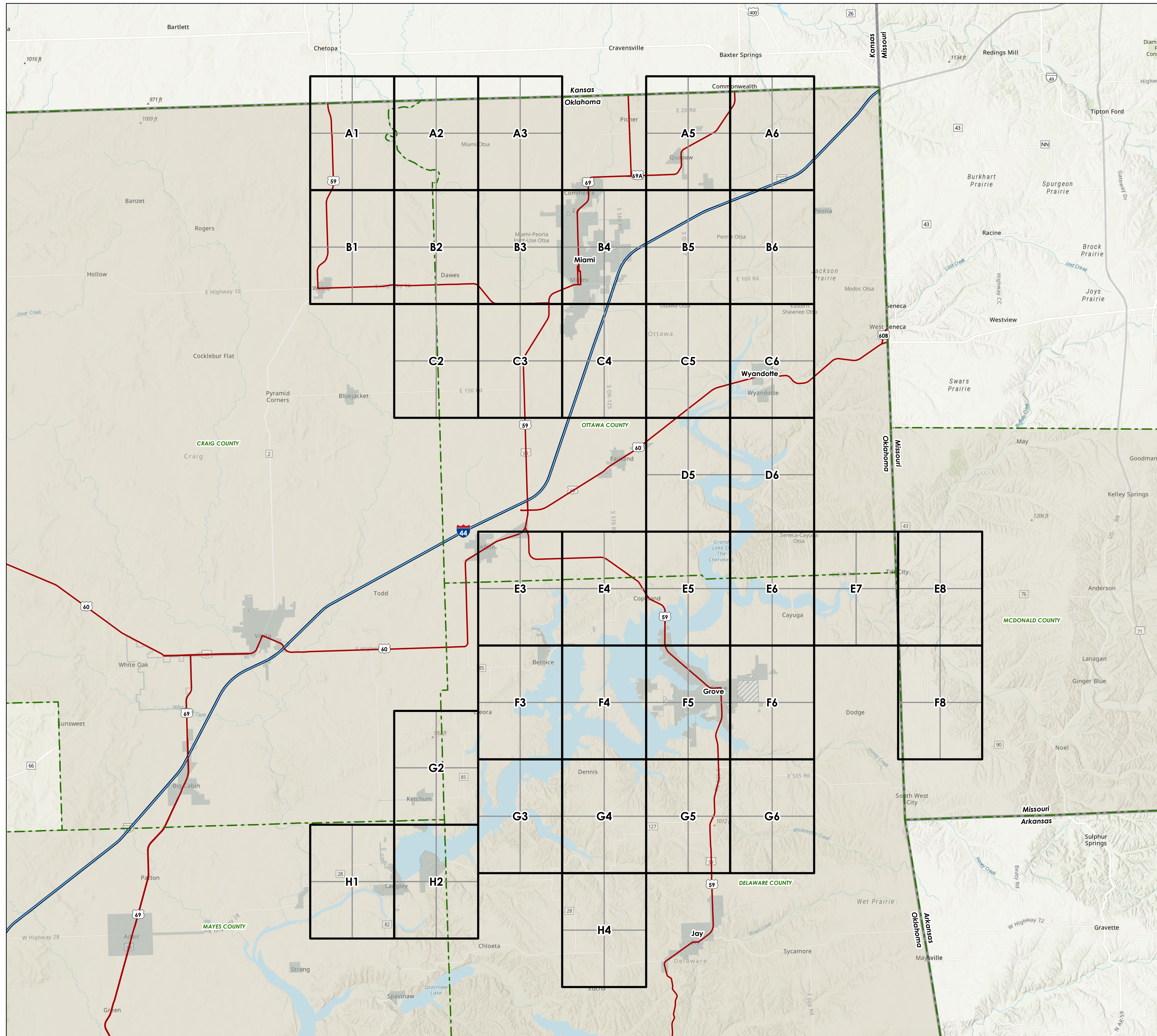

APPENDIX F.6:
100-YEAR EVENT INUNDATION MAPS

Upstream Model Results Overview Map

Pensacola Dam
GRAND RIVER DAM AUTHORITY
September 2021

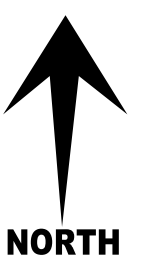
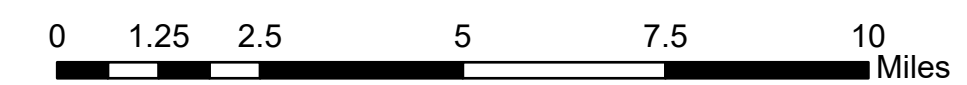
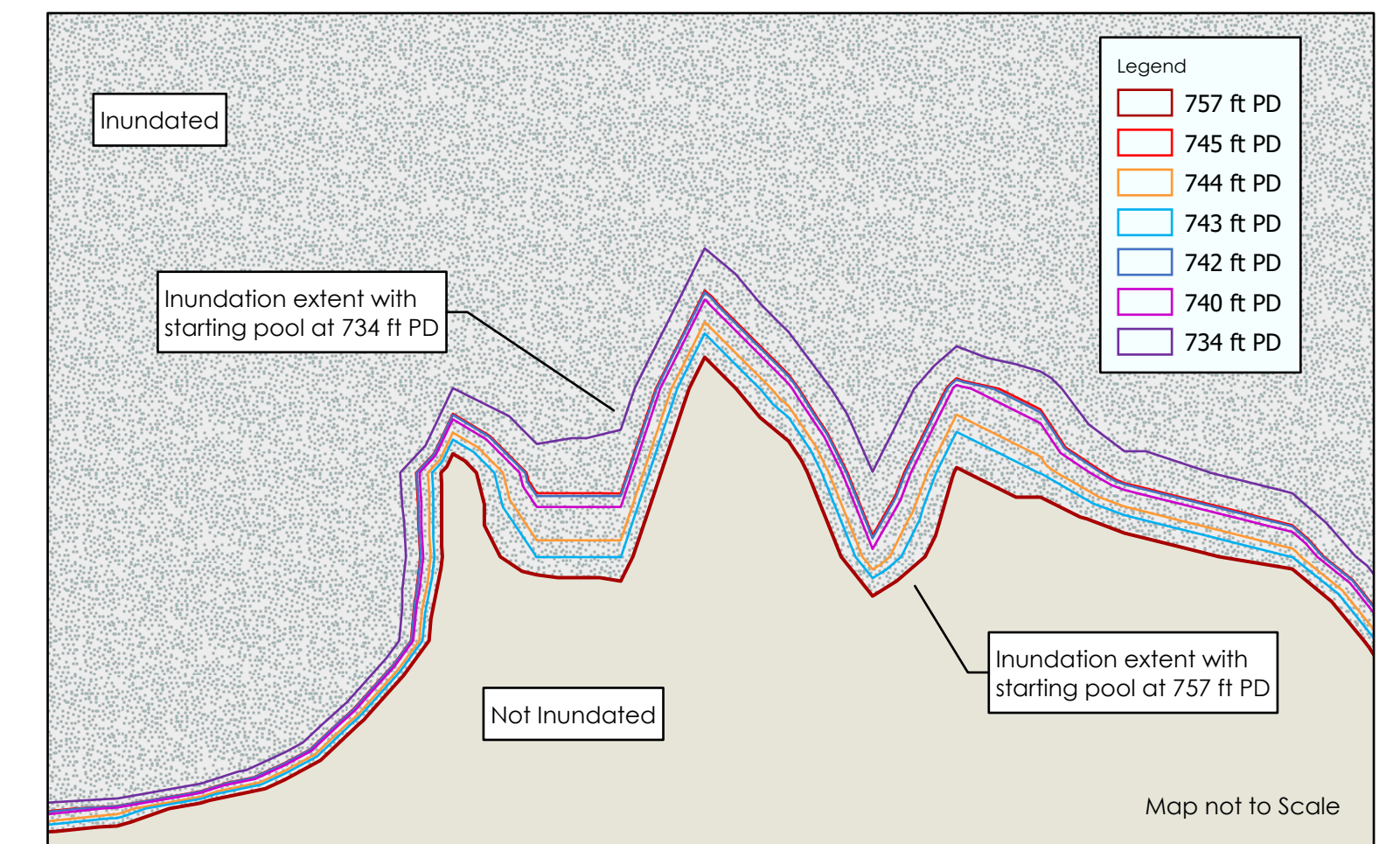


Overview Map Legend

- 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: 734 ft PD, 740 ft PD, 742 ft PD, 743 ft PD, 744 ft PD, 745 ft PD, and 757 ft PD.



Map Notes

Data Sources for Maps:

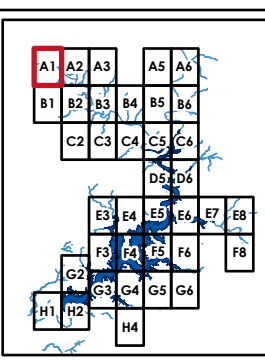
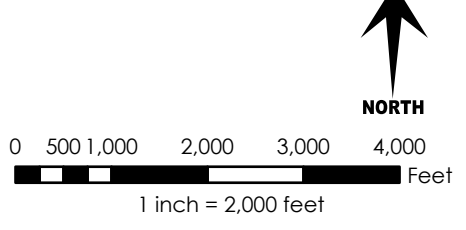
1. Base map images from https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019
2. Transportation network (major roads, local roads, and railroads) and county boundaries obtained from the Oklahoma Office of Geographic Information (<http://okmaps.org/cgi/search.aspx>).
3. Parcels 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.



A2

B1 B2

100-YEAR INUNDATION SCENARIO



- 100-YEAR MAX INUNDATION**
- █ 757 ft PD
 - █ 745 ft PD
 - █ 744 ft PD
 - █ 743 ft PD
 - █ 742 ft PD
 - █ 740 ft PD
 - █ 734 ft PD

