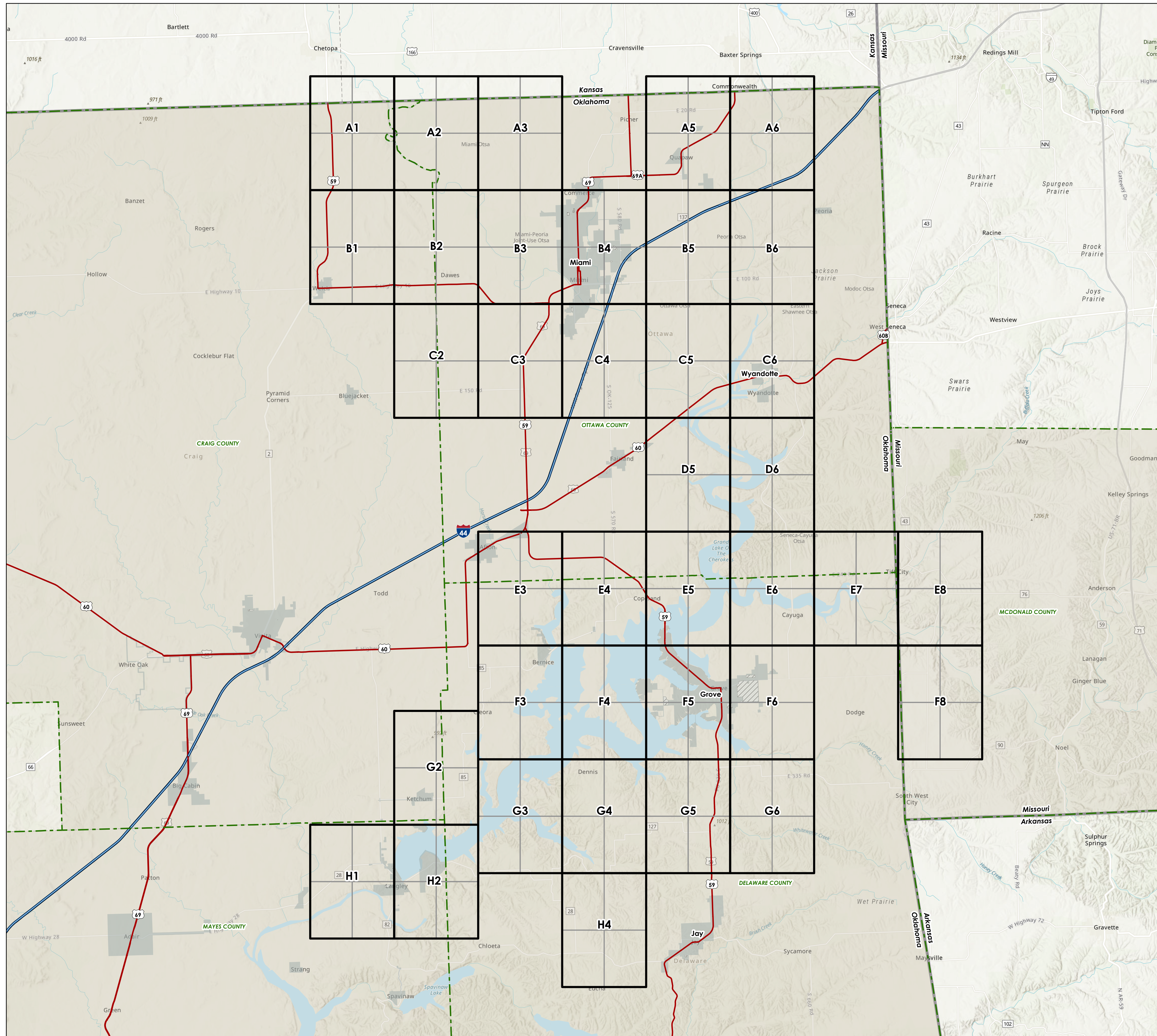


Upstream Model Results Overview Map

Pensacola Dam
GRAND RIVER DAM AUTHORITY
September 2022

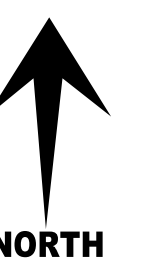
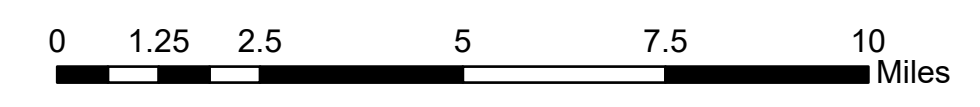
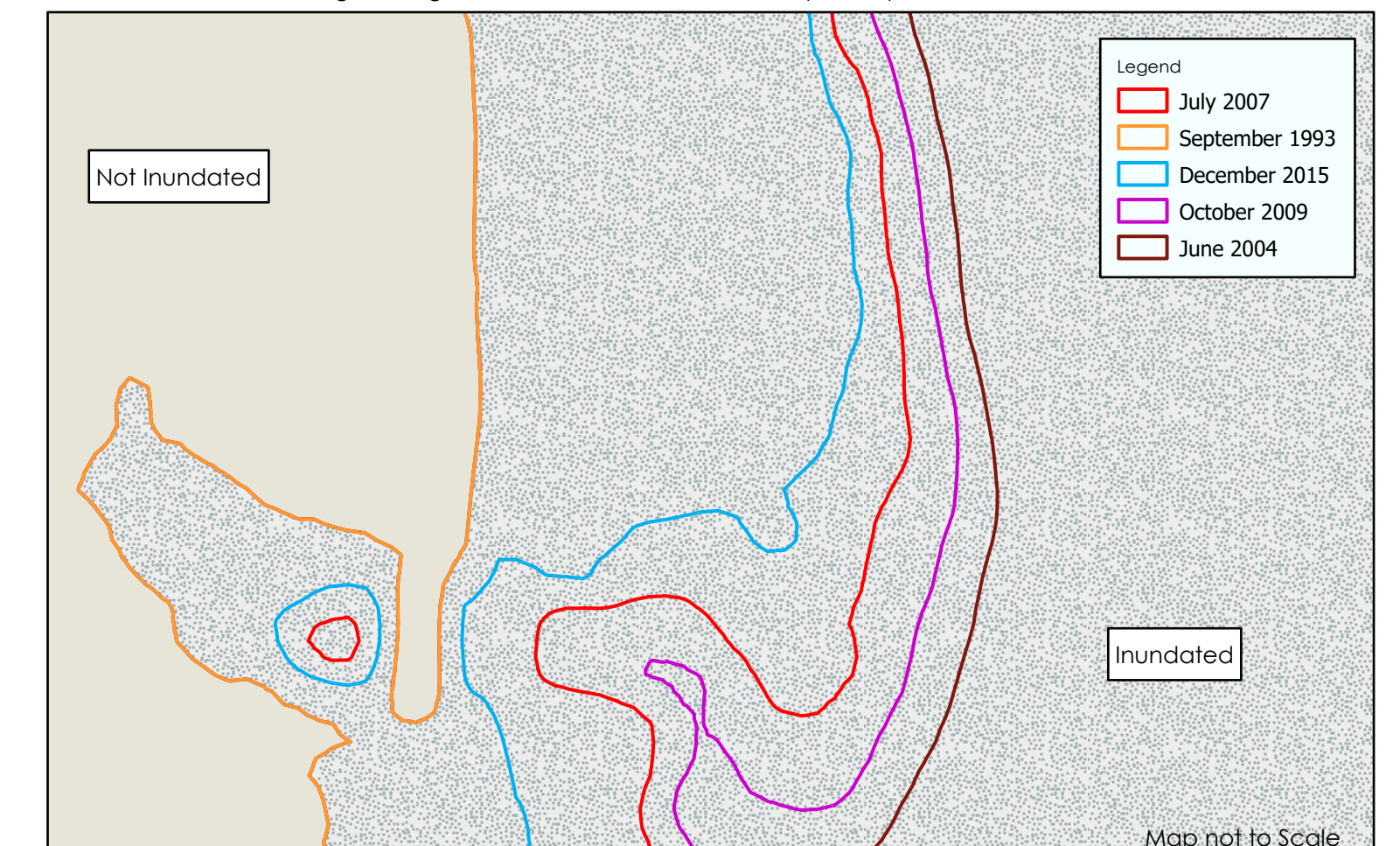


Overview Map Legend

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

Inundation Scenario Mapping

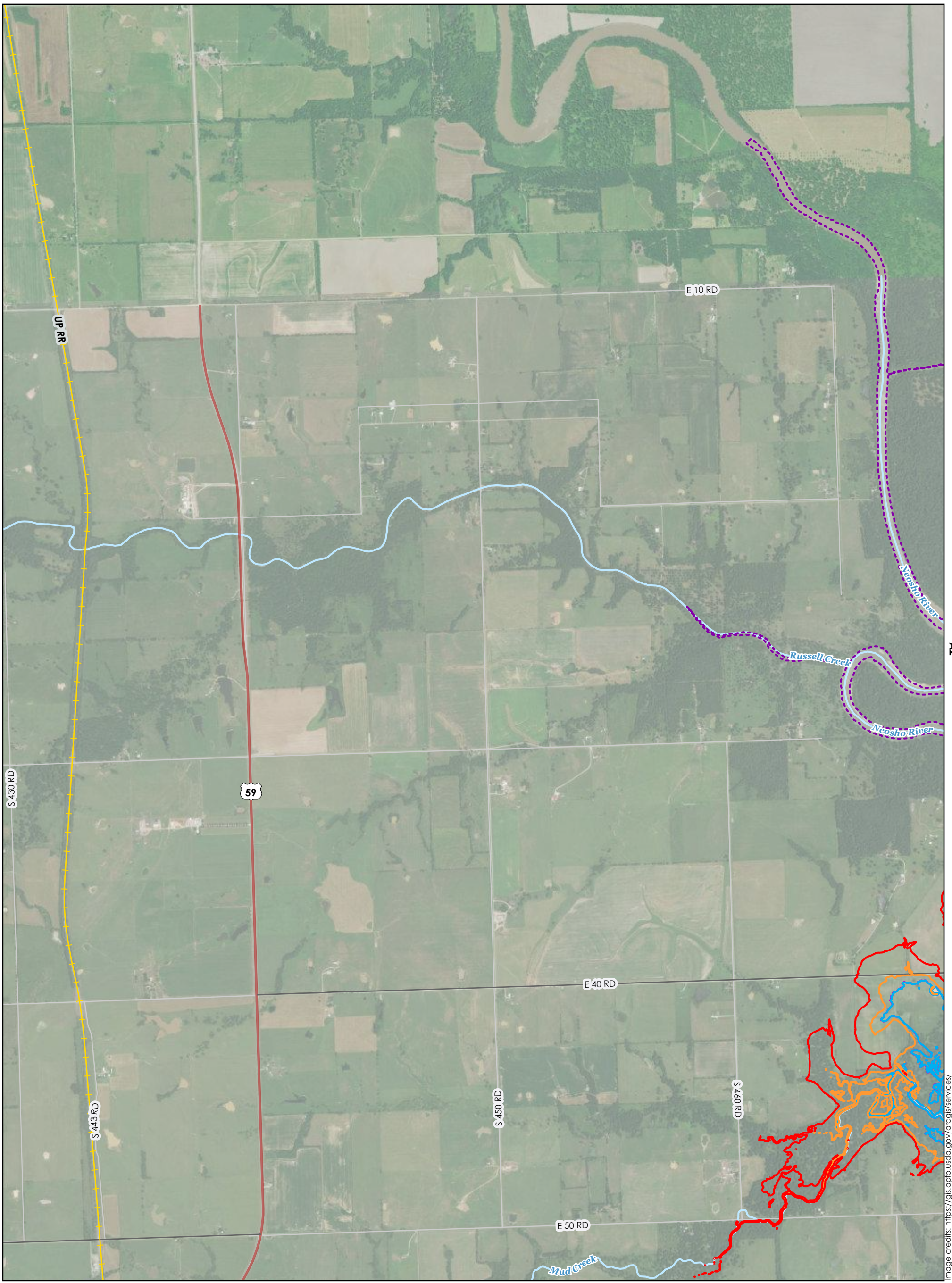
Mapping shows the extent of inundation for historical flow events, using the historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.



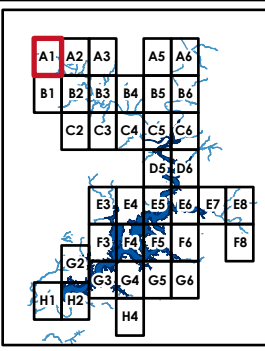
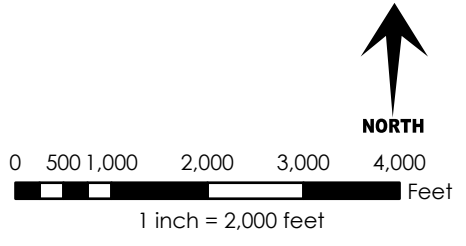
Map Notes

Data Sources for Maps:

1. Base map images from https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021
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.



HISTORICAL INUNDATION SCENARIOS



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

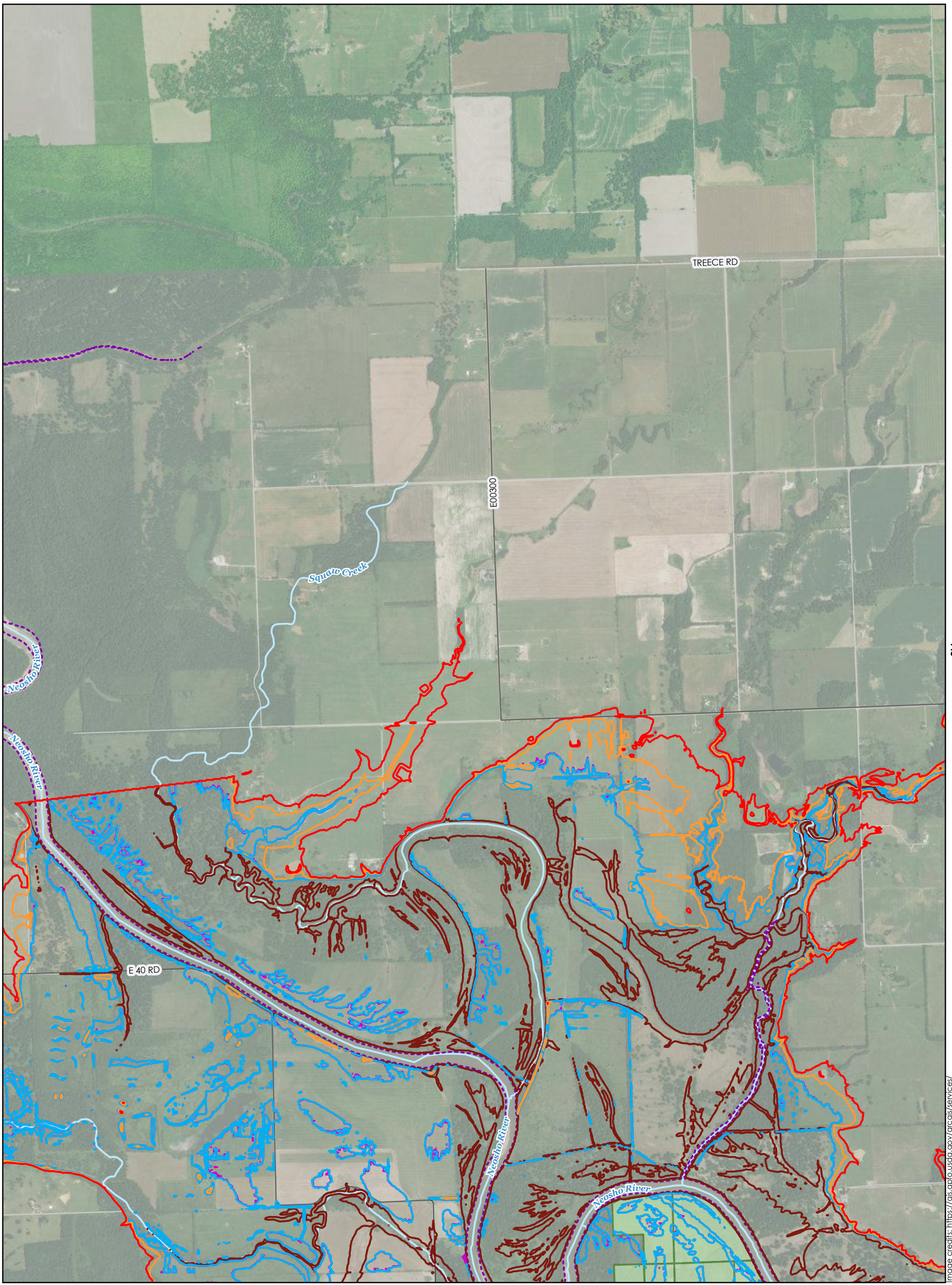
PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: A1

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

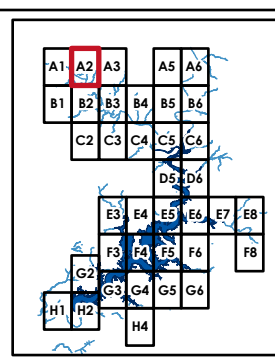


HISTORICAL INUNDATION SCENARIOS

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

1 inch = 2,000 feet

NORTH



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. 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 2022

Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer_2021

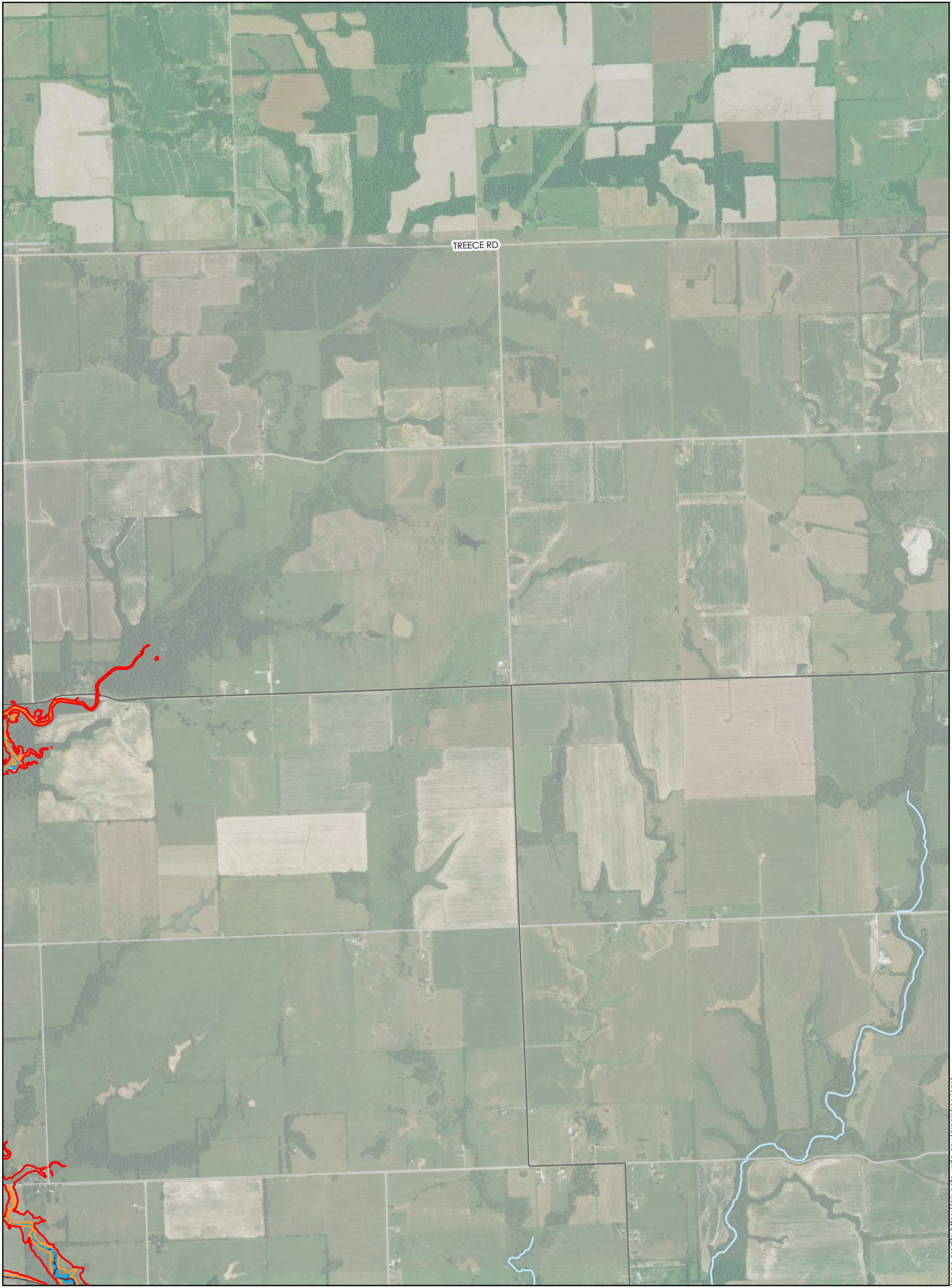


Image credits: https://gis.dplp.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

