

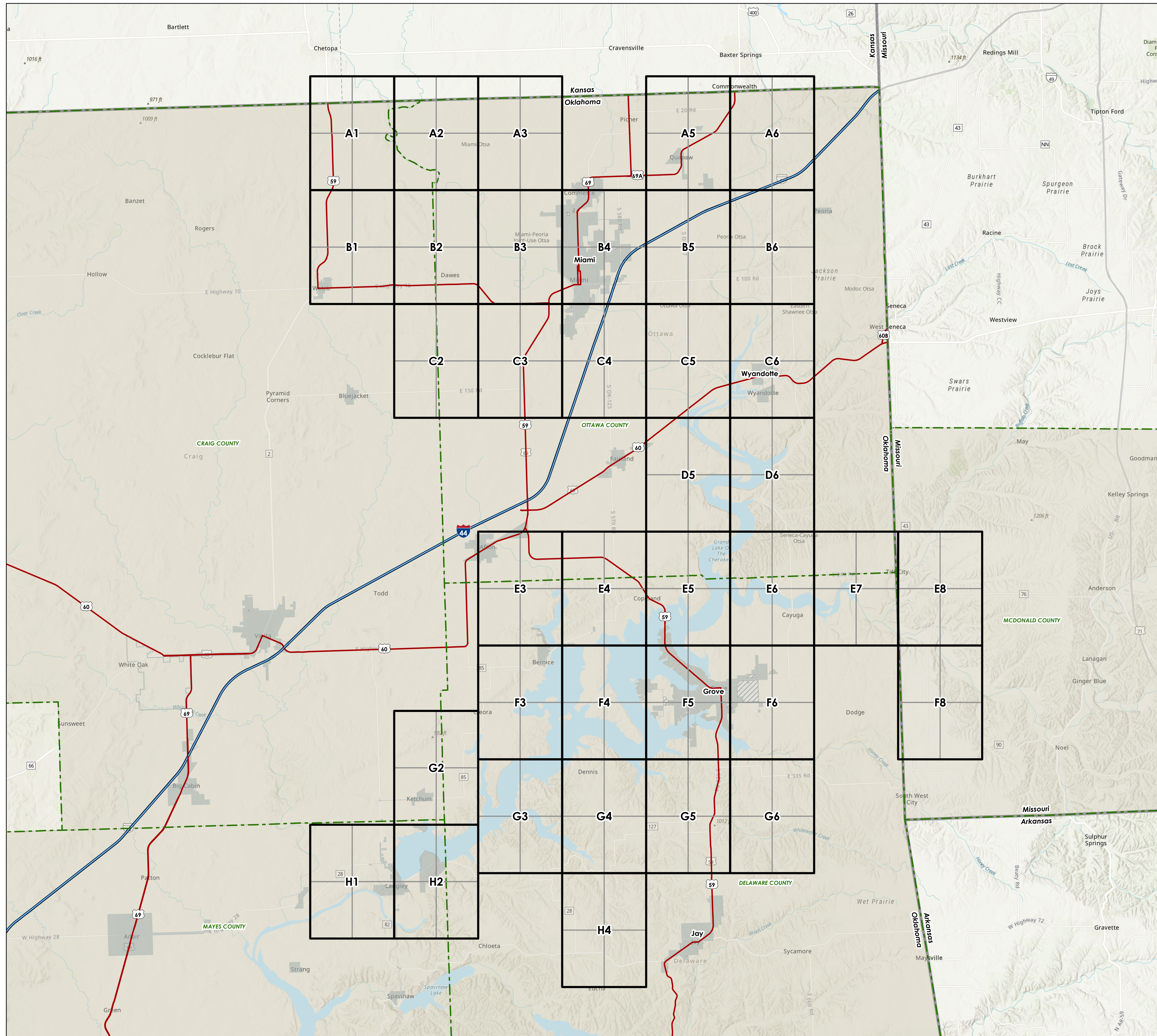


APPENDIX F.2:
JUNE 2004 EVENT INUNDATION MAPS



Upstream Model Results Overview Map

Pensacola Dam
 GRAND RIVER DAM AUTHORITY
 September 2021

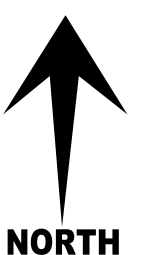
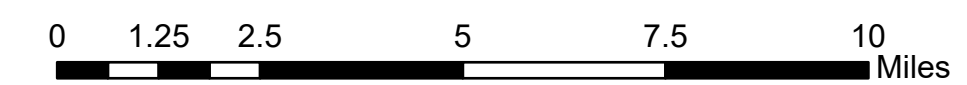
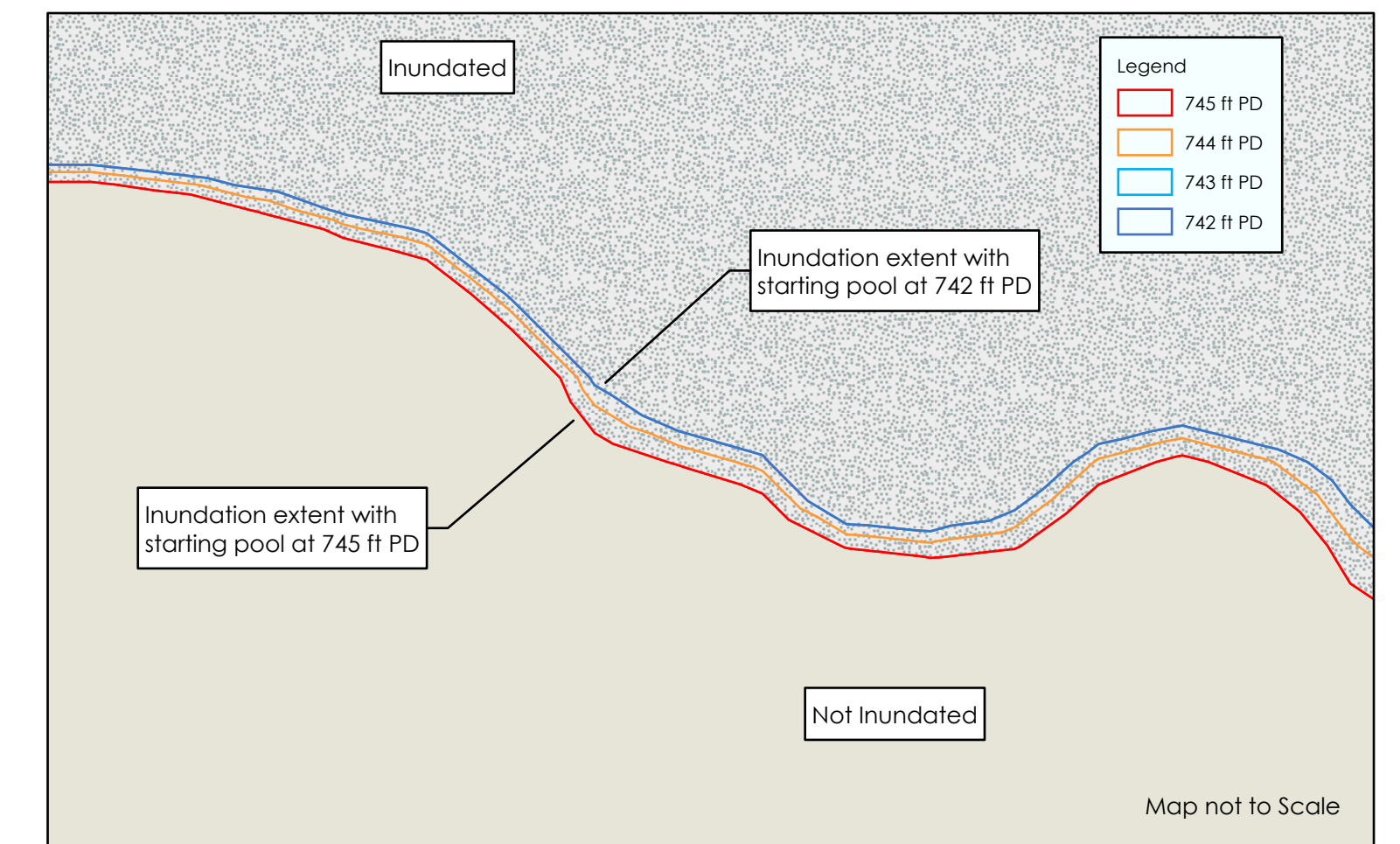


Overview Map Legend

- 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:

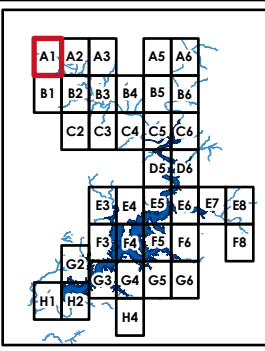
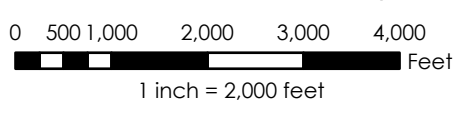
1. Base map images from https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019
2. Transportation network (major roads, local roads, and railroads) and county boundaries obtained from the Oklahoma Office of Geographic Information (<http://okmaps.org/cgi/search.aspx>).
3. Parcels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