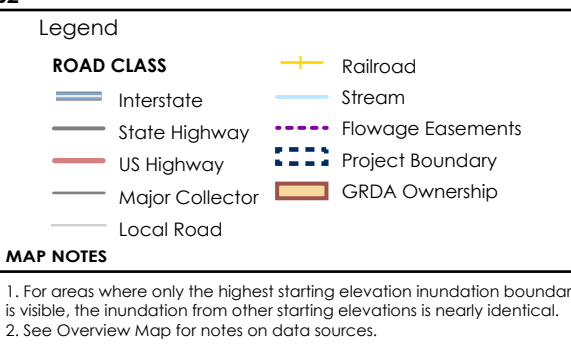
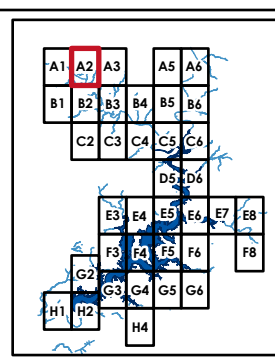
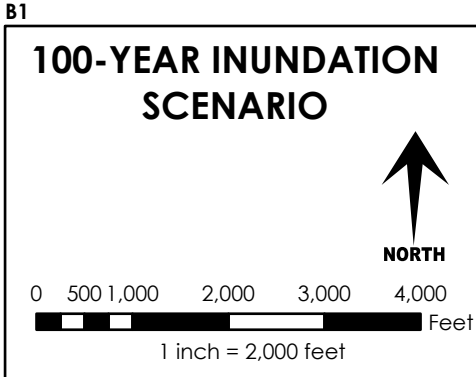
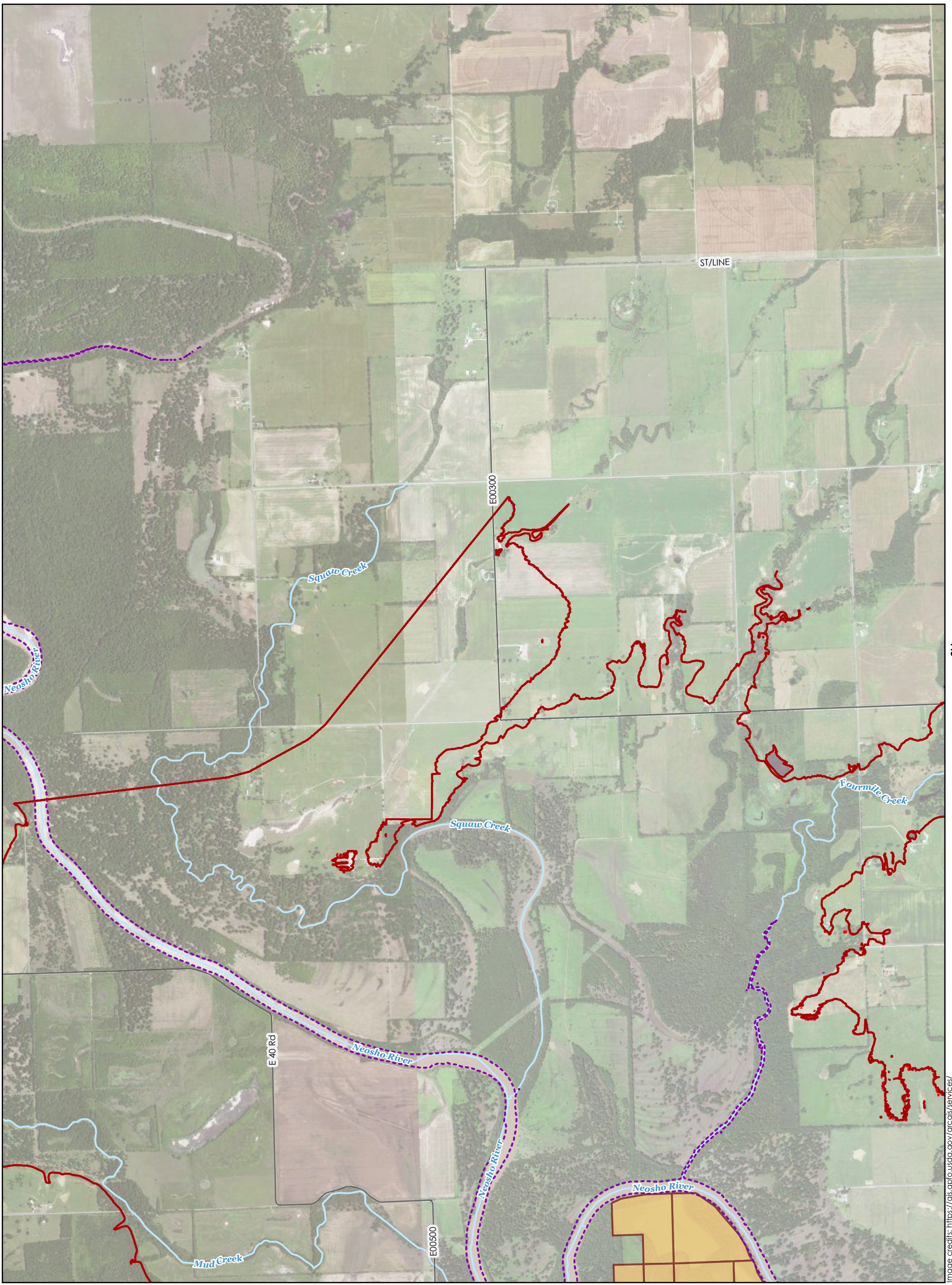
- Legend**
- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
 - Railroad
 - Stream
 - - - Flowage Easements
 - - - Project Boundary
 - █ GRDA Ownership

- 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: A1

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



PENSACOLA DAM

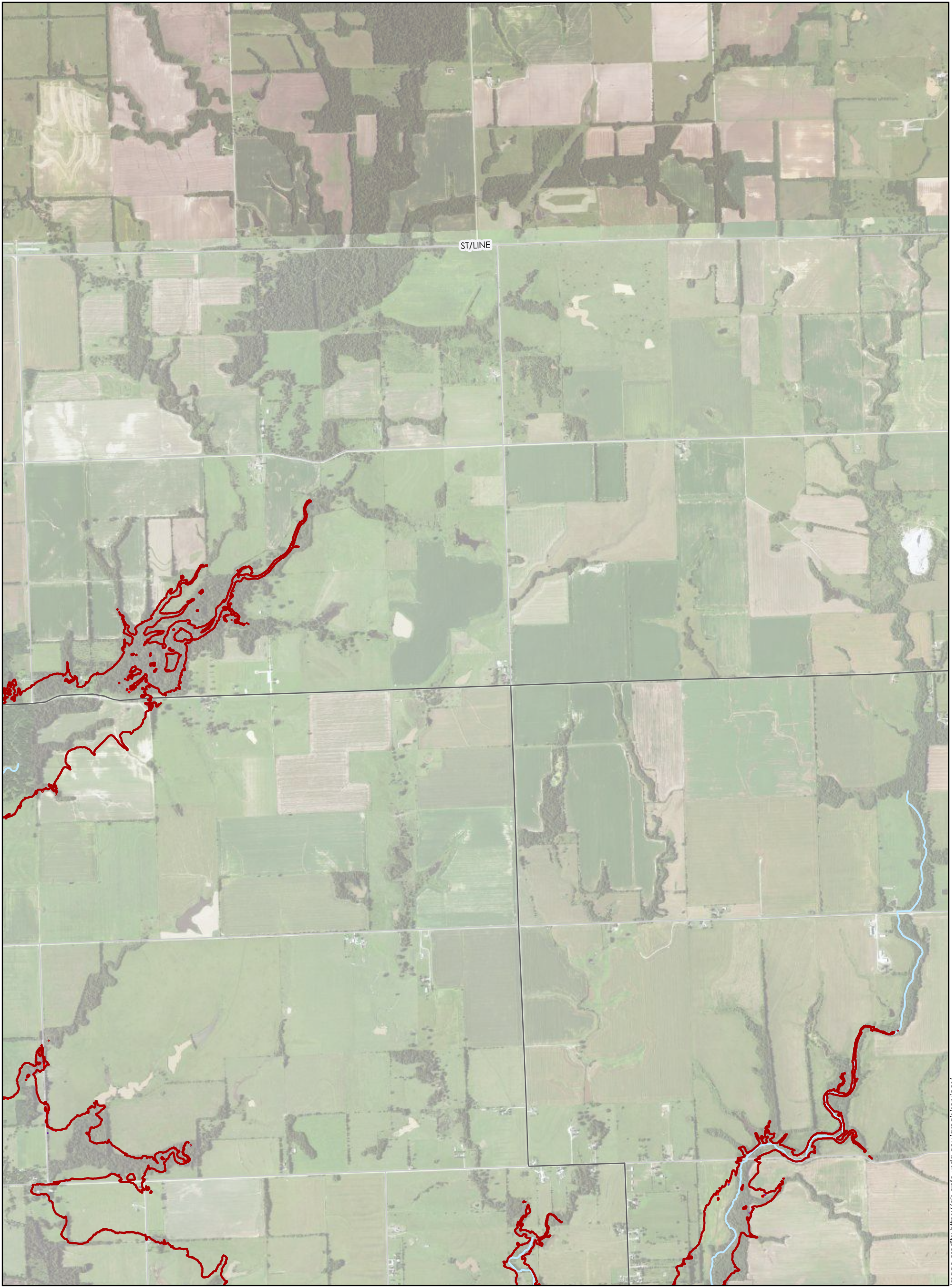
GRAND RIVER DAM AUTHORITY

MAP: A2

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



100-YEAR INUNDATION SCENARIO

NORTH

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

1 inch = 2,000 feet

100-YEAR MAX INUNDATION

- 757 ft PD
- 745 ft PD
- 744 ft PD
- 743 ft PD
- 742 ft PD
- 740 ft PD
- 734 ft PD

Legend

Interstate	Railroad
State Highway	Stream
US Highway	Flowage Easements
Major Collector	Project Boundary
Local Road	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

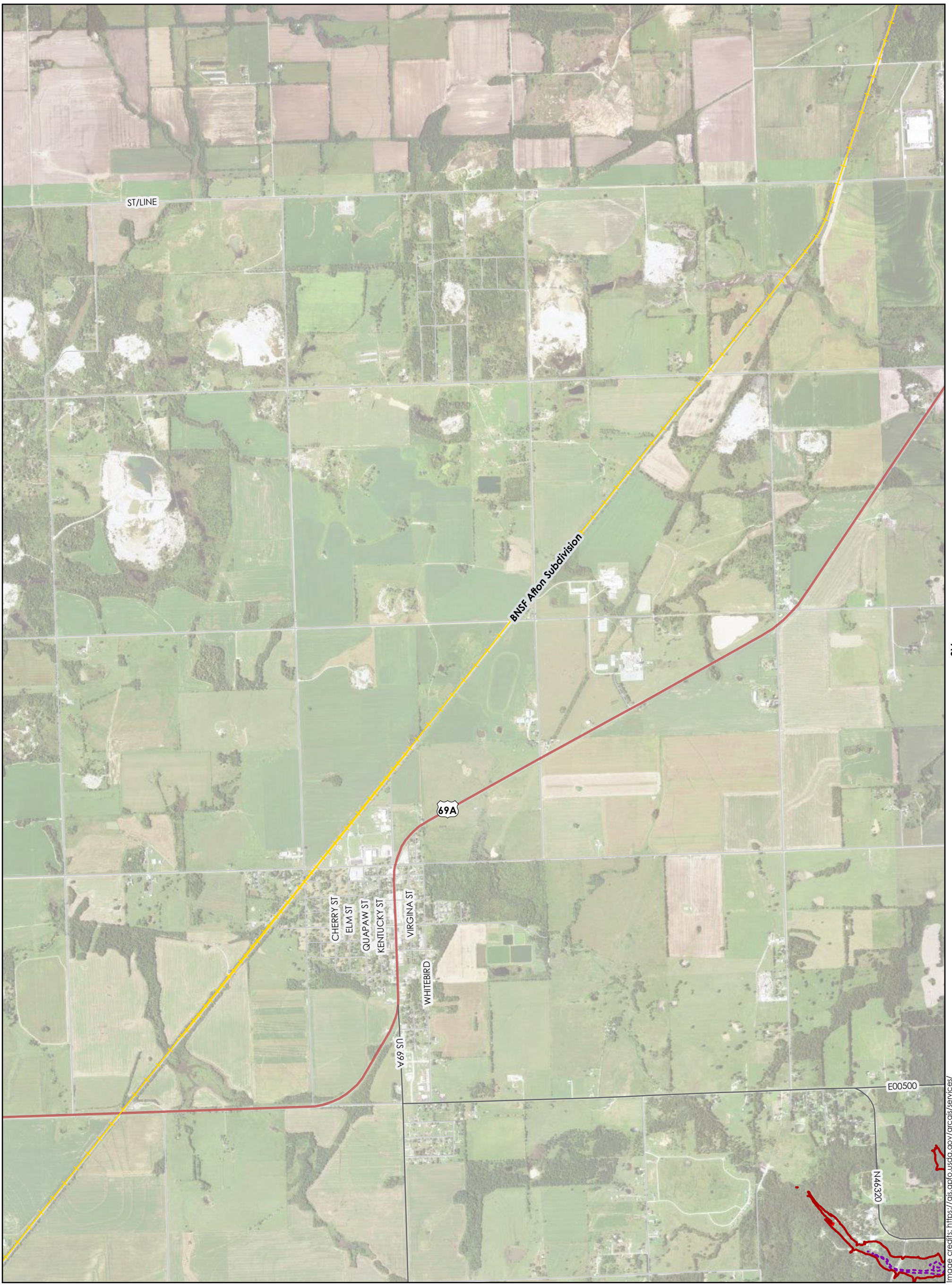
GRAND RIVER DAM AUTHORITY

MAP: A3

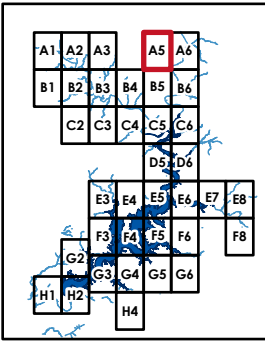
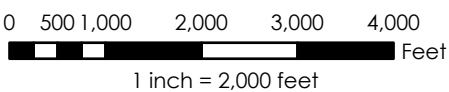
CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