HISTORICAL INUNDATION SCENARIOS

NORTH

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

1 inch = 2,000 feet

MAX INUNDATION

- July 2007
- September 1993
- December 2015
- October 2009
- June 2004

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

Legend

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

PENSACOLA DAM

GRAND RIVER DAM AUTHORITY

MAP: A3

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

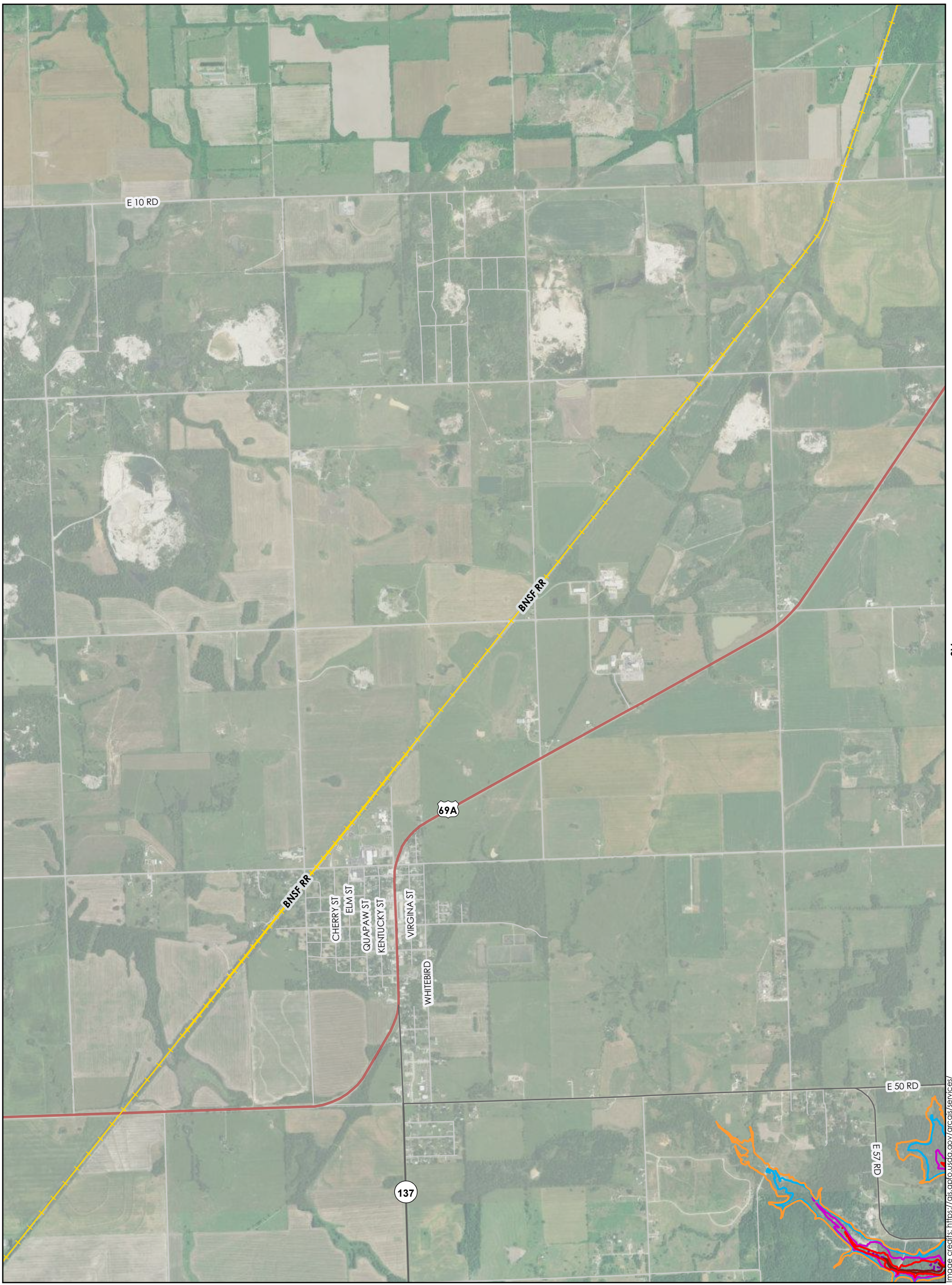
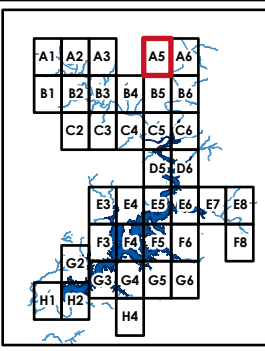
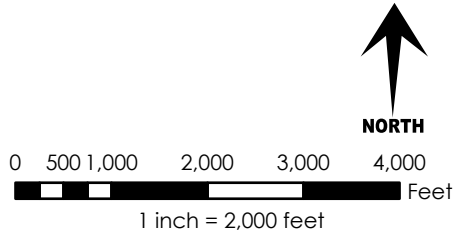


Image credits: https://gis.dplp.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

HISTORICAL INUNDATION SCENARIOS



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
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 2022

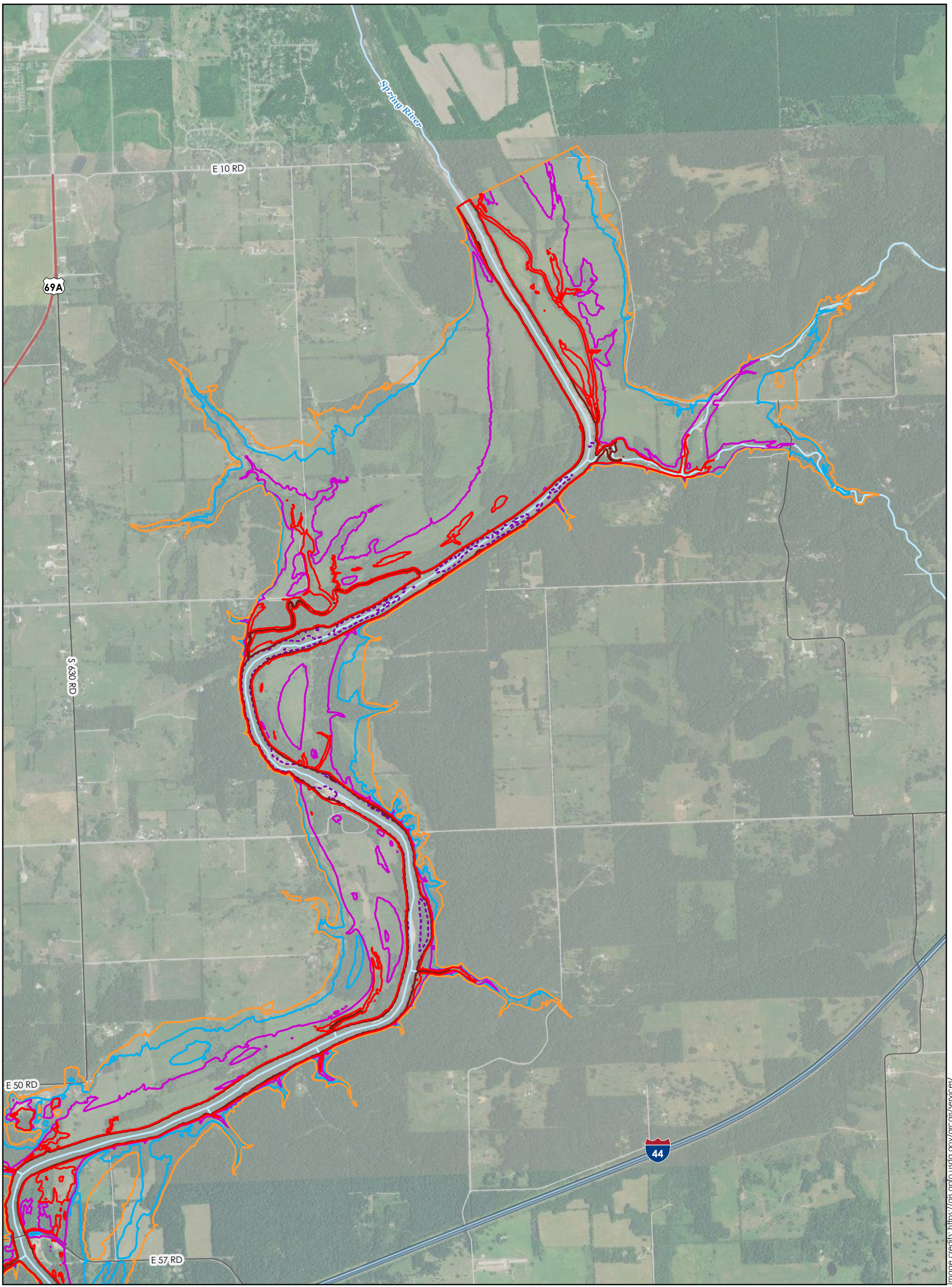


Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

HISTORICAL INUNDATION SCENARIOS

NORTH

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

1 inch = 2,000 feet

A1	A2	A3	A4	A5	A6
B1	B2	B3	B4	B5	B6
C2	C3	C4	C5	C6	
			D5	D6	
E3	E4	E5	E6	E7	E8
F3	F4	F5	F6		
G2	G3	G4	G5	G6	
H1	H2		H4		

<p>MAX INUNDATION</p> <ul style="list-style-type: none"> █ July 2007 █ September 1993 █ December 2015 █ October 2009 █ June 2004 	<p>ROAD CLASS</p> <ul style="list-style-type: none"> — Interstate — State Highway — US Highway — Major Collector — Local Road 	<ul style="list-style-type: none"> + Railroad — Stream - - - Flowage Easements ■ Project Boundary ■ GRDA Ownership
--	--	---

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

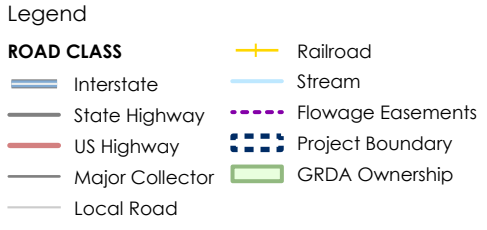
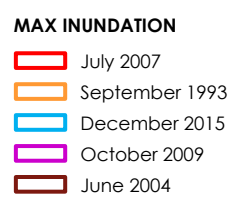
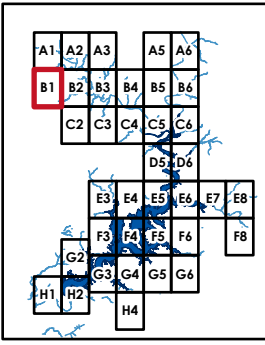
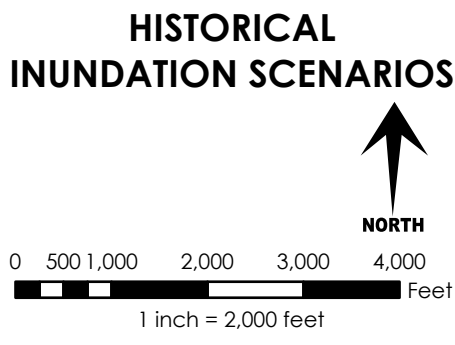
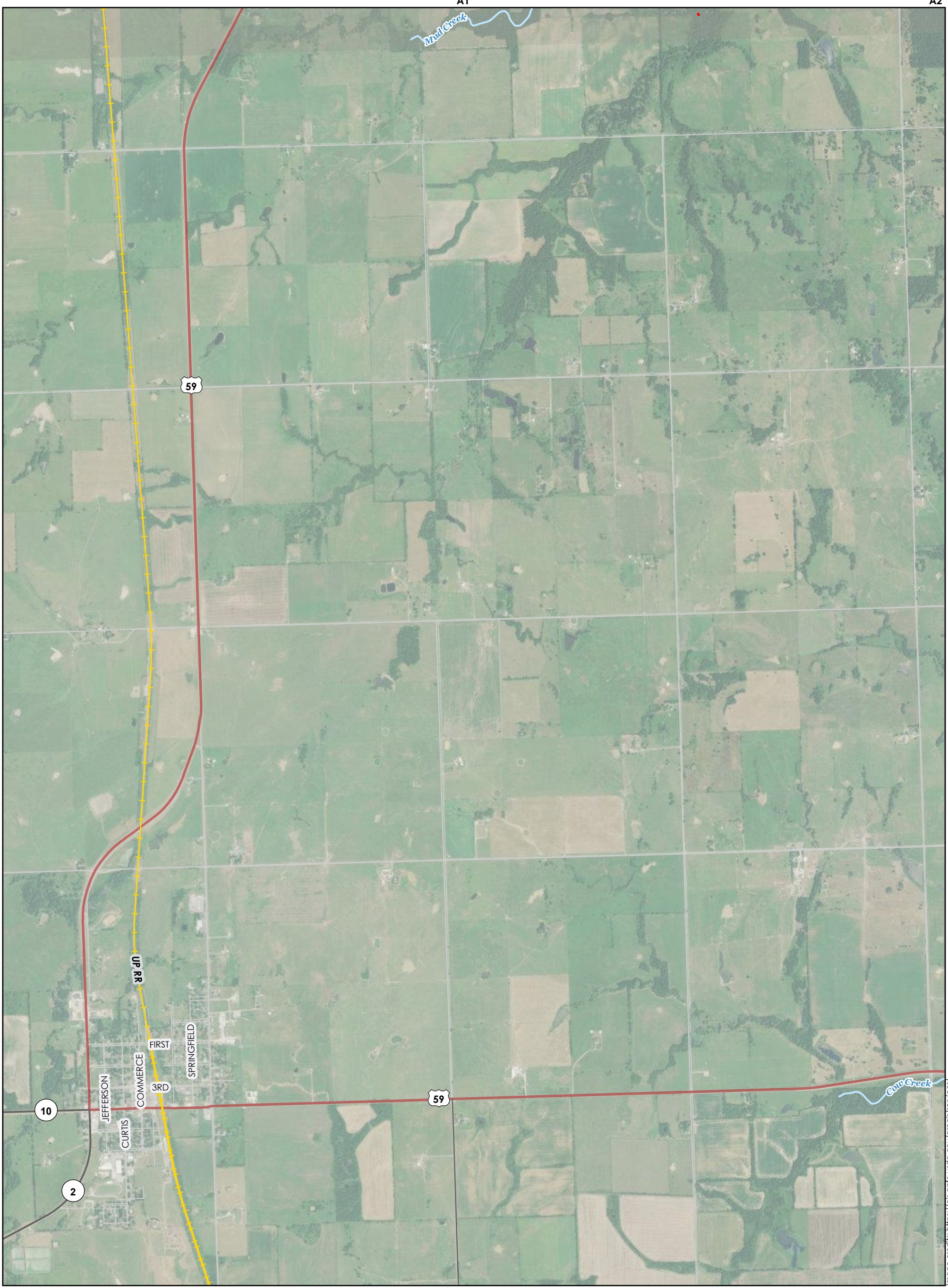
PENSACOLA DAM

GRAND RIVER DAM AUTHORITY

MAP: A6

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

PENSACOLA DAM

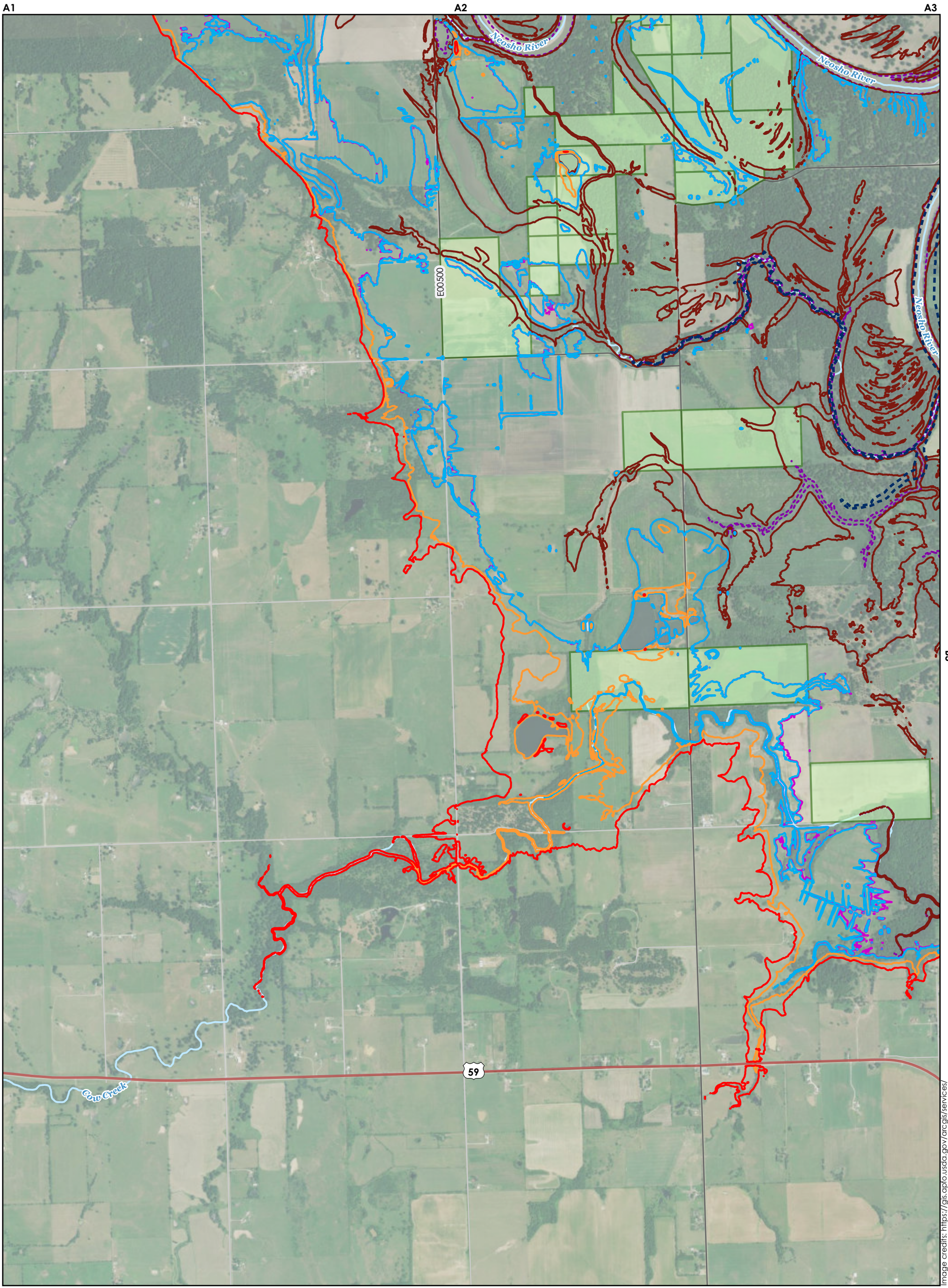
GRAND RIVER DAM AUTHORITY

MAP: B1

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

A1 A2 B2 B2 C1 C2
Image credits: https://gis.dplp.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

