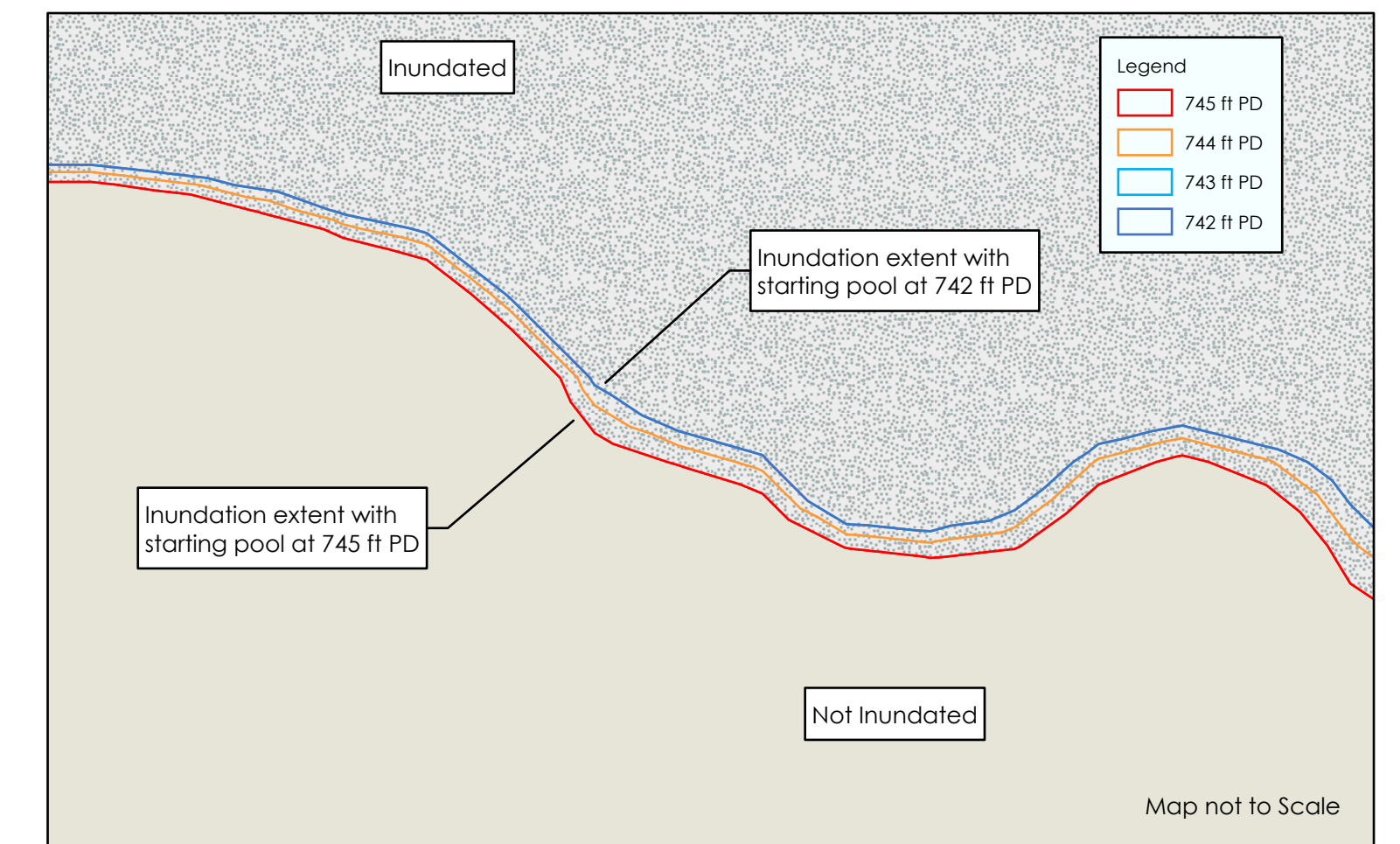


Overview Map Legend

- 1:24,000-scale Map Sheet
- State Boundary
- County Boundary
- Municipality
- Unincorporated
- Road Class**
- Interstate
- US Highway

Inundation Scenario Mapping

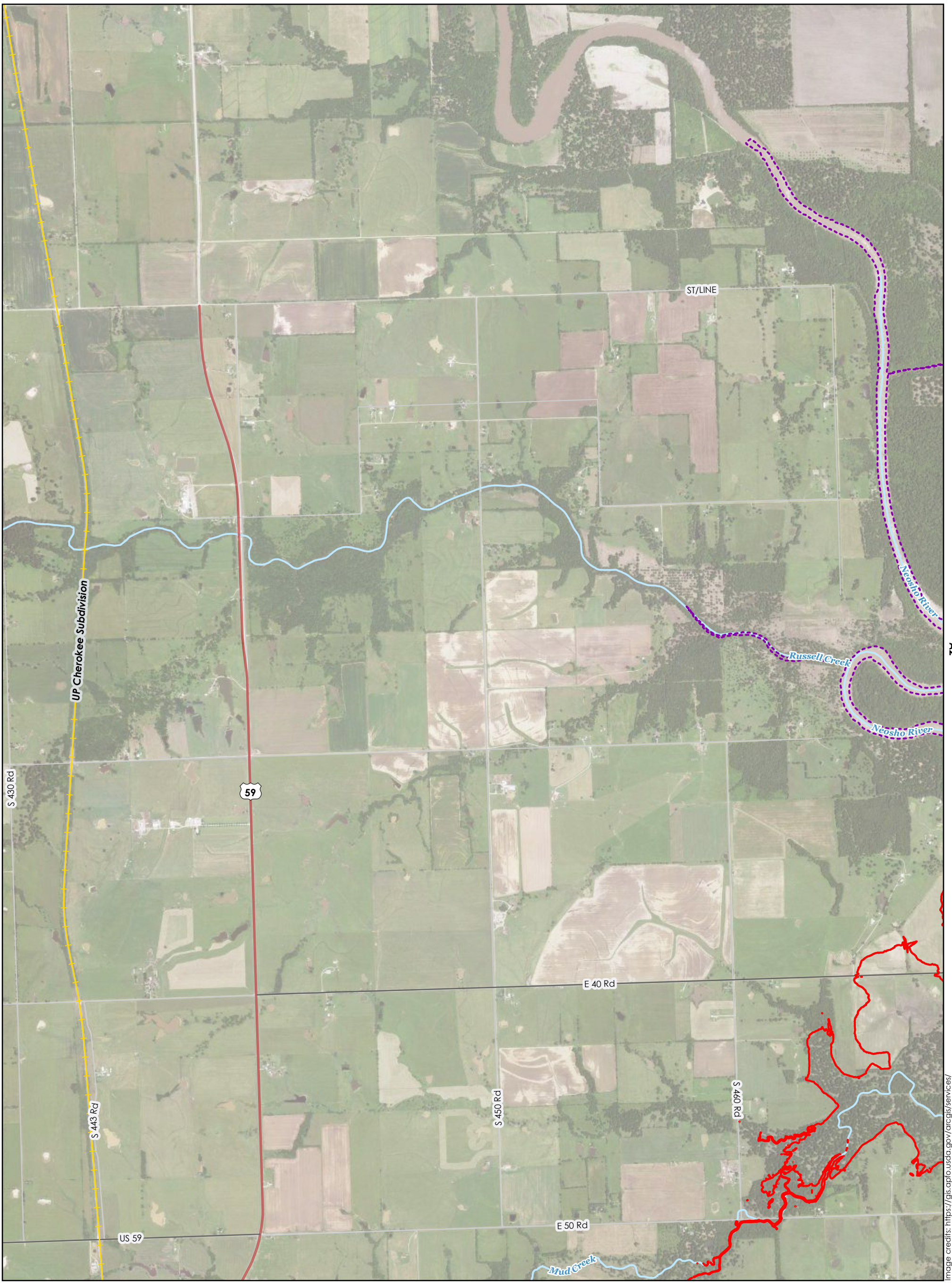
Mapping shows the extent of inundation for the selected hydraulic event under different starting pool elevations: 742 ft PD, 743 ft PD, 744 ft PD, and 745 ft PD.



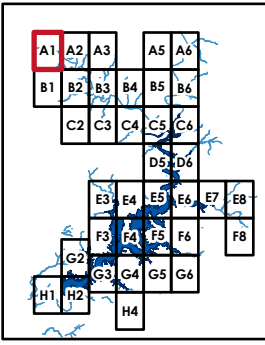
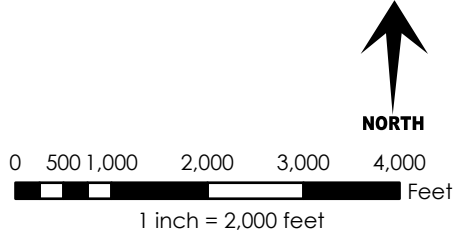
Map Notes

Data Sources for Maps:

1. Base map images from https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019
2. Transportation network (major roads, local roads, and railroads) and county boundaries obtained from the Oklahoma Office of Geographic Information (<http://okmaps.org/cgi/search.aspx>).
3. Parcels owned by GRDA are from GIS parcel data provided by County Assessor's Offices (2020).
4. The displayed Flowage Easement is equal to the 760-foot NGVD29 elevation contour, extracted from 2011 Dewberry LIDAR.



**JULY 2007
INUNDATION SCENARIO**



- Legend**
- JULY 2007 MAX INUNDATION**
- 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD
- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- Railroad
 - Stream
 - - - Flowage Easements
 - - - Project Boundary
 - GRDA Ownership