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



100-YEAR INUNDATION SCENARIO



- 100-YEAR MAX INUNDATION**
- █ 757 ft PD
 - █ 745 ft PD
 - █ 744 ft PD
 - █ 743 ft PD
 - █ 742 ft PD
 - █ 740 ft PD
 - █ 734 ft PD

Legend

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

MAP NOTES

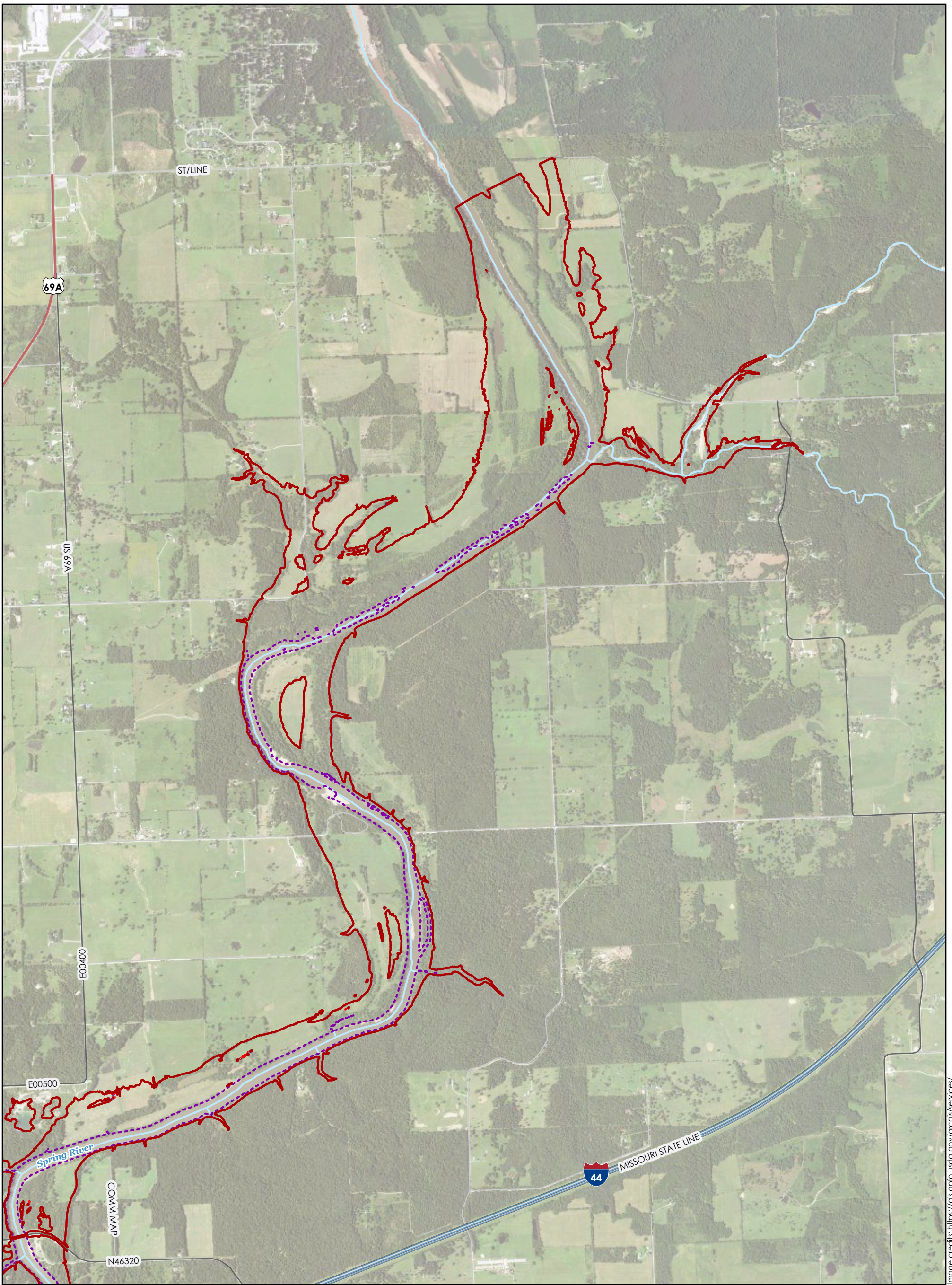
1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
2. See Overview Map for notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: A5

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

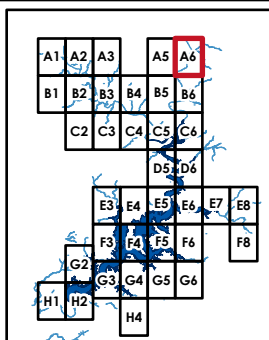


100-YEAR INUNDATION SCENARIO

NORTH

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

1 inch = 2,000 feet



- 100-YEAR MAX INUNDATION**
- 757 ft PD
 - 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD
 - 740 ft PD
 - 734 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.

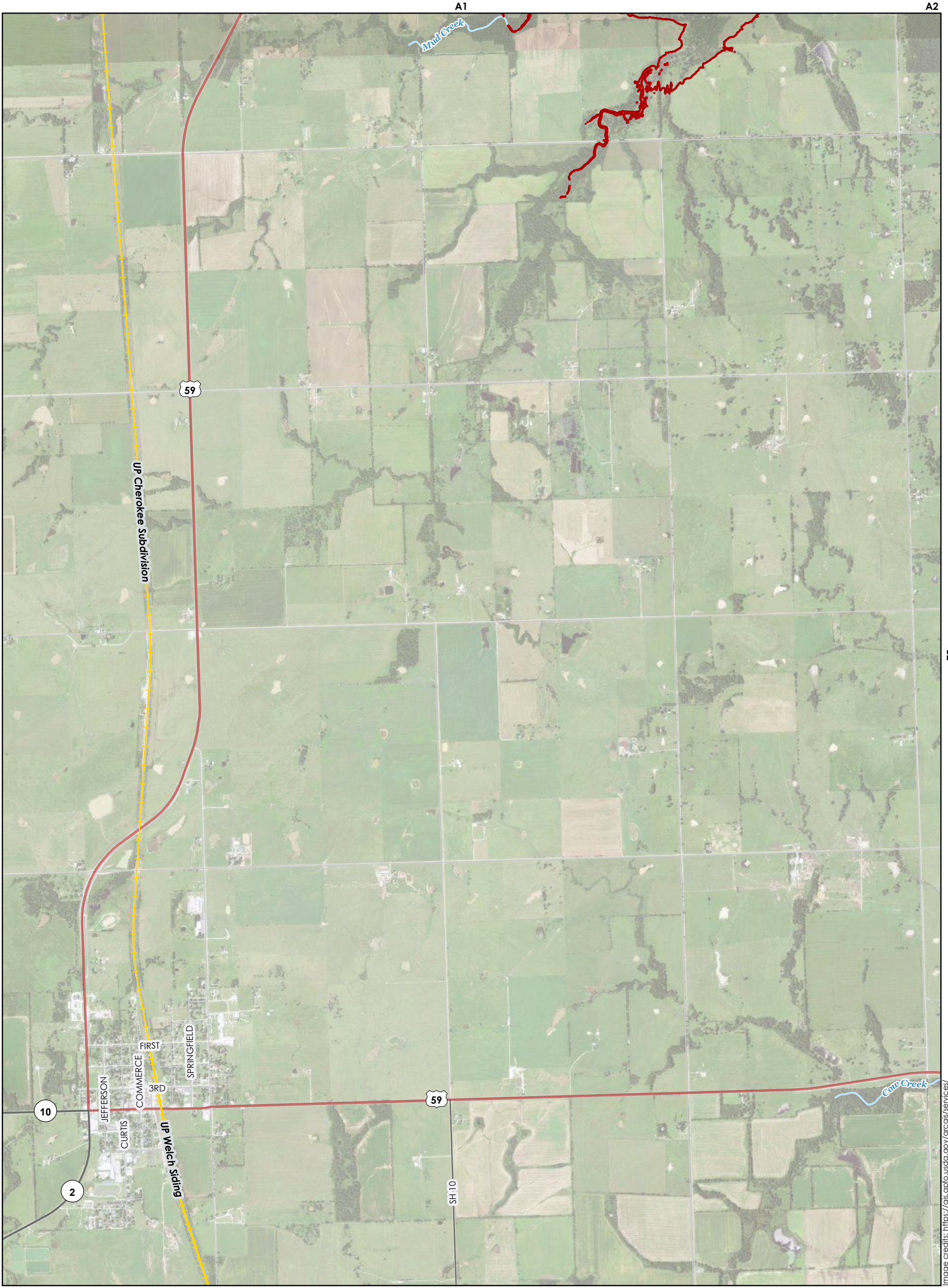
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: A6

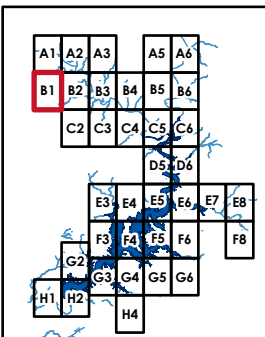
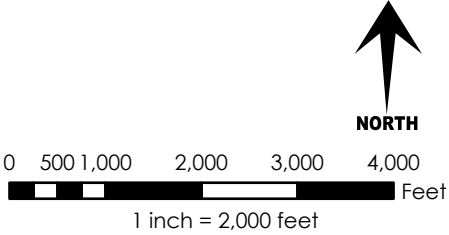
CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

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



100-YEAR INUNDATION SCENARIO



- 100-YEAR MAX INUNDATION**
- █ 757 ft PD
 - █ 745 ft PD
 - █ 744 ft PD
 - █ 743 ft PD
 - █ 742 ft PD
 - █ 740 ft PD
 - █ 734 ft PD