A2

B1 B2

JUNE 2004 INUNDATION SCENARIO



- JUNE 2004 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

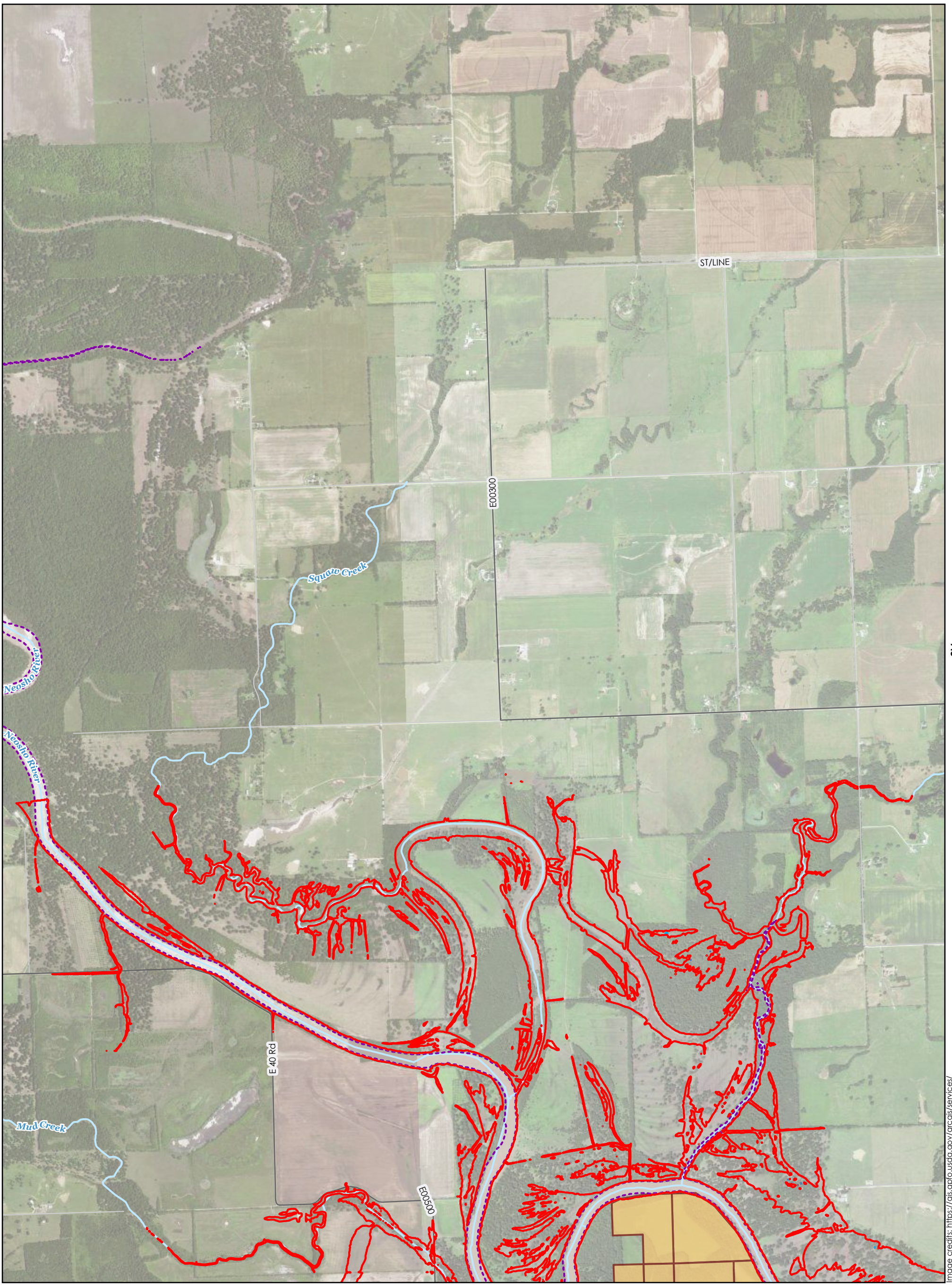
- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- Railroad
 - Stream
 - Flowage Easements
 - Project Boundary
 - GRDA Ownership

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: A1

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

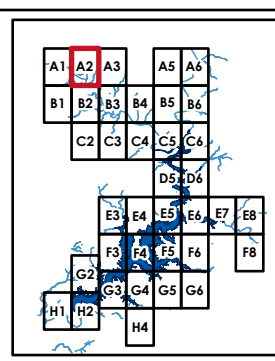


JUNE 2004 INUNDATION SCENARIO

NORTH

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

1 inch = 2,000 feet



JUNE 2004 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.

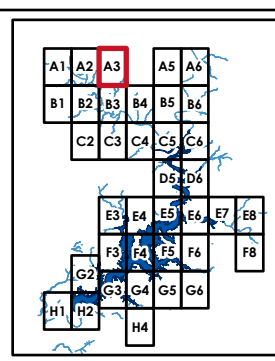
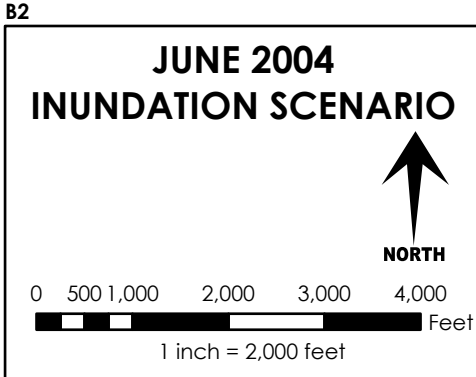
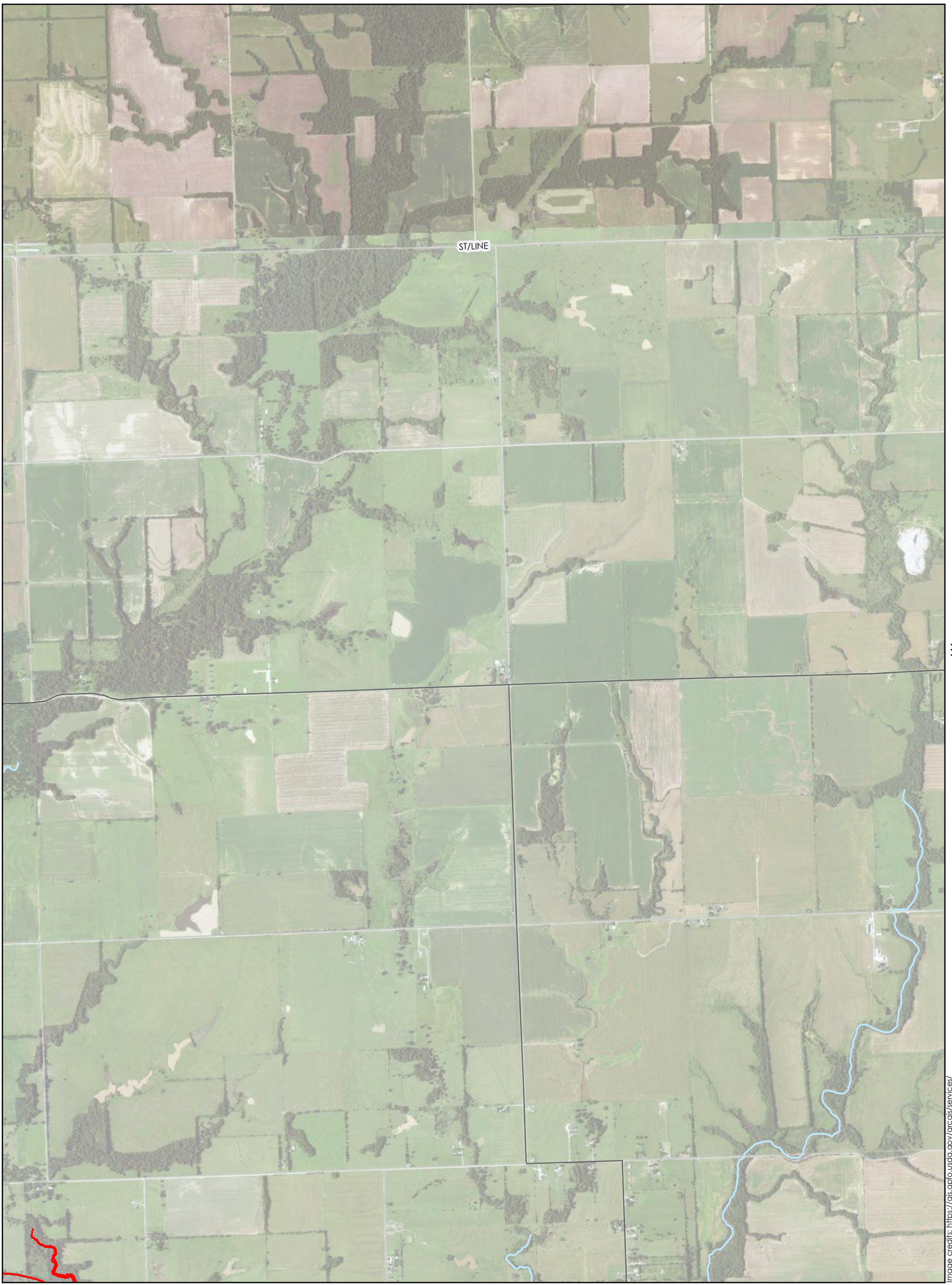
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: 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



JUNE 2004 MAX INUNDATION

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

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.

Legend

ROAD CLASS

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

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

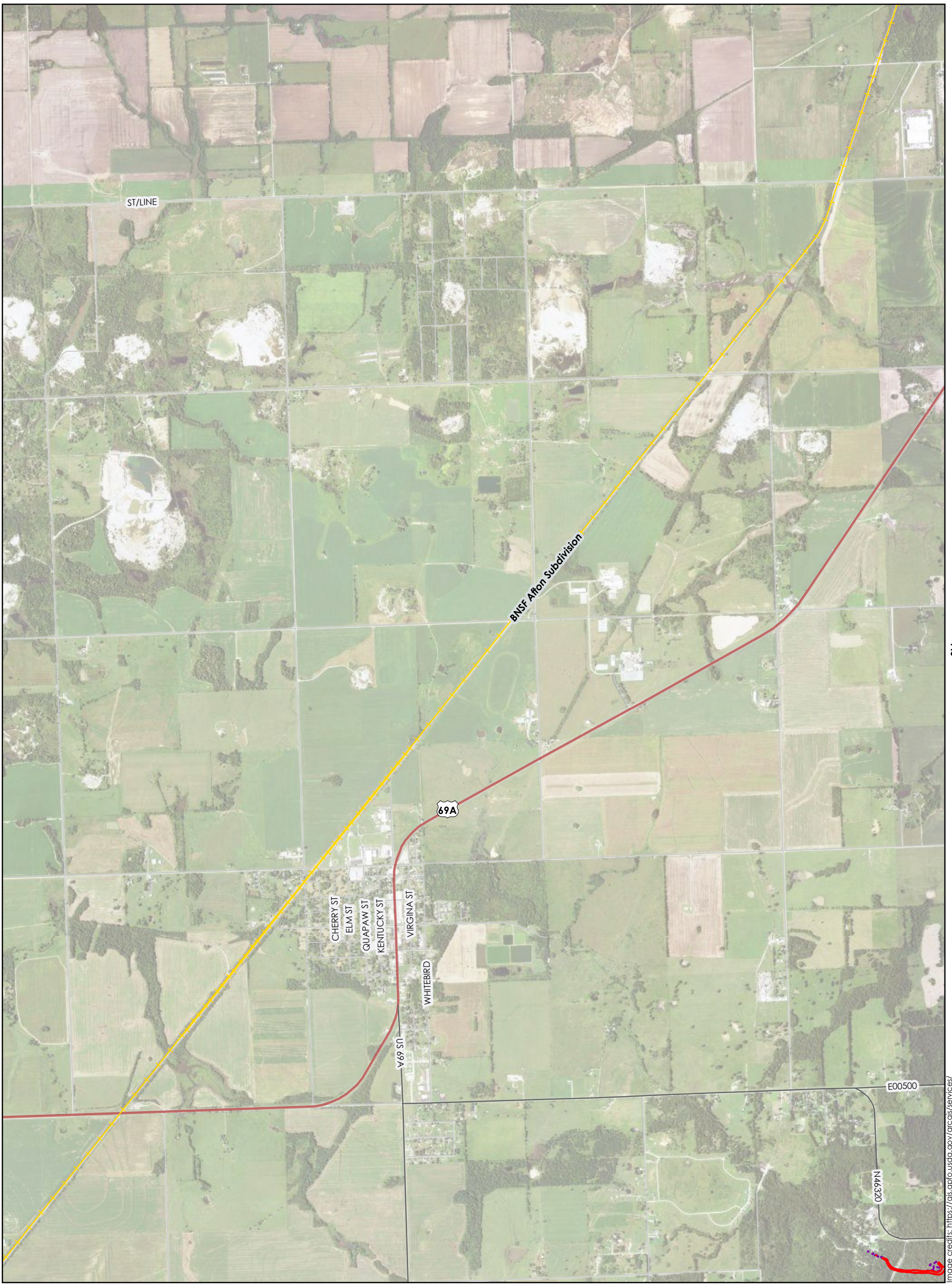
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: A3