MAP NOTES

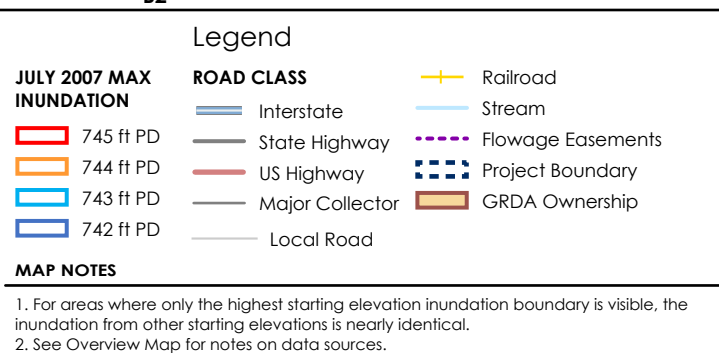
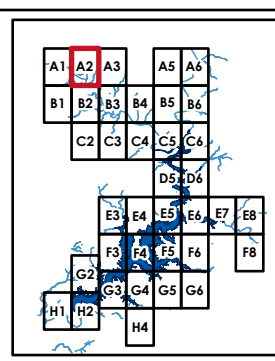
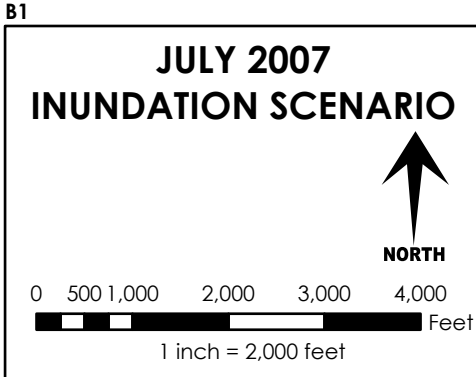
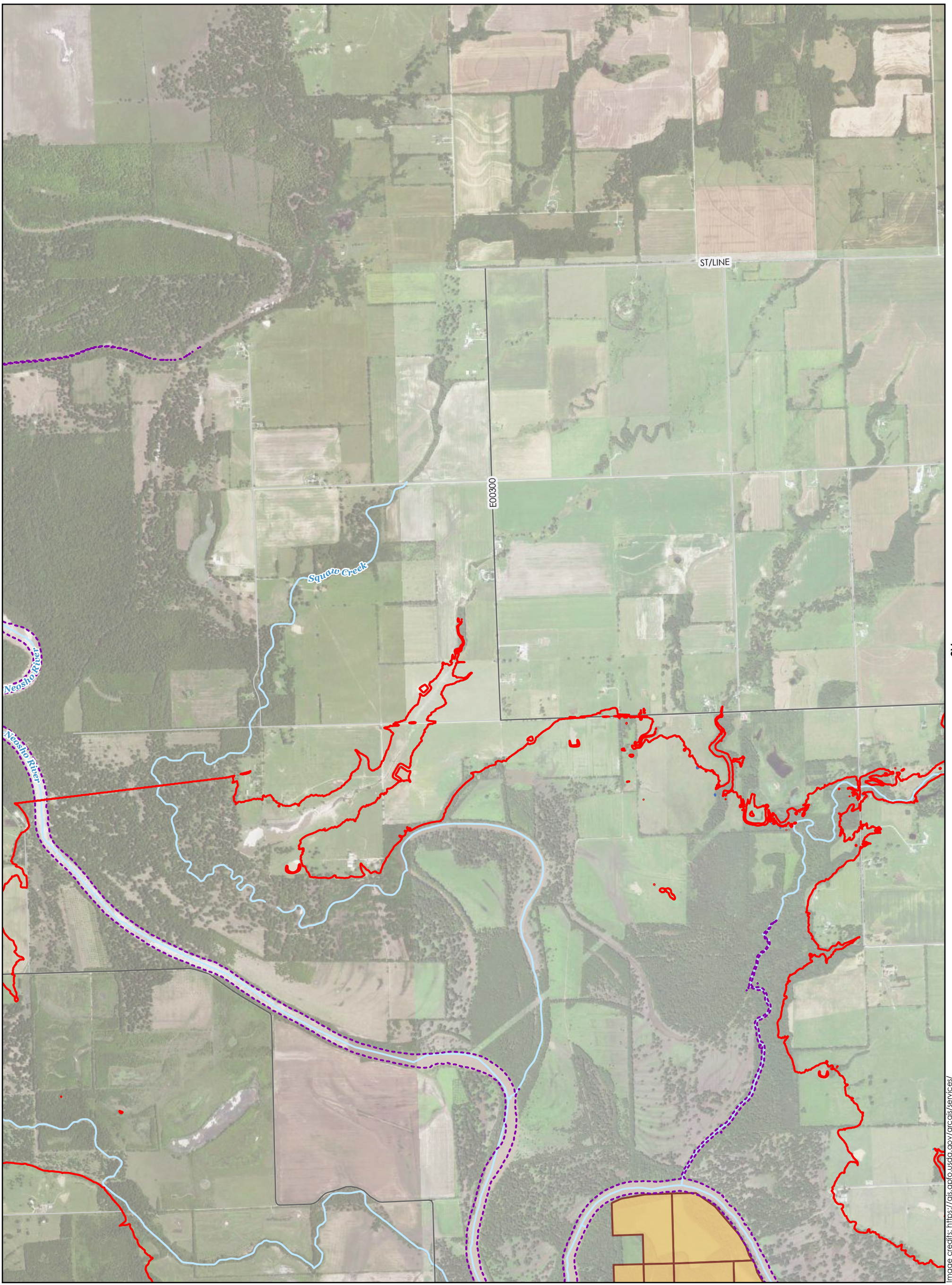
- For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
- See Overview Map for notes on data sources.

**PENSACOLA DAM
GRAND RIVER DAM AUTHORITY**

MAP: A1

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA
FERC No. 1494
September 2021

Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019



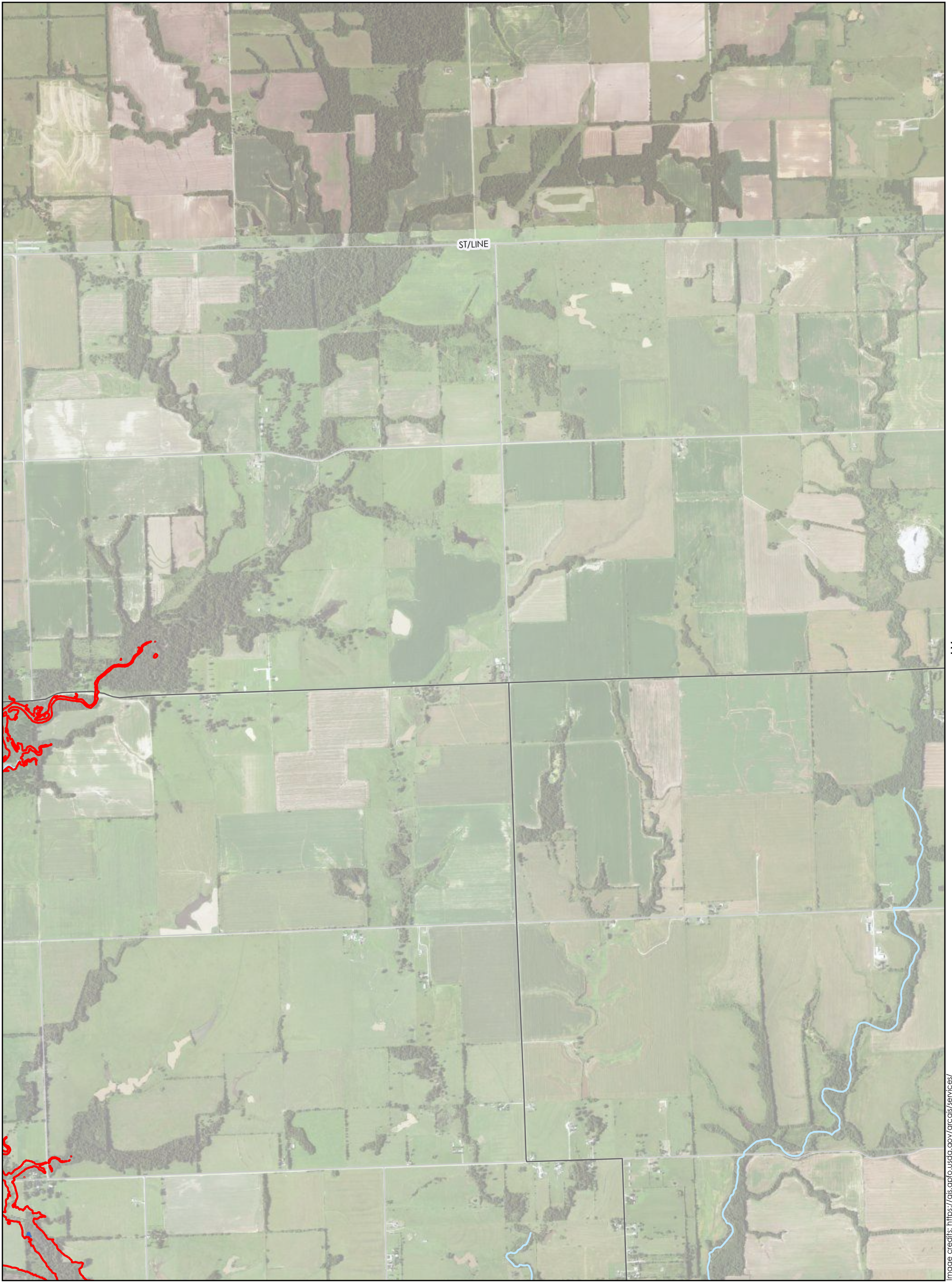
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: A2

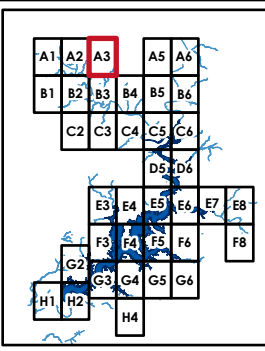
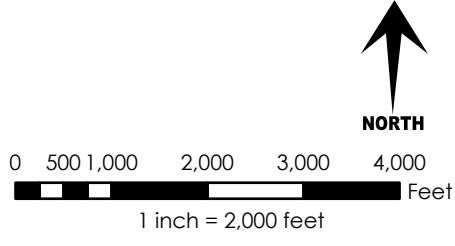
CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

Image credits: https://gis.dplp.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019



JULY 2007 INUNDATION SCENARIO



- JULY 2007 MAX INUNDATION**
- 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD

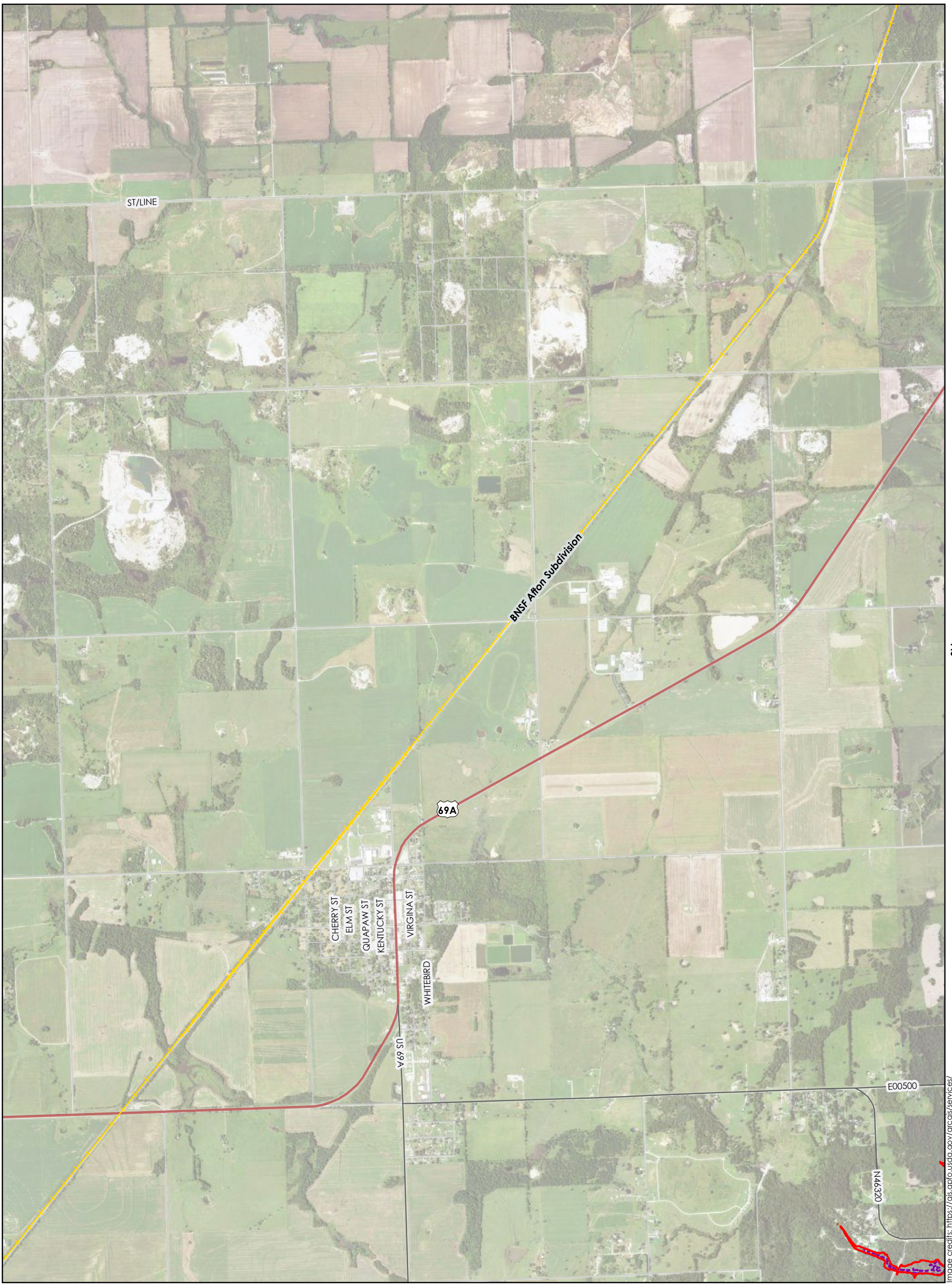
- Legend**
- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- + Railroad
 - Stream
 - Flowage Easements
 - Project Boundary
 - GRDA Ownership