Legend

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

MAP NOTES

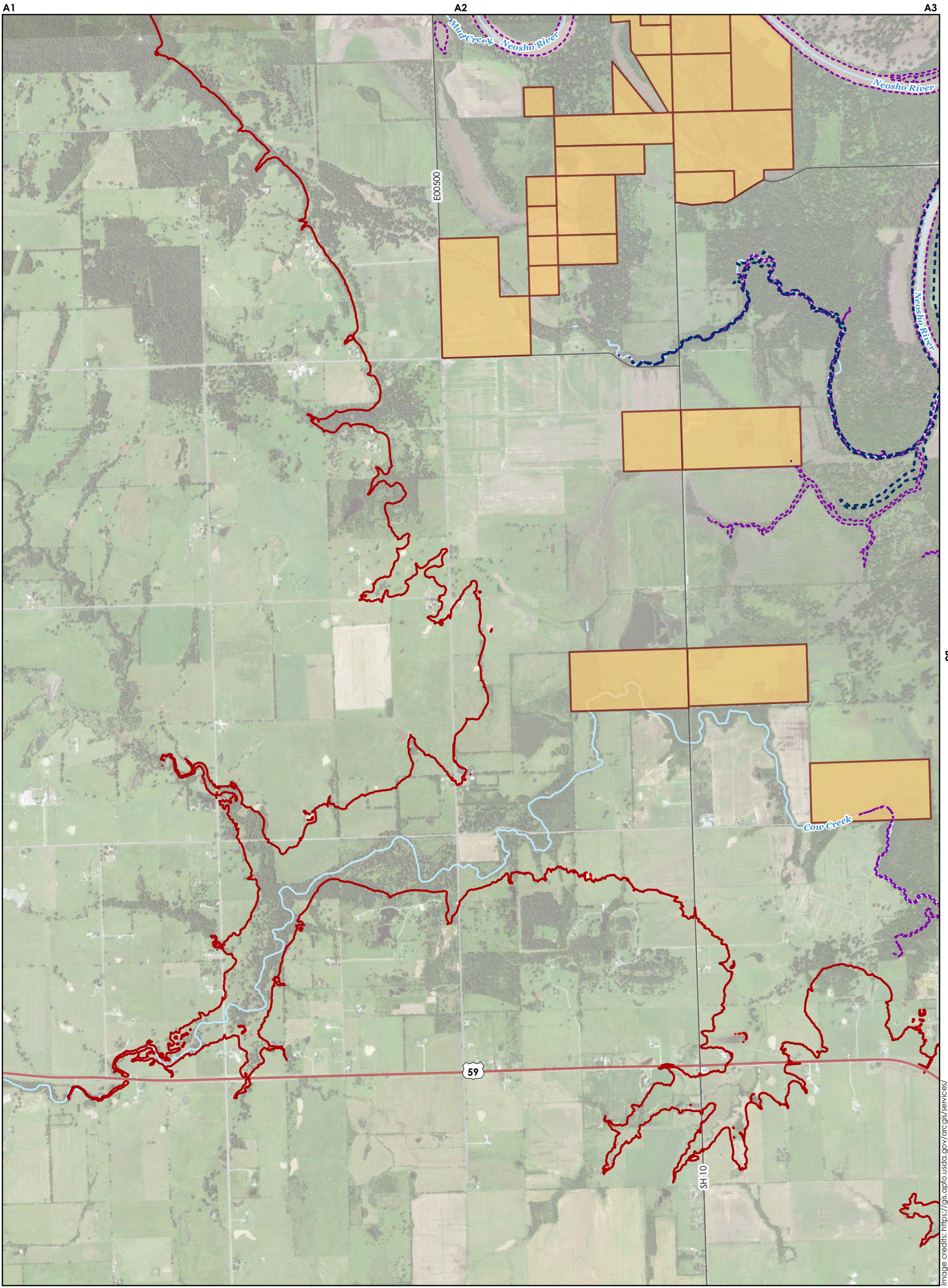
1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
2. See Overview Map for notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: B1

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021



100-YEAR INUNDATION SCENARIO

NORTH

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

1 inch = 2,000 feet

100-YEAR MAX INUNDATION

- 757 ft PD
- 745 ft PD
- 744 ft PD
- 743 ft PD
- 742 ft PD
- 740 ft PD
- 734 ft PD

Legend

— Interstate	— Railroad
— State Highway	— Stream
— US Highway	- - - Flowage Easements
— Major Collector	- - - Project Boundary
— Local Road	 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

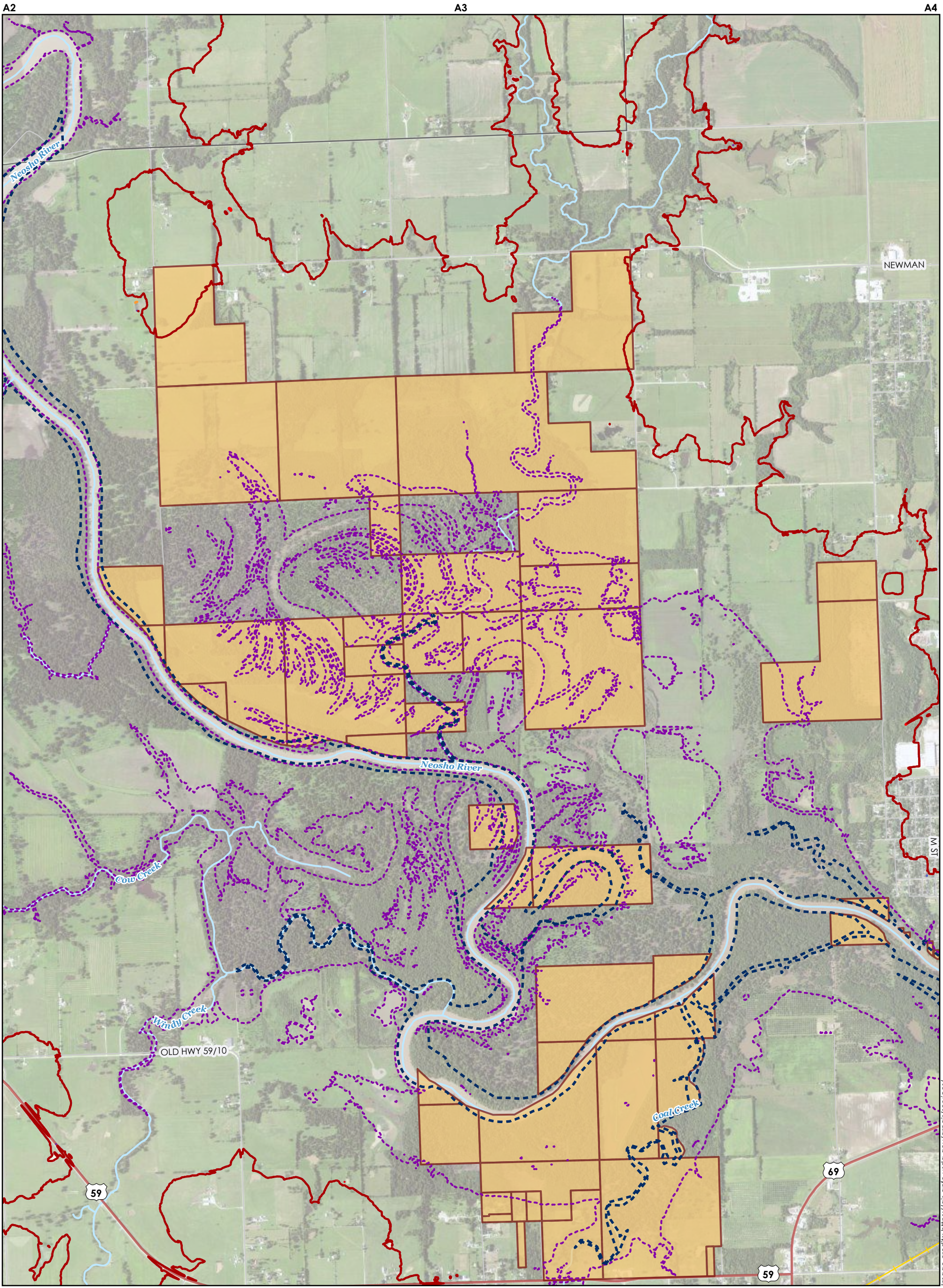
GRAND RIVER DAM AUTHORITY

MAP: B2

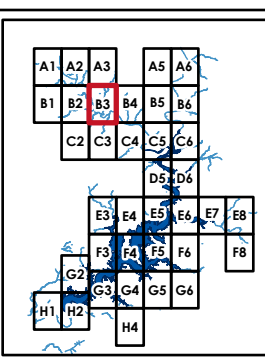
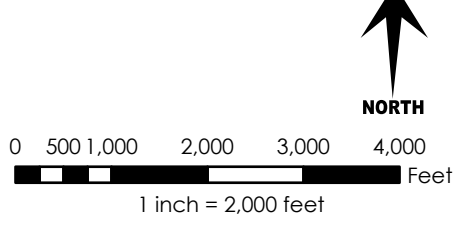
CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

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



100-YEAR INUNDATION SCENARIO



- 100-YEAR MAX INUNDATION**
- 757 ft PD
 - 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD
 - 740 ft PD
 - 734 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.