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

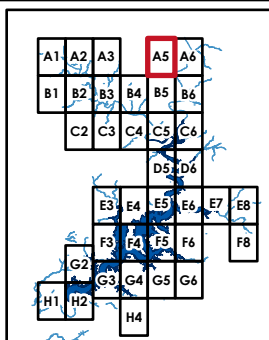
Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019



JUNE 2004 INUNDATION SCENARIO



0 500 1,000 2,000 3,000 4,000 Feet
1 inch = 2,000 feet



JUNE 2004 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

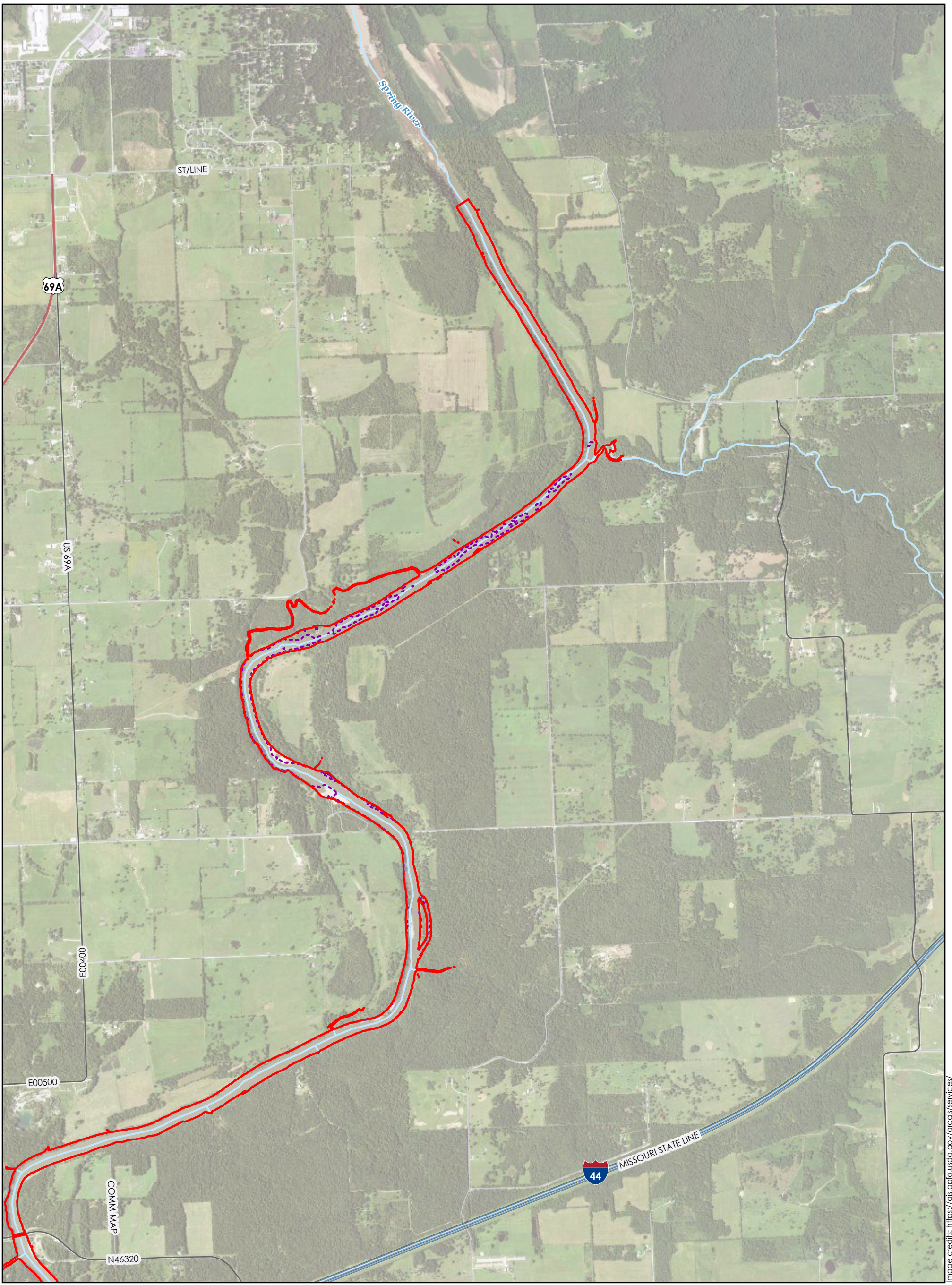
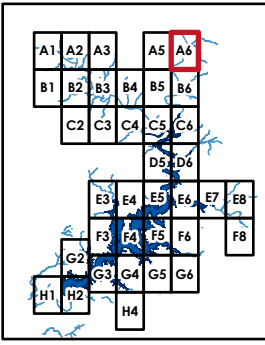
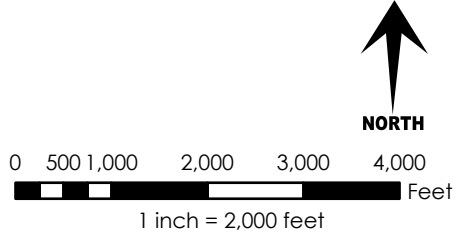


Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

JUNE 2004 INUNDATION SCENARIO



JUNE 2004 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

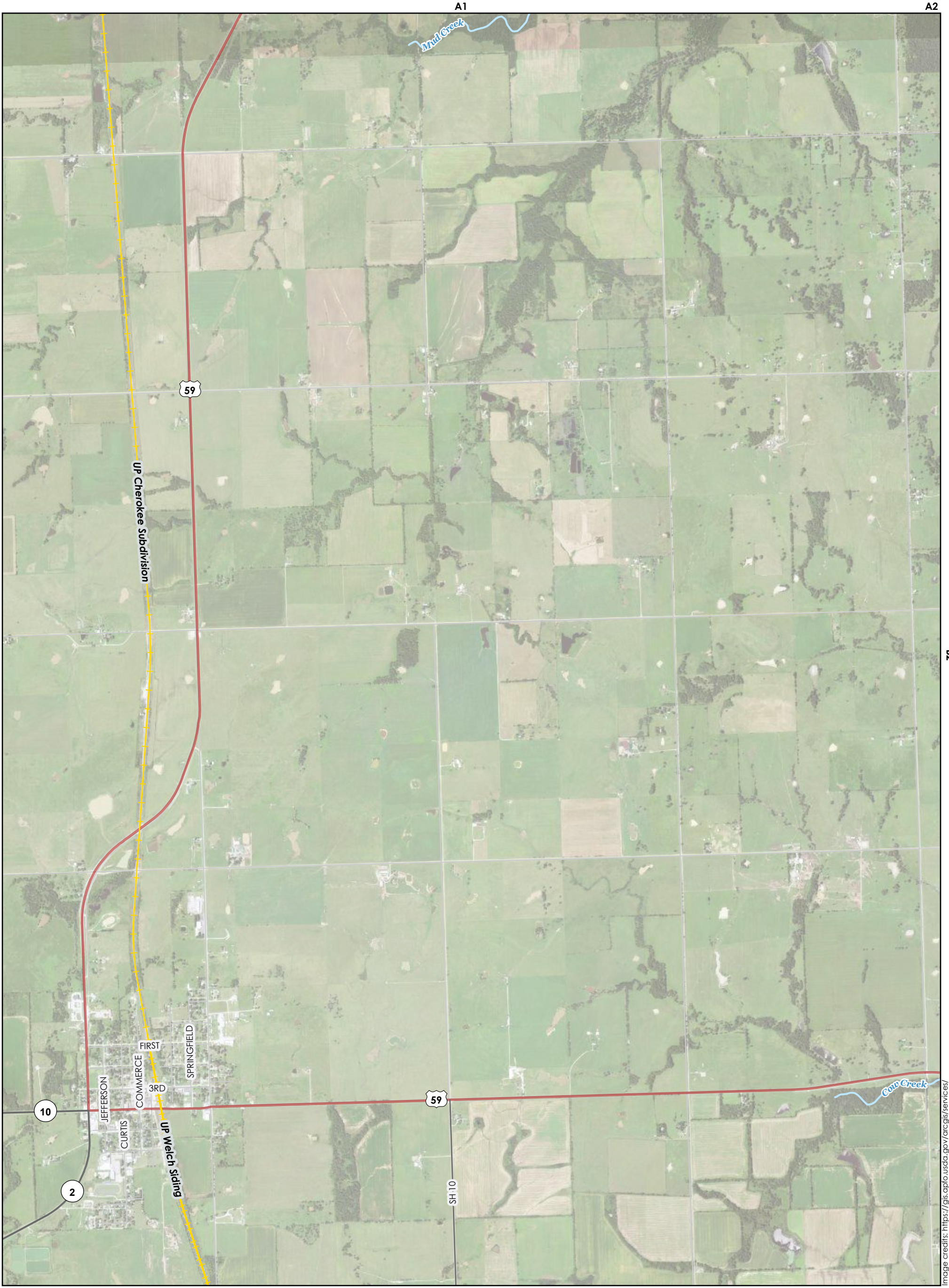
- For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
- See Overview Map for notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