- MAP NOTES**
1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
 2. See Overview Map for notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: A3

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA
FERC No. 1494
September 2021



A4

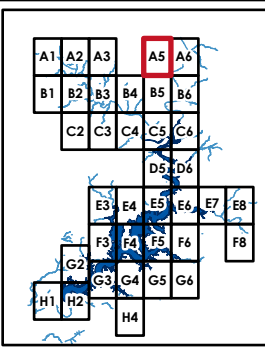
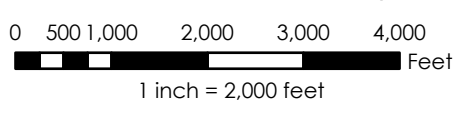
A6

B4

B5

B6

JULY 2007 INUNDATION SCENARIO



- JULY 2007 MAX INUNDATION**
- █ 745 ft PD
 - █ 744 ft PD
 - █ 743 ft PD
 - █ 742 ft PD

MAP NOTES

1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
2. See Overview Map for notes on data sources.

Legend

- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- Railroad
 - Stream
 - Flowage Easements
 - Project Boundary
 - GRDA Ownership

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: A5

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

Image credits: https://gis.dplfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

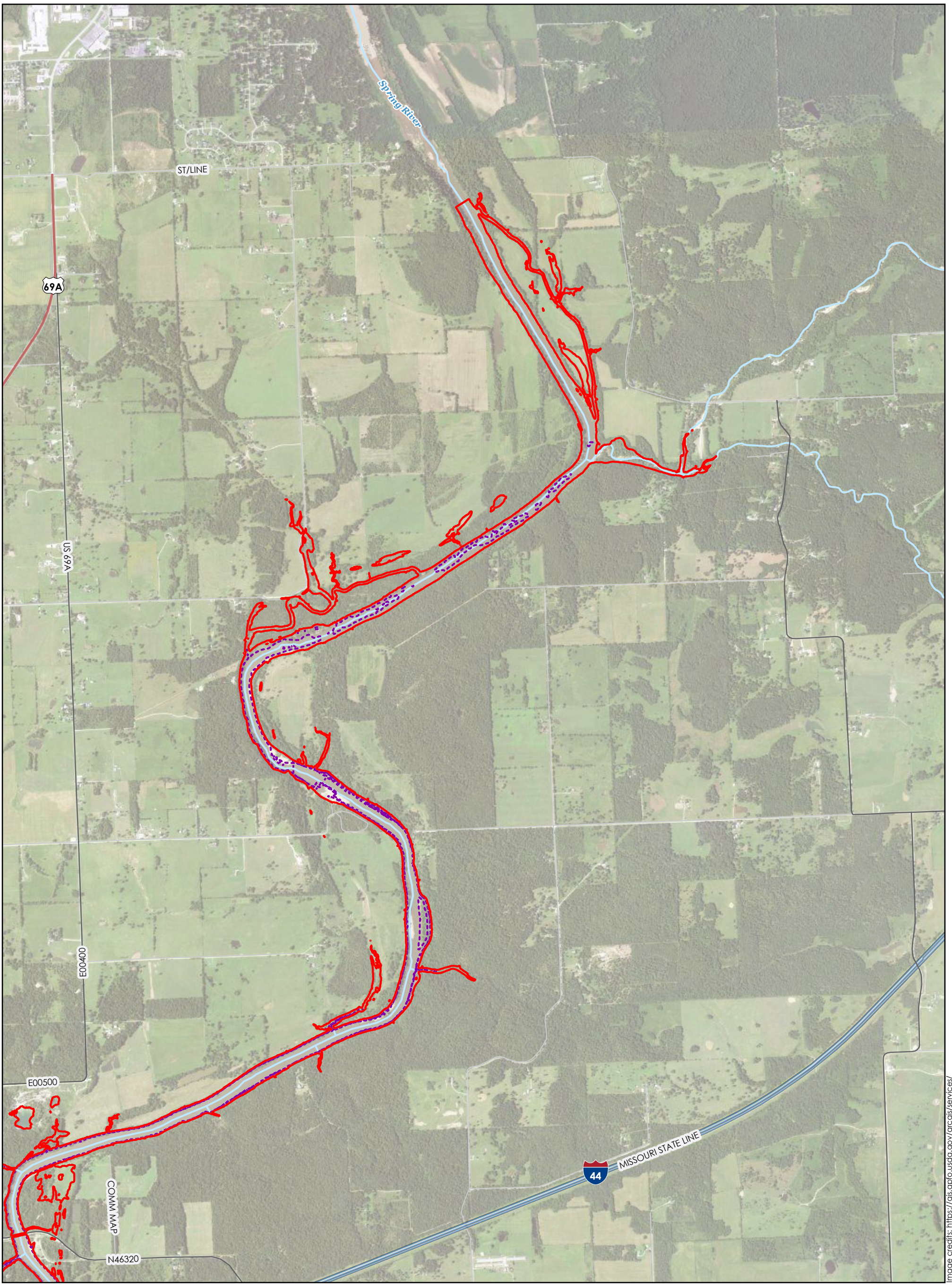
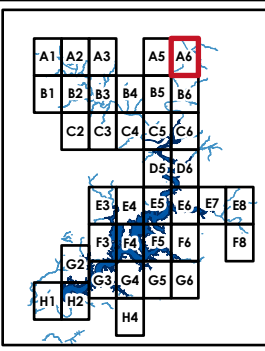
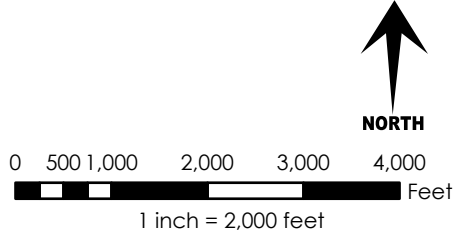


Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

JULY 2007 INUNDATION SCENARIO



- JULY 2007 MAX INUNDATION**
- █ 745 ft PD
 - █ 744 ft PD
 - █ 743 ft PD
 - █ 742 ft PD
- Legend**
- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- + Railroad
 - Stream
 - - - Flowage Easements
 - - - Project Boundary
 - █ GRDA Ownership

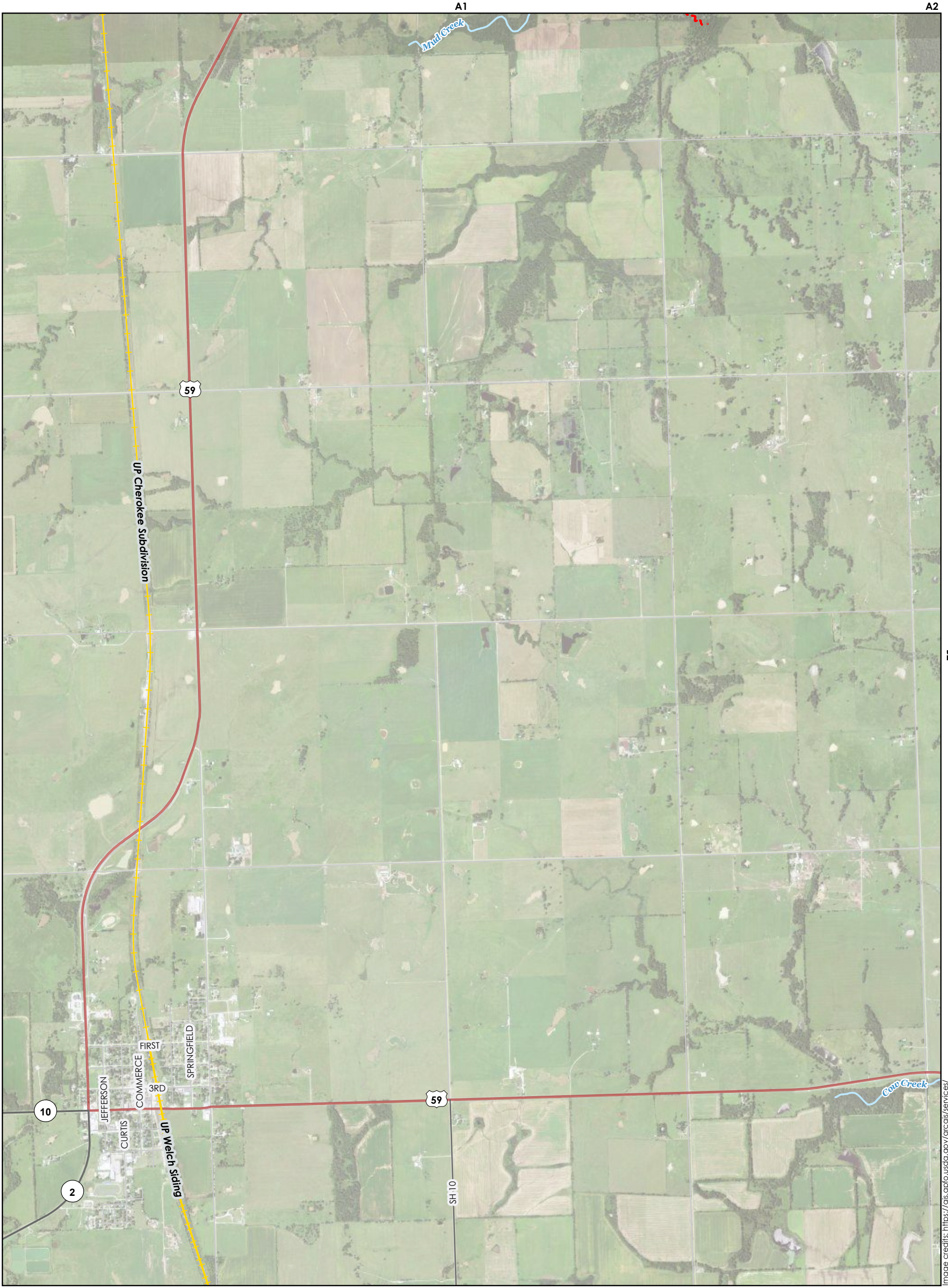
- MAP NOTES**
- For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
 - See Overview Map for notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

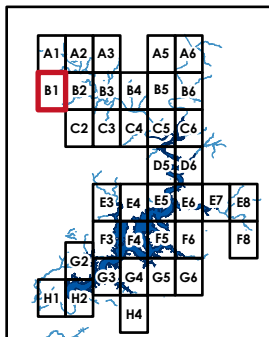
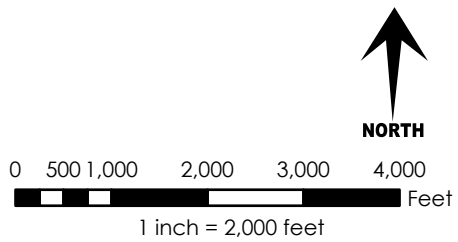
MAP: A6

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021



JULY 2007 INUNDATION SCENARIO



JULY 2007 MAX INUNDATION



MAP NOTES

1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
2. See Overview Map for notes on data sources.