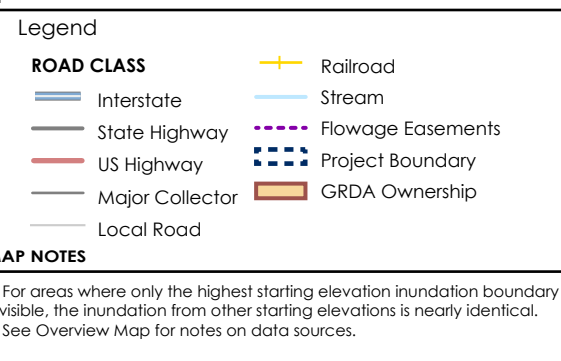
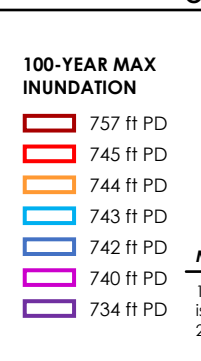
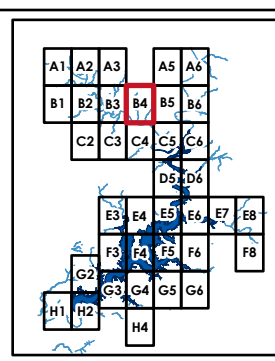
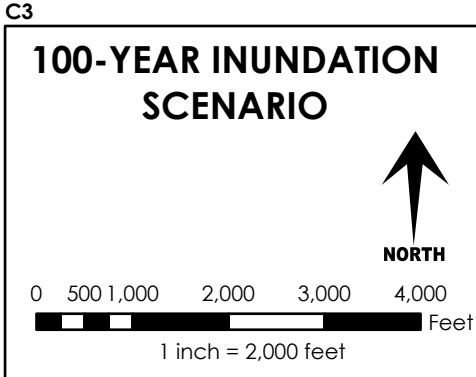
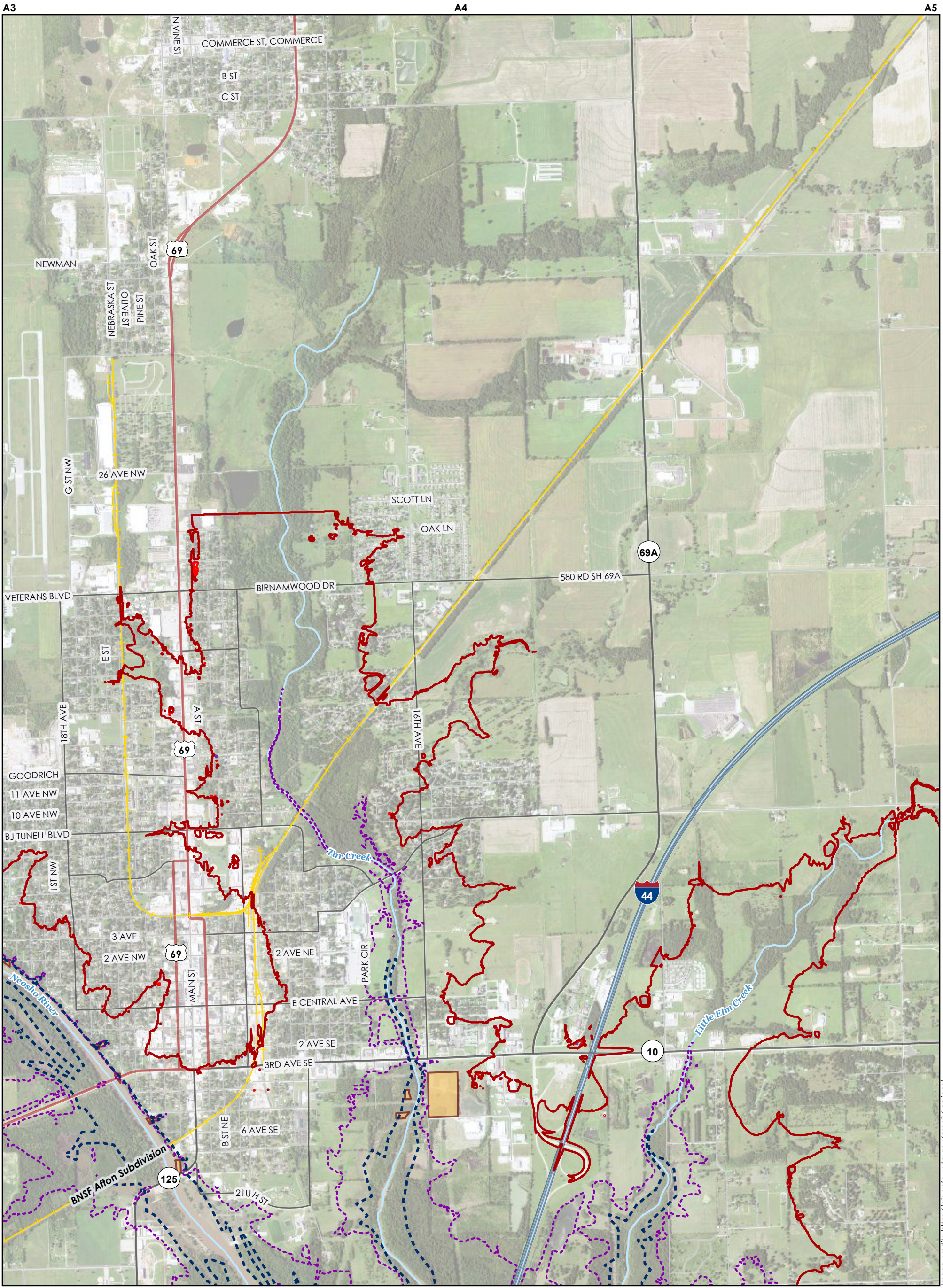
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: 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



PENSACOLA DAM

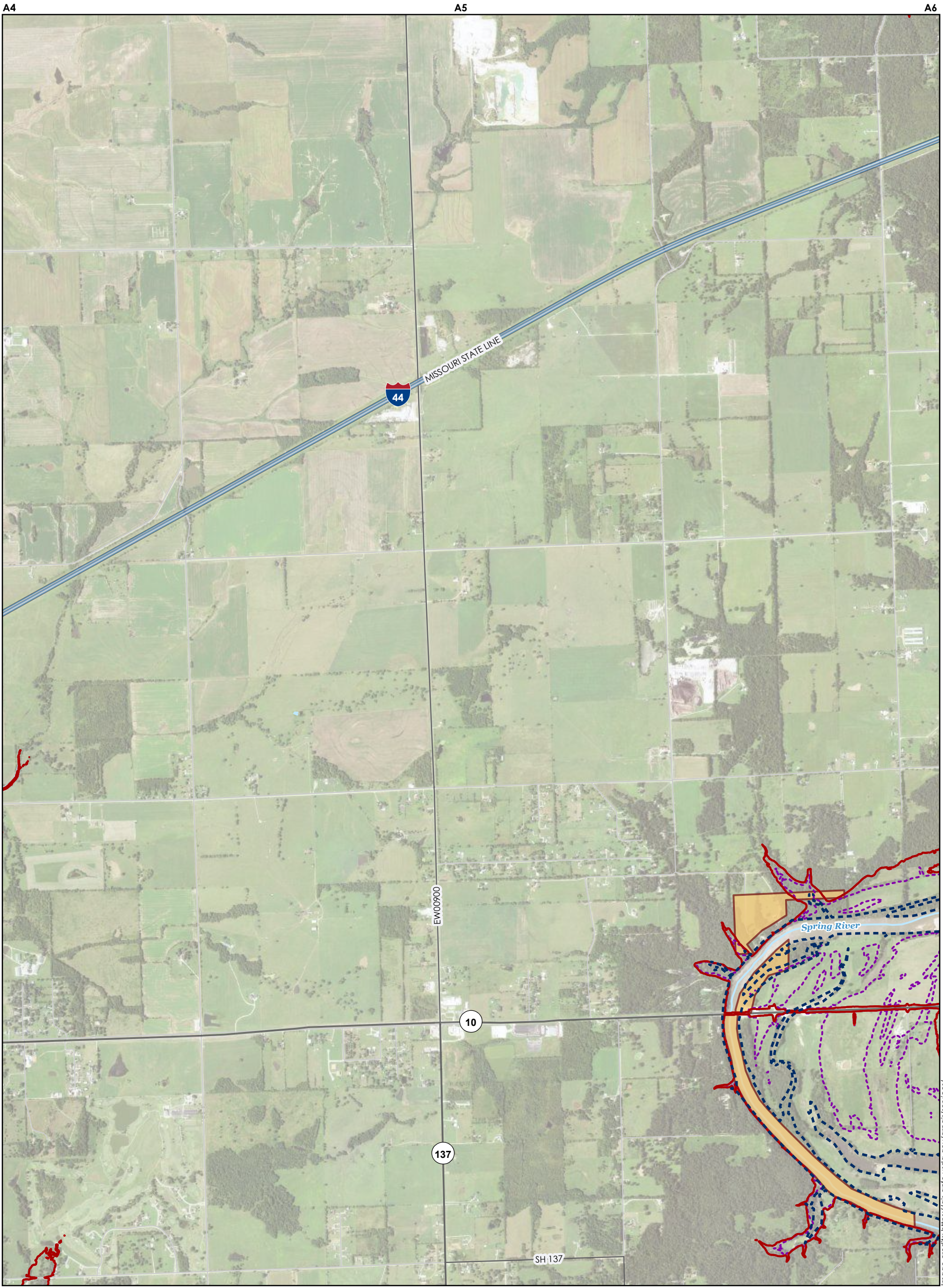
GRAND RIVER DAM AUTHORITY

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

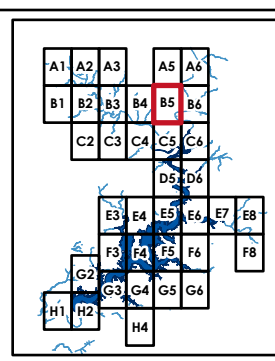


100-YEAR INUNDATION SCENARIO

NORTH

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

1 inch = 2,000 feet



- #### 100-YEAR MAX INUNDATION
- 757 ft PD
 - 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD
 - 740 ft PD
 - 734 ft PD

- #### Legend
- | | |
|---|---|
| — Interstate | — Railroad |
| — State Highway | — Stream |
| — US Highway | - - - Flowage Easements |
| — Major Collector | - - - Project Boundary |
| — Local Road | — 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

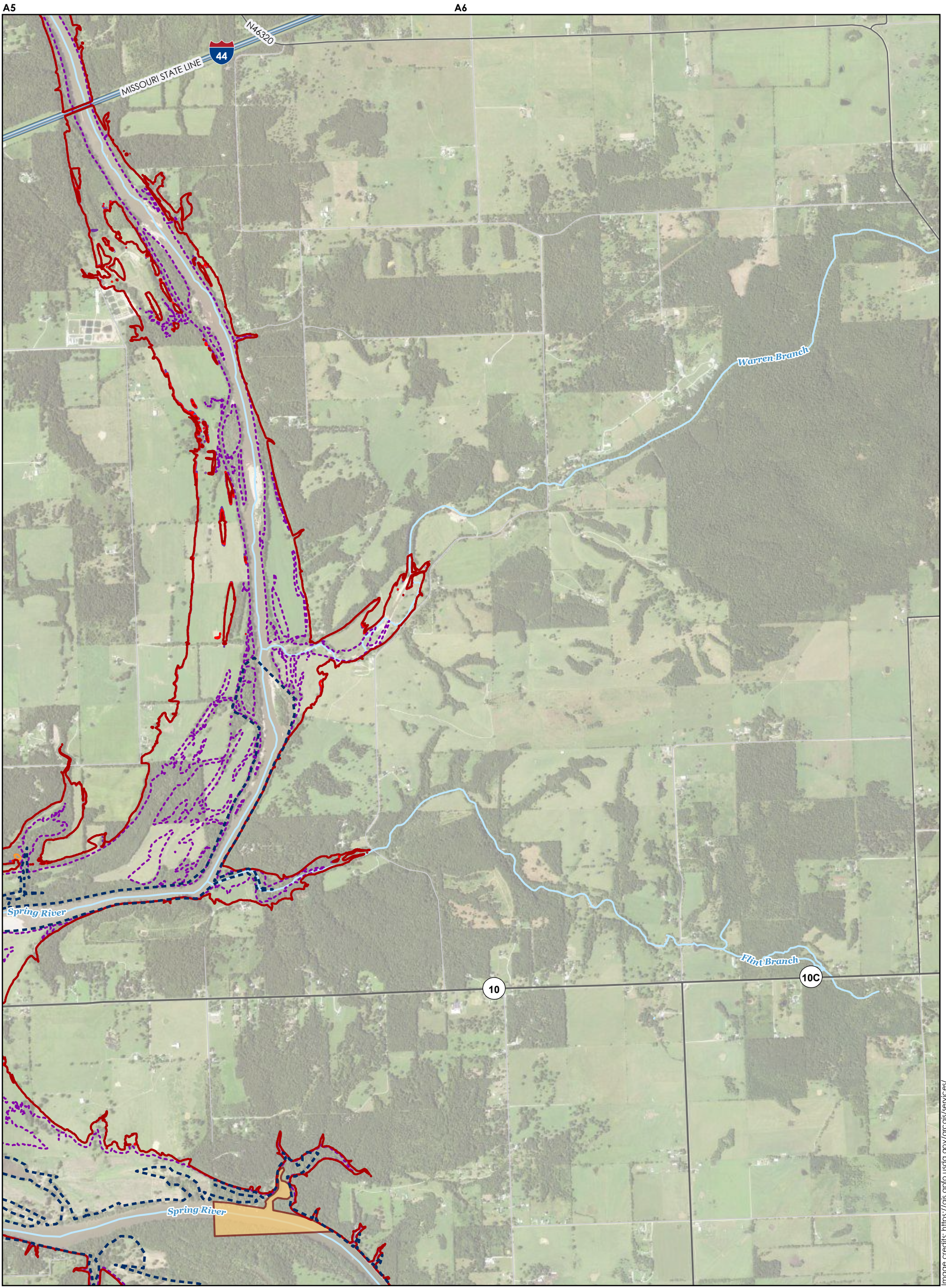
GRAND RIVER DAM AUTHORITY

MAP: 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

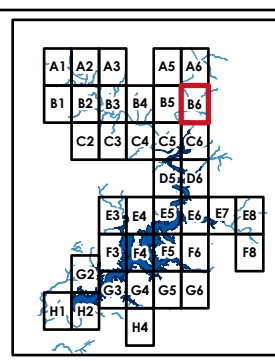


100-YEAR INUNDATION SCENARIO

NORTH

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

1 inch = 2,000 feet



- #### 100-YEAR MAX INUNDATION
- 757 ft PD
 - 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD
 - 740 ft PD
 - 734 ft PD