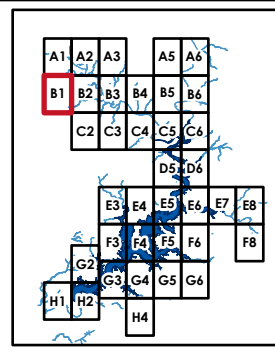
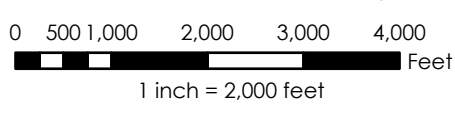
MAP: A6

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021



JUNE 2004 INUNDATION SCENARIO



- JUNE 2004 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

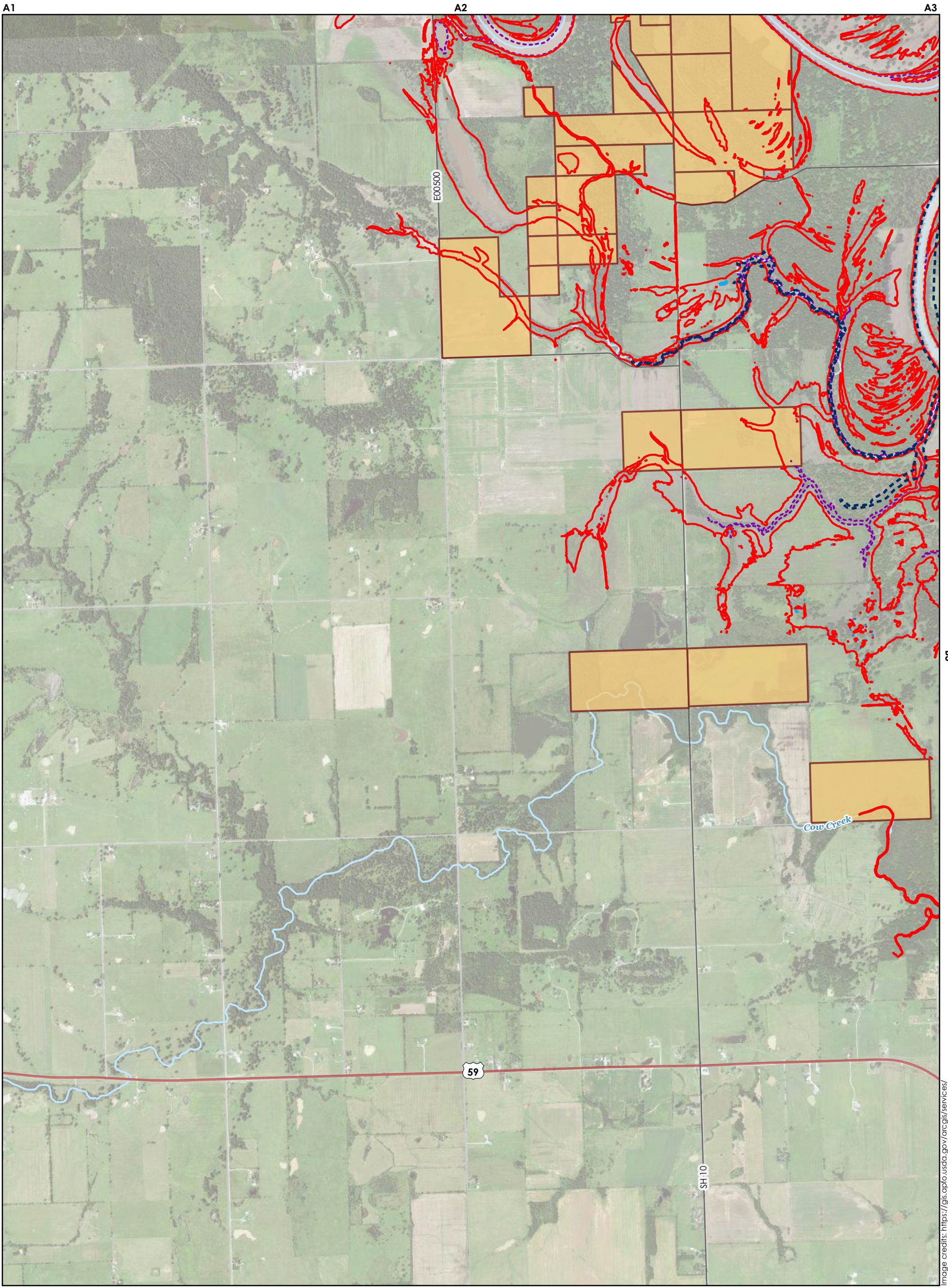
- For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
- See Overview Map for notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

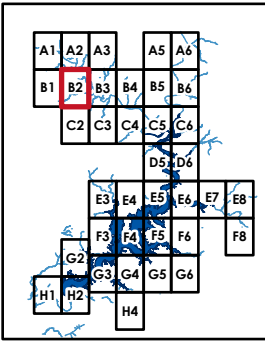
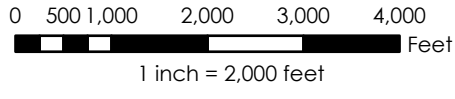
MAP: B1

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

A1 A2 B2 C1 C2
Image credits: https://gis.dplfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019



**JUNE 2004
INUNDATION SCENARIO**



- JUNE 2004 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
- Legend**
- ▬ Railroad
 - ▬ Stream
 - ▬ Flowage Easements
 - ▬ Project Boundary
 - ▬ GRDA Ownership

MAP NOTES

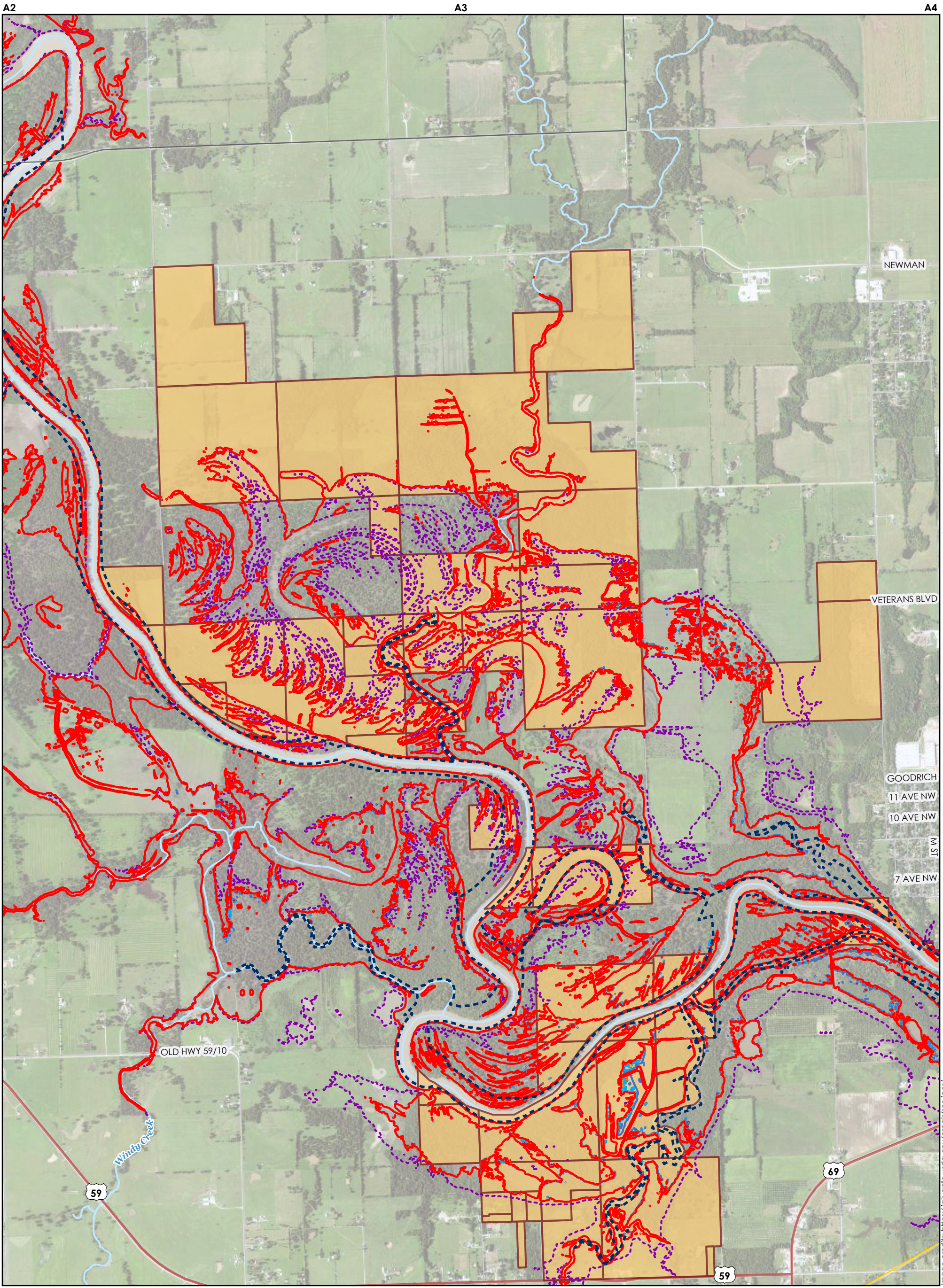
1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
2. See Overview Map for notes on data sources.