Legend

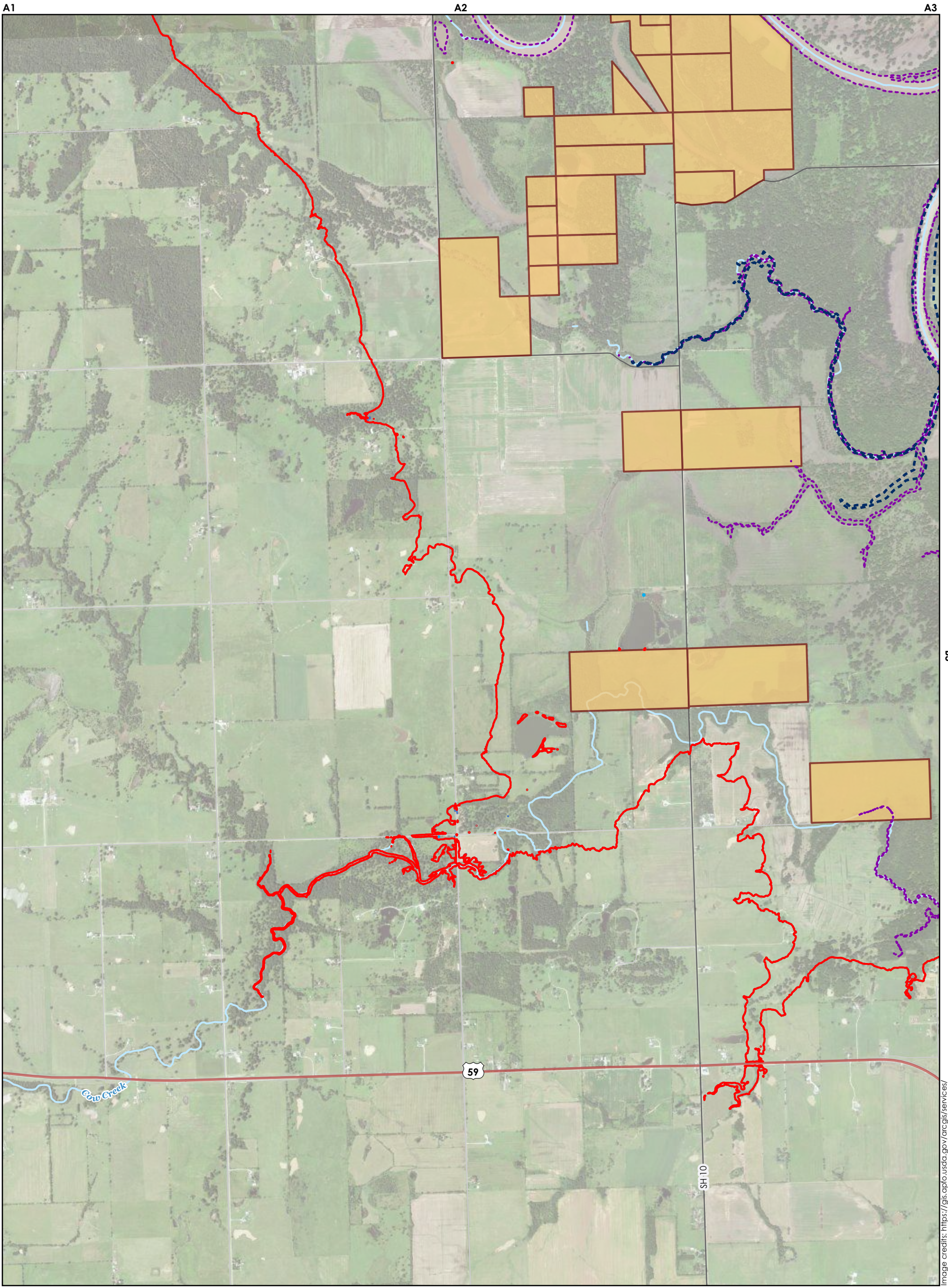
- | | |
|-----------------|-------------------|
| Interstate | Railroad |
| State Highway | Stream |
| US Highway | Flowage Easements |
| Major Collector | Project Boundary |
| Local Road | GRDA Ownership |

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: B1

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

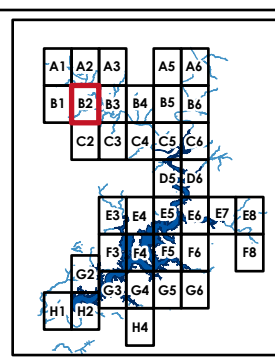


JULY 2007 INUNDATION SCENARIO

NORTH

0 500 1,000 2,000 3,000 4,000 Feet

1 inch = 2,000 feet



Legend

JULY 2007 MAX INUNDATION

- 745 ft PD
- 744 ft PD
- 743 ft PD
- 742 ft PD

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector
- Local Road

- Railroad
- Stream
- Flowage Easements
- Project Boundary
- GRDA Ownership

MAP NOTES

- For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
- See Overview Map for notes on data sources.

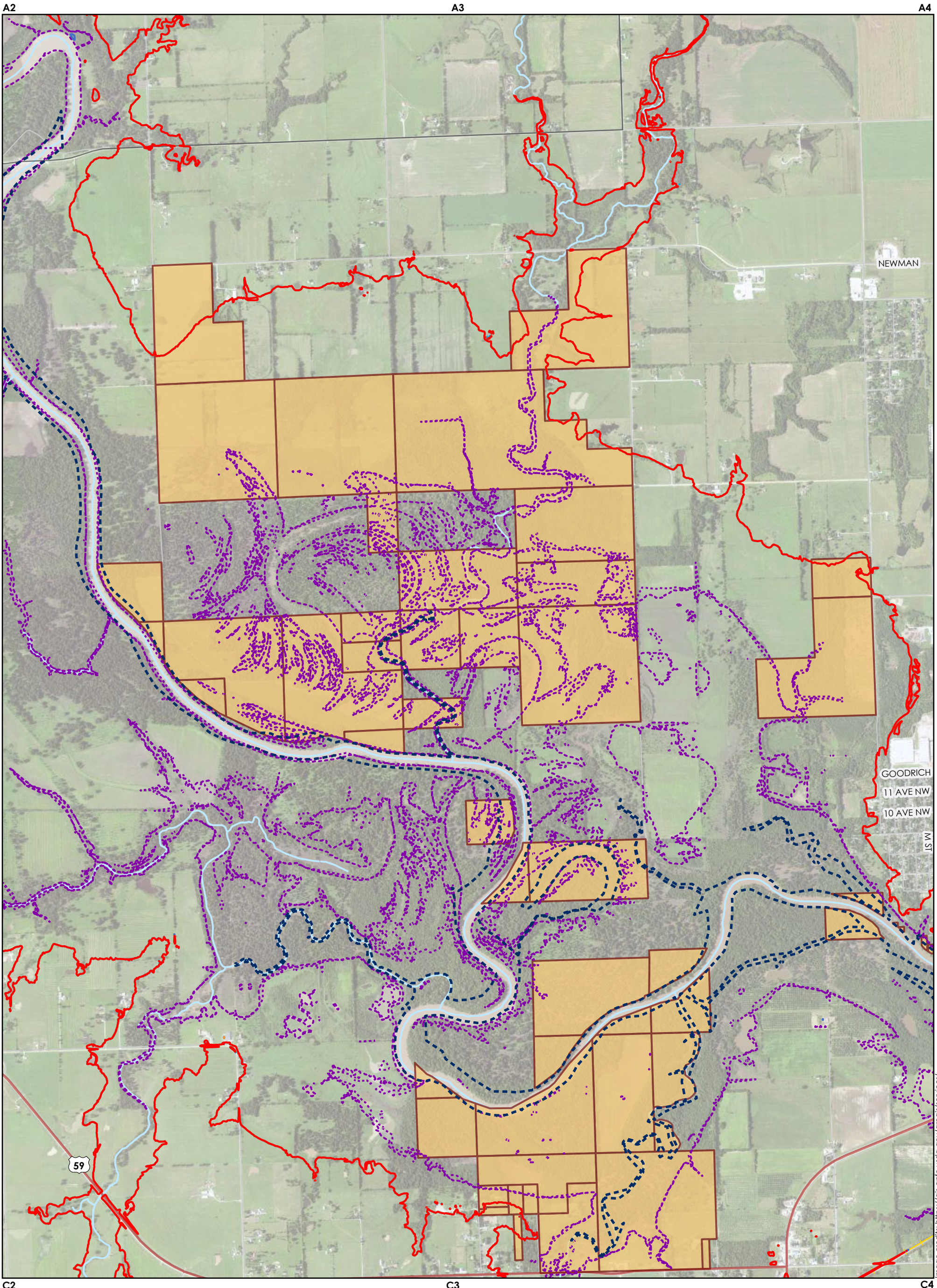
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: B2

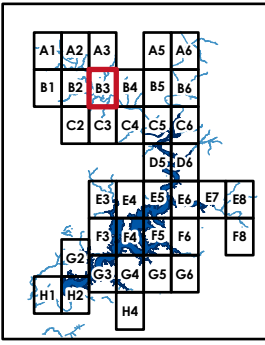
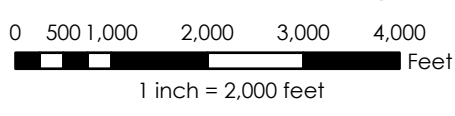
CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019



**JULY 2007
INUNDATION SCENARIO**



Legend

- JULY 2007 MAX INUNDATION**
- 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD
- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- + Railroad
 - Stream
 - - - Flowage Easements
 - - - Project Boundary
 - GRDA Ownership