- #### Legend
- | ROAD CLASS | |
|---|---|
| — Interstate | — Railroad |
| — State Highway | — Stream |
| — US Highway | - - - Flowage Easements |
| — Major Collector | - - - Project Boundary |
| — Local Road | ■ 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

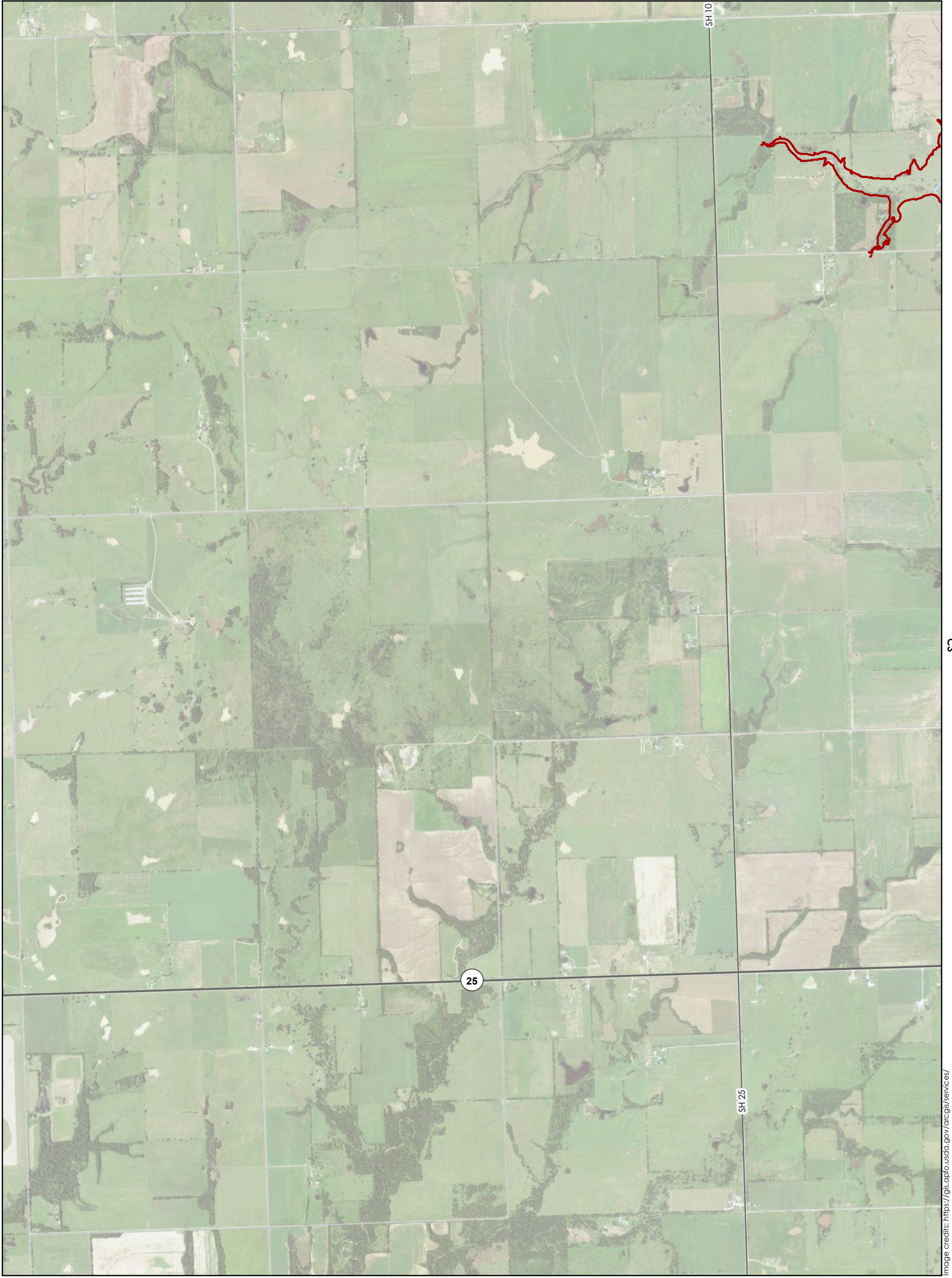
FERC No. 1494
September 2021

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

B1

B2

B3

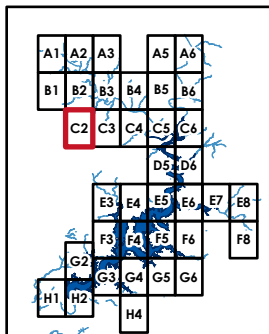
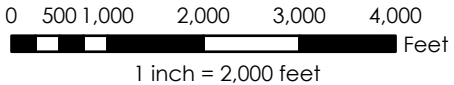


D1

D2

D3

100-YEAR INUNDATION SCENARIO



100-YEAR MAX INUNDATION

- █ 757 ft PD
- █ 745 ft PD
- █ 744 ft PD
- █ 743 ft PD
- █ 742 ft PD
- █ 740 ft PD
- █ 734 ft PD

Legend

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

MAP NOTES

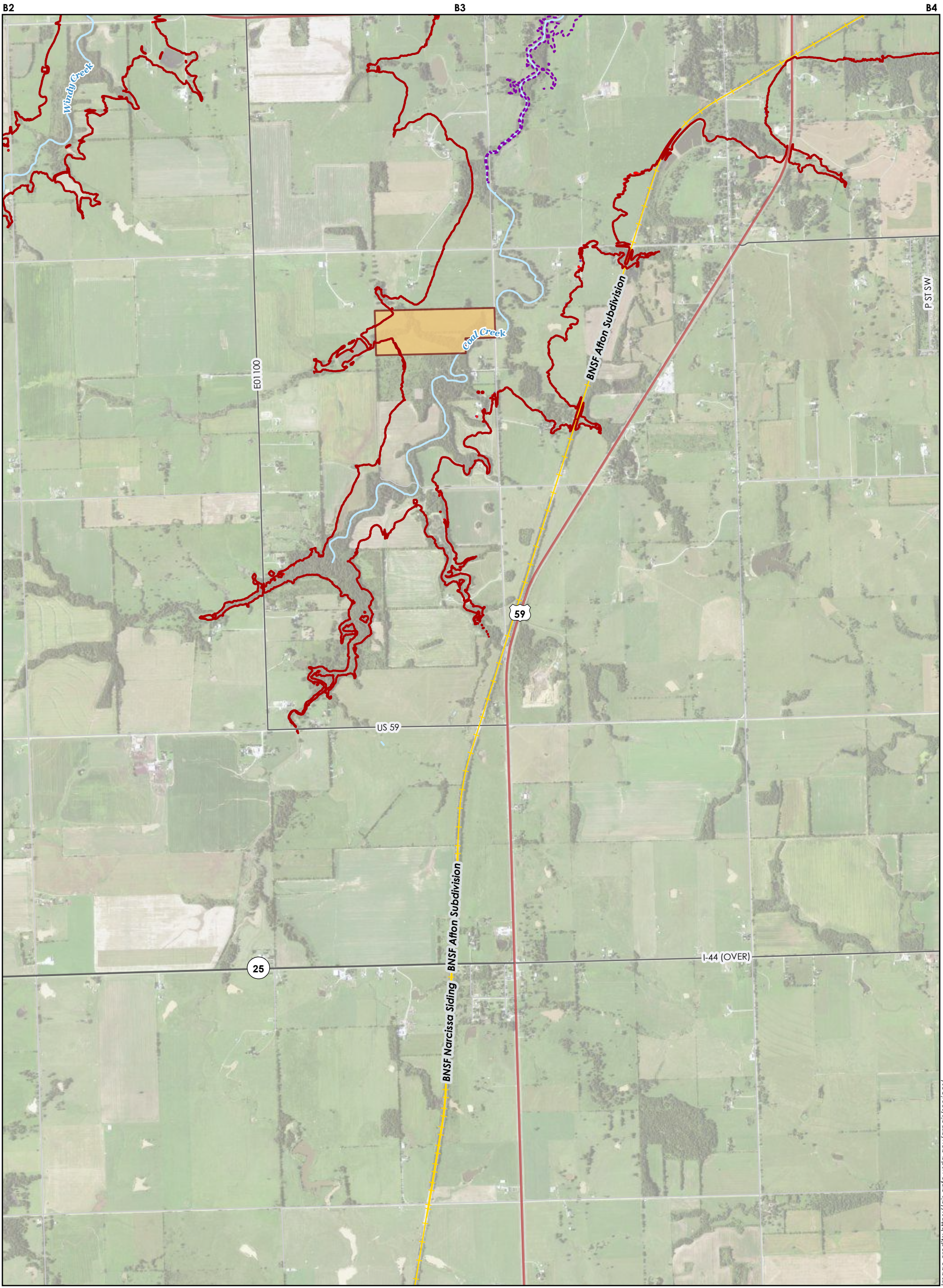
1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
2. See Overview Map for notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

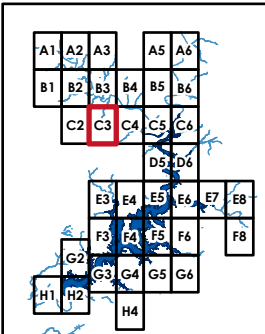
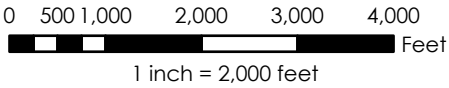
MAP: C2

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021



100-YEAR INUNDATION SCENARIO



- 100-YEAR MAX INUNDATION**
- █ 757 ft PD
 - █ 745 ft PD
 - █ 744 ft PD
 - █ 743 ft PD
 - █ 742 ft PD
 - █ 740 ft PD
 - █ 734 ft PD