**PENSACOLA DAM
GRAND RIVER DAM AUTHORITY**

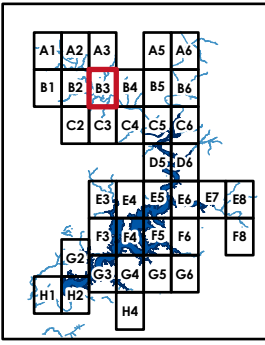
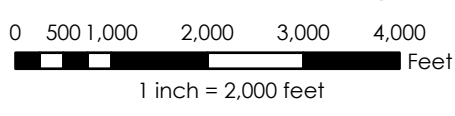
MAP: B2

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



JUNE 2004 INUNDATION SCENARIO



JUNE 2004 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

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

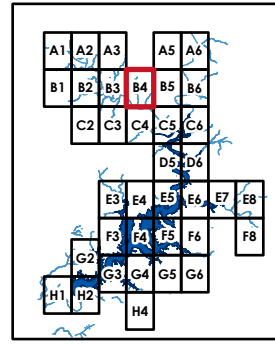
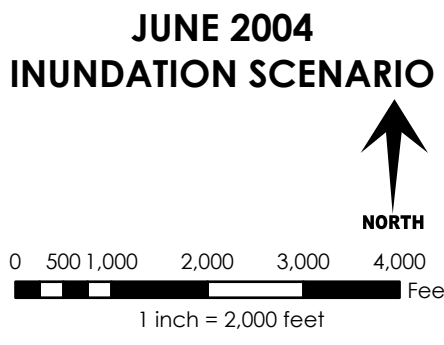
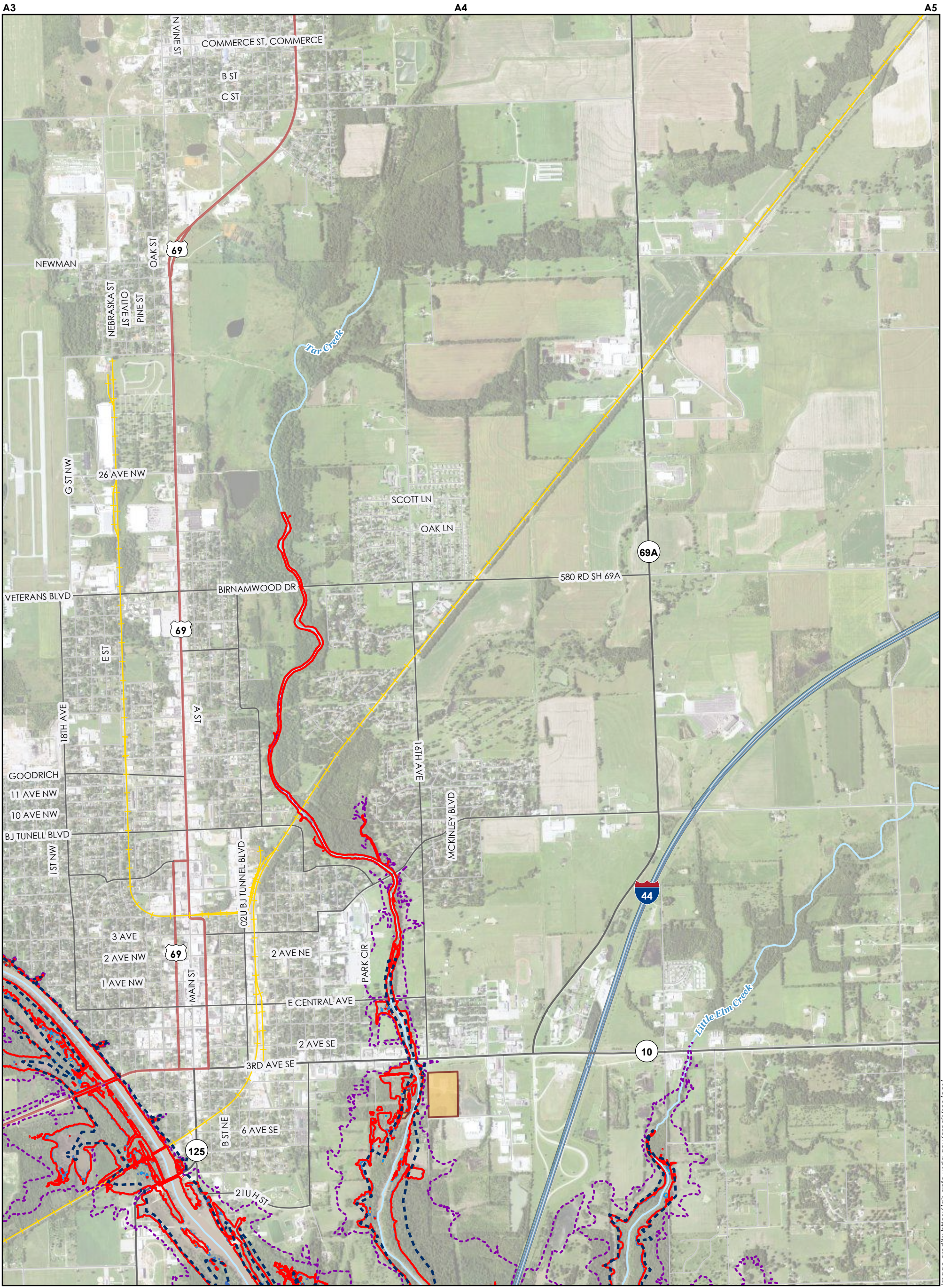
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

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



- #### Legend
- | | | | |
|---------------------------------|-----------------|------------------|-------------------|
| JUNE 2004 MAX INUNDATION | 745 ft PD | Interstate | Railroad |
| 744 ft PD | State Highway | Stream | Flowage Easements |
| 743 ft PD | US Highway | Project Boundary | GRDA Ownership |
| 742 ft PD | Major Collector | Local Road | |
- 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

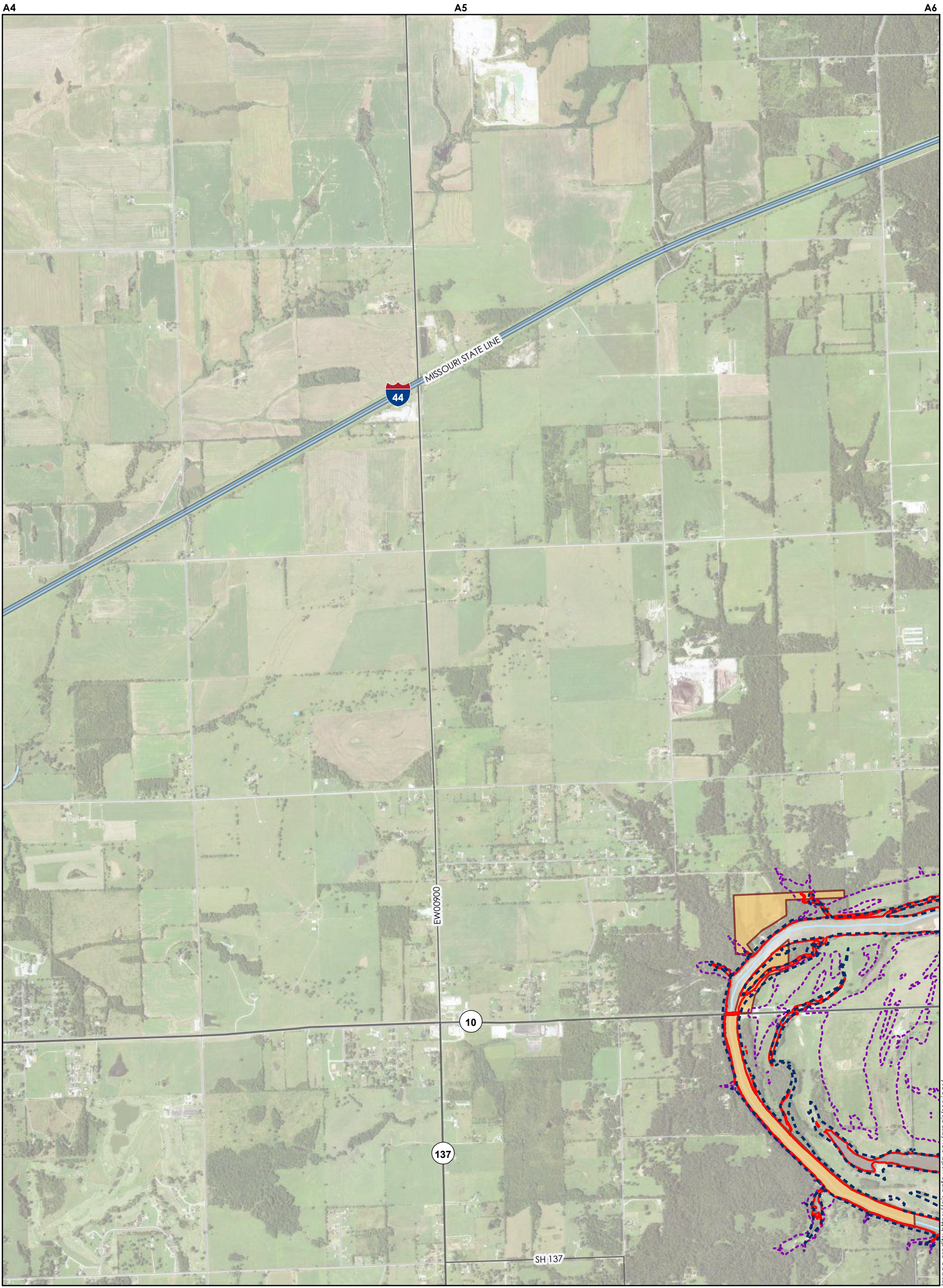
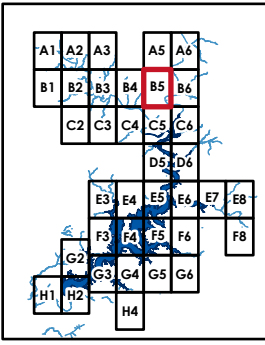
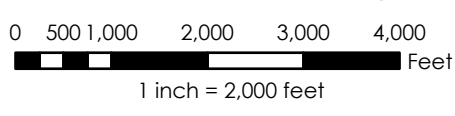


Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

JUNE 2004 INUNDATION SCENARIO



JUNE 2004 MAX INUNDATION

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

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.