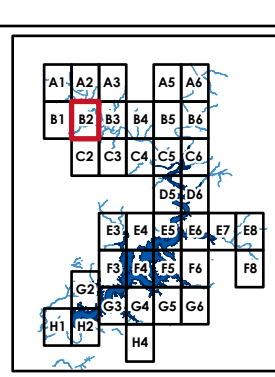


HISTORICAL INUNDATION SCENARIOS

NORTH

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

1 inch = 2,000 feet



MAX INUNDATION

- █ July 2007
- █ September 1993
- █ December 2015
- █ October 2009
- █ June 2004

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
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

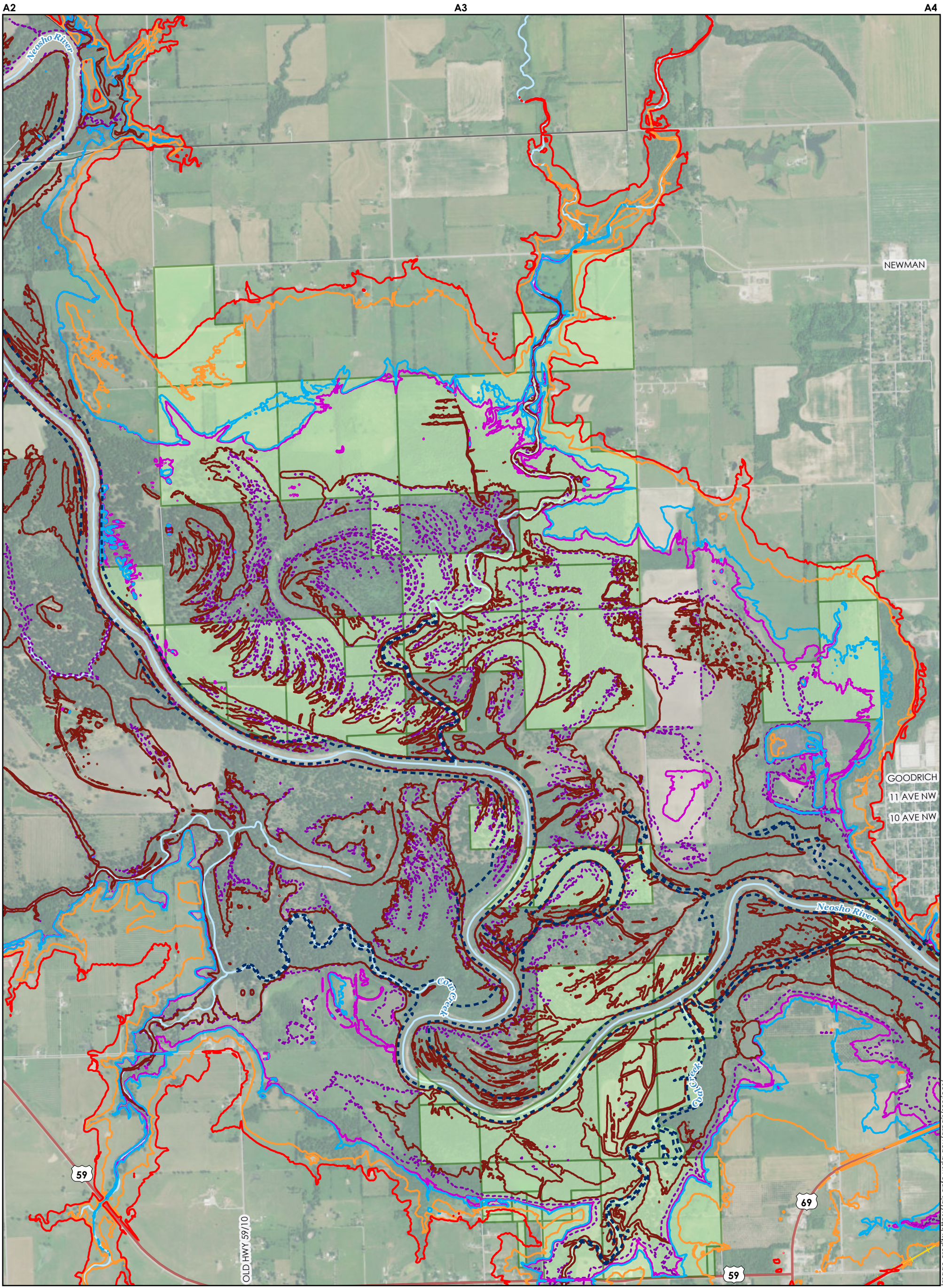
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: B2

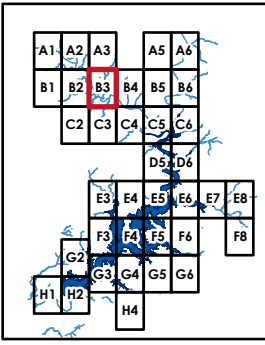
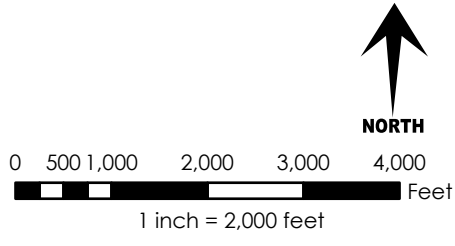
CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021



HISTORICAL INUNDATION SCENARIOS



- MAX INUNDATION**
- July 2007
 - September 1993
 - December 2015
 - October 2009
 - June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

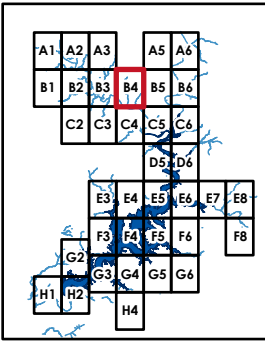
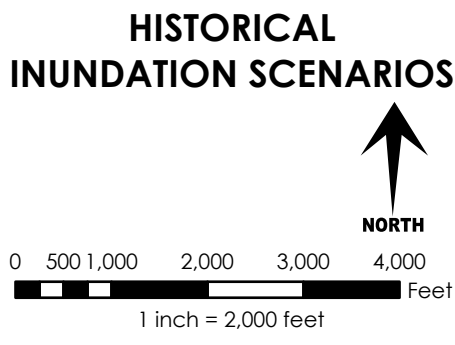
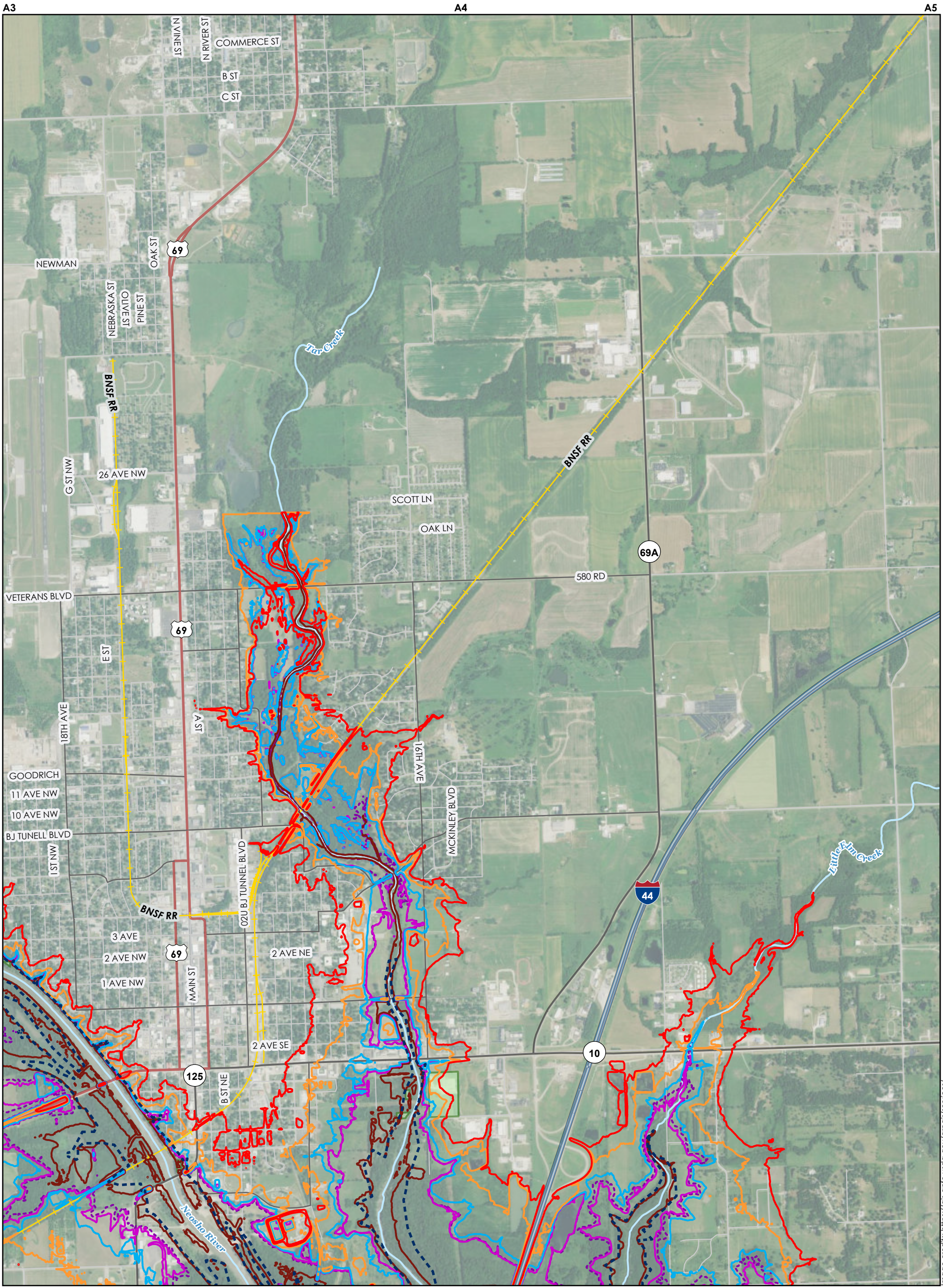
PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: B3

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. 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 2022

Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

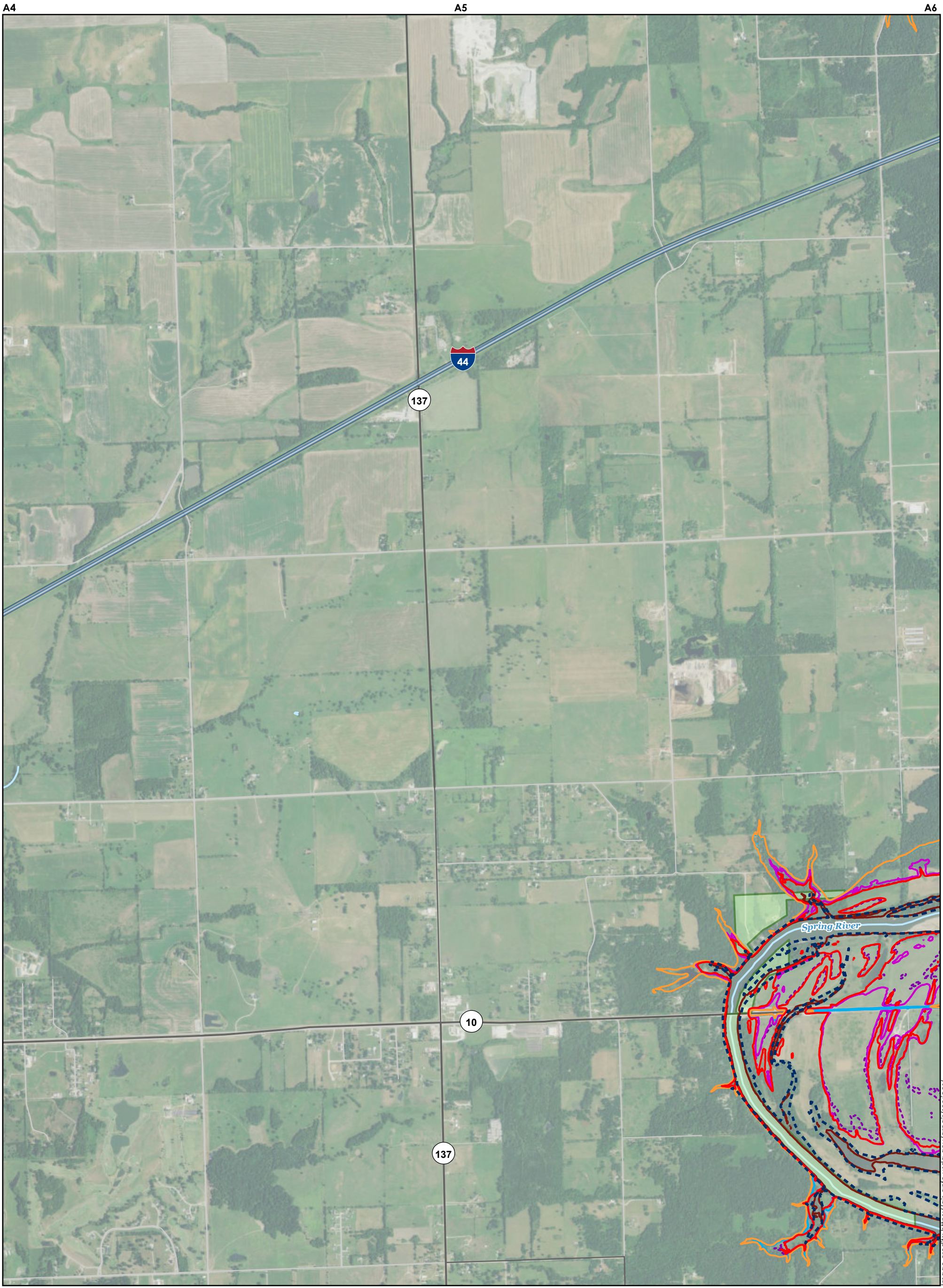
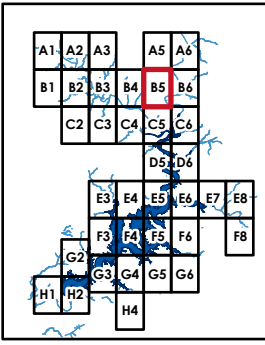
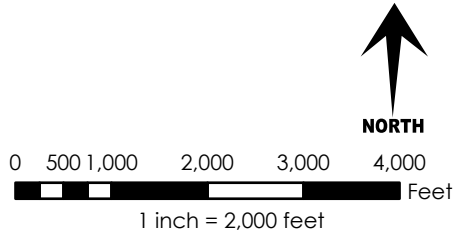


Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

HISTORICAL INUNDATION SCENARIOS



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
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 2022

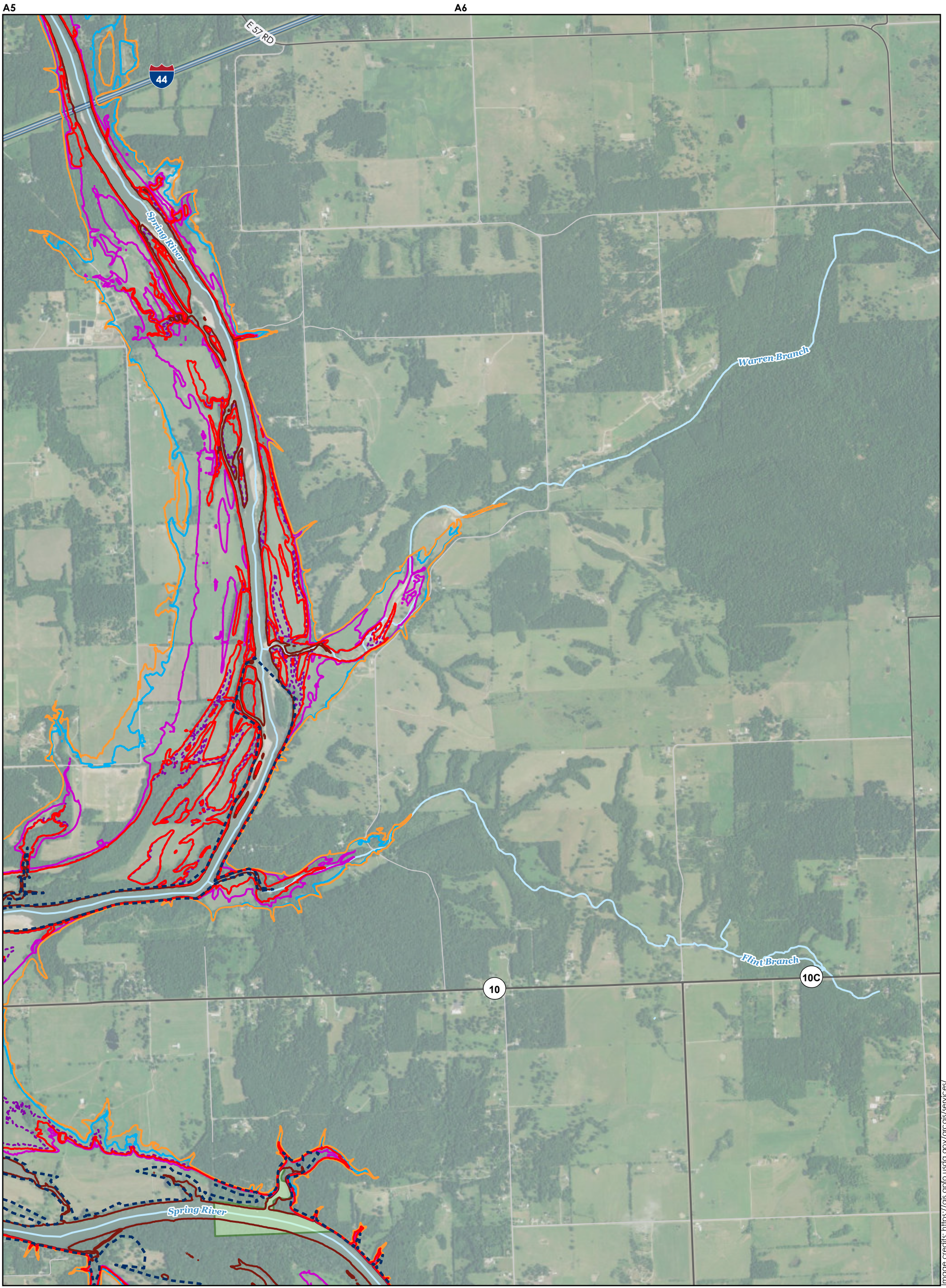


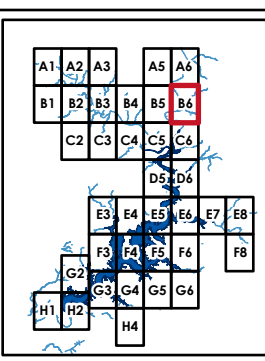
Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

HISTORICAL INUNDATION SCENARIOS

NORTH

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

1 inch = 2,000 feet



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

- 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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2. See Overview Map for notes on data sources.