Legend

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

MAP NOTES

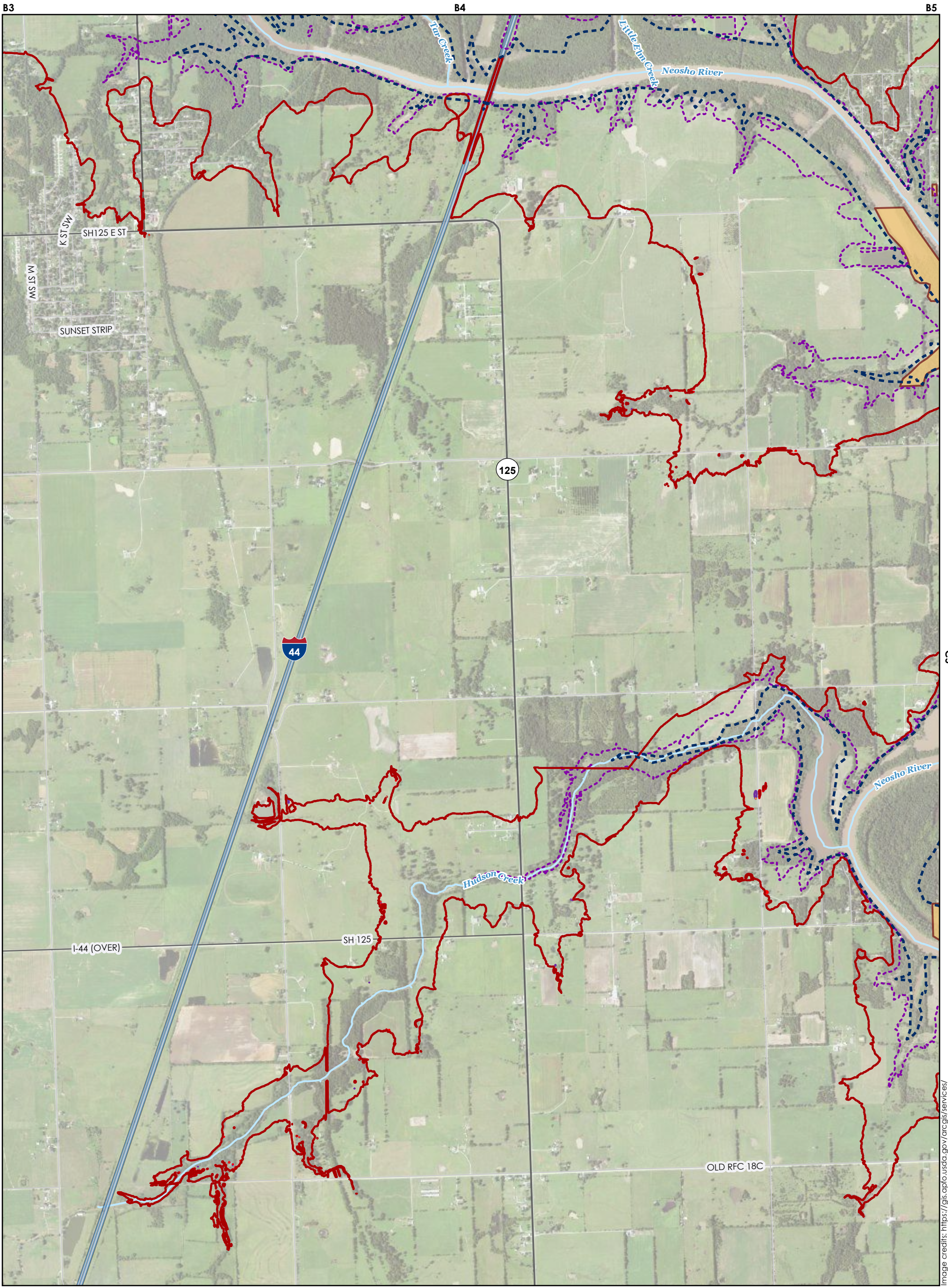
1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
2. See Overview Map for notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

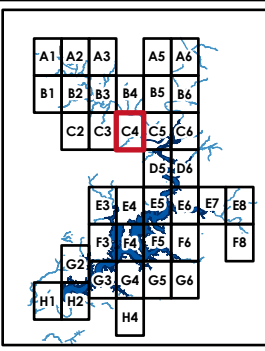
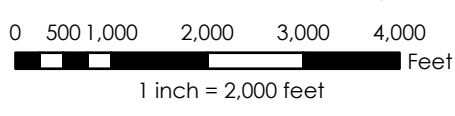
MAP: C3

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



100-YEAR INUNDATION SCENARIO



- 100-YEAR MAX INUNDATION**
- 757 ft PD
 - 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD
 - 740 ft PD
 - 734 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.

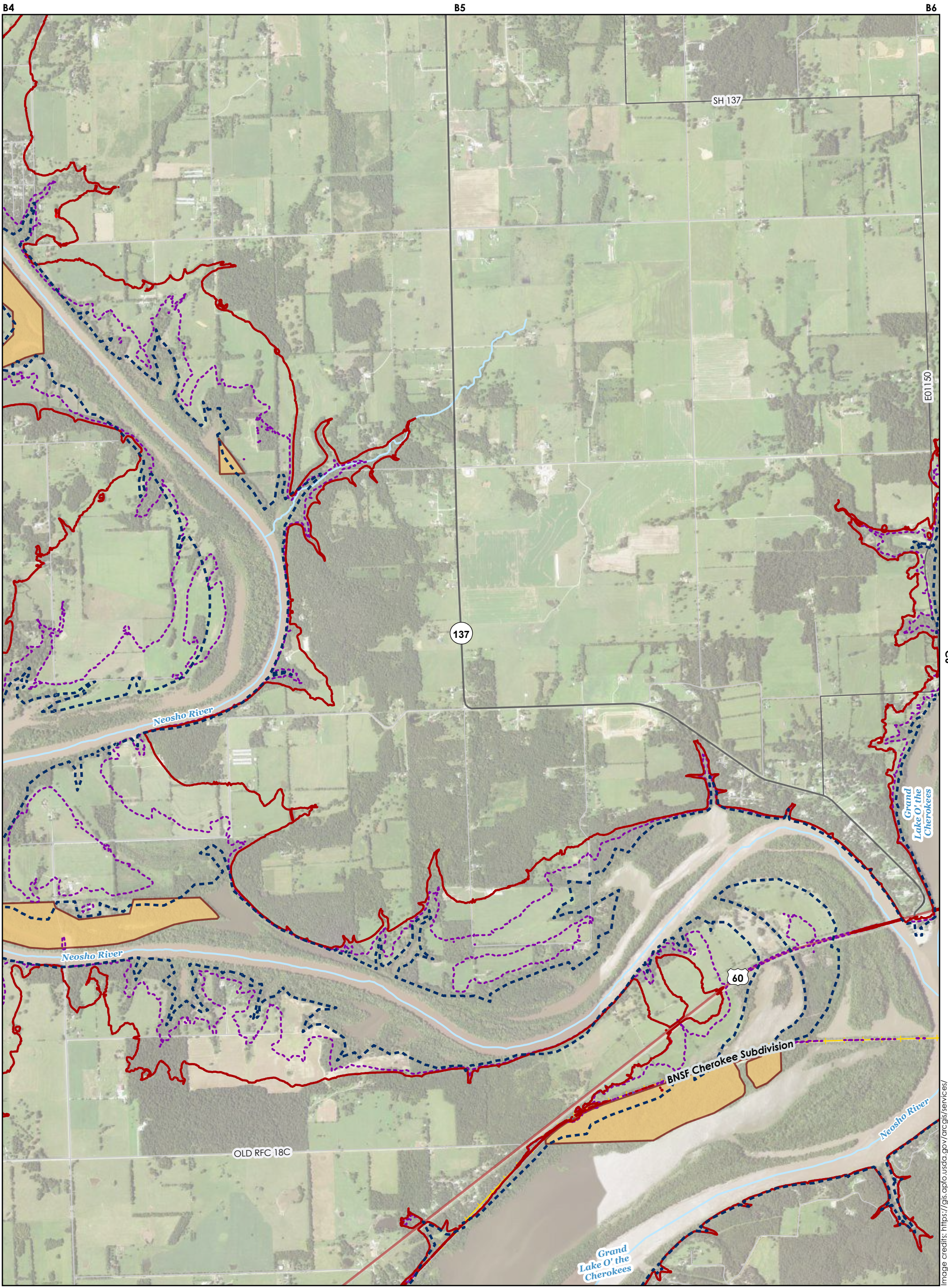
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C4

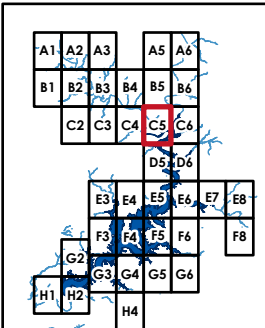
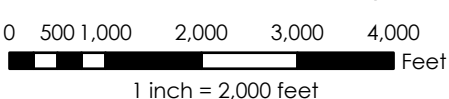
CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

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



100-YEAR INUNDATION SCENARIO



- 100-YEAR MAX INUNDATION**
- 757 ft PD
 - 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD
 - 740 ft PD
 - 734 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: C5

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

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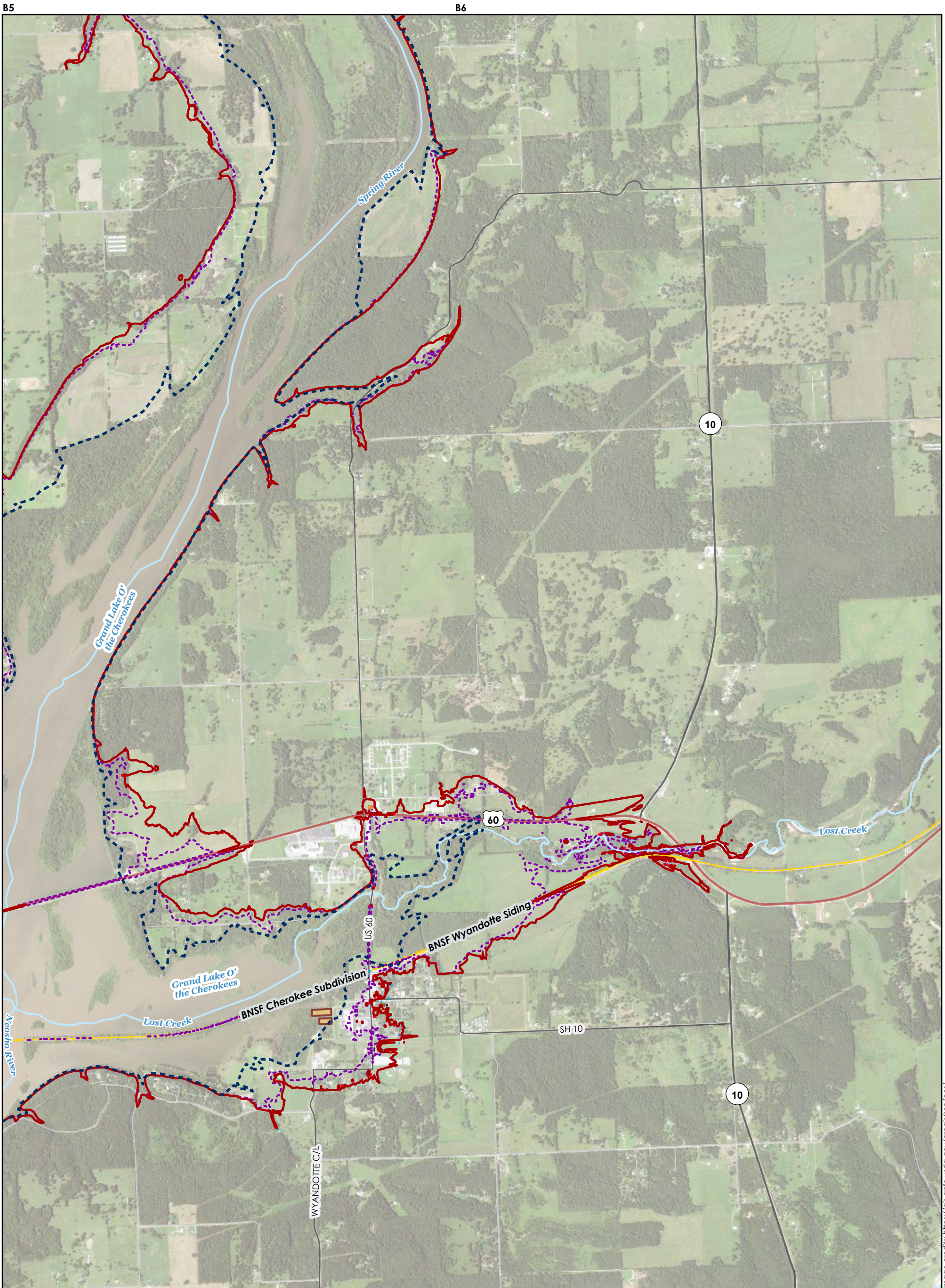