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: B5

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

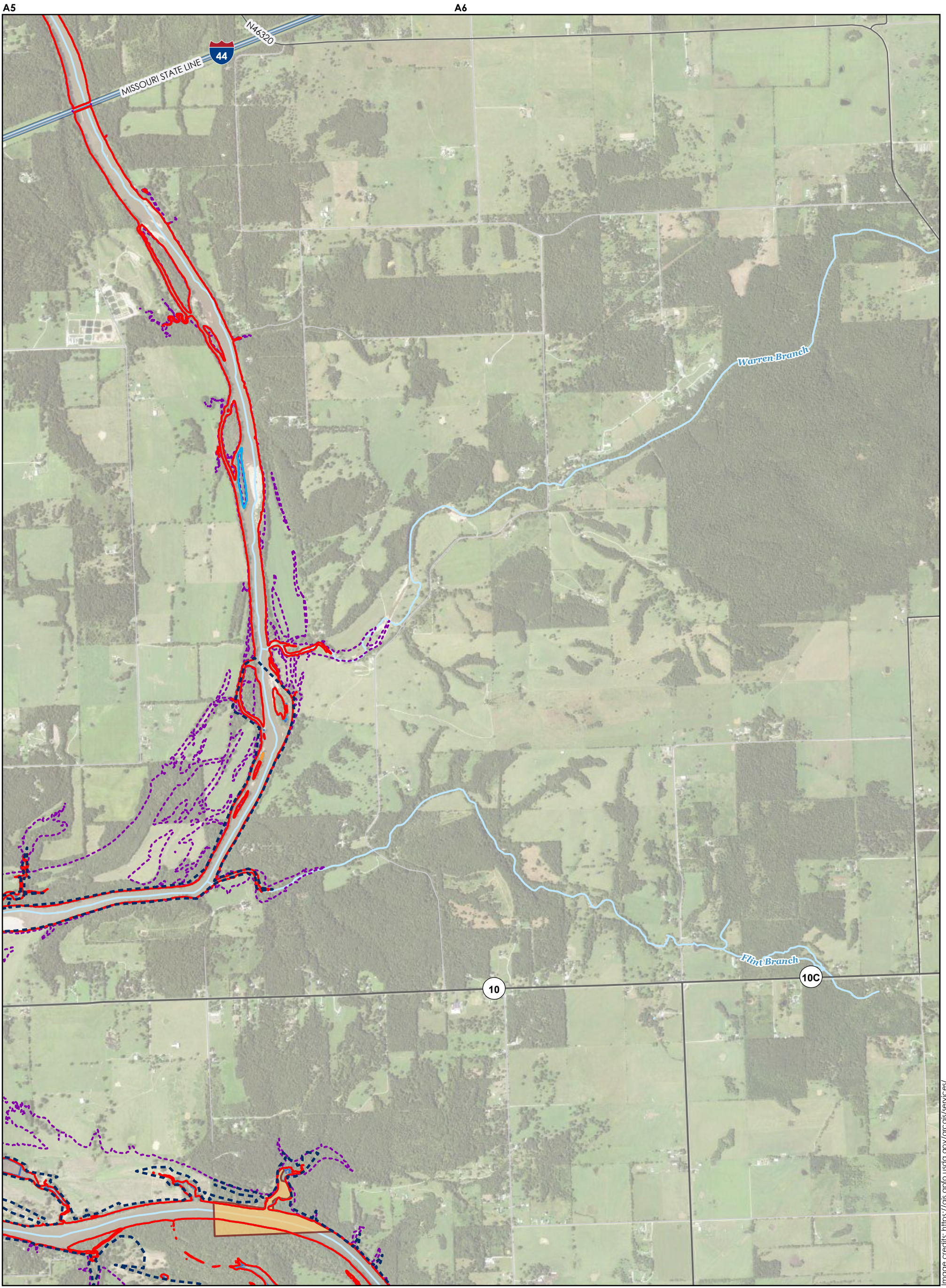
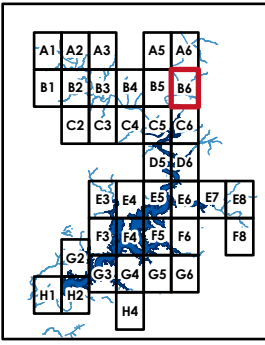
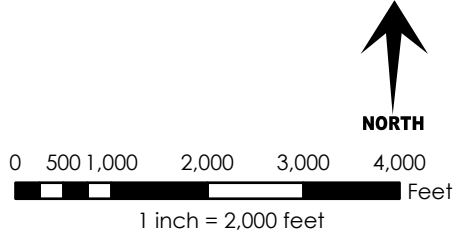


Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

JUNE 2004 INUNDATION SCENARIO



- JUNE 2004 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: B6

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

B1

B2

B3

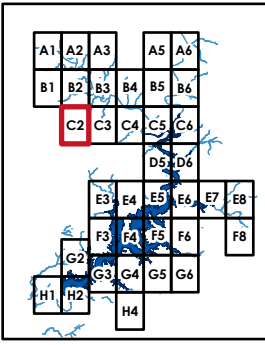
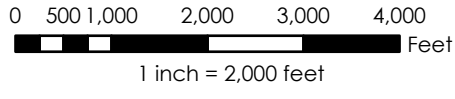


D1

D2

D3

**JUNE 2004
INUNDATION SCENARIO**



**JUNE 2004 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

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

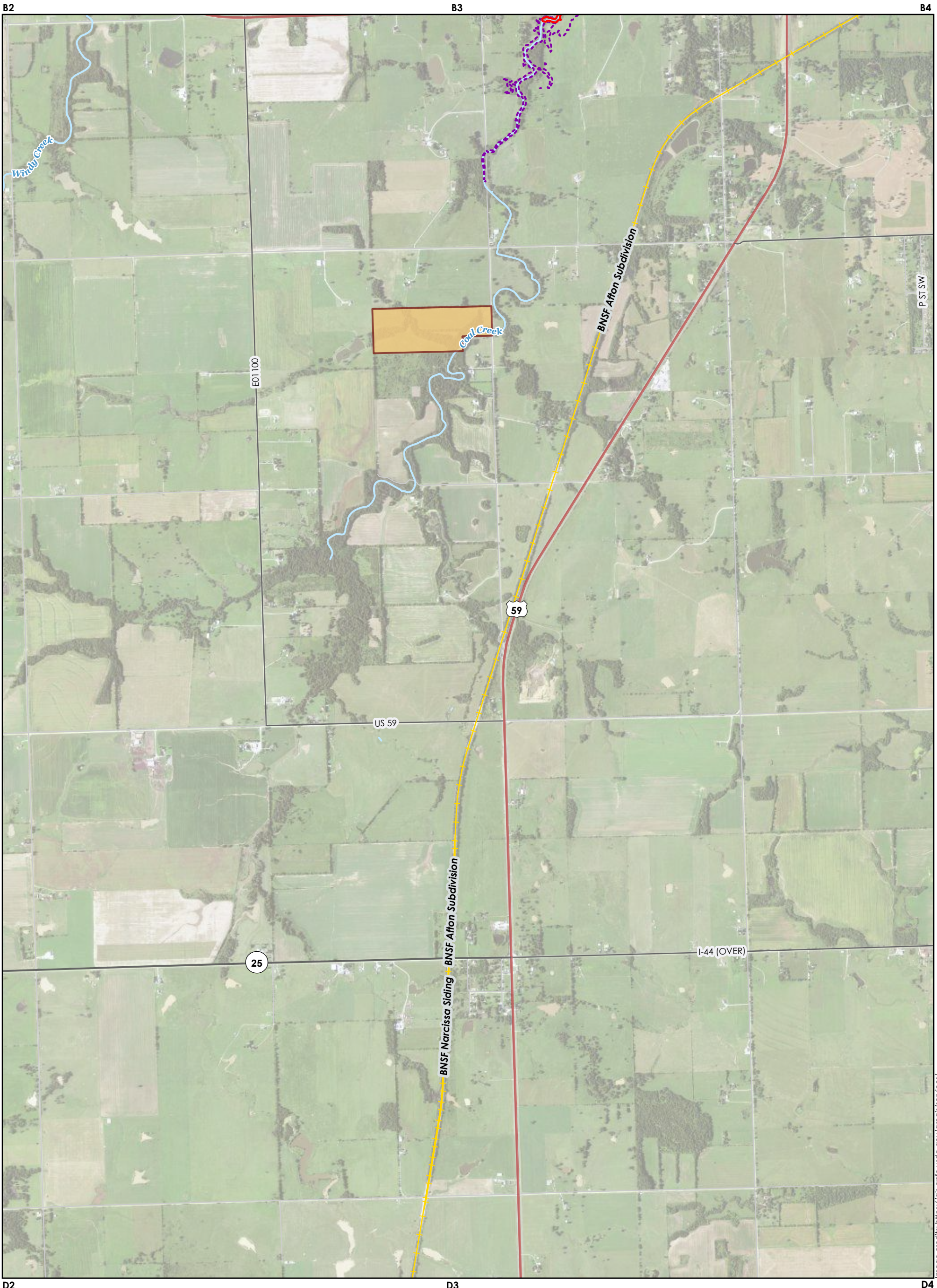
**PENSACOLA DAM
GRAND RIVER DAM AUTHORITY**

MAP: C2

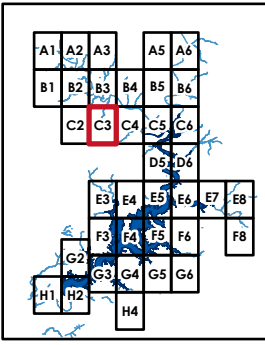
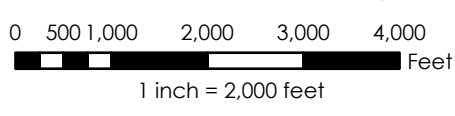
CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