PENSACOLA DAM

GRAND RIVER DAM AUTHORITY

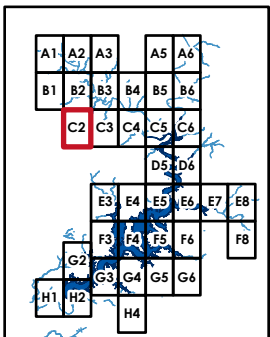
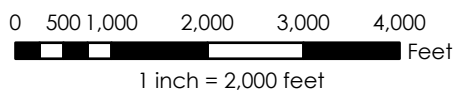
MAP: B6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



HISTORICAL INUNDATION SCENARIOS



MAX INUNDATION

- July 2007
- September 1993
- December 2015
- October 2009
- June 2004

Legend

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

MAP NOTES

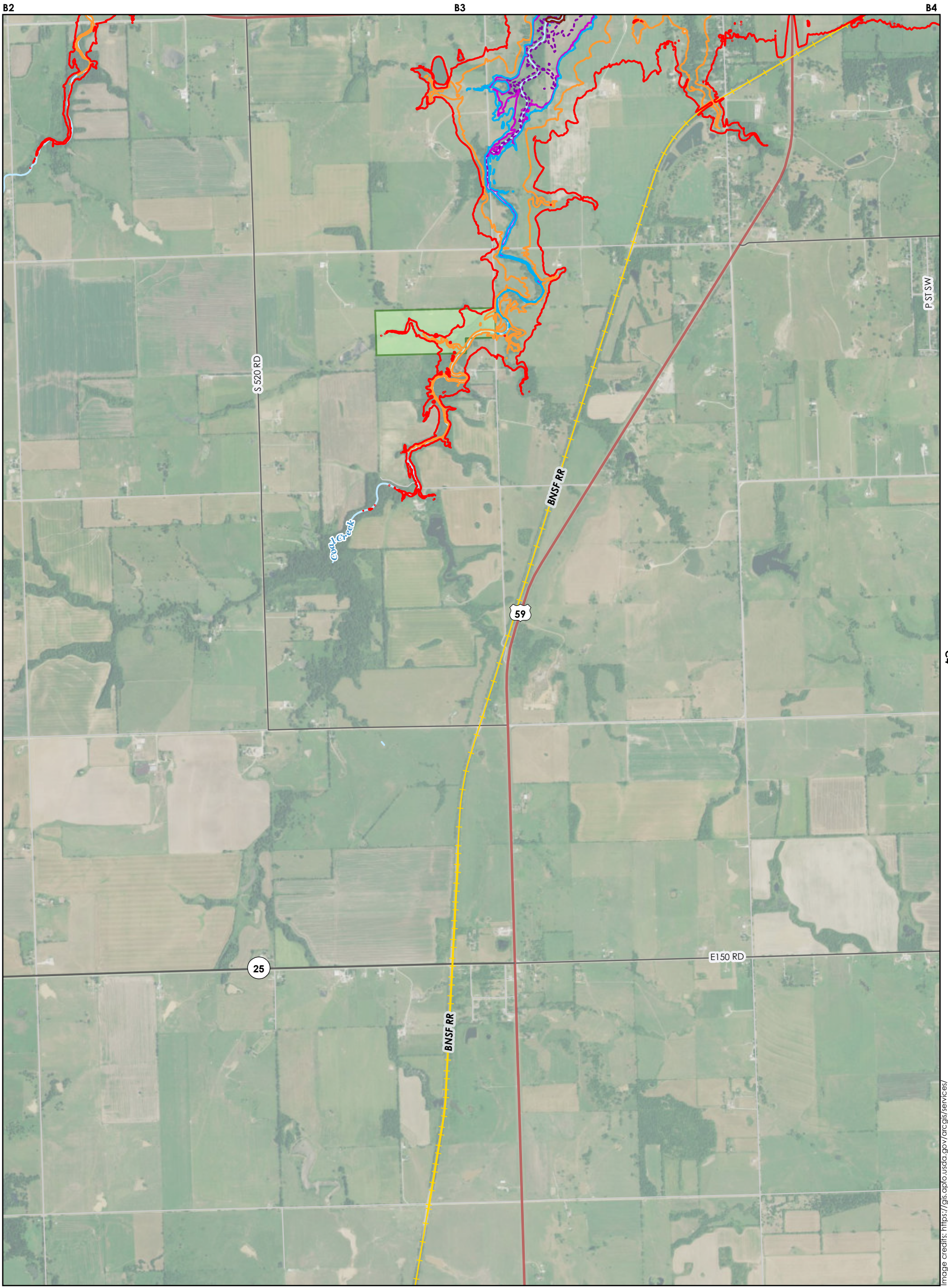
1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: C2

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

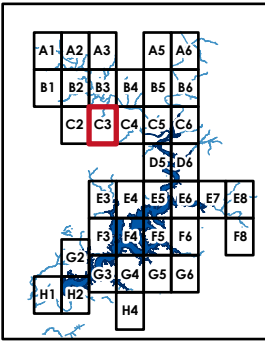


HISTORICAL INUNDATION SCENARIOS

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

1 inch = 2,000 feet

NORTH



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

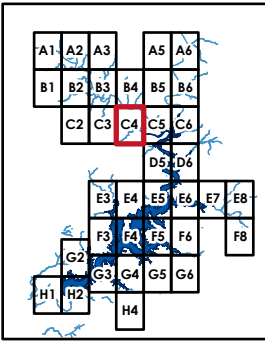
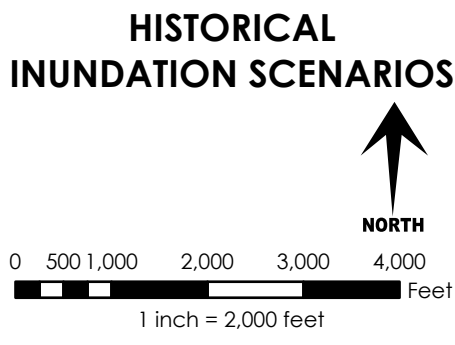
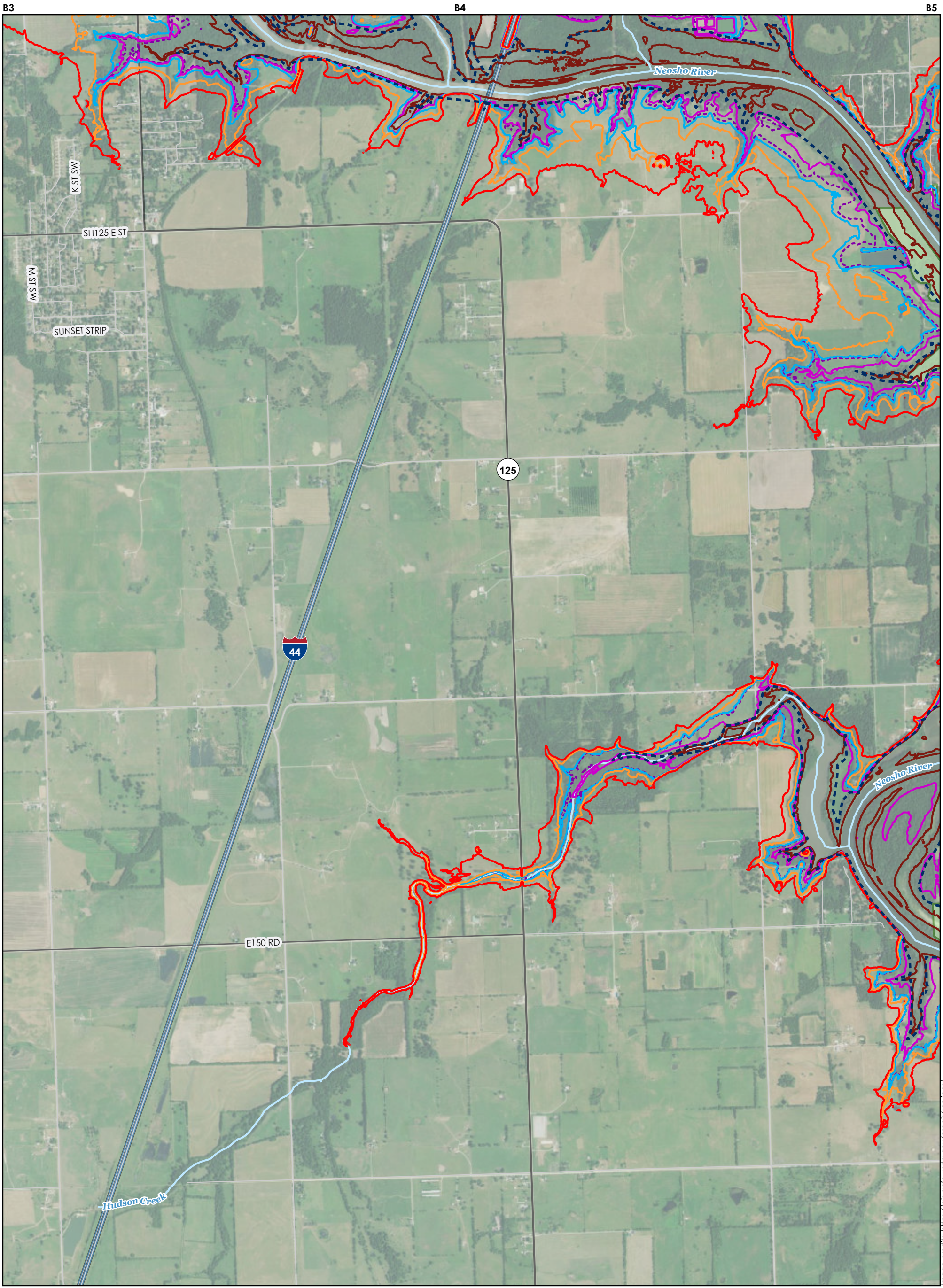
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C3

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

Image credits: https://gis.cplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021



- MAX INUNDATION**
- July 2007
 - September 1993
 - December 2015
 - October 2009
 - June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

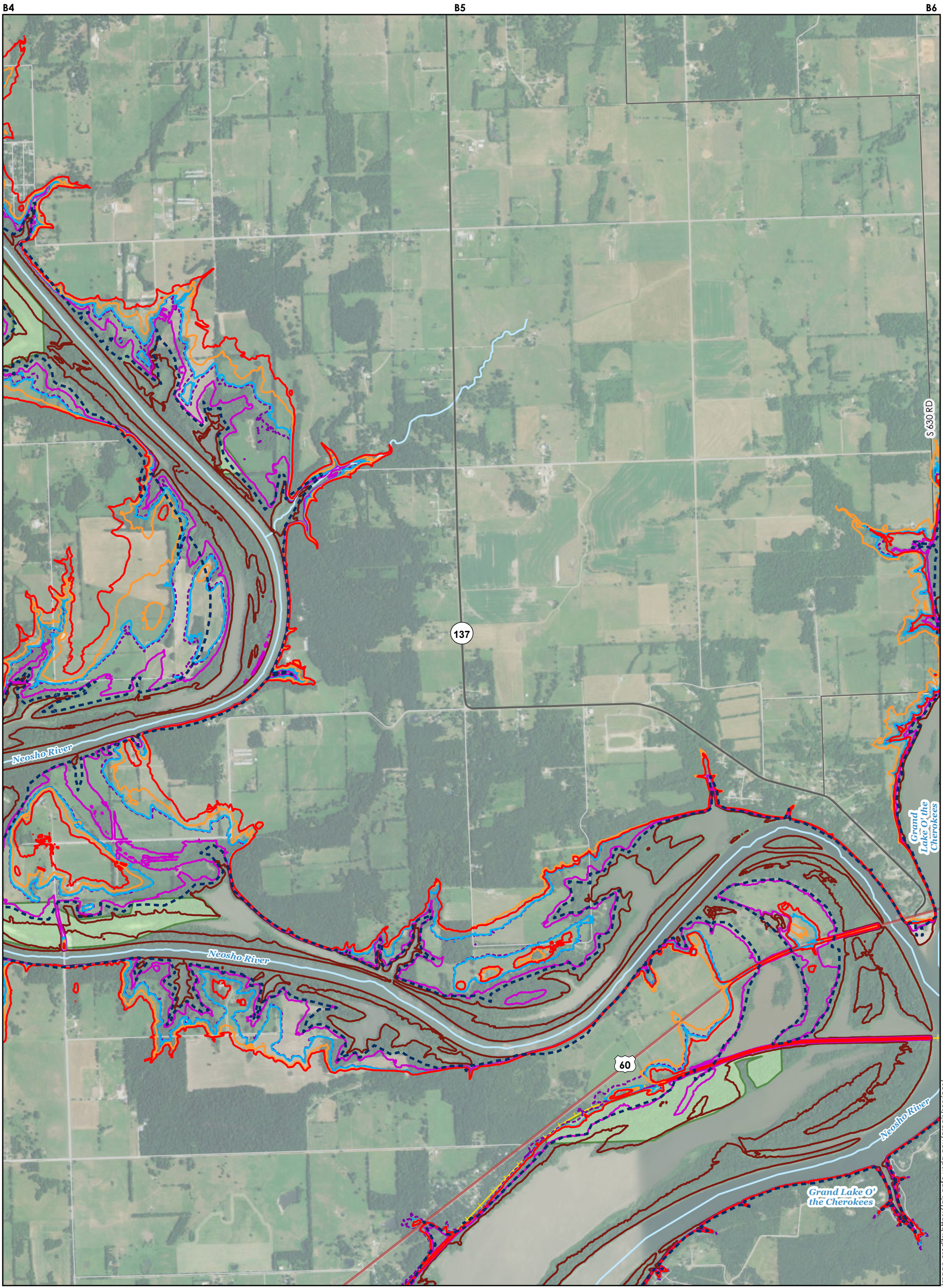
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C4

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

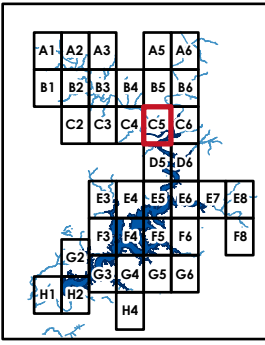


HISTORICAL INUNDATION SCENARIOS

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

1 inch = 2,000 feet

NORTH



- MAX INUNDATION**
- July 2007
 - September 1993
 - December 2015
 - October 2009
 - June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
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 2022

Image credits: https://gis.dplp.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

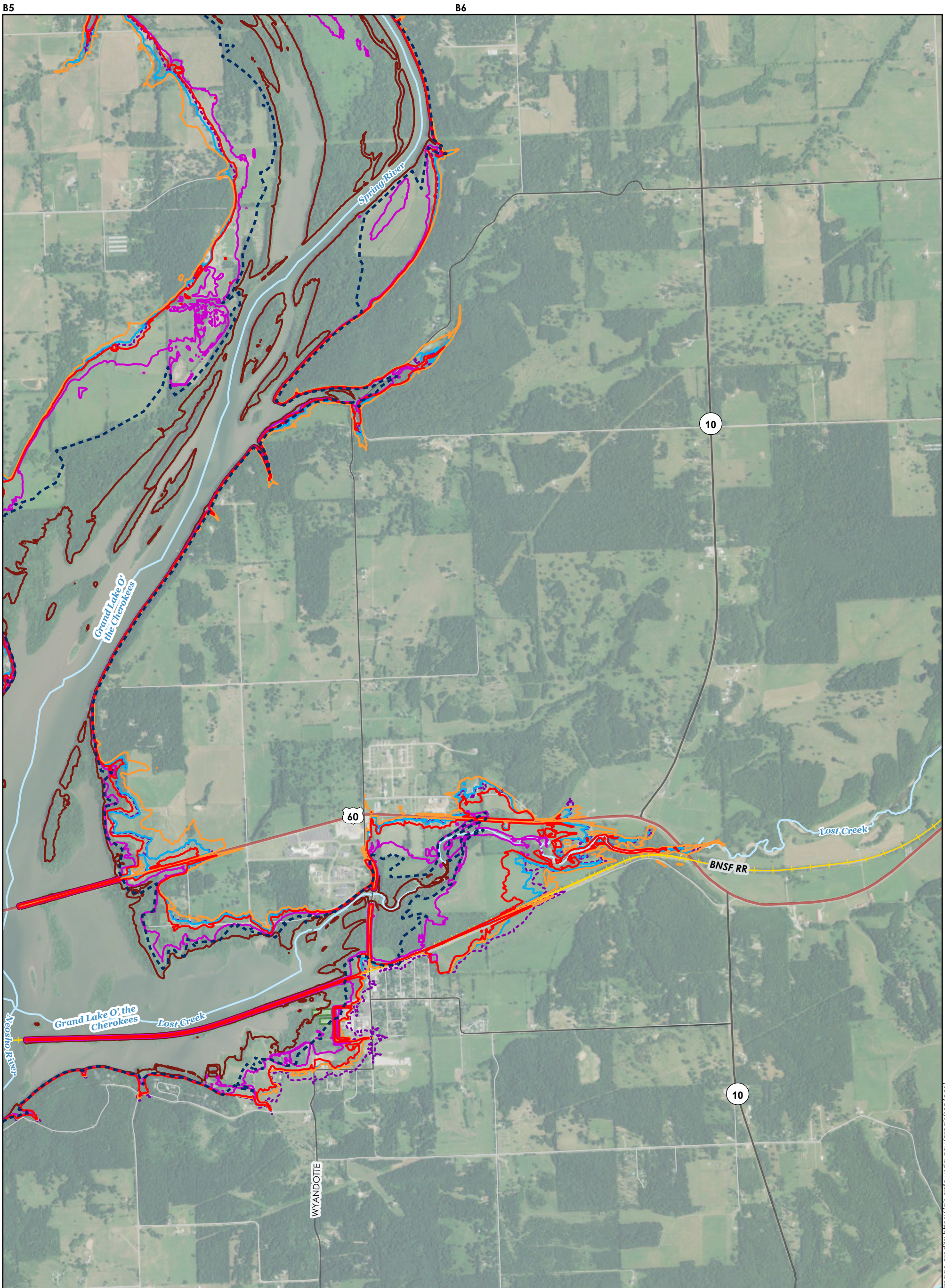


Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

HISTORICAL INUNDATION SCENARIOS

NORTH

MAX INUNDATION

- █ July 2007
- █ September 1993
- █ December 2015
- █ October 2009
- █ June 2004