MAP NOTES

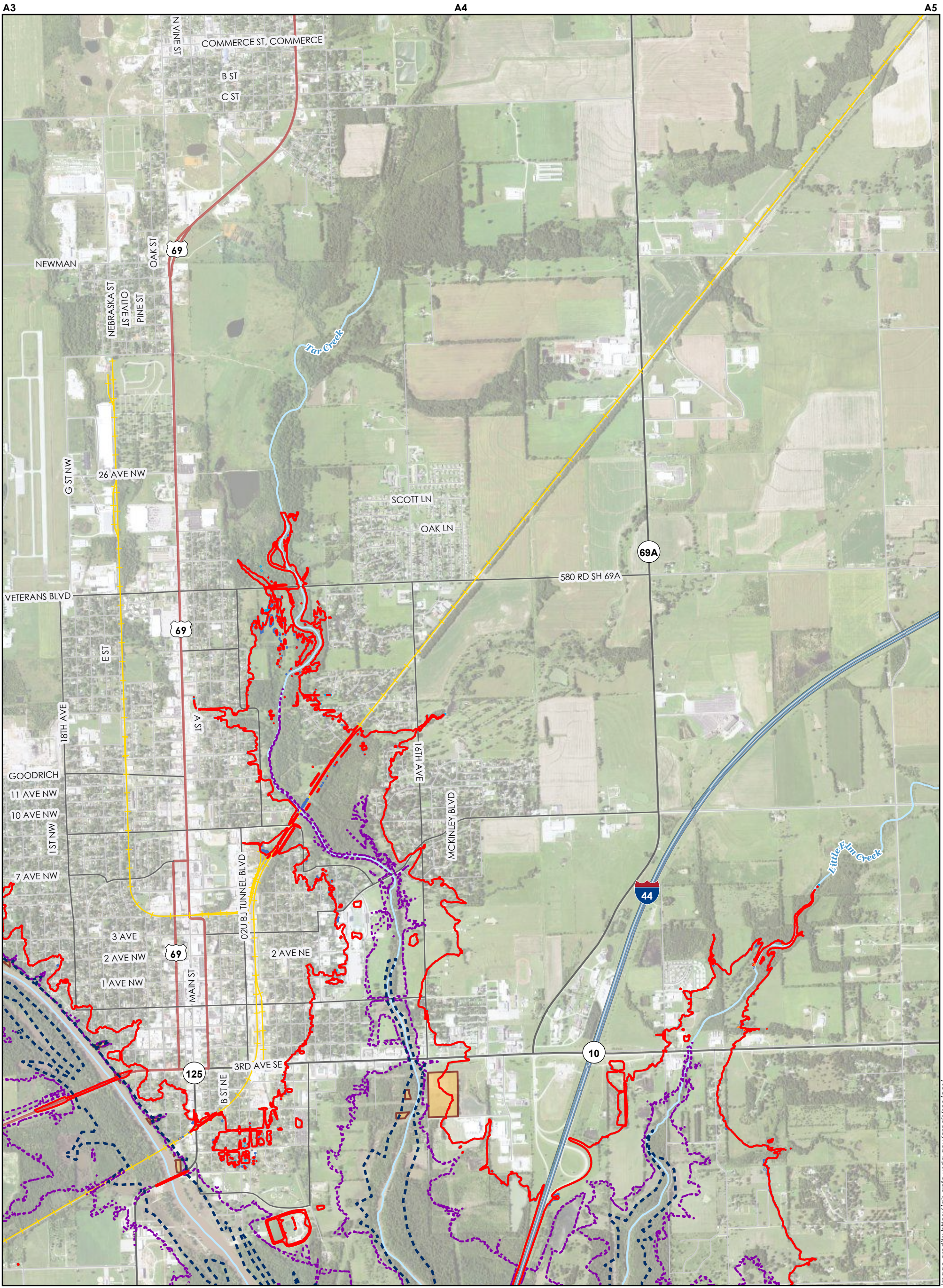
1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
2. See Overview Map for notes on data sources.

**PENSACOLA DAM
GRAND RIVER DAM AUTHORITY**

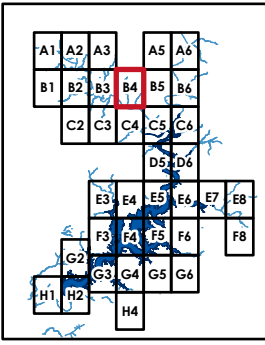
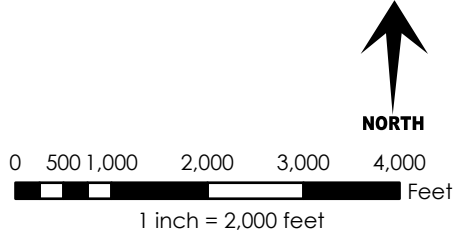
MAP: B3

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA
FERC No. 1494
September 2021

Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019



JULY 2007 INUNDATION SCENARIO



- Legend**
- JULY 2007 MAX INUNDATION**
- 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD
- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- Railroad
 - Stream
 - Flowage Easements
 - - - Project Boundary
 - GRDA Ownership

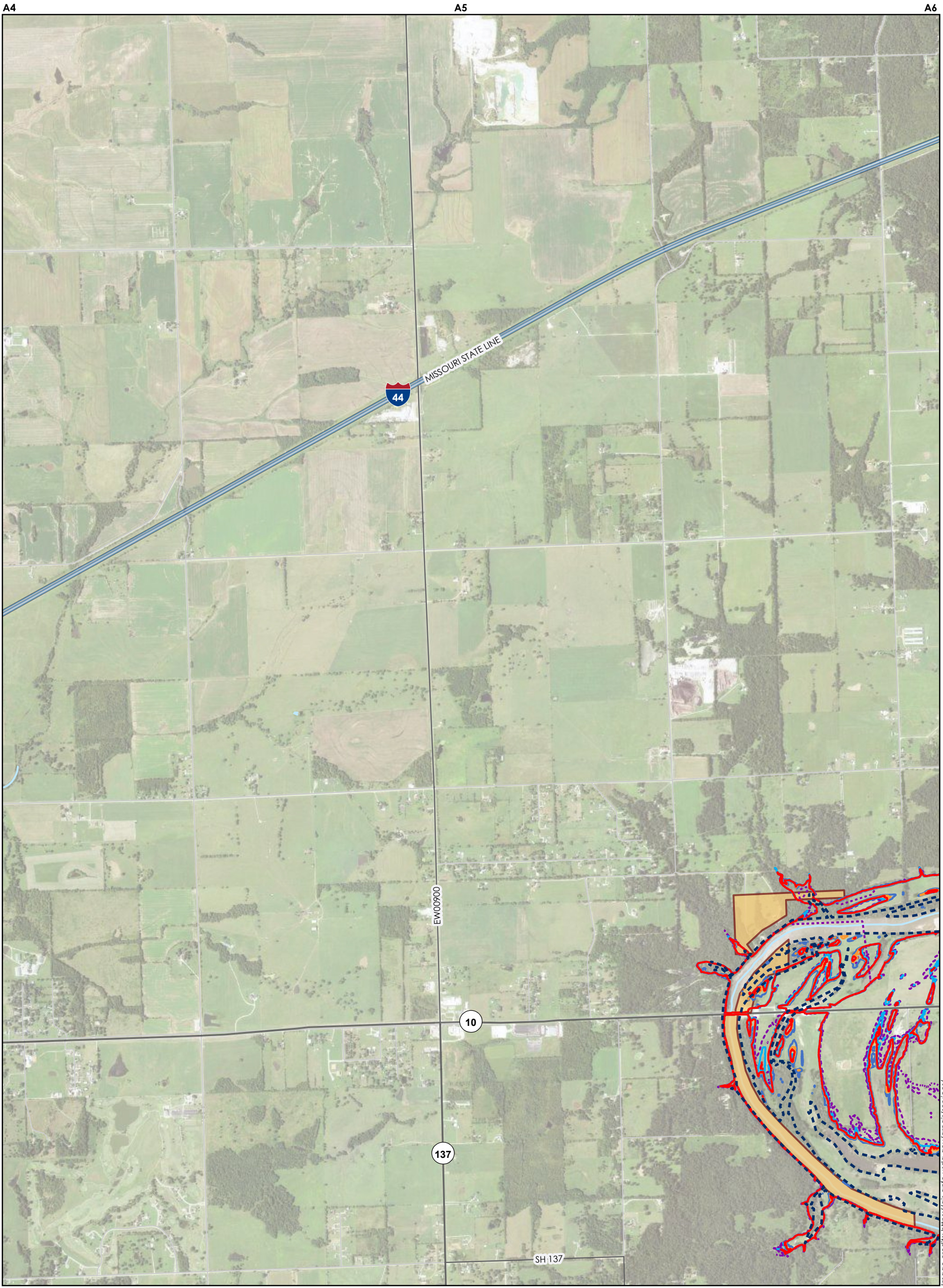
- MAP NOTES**
- For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
 - See Overview Map for notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

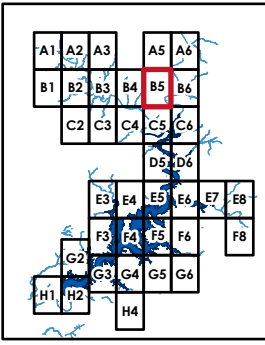
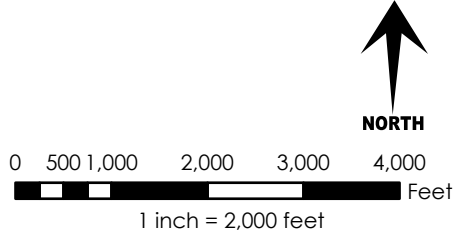
MAP: B4

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA
FERC No. 1494
September 2021

Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019



**JULY 2007
INUNDATION SCENARIO**



- Legend**
- JULY 2007 MAX INUNDATION**
- █ 745 ft PD
 - █ 744 ft PD
 - █ 743 ft PD
 - █ 742 ft PD
- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- + Railroad
 - Stream
 - - - Flowage Easements
 - - - Project Boundary
 - █ GRDA Ownership

- MAP NOTES**
1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
 2. See Overview Map for notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: B5

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA
FERC No. 1494
September 2021

Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

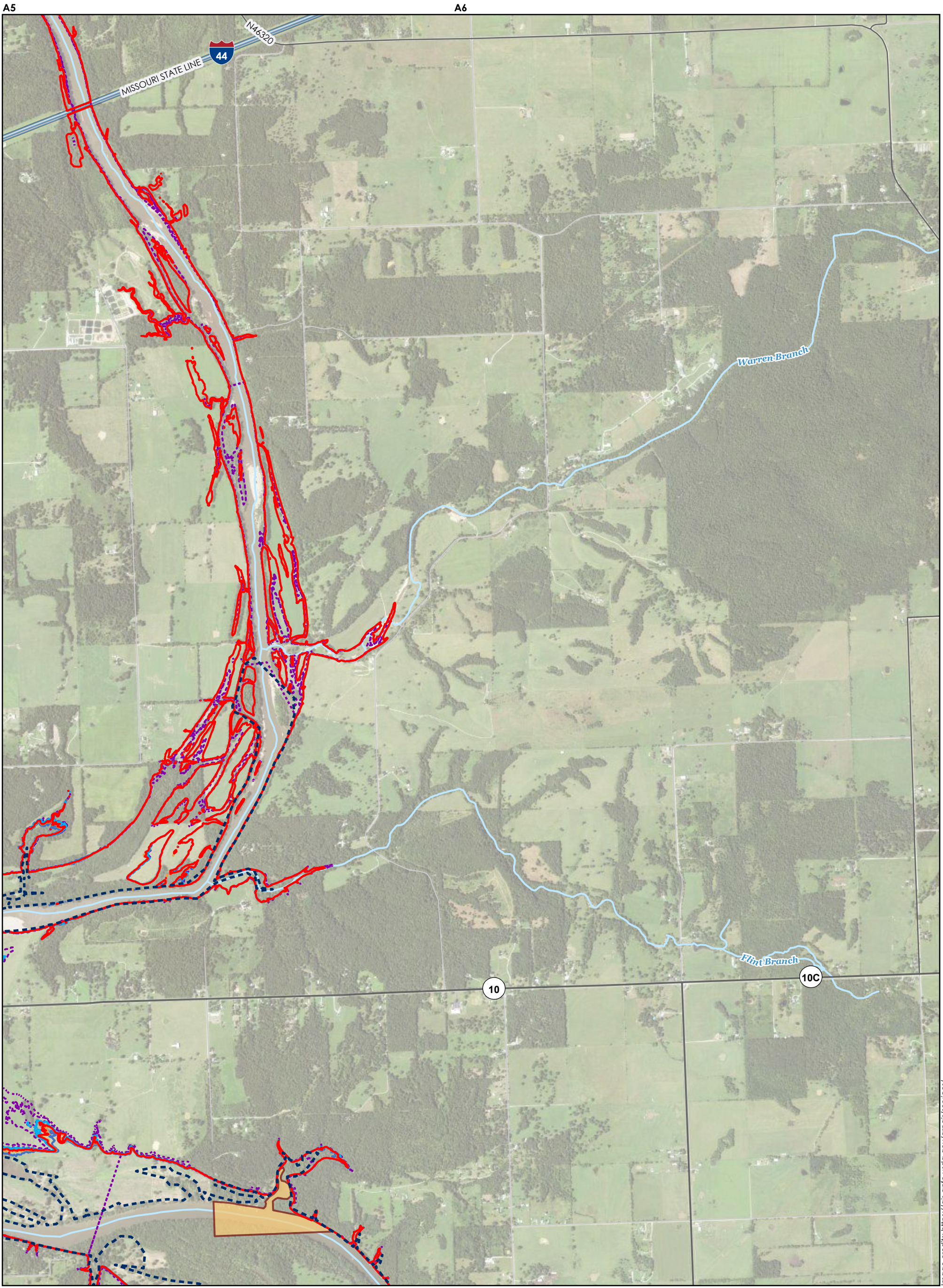


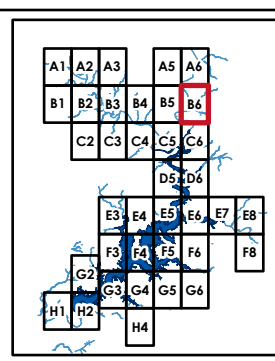
Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

JULY 2007 INUNDATION SCENARIO

NORTH

0 500 1,000 2,000 3,000 4,000 Feet

1 inch = 2,000 feet



JULY 2007 MAX INUNDATION

- 745 ft PD
- 744 ft PD
- 743 ft PD
- 742 ft PD

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector
- Local Road

- Railroad
- Stream
- Flowage Easements
- Project Boundary
- GRDA Ownership

MAP NOTES

- For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
- See Overview Map for notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

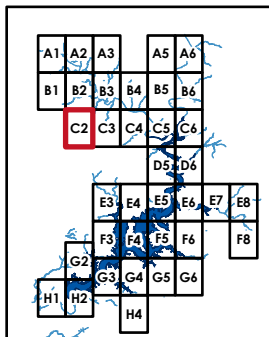
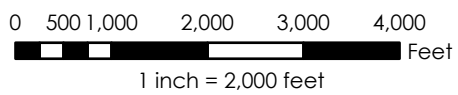
MAP: B6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021



**JULY 2007
INUNDATION SCENARIO**



Legend

- JULY 2007 MAX INUNDATION**
- 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD

- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road

- + Railroad
- Stream
- - - Flowage Easements
- Project Boundary
- GRDA Ownership

MAP NOTES

1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
2. See Overview Map for notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C2

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

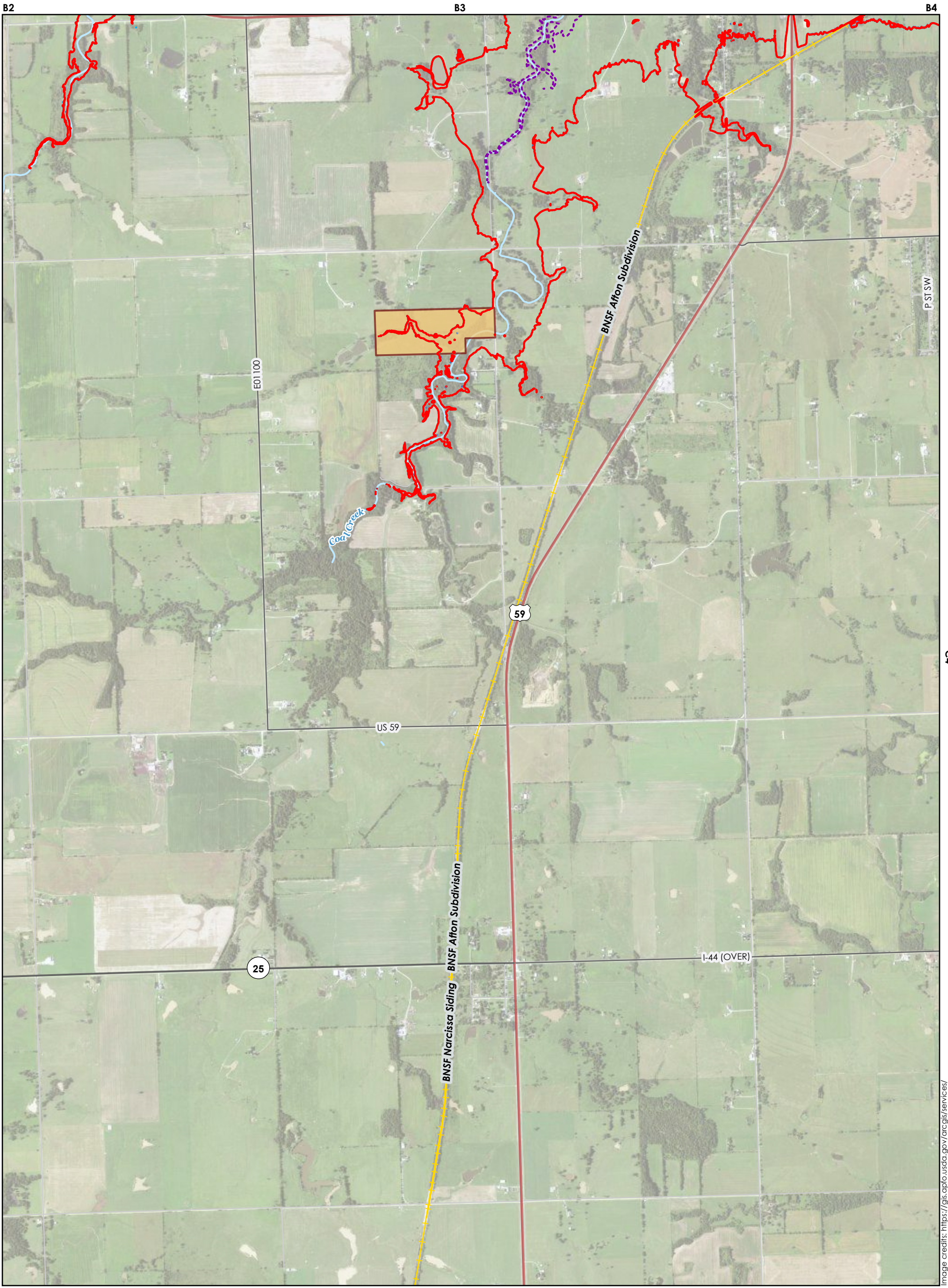
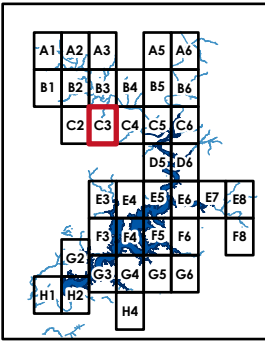
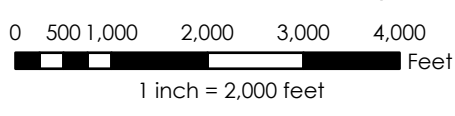


Image credits: https://gis.dplfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

JULY 2007 INUNDATION SCENARIO



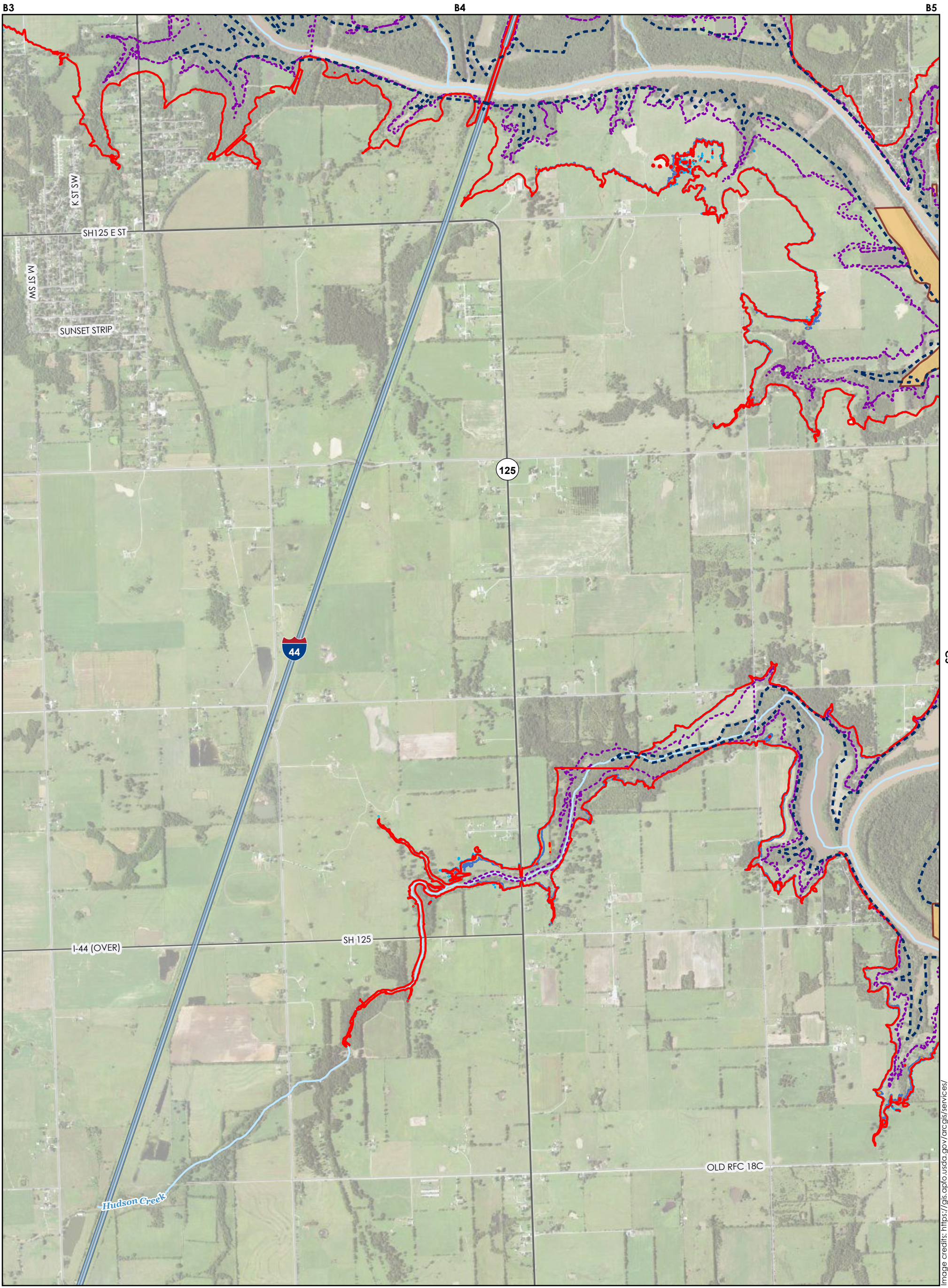
- Legend**
- JULY 2007 MAX INUNDATION**
- █ 745 ft PD
 - █ 744 ft PD
 - █ 743 ft PD
 - █ 742 ft PD
- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- Railroad
 - Stream
 - - - Flowage Easements
 - - - Project Boundary
 - █ GRDA Ownership