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



JUNE 2004 INUNDATION SCENARIO



- JUNE 2004 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

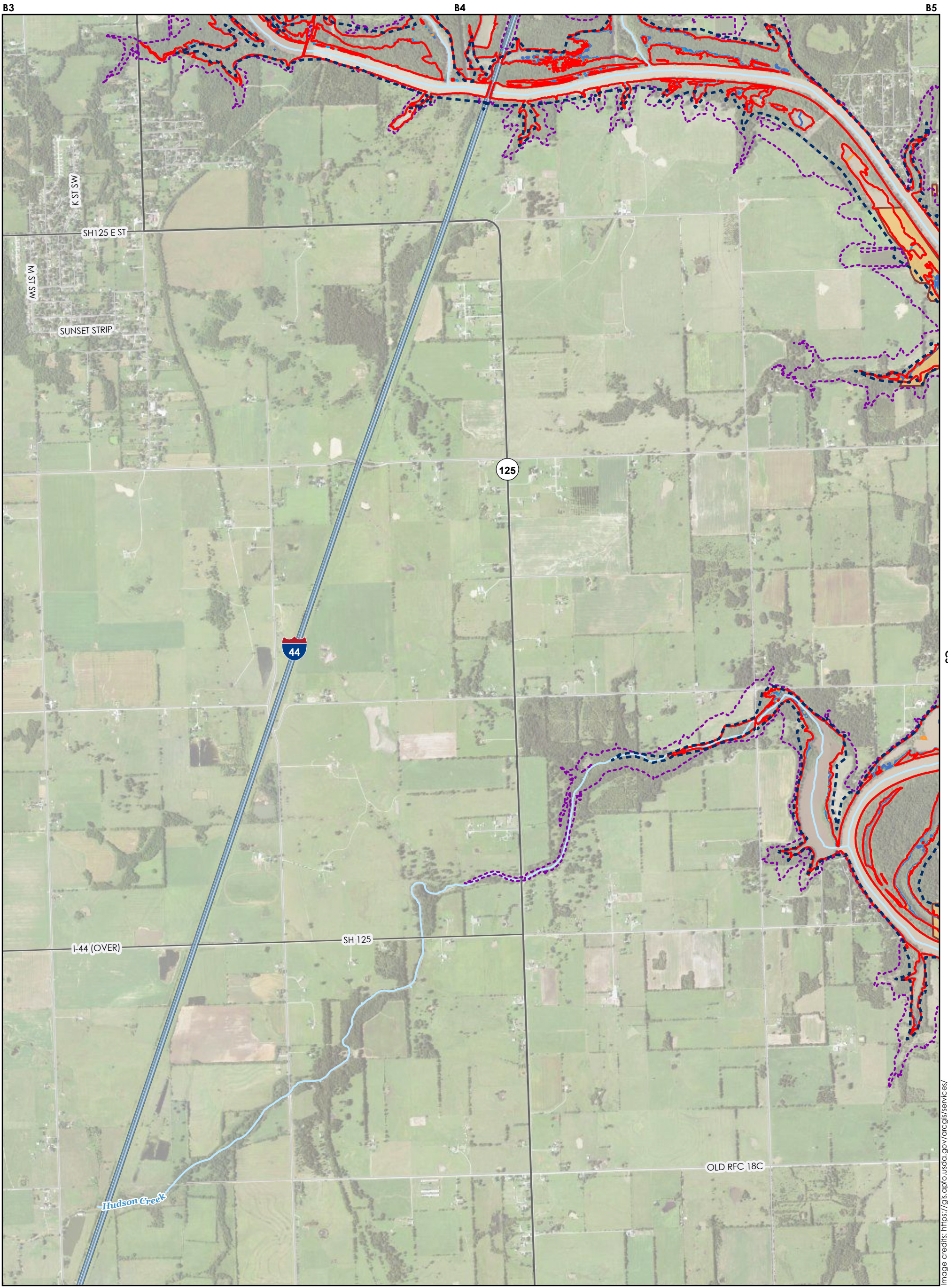
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C3

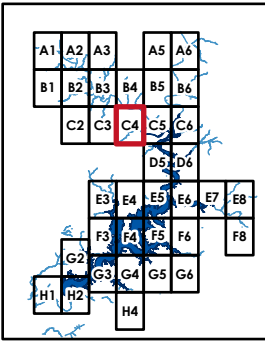
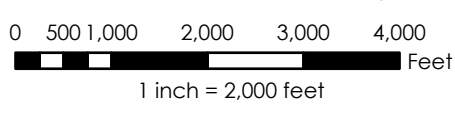
CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2021

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



JUNE 2004 INUNDATION SCENARIO



- JUNE 2004 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

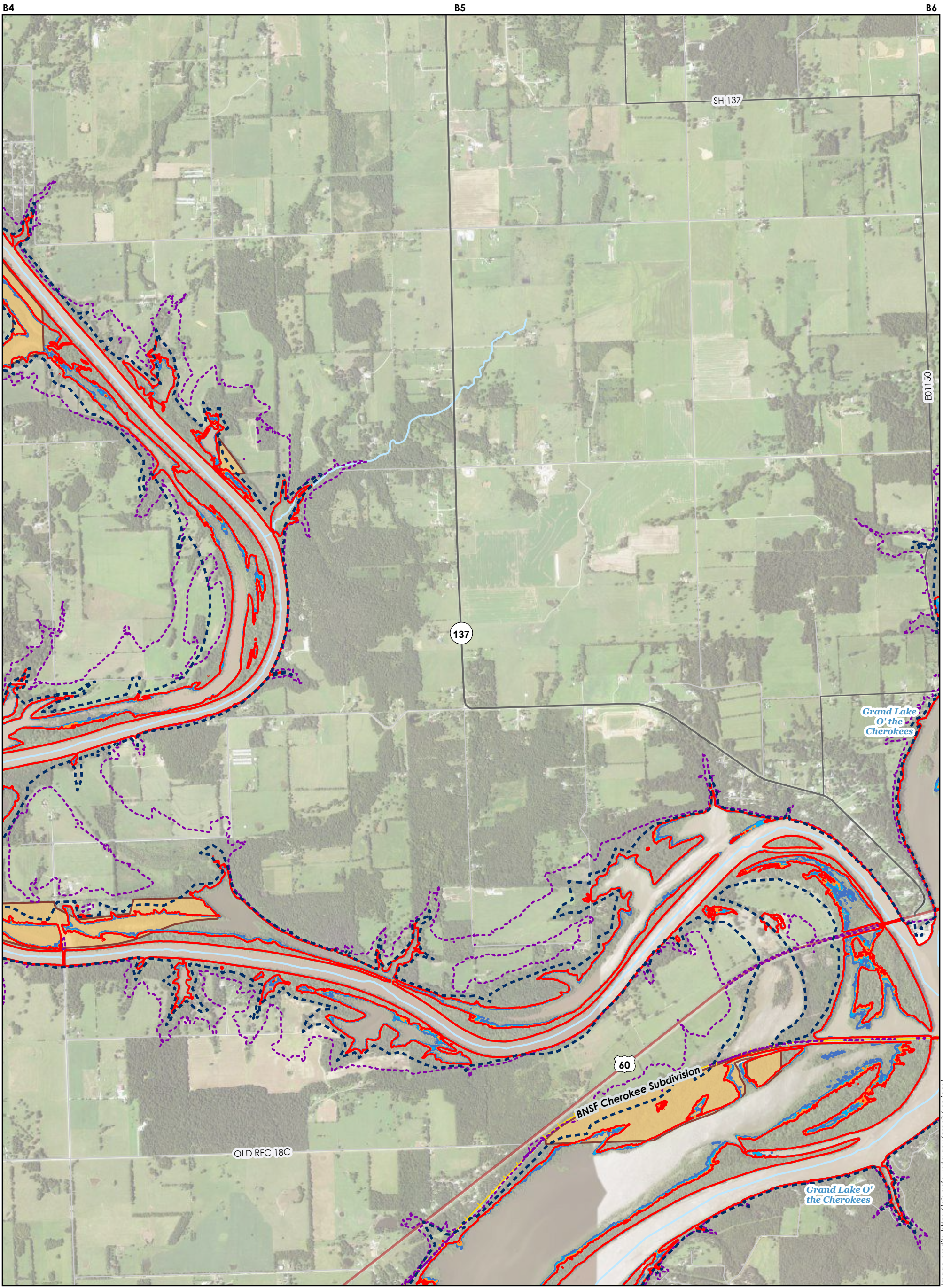
- ROAD CLASS**
- Interstate
 - State Highway
 - US Highway
 - Major Collector
 - Local Road
- Railroad
 - Stream
 - - - Flowage Easements
 - - - Project Boundary
 - GRDA Ownership

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

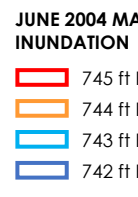
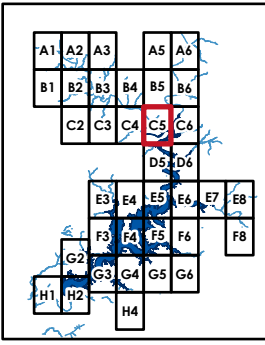
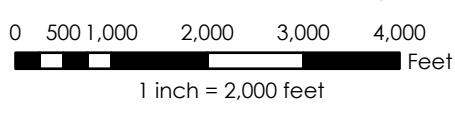
MAP: C4