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

Legend

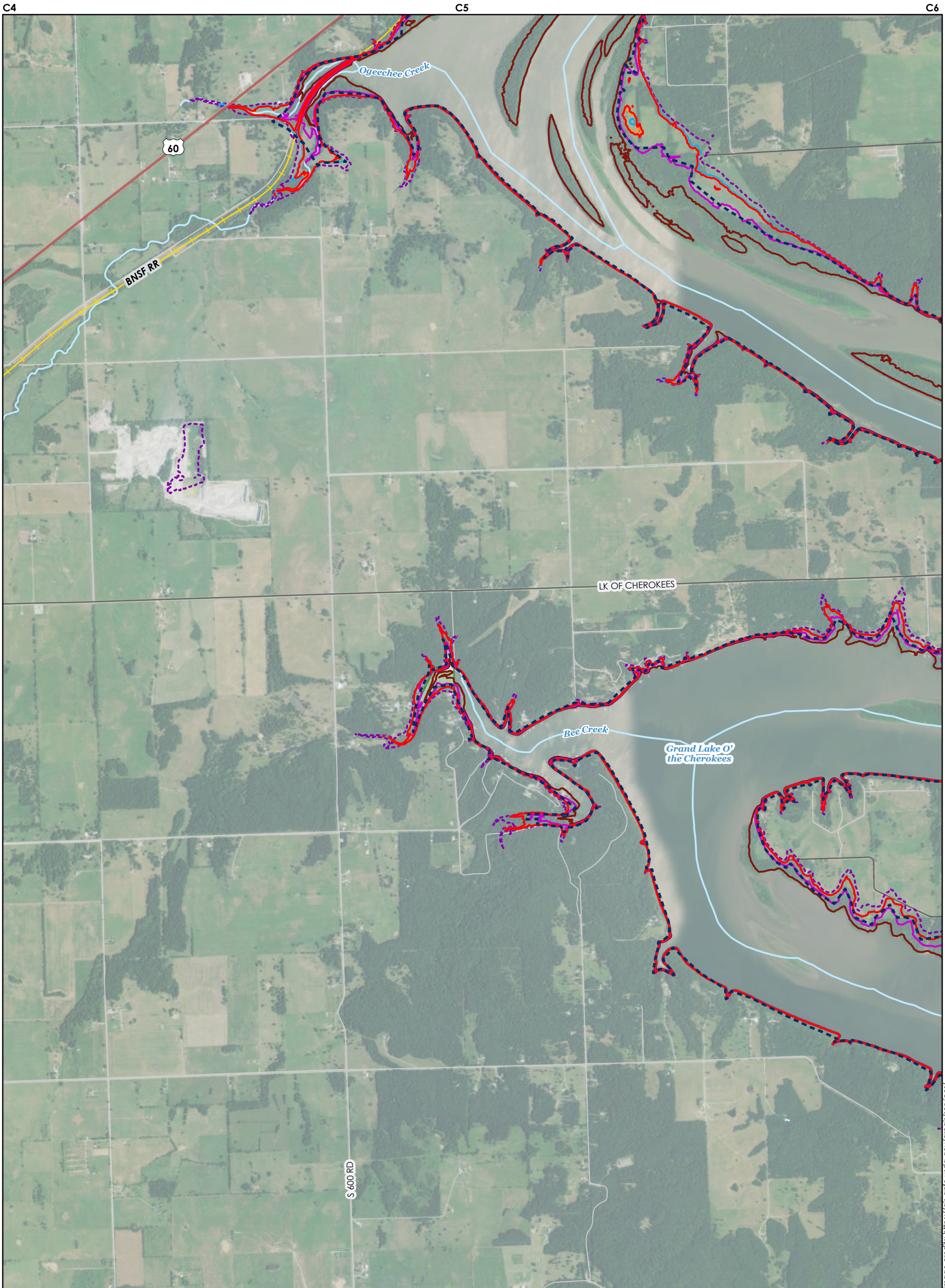
— Interstate	+ Railroad
— State Highway	— Stream
— US Highway	- - - Flowage Easements
— Major Collector	- - - Project Boundary
— Local Road	█ GRDA Ownership

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

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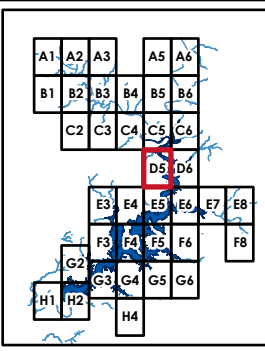


HISTORICAL INUNDATION SCENARIOS

NORTH

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

1 inch = 2,000 feet



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

PENSACOLA DAM

GRAND RIVER DAM AUTHORITY

MAP: D5

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

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September 2022

Image credits: https://gis.dplp.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

C5

C6

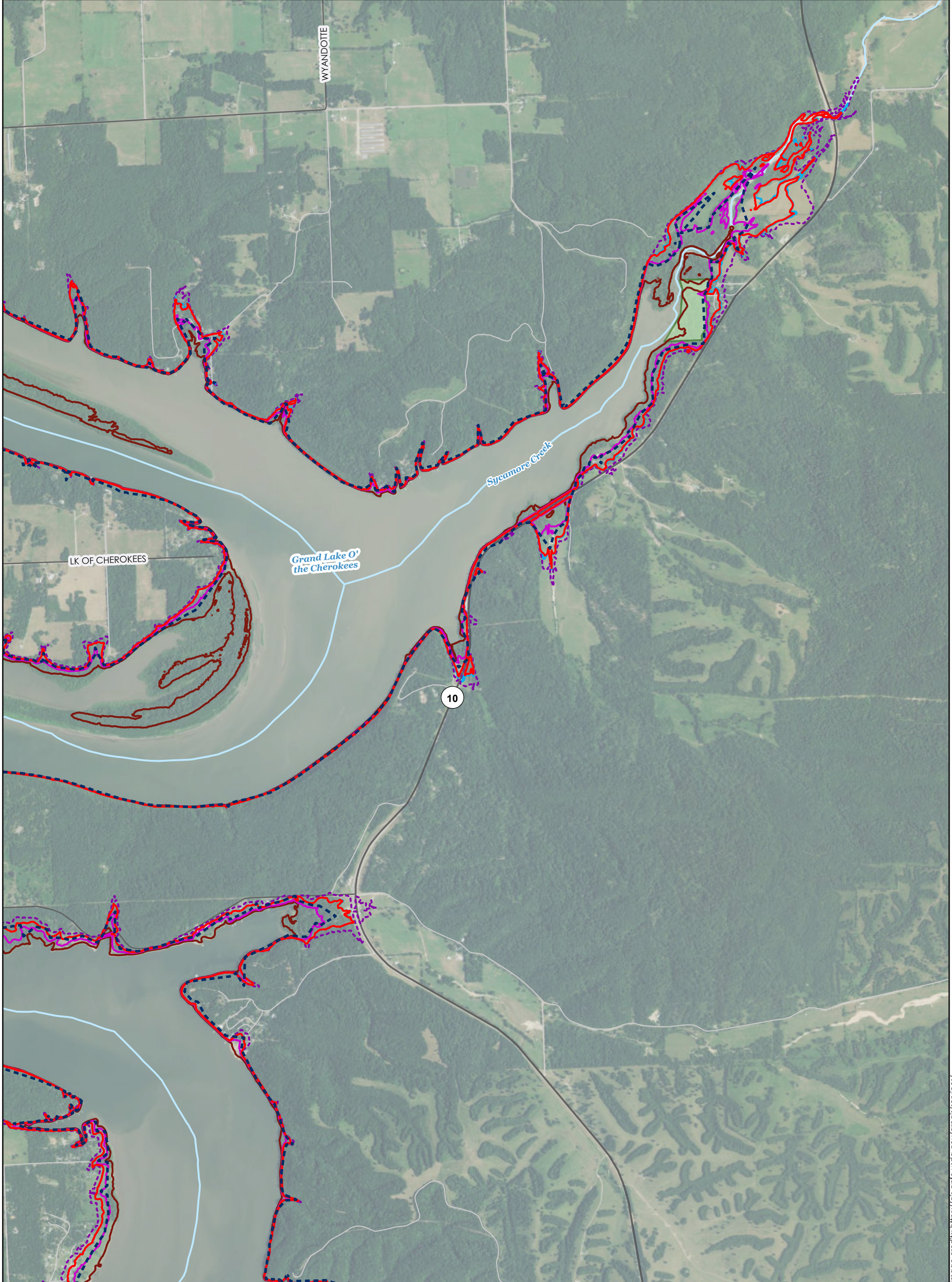


Image credits: https://gis.cplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

E5

E6

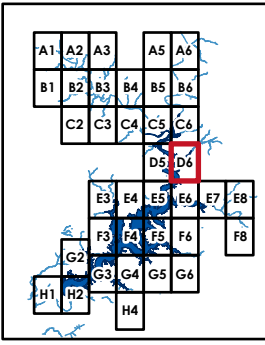
E7

HISTORICAL INUNDATION SCENARIOS



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

1 inch = 2,000 feet



- MAX INUNDATION**
- July 2007
 - September 1993
 - December 2015
 - October 2009
 - June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

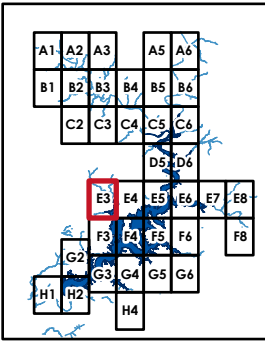
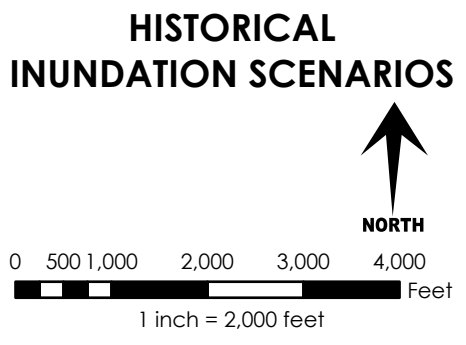
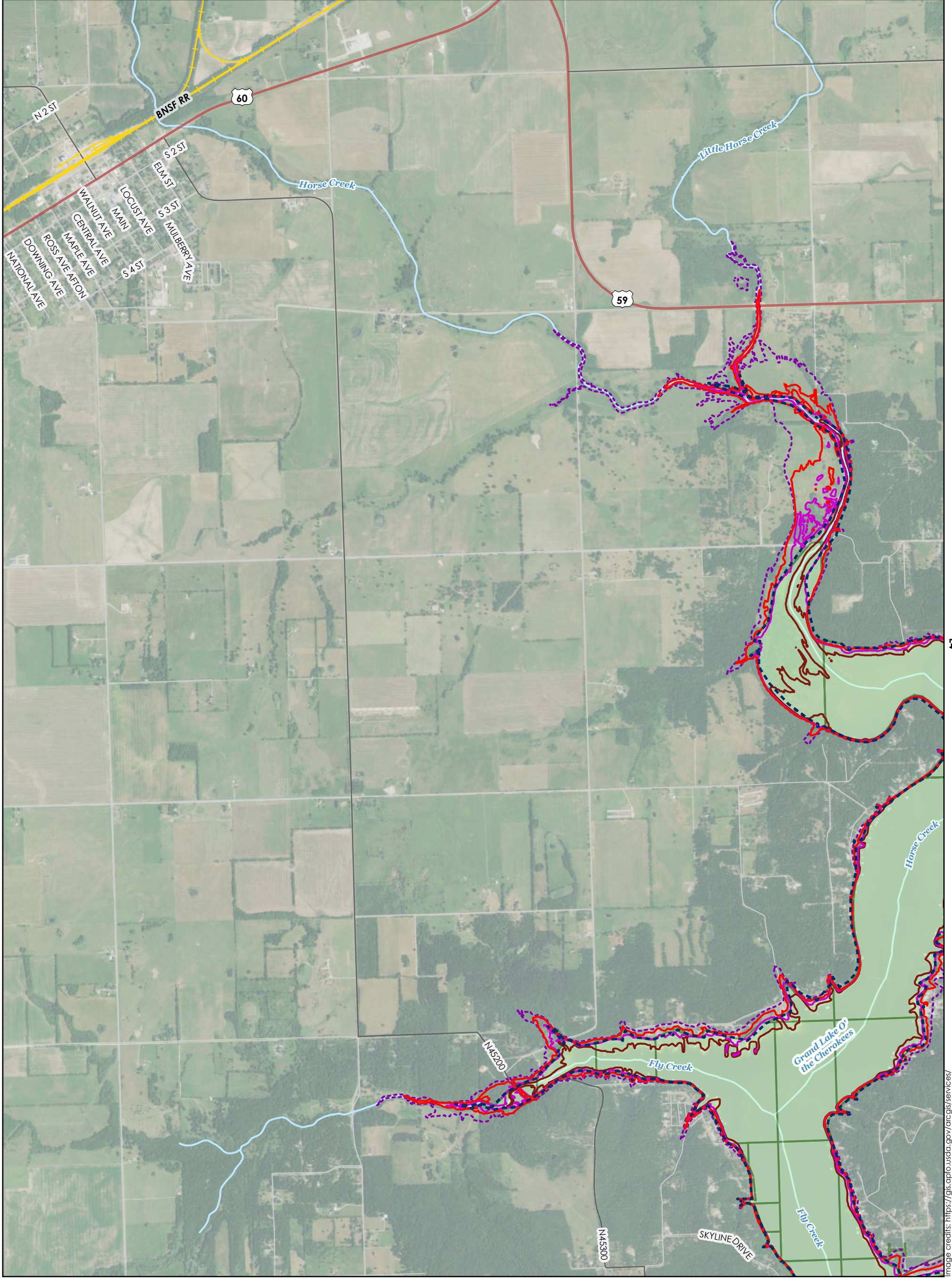
PENSACOLA DAM

GRAND RIVER DAM AUTHORITY

MAP: D6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

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September 2022



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

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

MAP NOTES

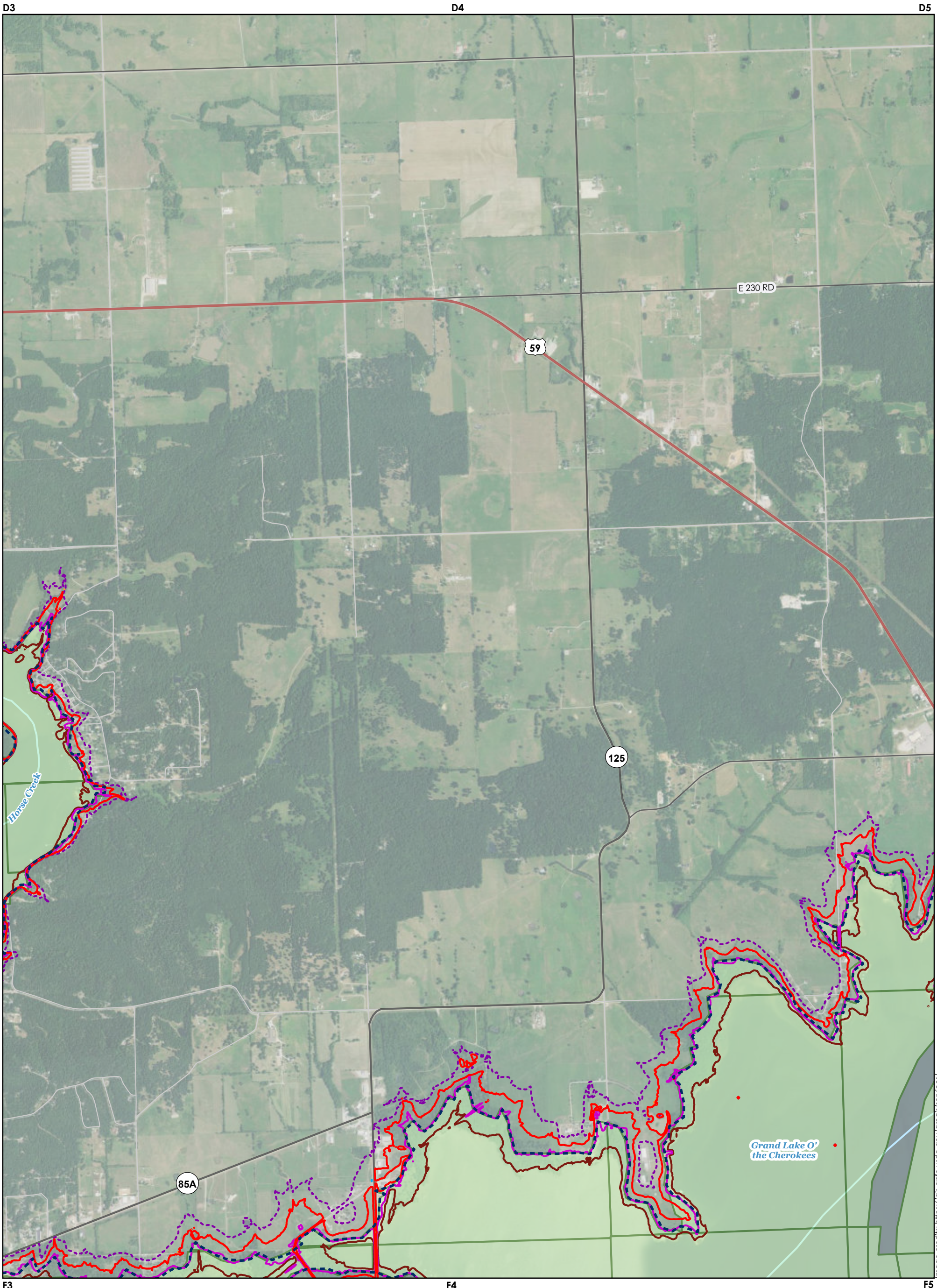
1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: E3

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

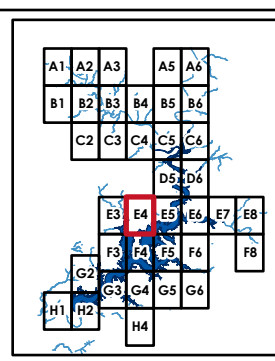


HISTORICAL INUNDATION SCENARIOS

NORTH

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

1 inch = 2,000 feet



MAX INUNDATION

- July 2007
- September 1993
- December 2015
- October 2009
- June 2004

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
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