- MAP NOTES**
- For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
 - See Overview Map for notes on data sources.

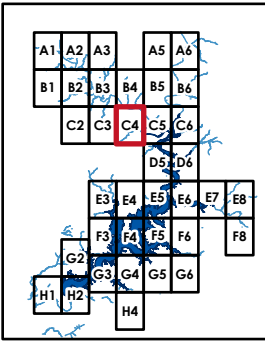
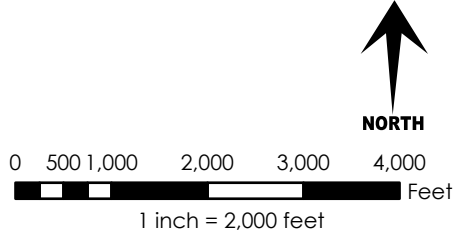
PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: C3

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA
FERC No. 1494
 September 2021



**JULY 2007
INUNDATION SCENARIO**



- JULY 2007 MAX INUNDATION**
- █ 745 ft PD
 - █ 744 ft PD
 - █ 743 ft PD
 - █ 742 ft PD

- Legend**
- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- + Railroad
 - Stream
 - - - Flowage Easements
 - - - Project Boundary
 - █ GRDA Ownership

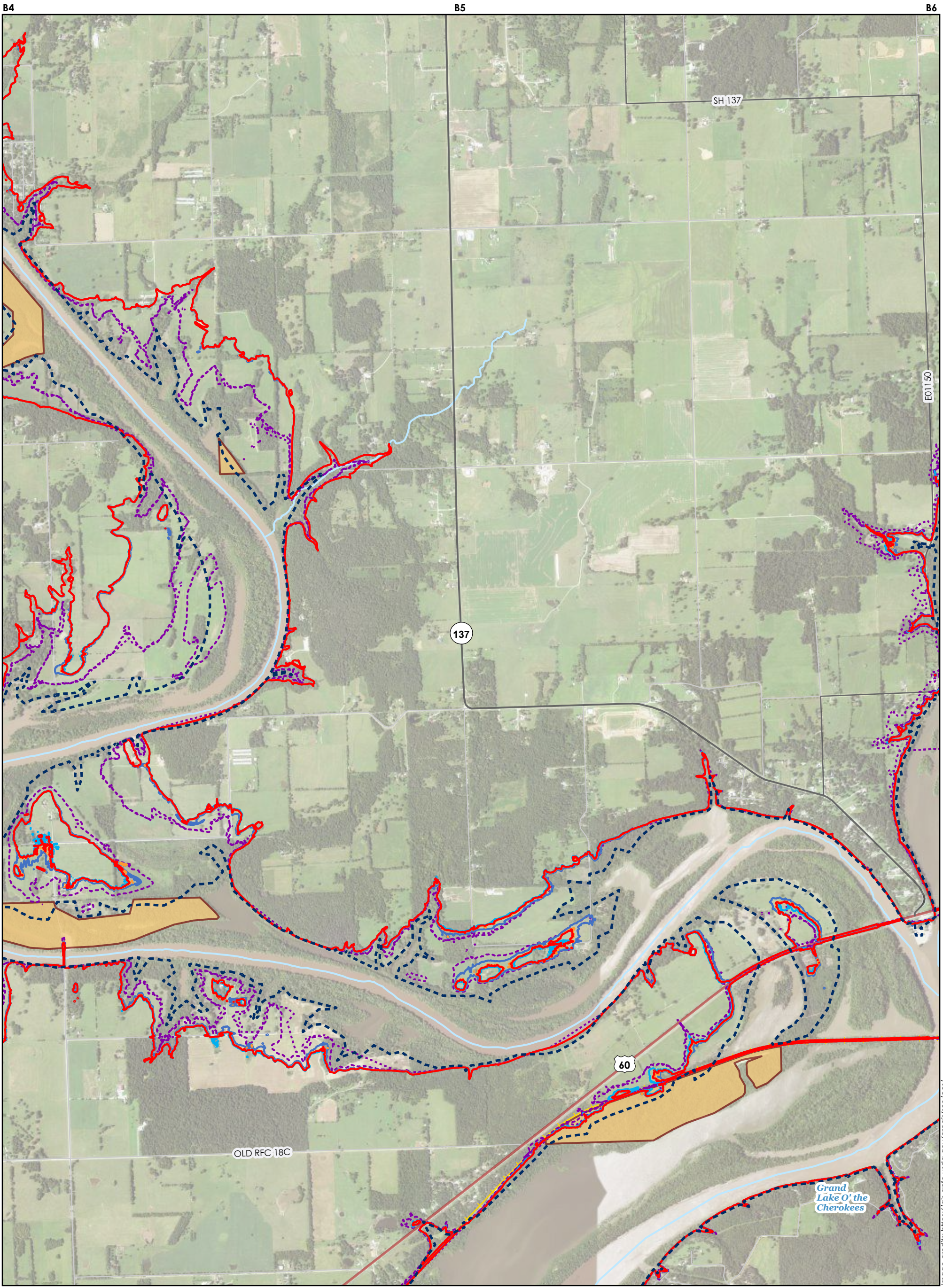
- MAP NOTES**
1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
 2. See Overview Map for notes on data sources.

**PENSACOLA DAM
GRAND RIVER DAM AUTHORITY**

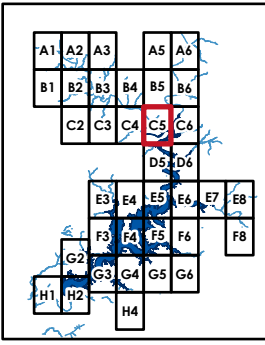
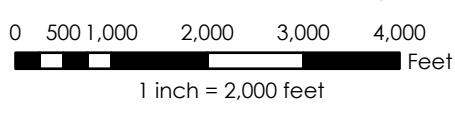
MAP: C4

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA
FERC No. 1494
September 2021

Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019



**JULY 2007
INUNDATION SCENARIO**



- JULY 2007 MAX INUNDATION**
- 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD

- Legend**
- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- Railroad
 - Stream
 - Flowage Easements
 - - - Project Boundary
 - GRDA Ownership

- MAP NOTES**
- For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
 - See Overview Map for notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C5

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA
FERC No. 1494
September 2021

Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

B5

B6

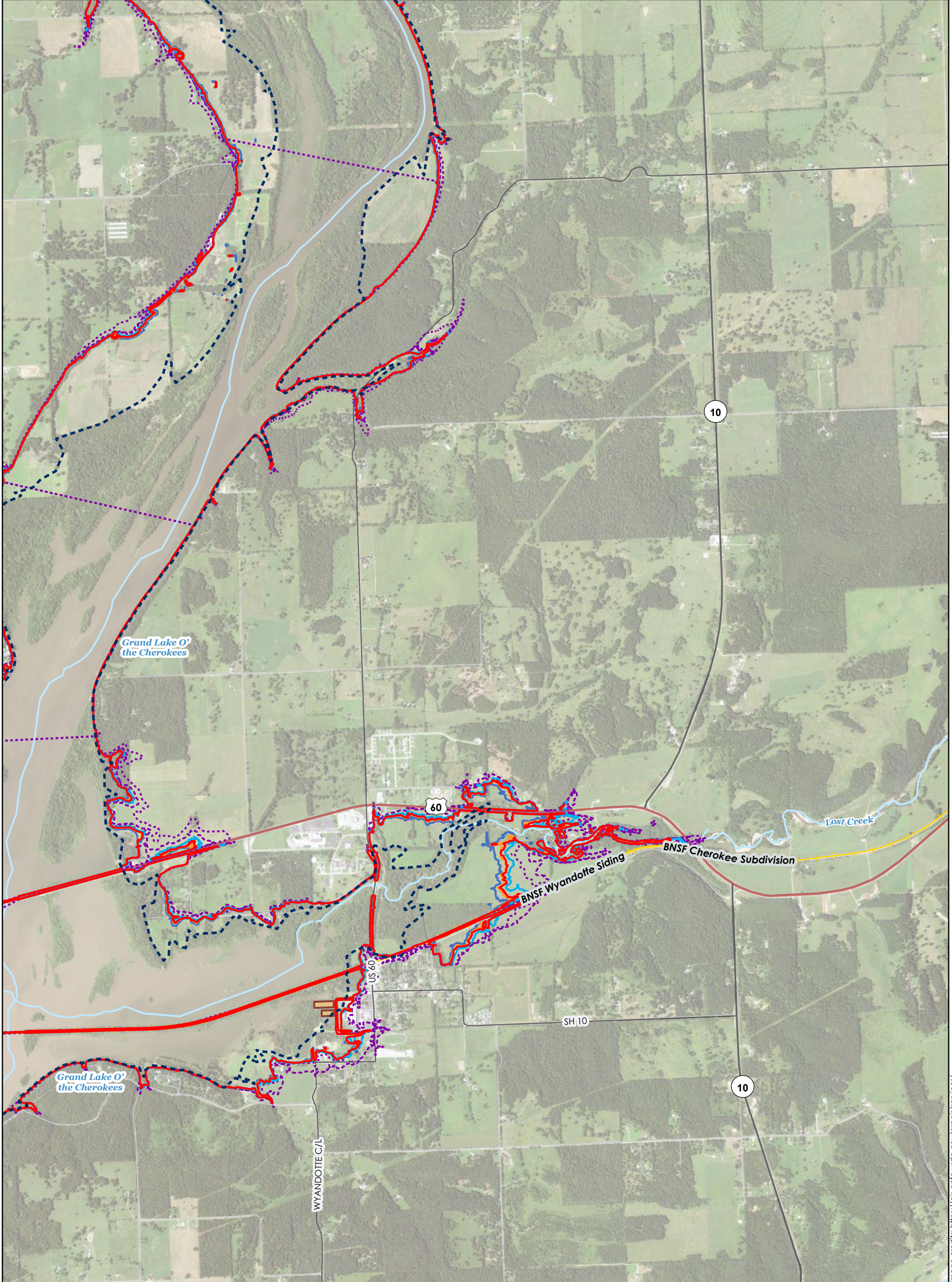
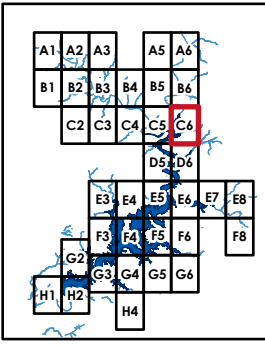
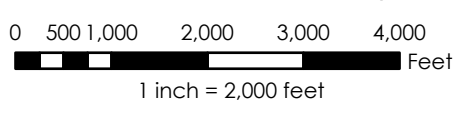


Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

D5

D6

JULY 2007 INUNDATION SCENARIO



- JULY 2007 MAX INUNDATION**
- █ 745 ft PD
 - █ 744 ft PD
 - █ 743 ft PD
 - █ 742 ft PD

Legend

- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- Railroad
 - Stream
 - - - Flowage Easements
 - - - Project Boundary
 - █ GRDA Ownership

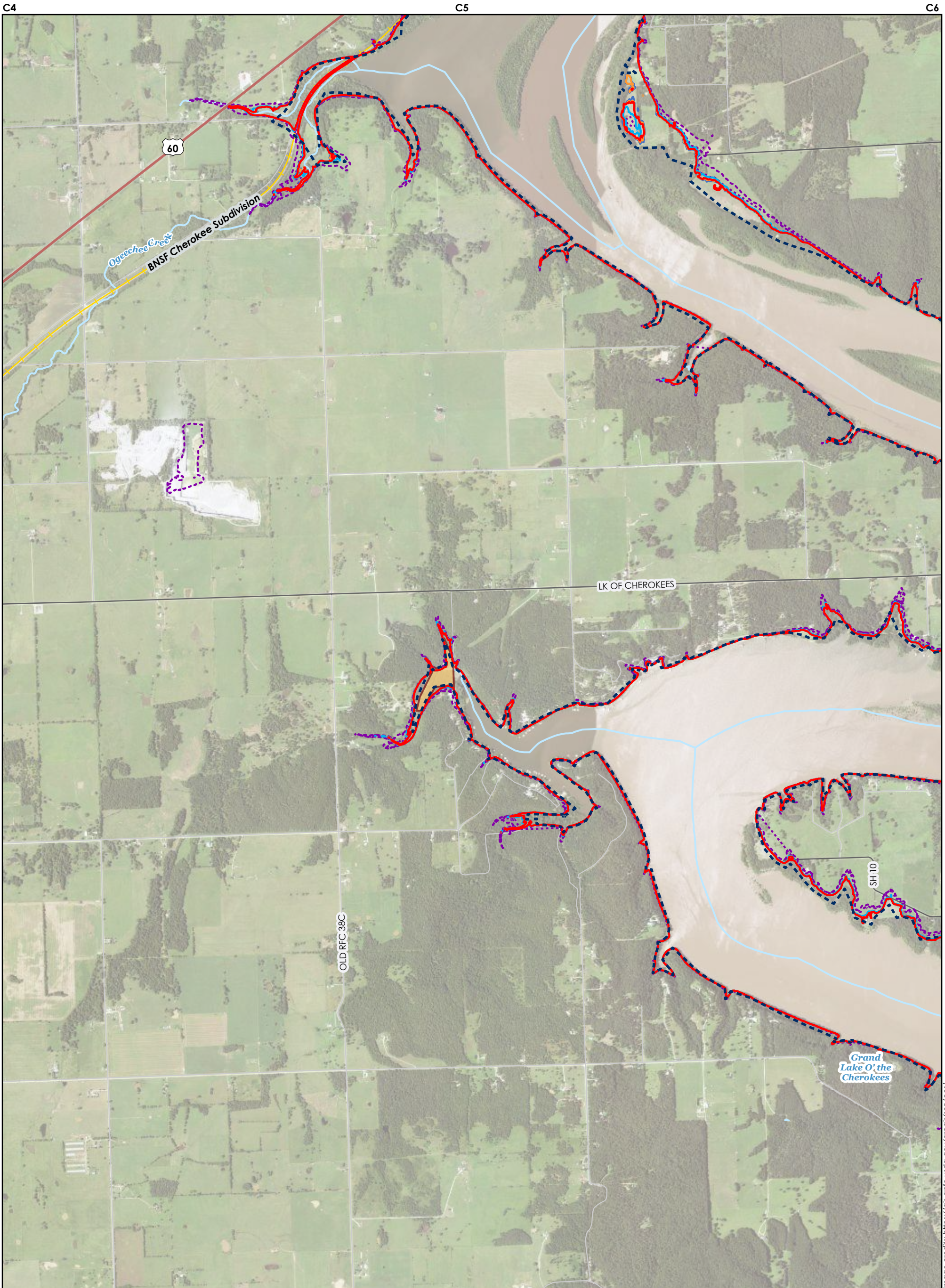
MAP NOTES

1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
2. See Overview Map for notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA
FERC No. 1494
September 2021

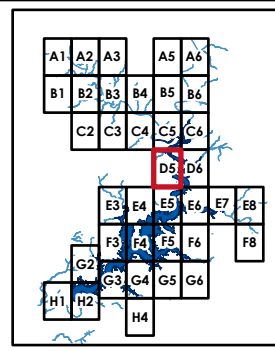


JULY 2007 INUNDATION SCENARIO

NORTH

0 500 1,000 2,000 3,000 4,000 Feet

1 inch = 2,000 feet



JULY 2007 MAX INUNDATION

- 745 ft PD
- 744 ft PD
- 743 ft PD
- 742 ft PD

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector
- Local Road

- Railroad
- Stream
- Flowage Easements
- Project Boundary
- GRDA Ownership

MAP NOTES

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PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: D5

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

C5

C6

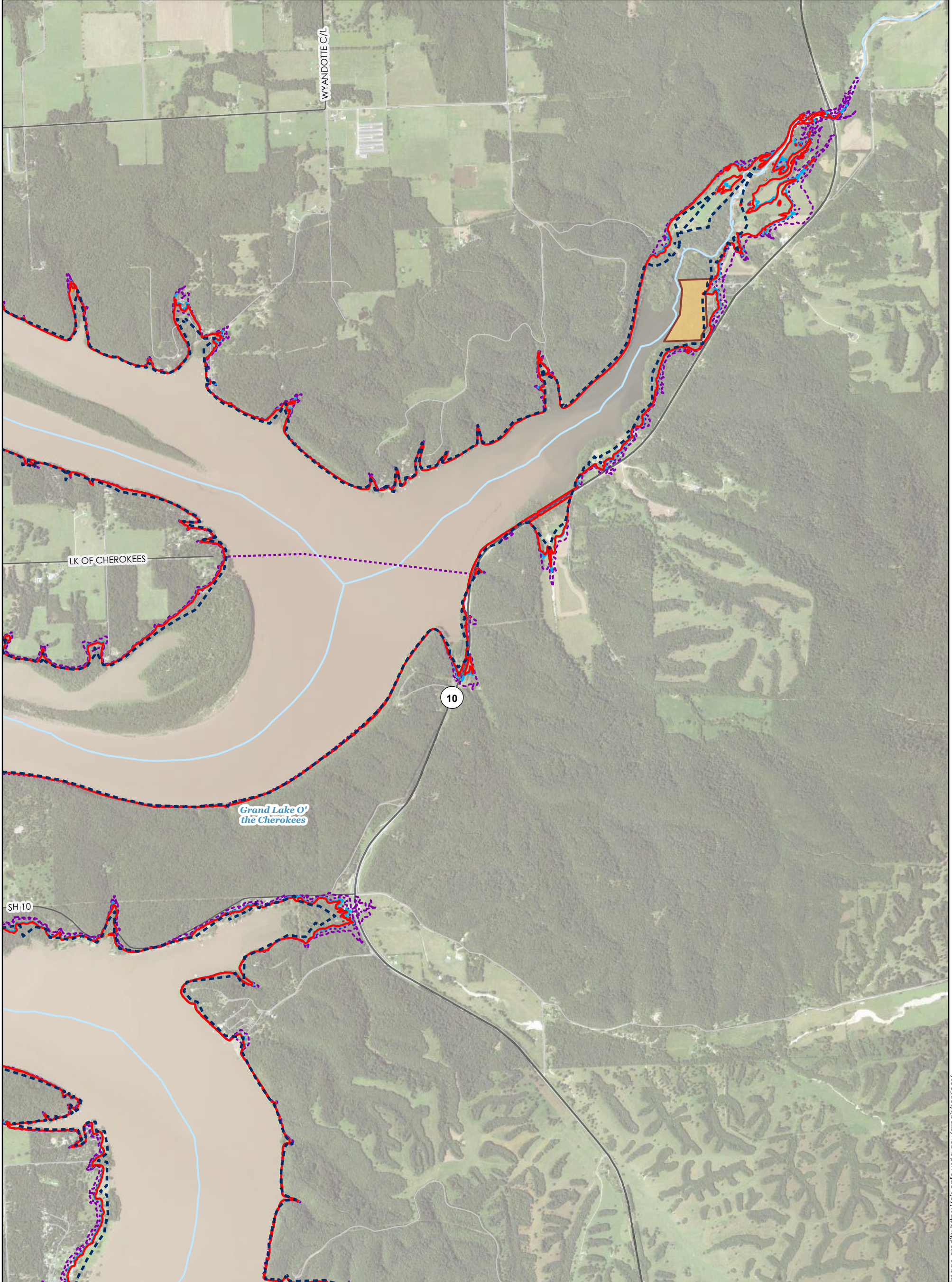


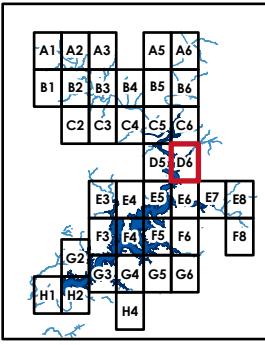
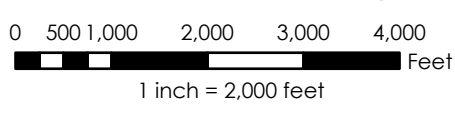
Image credits: https://gis.dplfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

E5

E6

E7

JULY 2007 INUNDATION SCENARIO



- JULY 2007 MAX INUNDATION**
- 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD

Legend

- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- + Railroad
 - Stream
 - - - Flowage Easements
 - - - Project Boundary
 - GRDA Ownership

MAP NOTES

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PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: D6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

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