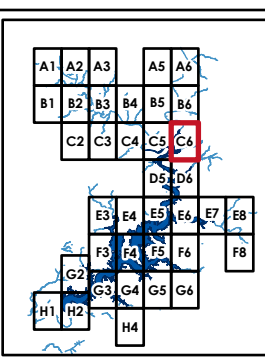
Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

100-YEAR INUNDATION SCENARIO

NORTH

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

1 inch = 2,000 feet



- #### 100-YEAR MAX INUNDATION
- █ 757 ft PD
 - █ 745 ft PD
 - █ 744 ft PD
 - █ 743 ft PD
 - █ 742 ft PD
 - █ 740 ft PD
 - █ 734 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.

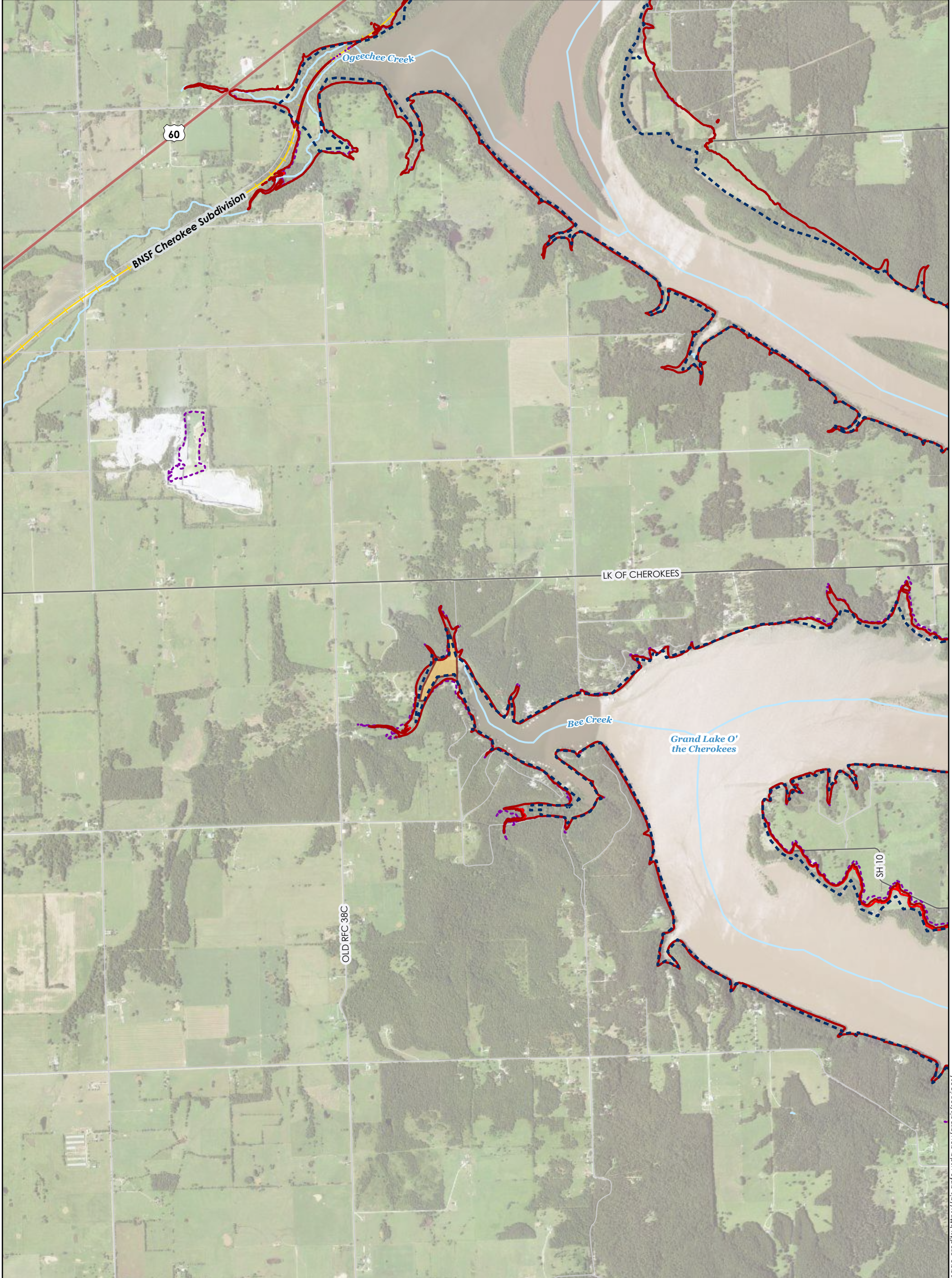
PENSACOLA DAM

GRAND RIVER DAM AUTHORITY

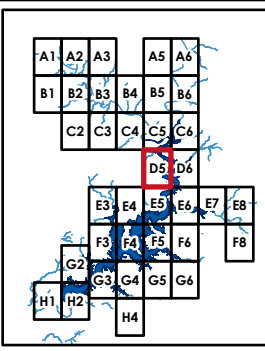
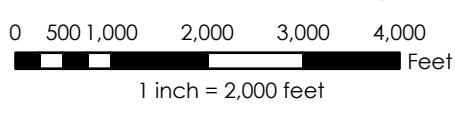
MAP: C6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021



100-YEAR INUNDATION SCENARIO



- 100-YEAR MAX INUNDATION**
- █ 757 ft PD
 - █ 745 ft PD
 - █ 744 ft PD
 - █ 743 ft PD
 - █ 742 ft PD
 - █ 740 ft PD
 - █ 734 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.
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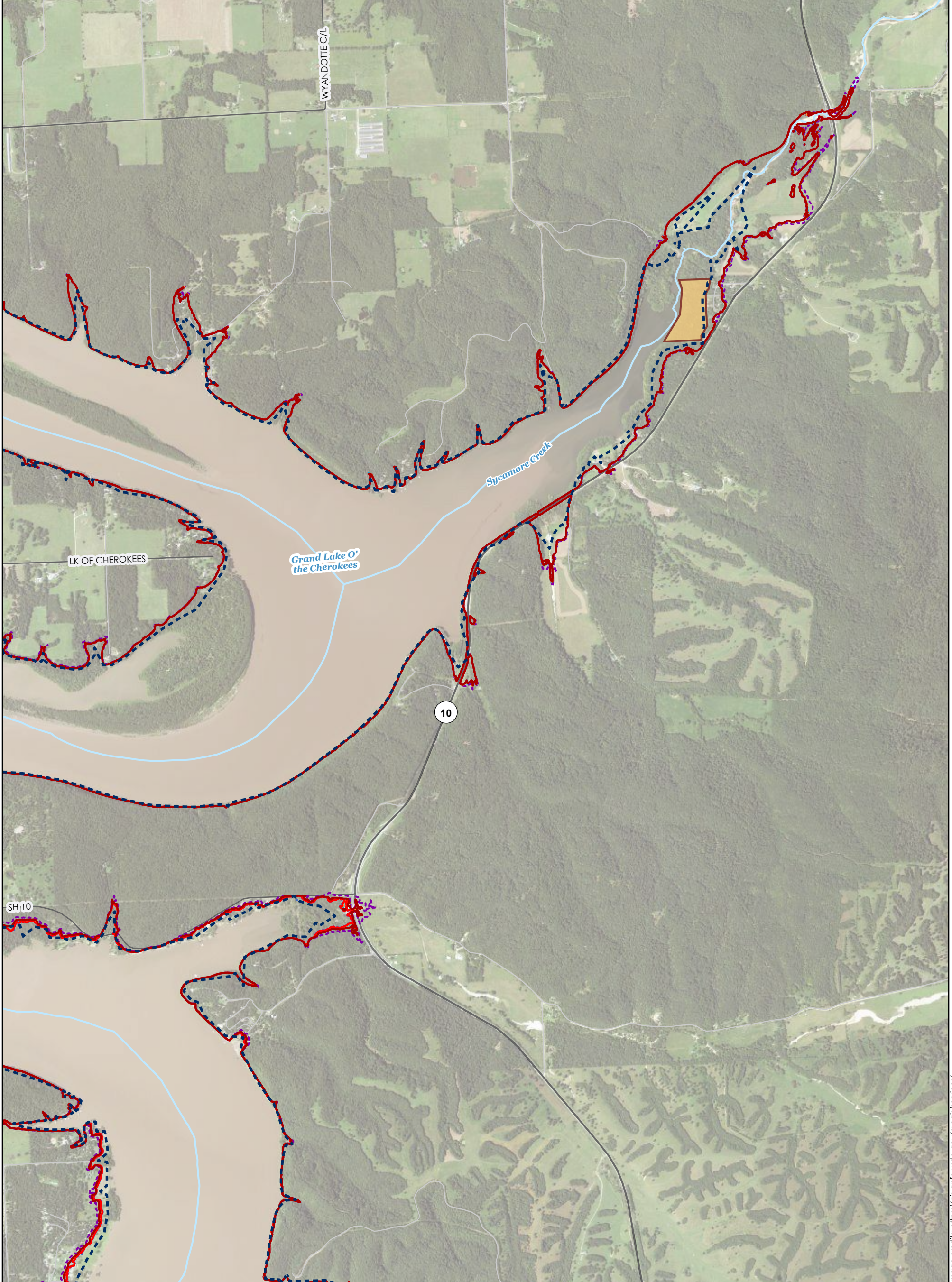
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: D5

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

C5

C6



D5

LK OF CHEROKEES

Grand Lake O' the Cherokees

Sycamore Creek

10

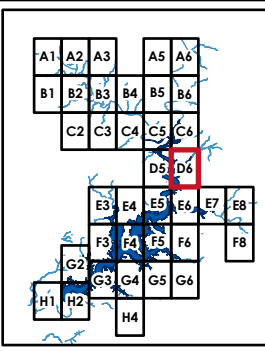
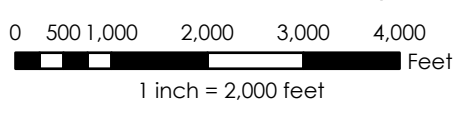
SH 10

E5

E6

E7

100-YEAR INUNDATION SCENARIO



- 100-YEAR MAX INUNDATION**
- 757 ft PD
 - 745 ft PD
 - 744 ft PD
 - 743 ft PD
 - 742 ft PD
 - 740 ft PD
 - 734 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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