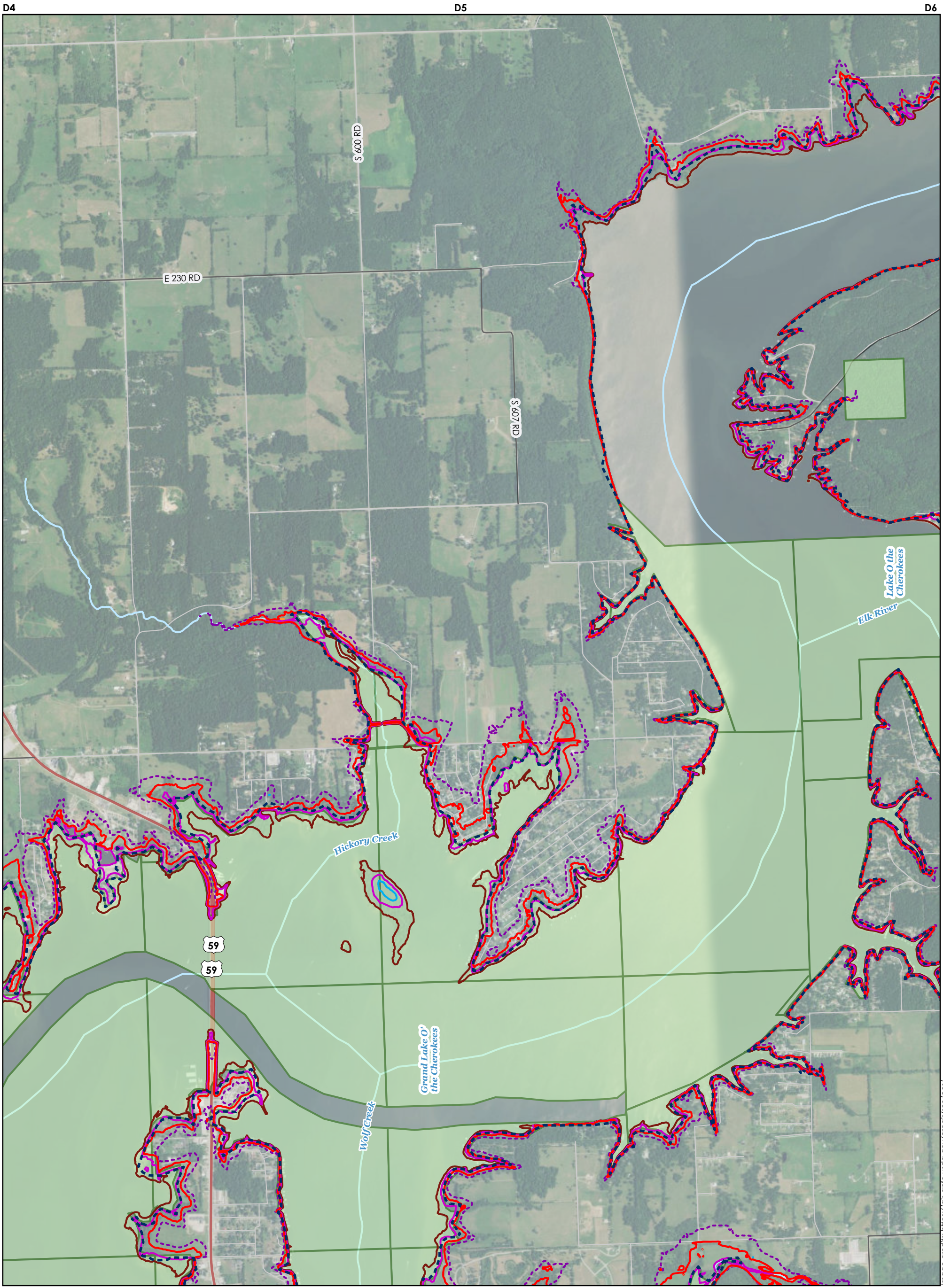
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: E4

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

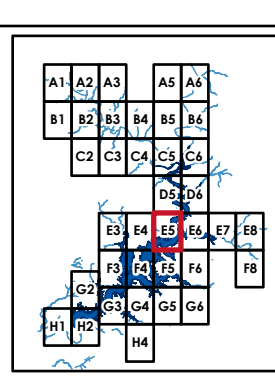
Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021



HISTORICAL INUNDATION SCENARIOS

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

NORTH



- MAX INUNDATION**
- July 2007
 - September 1993
 - December 2015
 - October 2009
 - June 2004
- MAP NOTES**
1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
 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

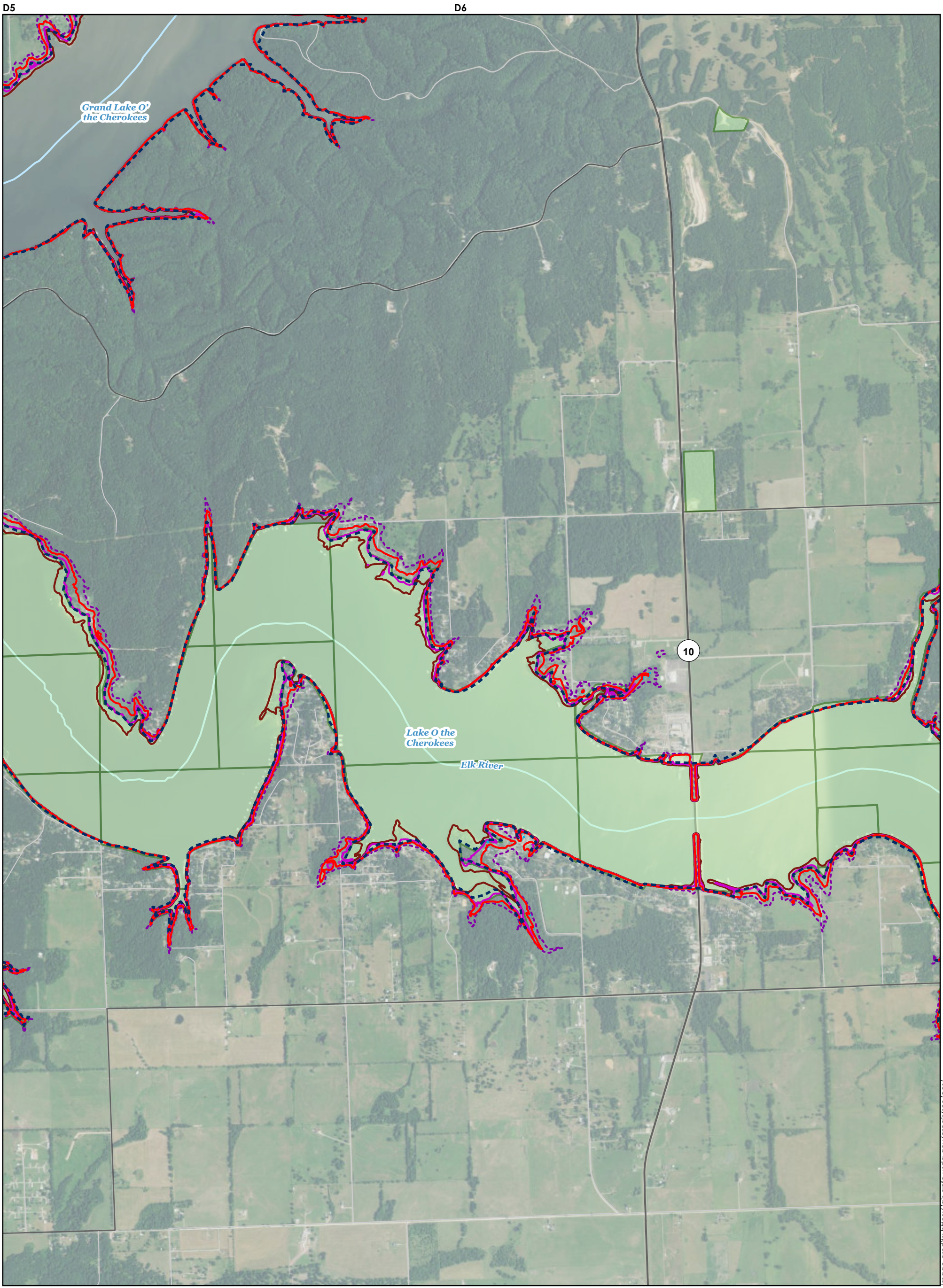
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: E5

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

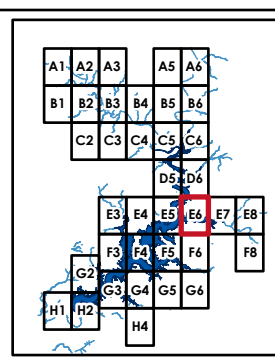


HISTORICAL INUNDATION SCENARIOS

NORTH

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

1 inch = 2,000 feet



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

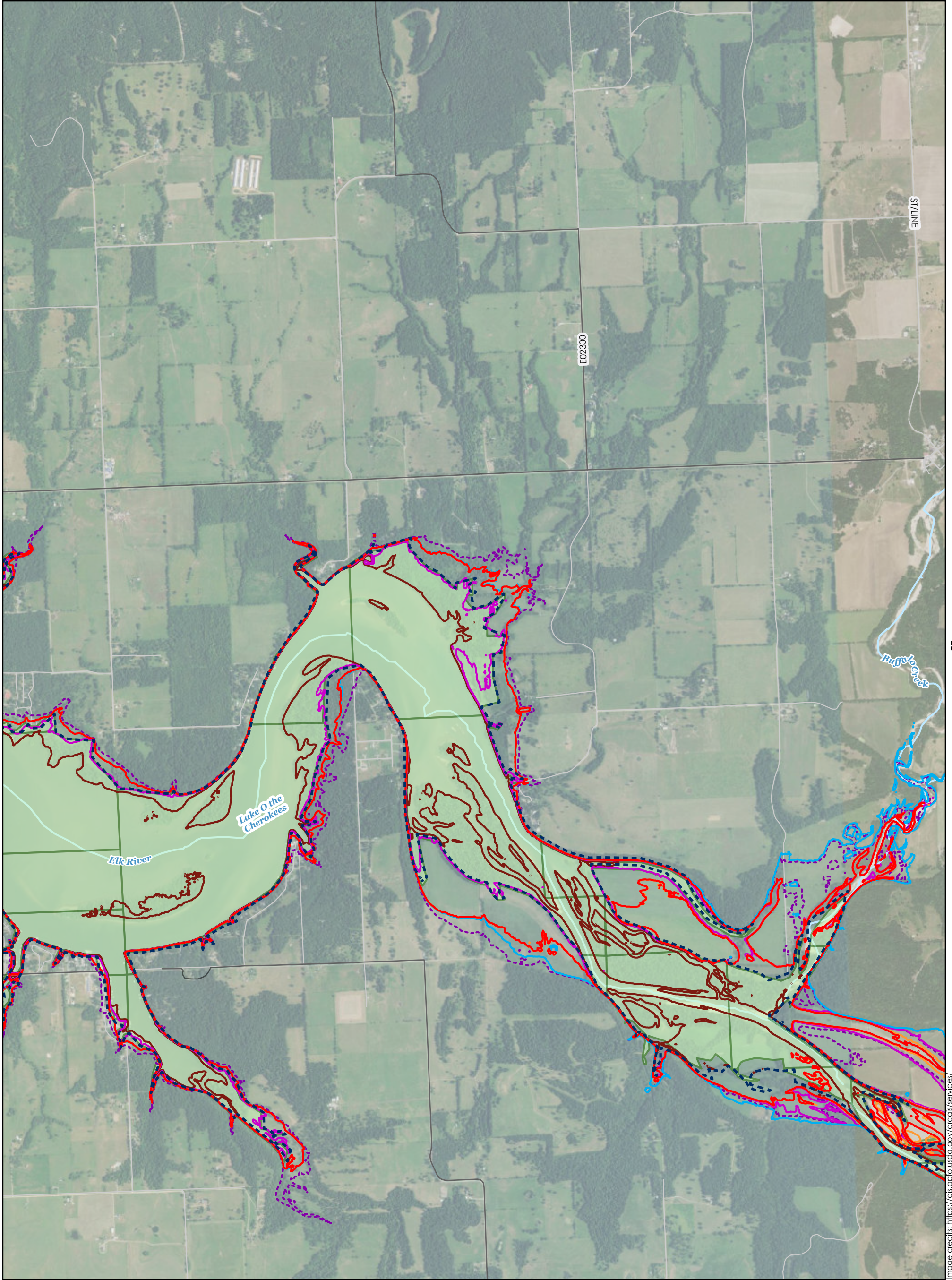
MAP: E6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

Image credits: https://gis.dplp.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

D6



F6

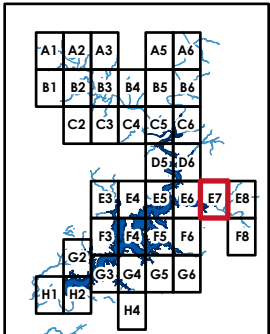
F7

F8

HISTORICAL INUNDATION SCENARIOS



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



MAX INUNDATION

- █ July 2007
- █ September 1993
- █ December 2015
- █ October 2009
- █ June 2004

Legend

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: E7

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

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September 2022

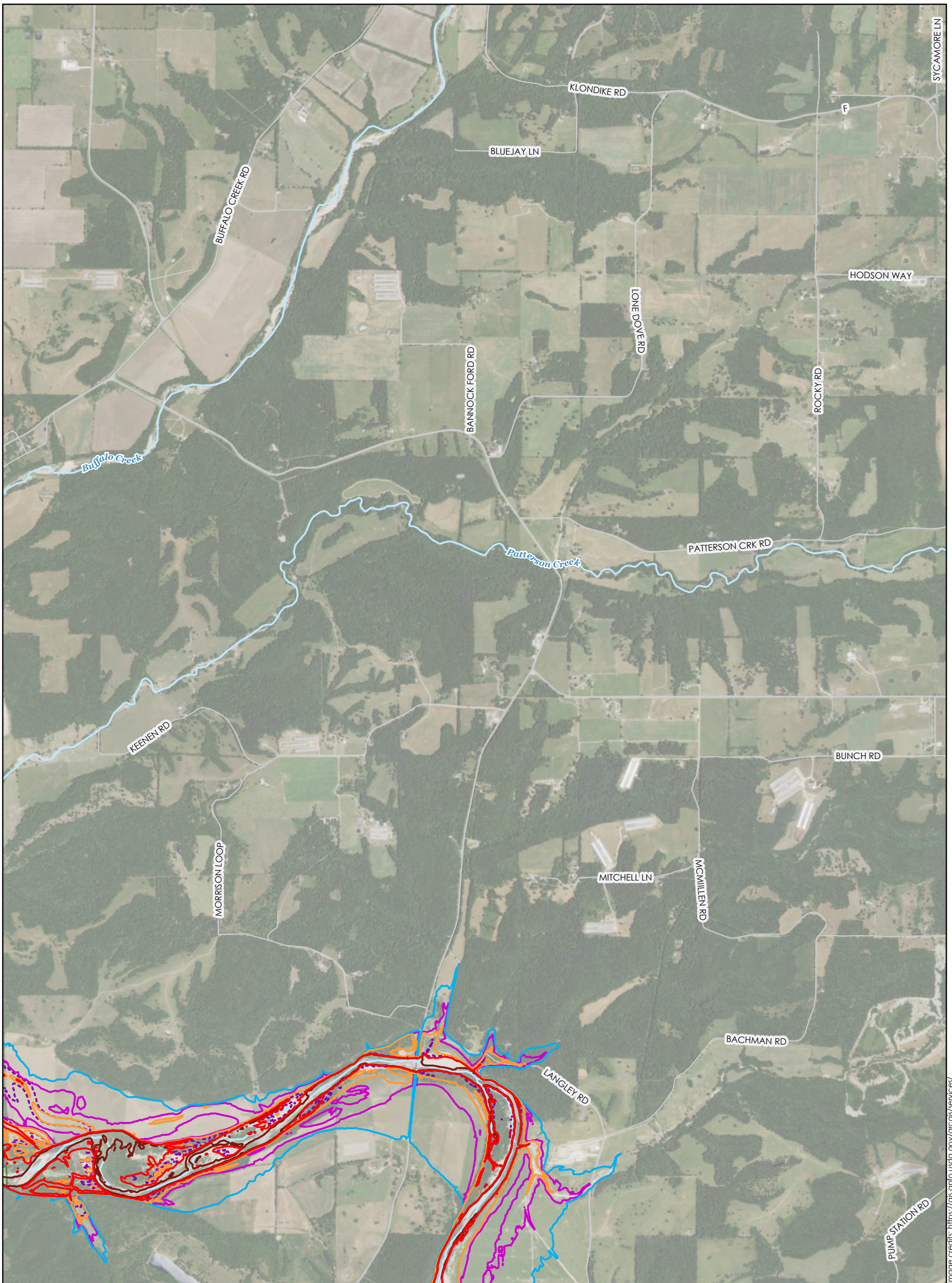


Image credits: https://gis.cplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

F7

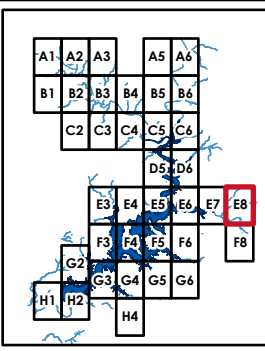
F8

HISTORICAL INUNDATION SCENARIOS

NORTH

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

1 inch = 2,000 feet



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

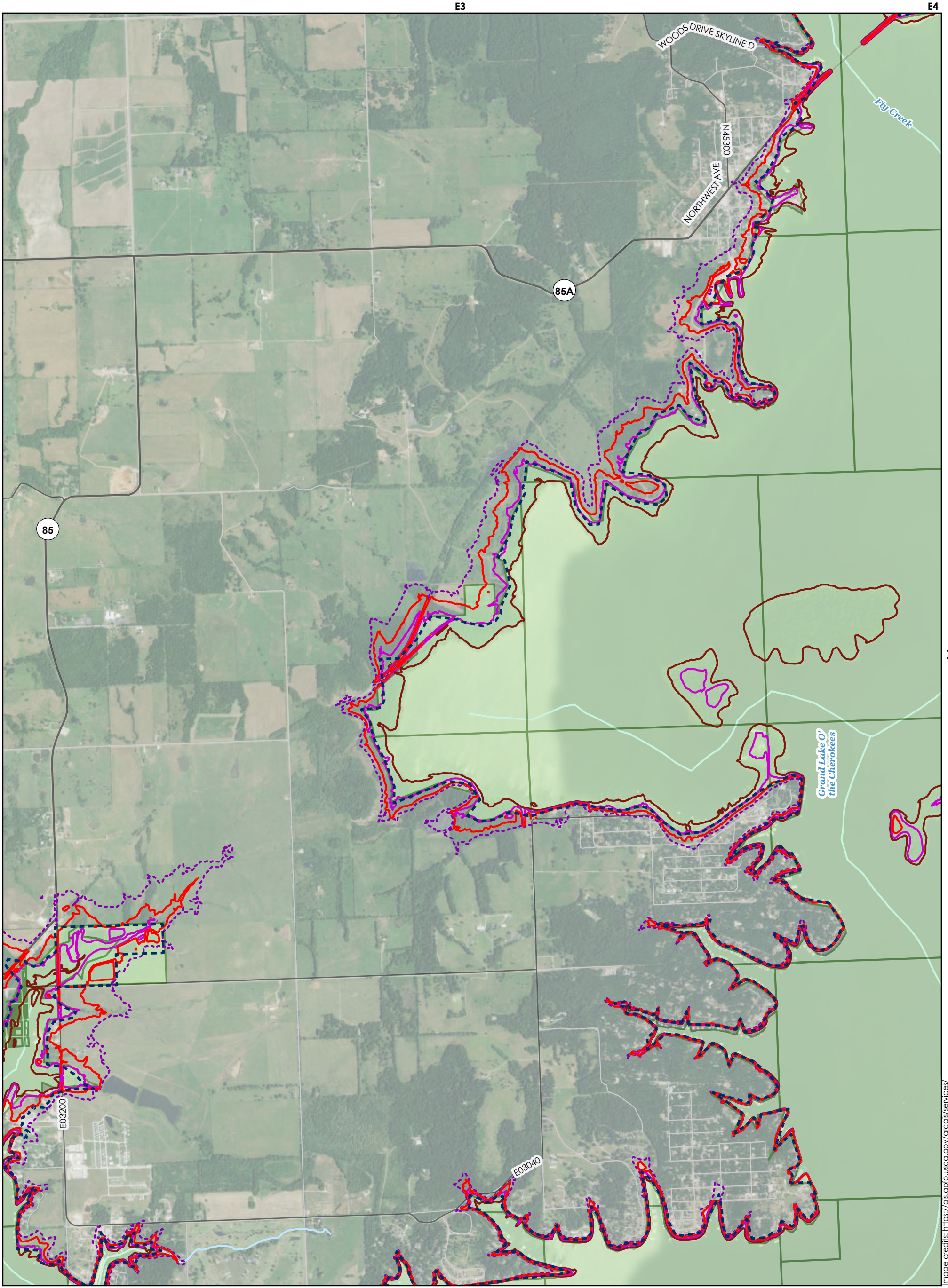
PENSACOLA DAM

GRAND RIVER DAM AUTHORITY

MAP: E8

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

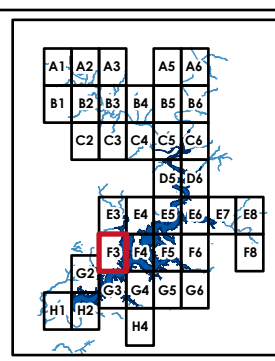


HISTORICAL INUNDATION SCENARIOS

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

1 inch = 2,000 feet

NORTH



MAX INUNDATION

- July 2007
- September 1993
- December 2015
- October 2009
- June 2004

ROAD CLASS

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

Legend

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: F3

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

Image credits: https://gis.dplp.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