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



JUNE 2004 INUNDATION SCENARIO



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

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

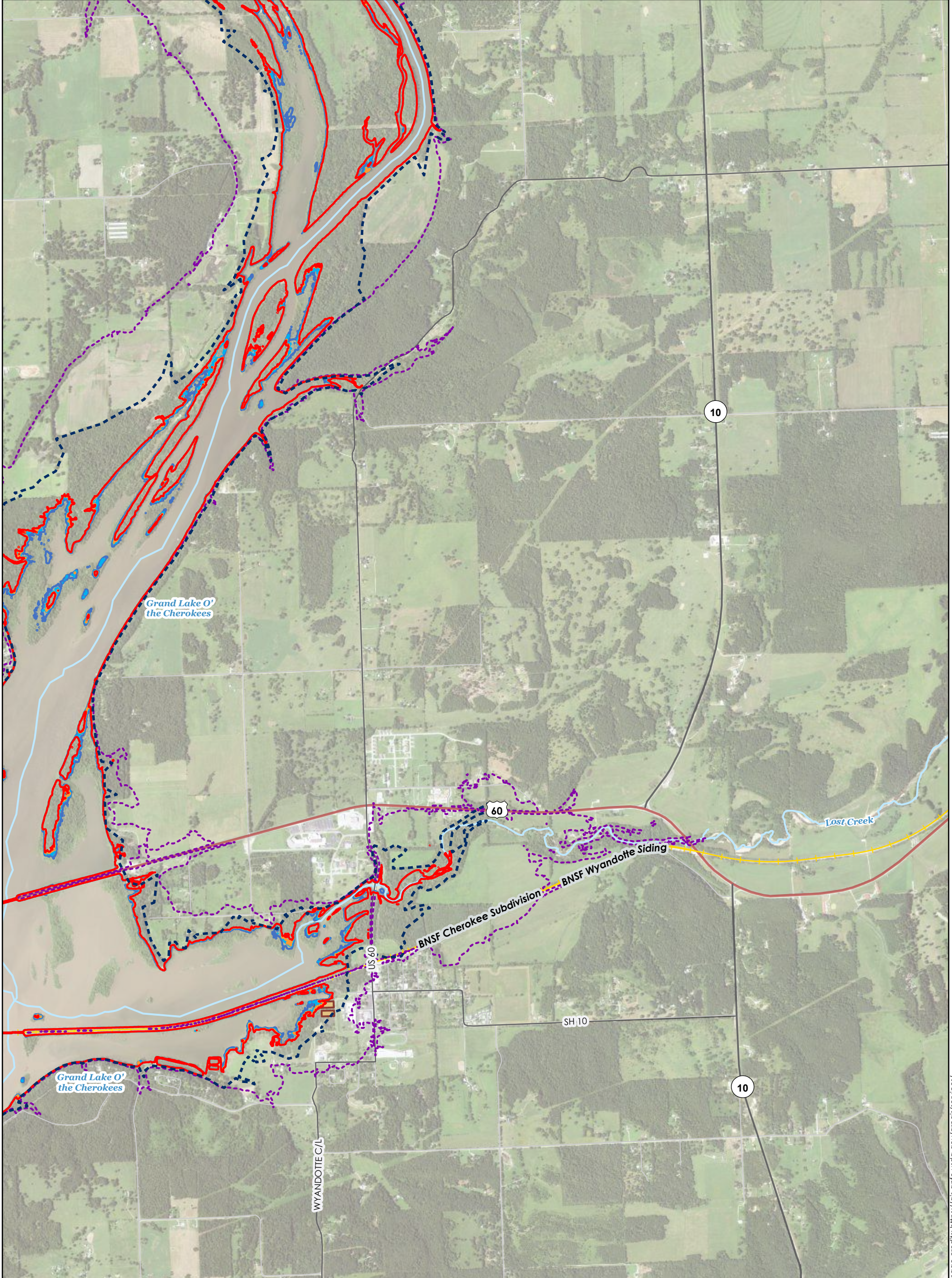
MAP: C5

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

B5

B6



C5

Grand Lake O' the Cherokees

Lost Creek

BNSF Cherokee Subdivision

BNSF Wyandotte Siding

60

10

SH 10

10

WYANDOTTE C/L

D5

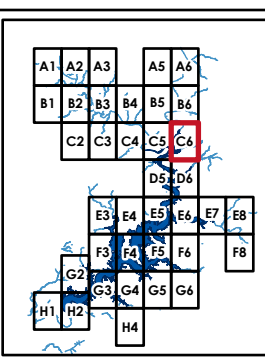
D6

JUNE 2004 INUNDATION SCENARIO

NORTH

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

1 inch = 2,000 feet



JUNE 2004 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.

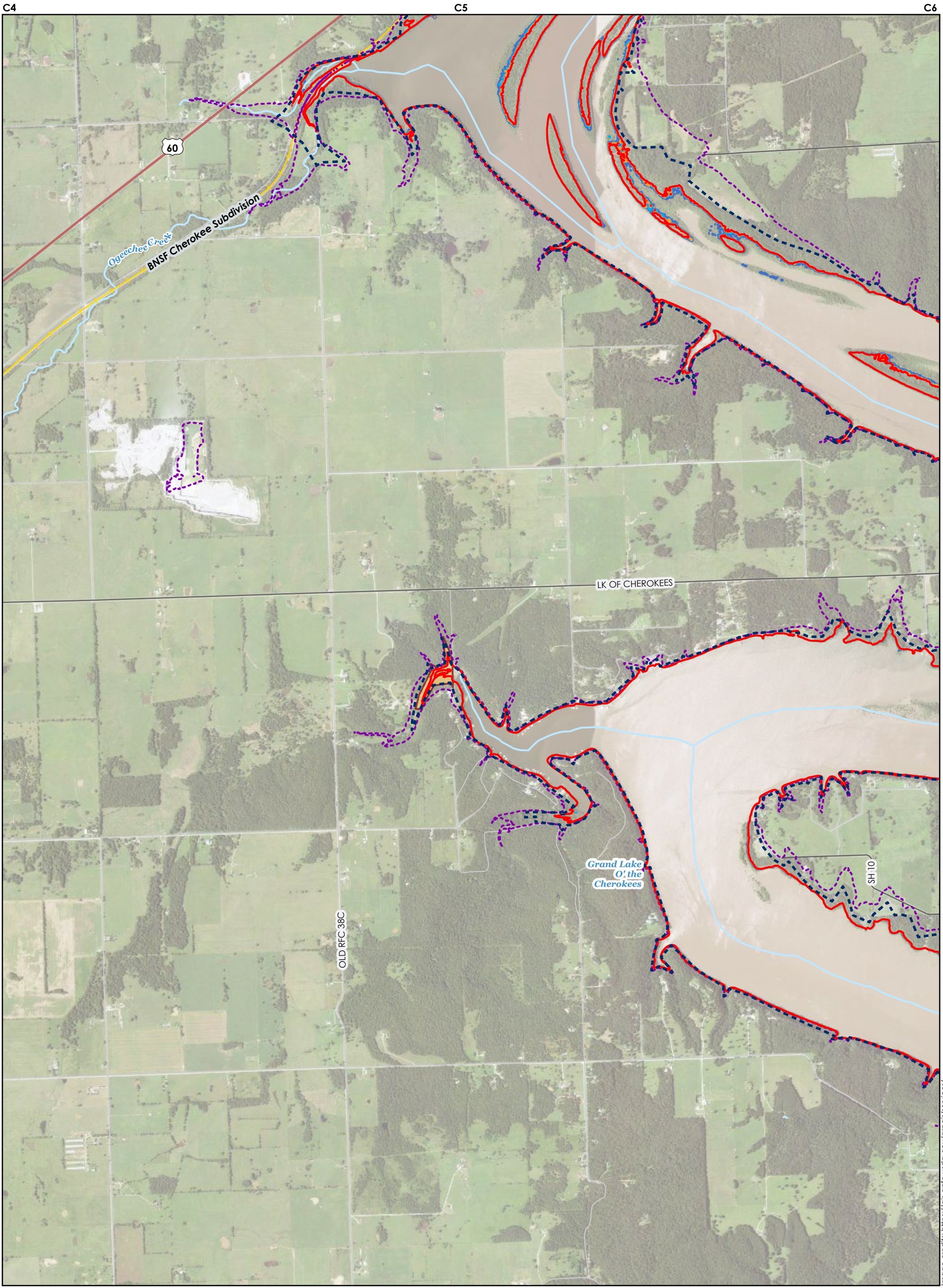
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

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September 2021

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

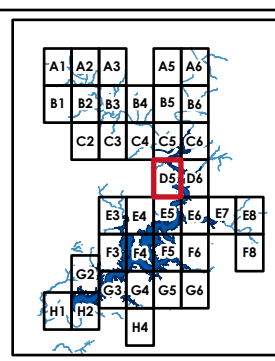


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PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: D5

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

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September 2021

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

C5

C6

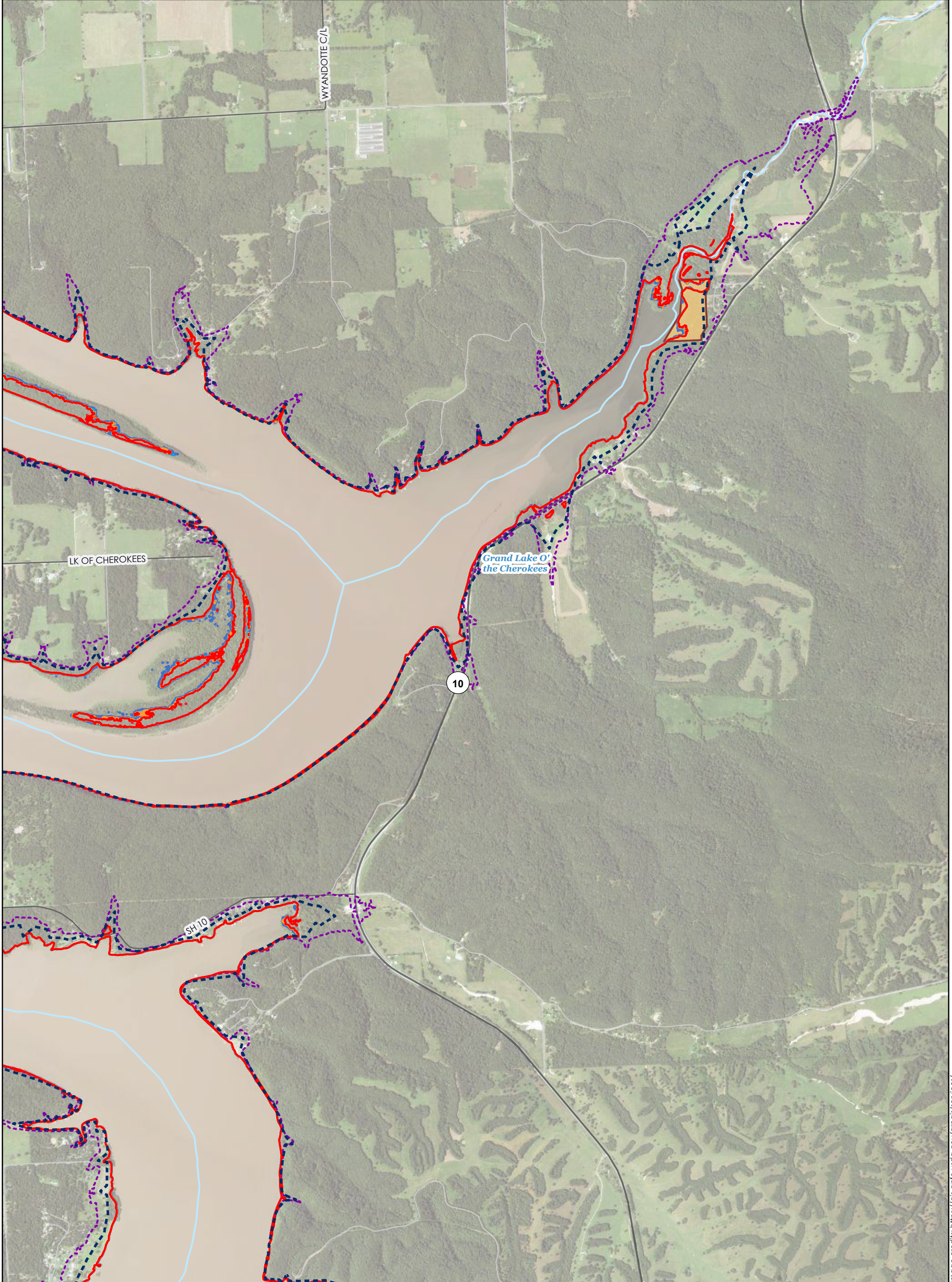


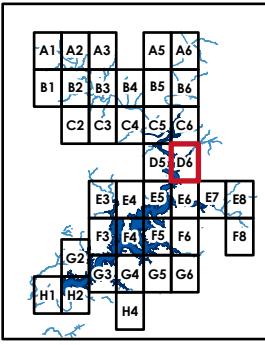
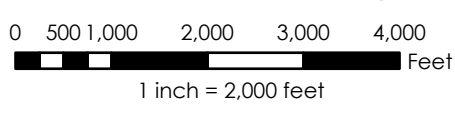
Image credits: https://gis.dplfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

E5

E6

E7

JUNE 2004 INUNDATION SCENARIO



- JUNE 2004 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
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PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: D6

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