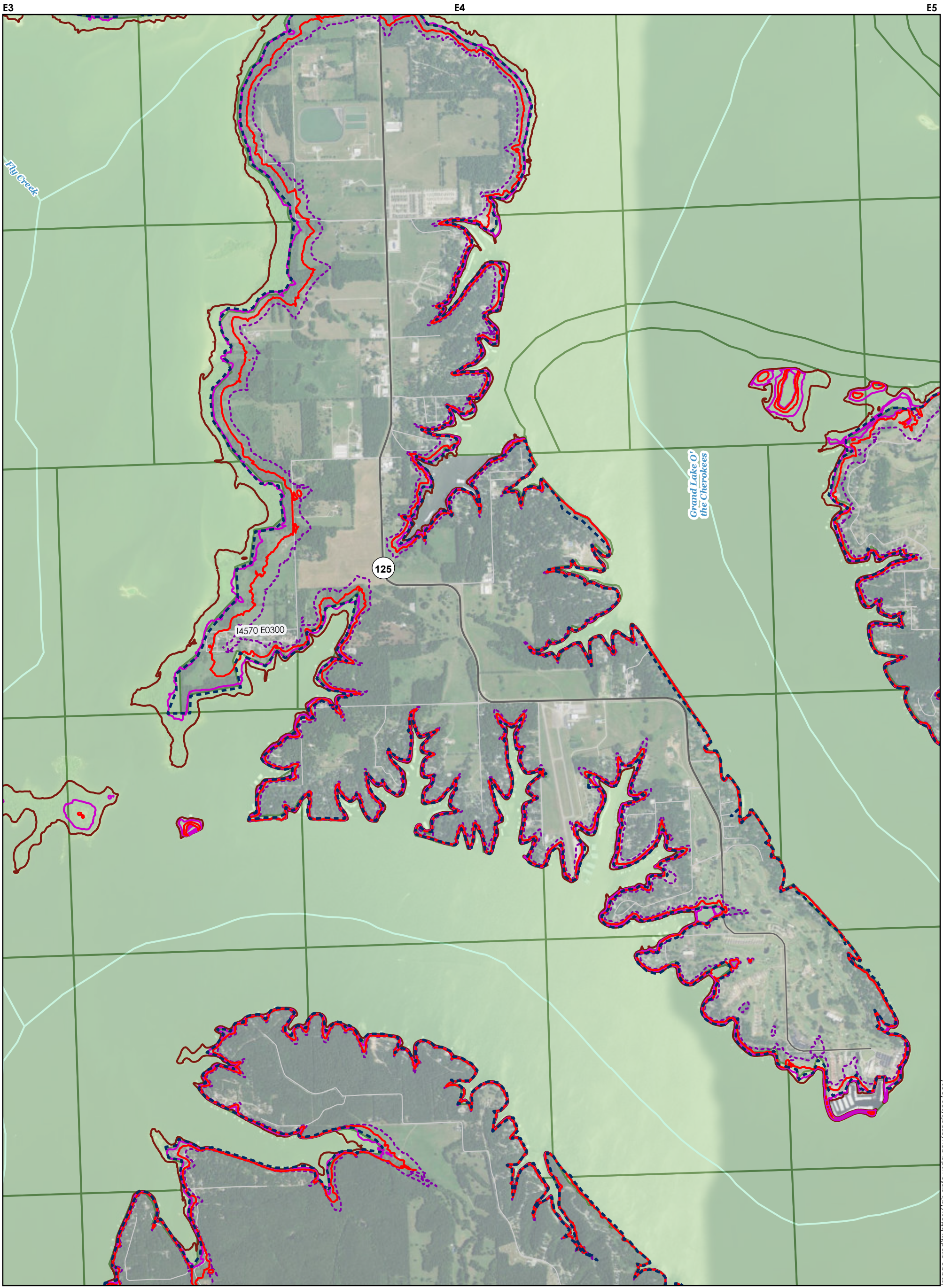
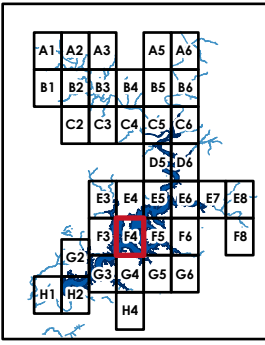
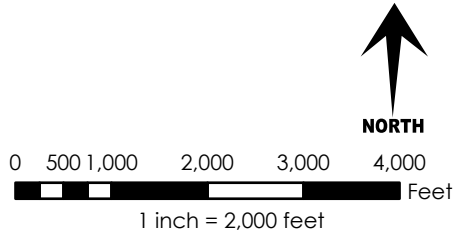


Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

HISTORICAL INUNDATION SCENARIOS



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

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

MAP NOTES

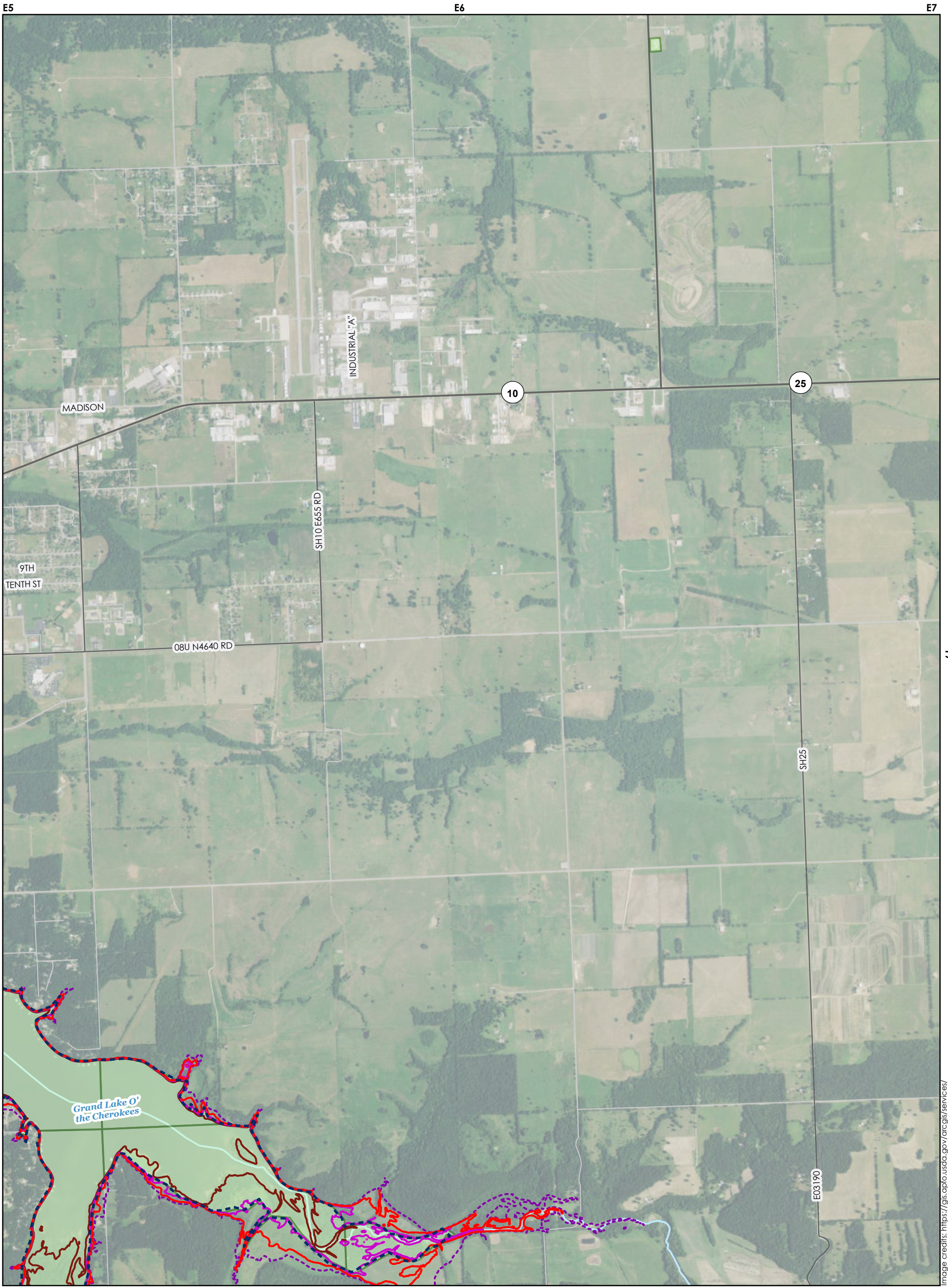
1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: F4

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

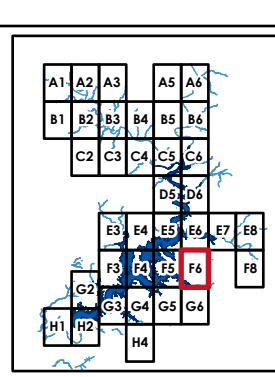


HISTORICAL INUNDATION SCENARIOS

NORTH

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

1 inch = 2,000 feet



MAX INUNDATION

- July 2007
- September 1993
- December 2015
- October 2009
- June 2004

ROAD CLASS

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

Legend

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

PENSACOLA DAM

GRAND RIVER DAM AUTHORITY

MAP: F6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

Image credits: https://gis.cplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

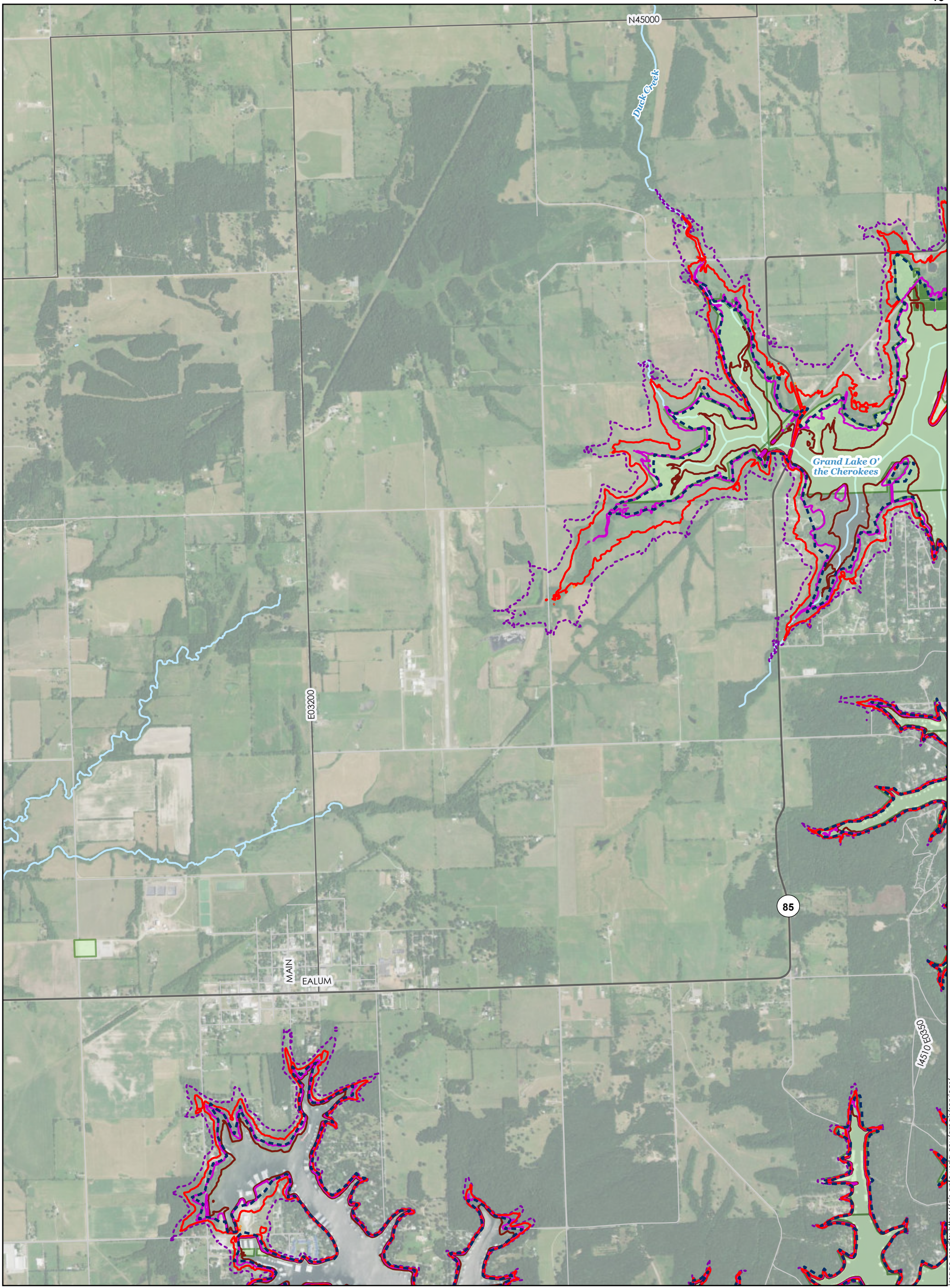
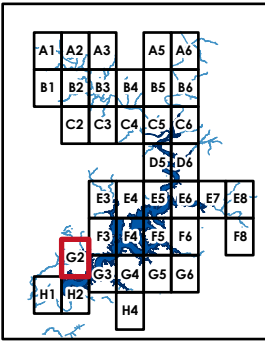
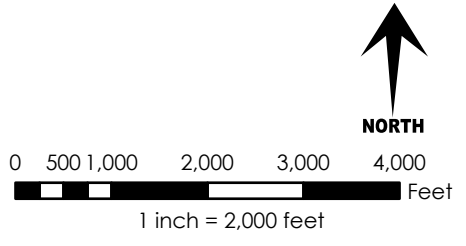


Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

HISTORICAL INUNDATION SCENARIOS



- MAX INUNDATION**
- July 2007
 - September 1993
 - December 2015
 - October 2009
 - June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: G2

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

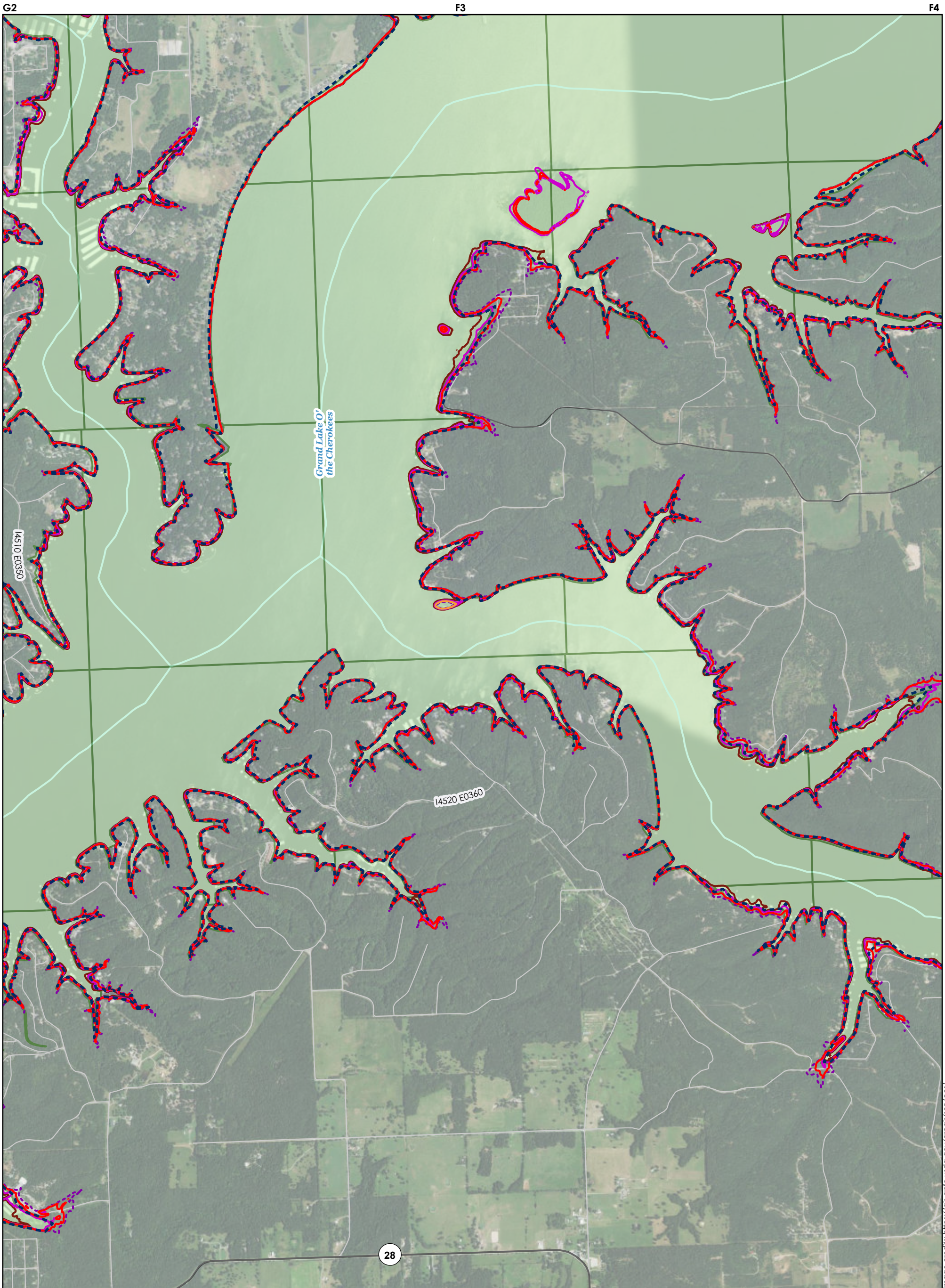
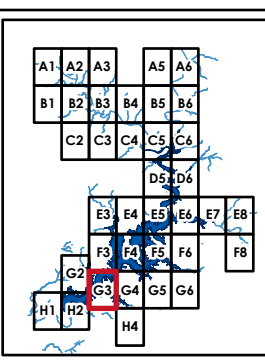
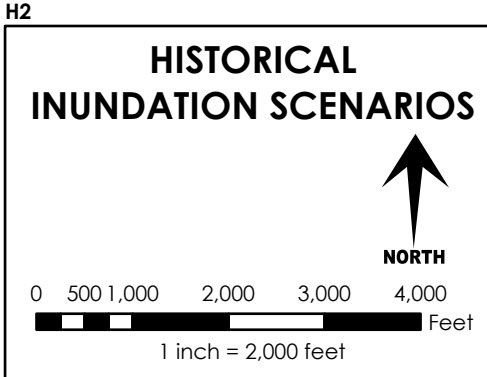


Image credits: https://gis.dplp.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021



- MAX INUNDATION**
- July 2007
 - September 1993
 - December 2015
 - October 2009
 - June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

PENSACOLA DAM
 GRAND RIVER DAM AUTHORITY

MAP: G3

CRAIG, DELAWARE, MAYES, AND
 OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
 September 2022

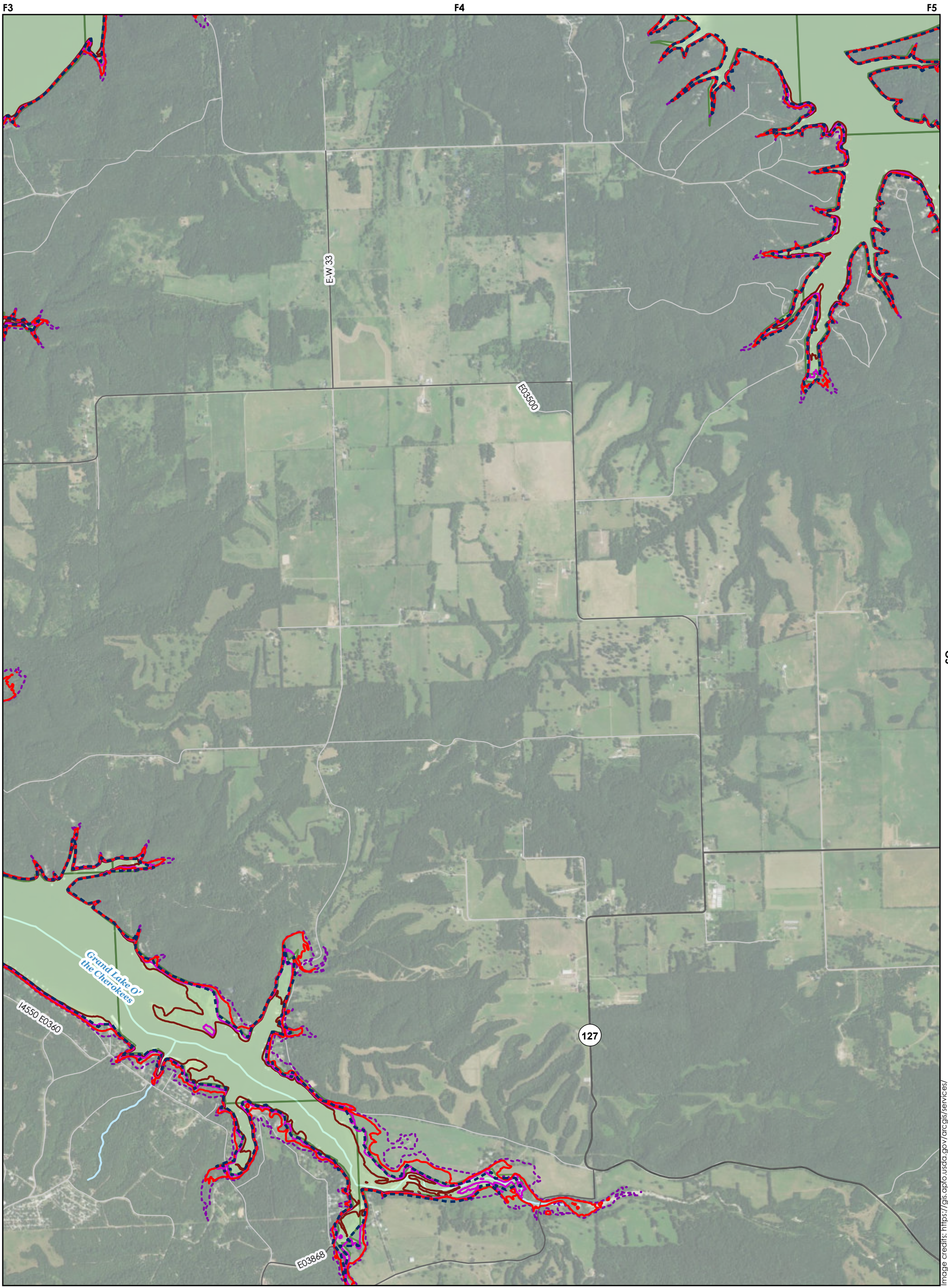
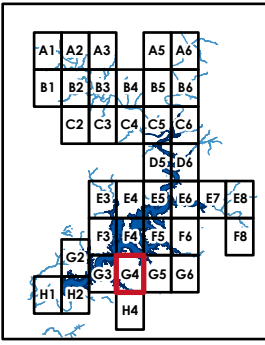


Image credits: https://gis.dplp.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

HISTORICAL INUNDATION SCENARIOS

NORTH



- MAX INUNDATION**
- July 2007
 - September 1993
 - December 2015
 - October 2009
 - June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

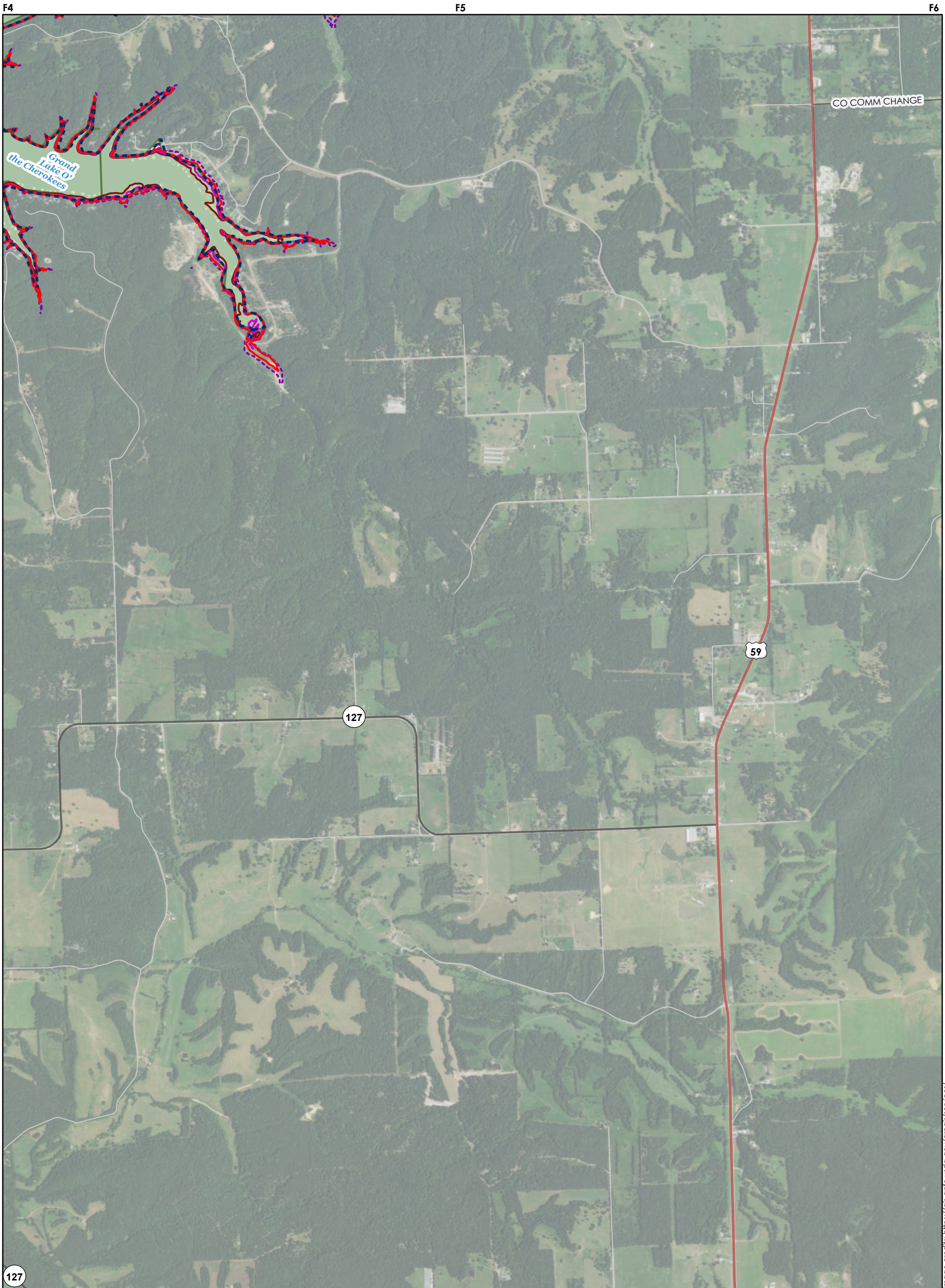
PENSACOLA DAM

GRAND RIVER DAM AUTHORITY

MAP: G4

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



HISTORICAL INUNDATION SCENARIOS

NORTH

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

1 inch = 2,000 feet

MAX INUNDATION

- █ July 2007
- █ September 1993
- █ December 2015
- █ October 2009
- █ June 2004

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
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: G5

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

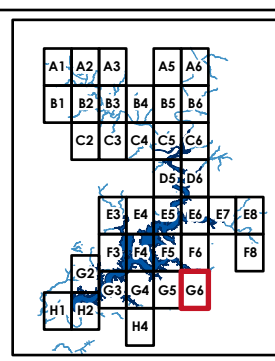
FERC No. 1494
September 2022

Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021



HISTORICAL INUNDATION SCENARIOS

NORTH



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

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

MAP NOTES

1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

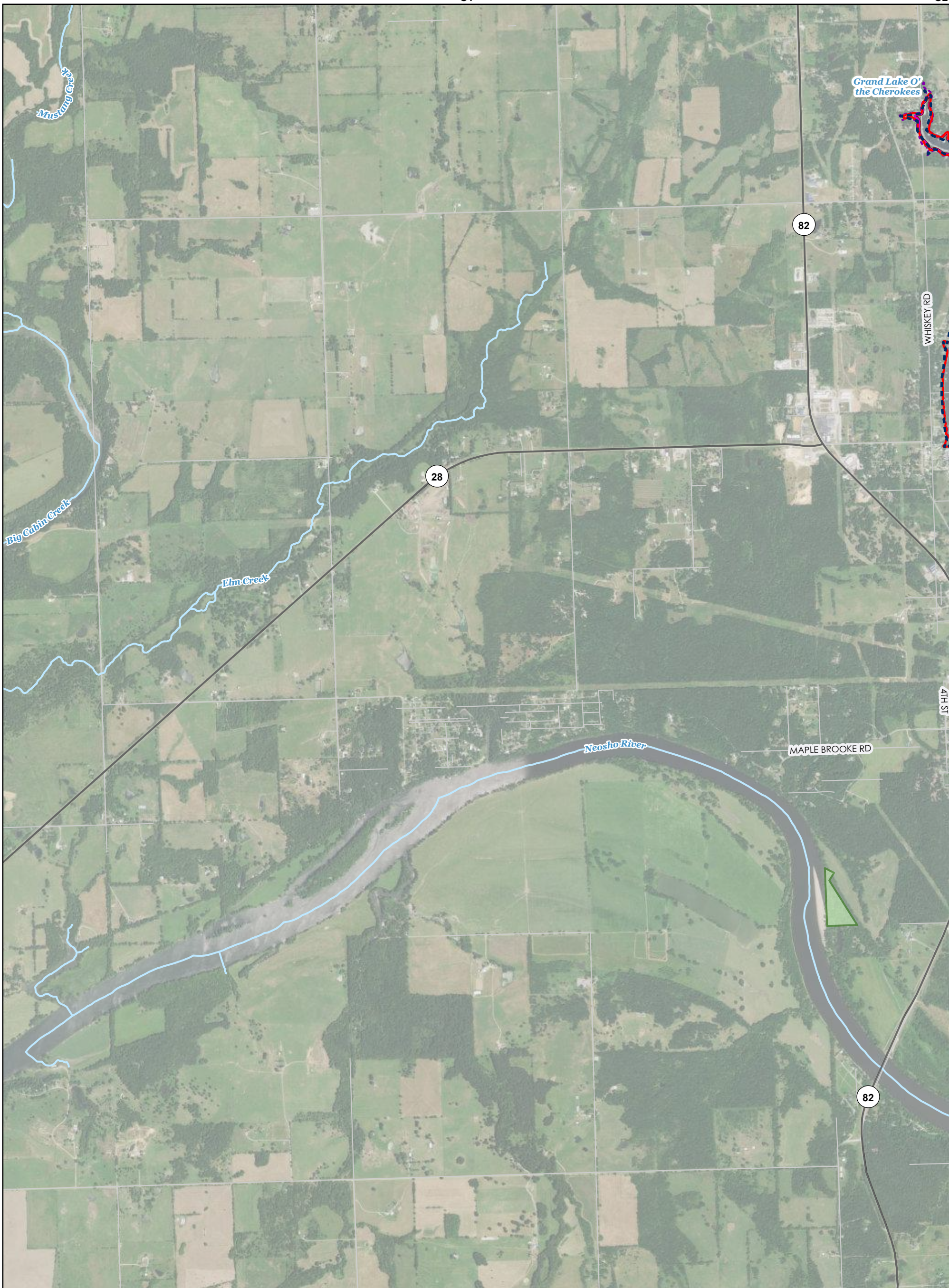
PENSACOLA DAM

GRAND RIVER DAM AUTHORITY

MAP: G6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

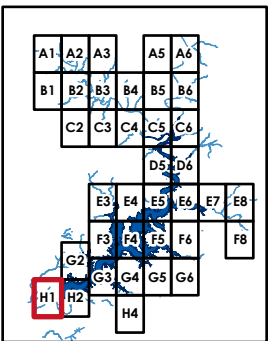
FERC No. 1494
September 2022



HISTORICAL INUNDATION SCENARIOS



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



MAX INUNDATION

- July 2007
- September 1993
- December 2015
- October 2009
- June 2004

Legend

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

MAP NOTES

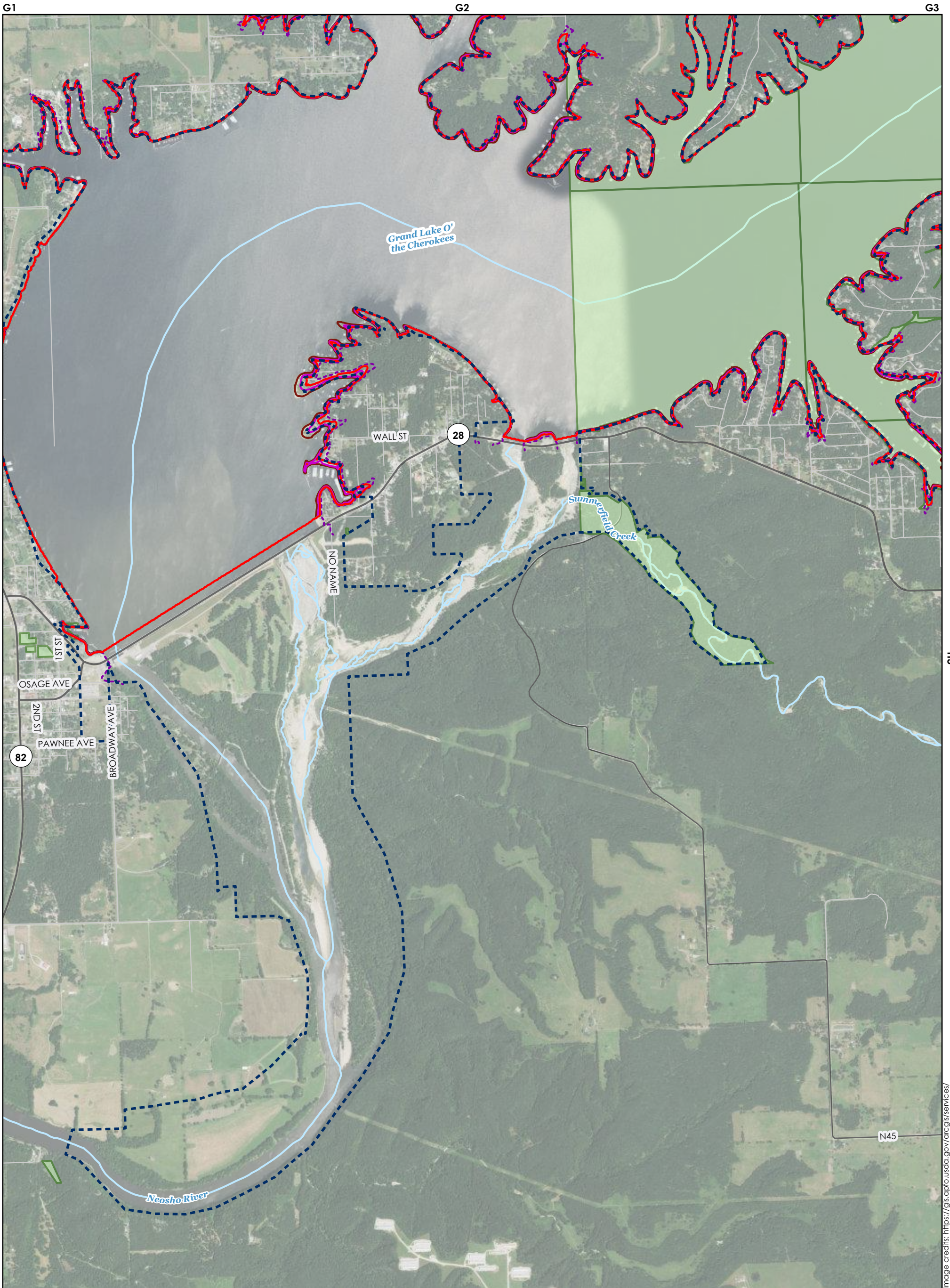
1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
2. See Overview Map for notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

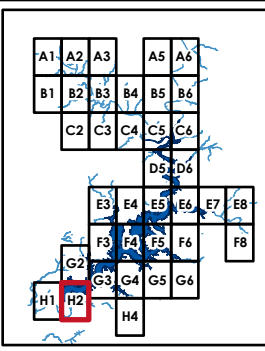
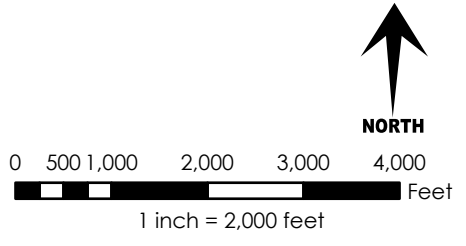
MAP: H1

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



HISTORICAL INUNDATION SCENARIOS



- MAX INUNDATION**
- █ July 2007
 - █ September 1993
 - █ December 2015
 - █ October 2009
 - █ June 2004

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

- MAP NOTES**
1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
 2. See Overview Map for notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: H2

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

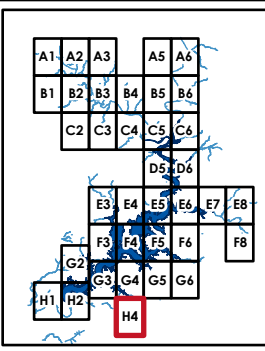
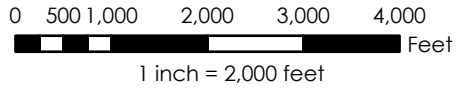
FERC No. 1494
September 2022

Image credits: https://gis.dplb.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer_2021



Image credits: https://gis.dplbo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2021

HISTORICAL INUNDATION SCENARIOS



- MAX INUNDATION**
- July 2007
 - September 1993
 - December 2015
 - October 2009
 - June 2004

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

- MAP NOTES**
1. Simulations of historical inflow events use historical starting stage at Pensacola Dam. Pensacola Dam stage during the inflow event is calculated by the Operations Model.
 2. See Overview Map for notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: H4

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA
FERC No. 1494
September 2022