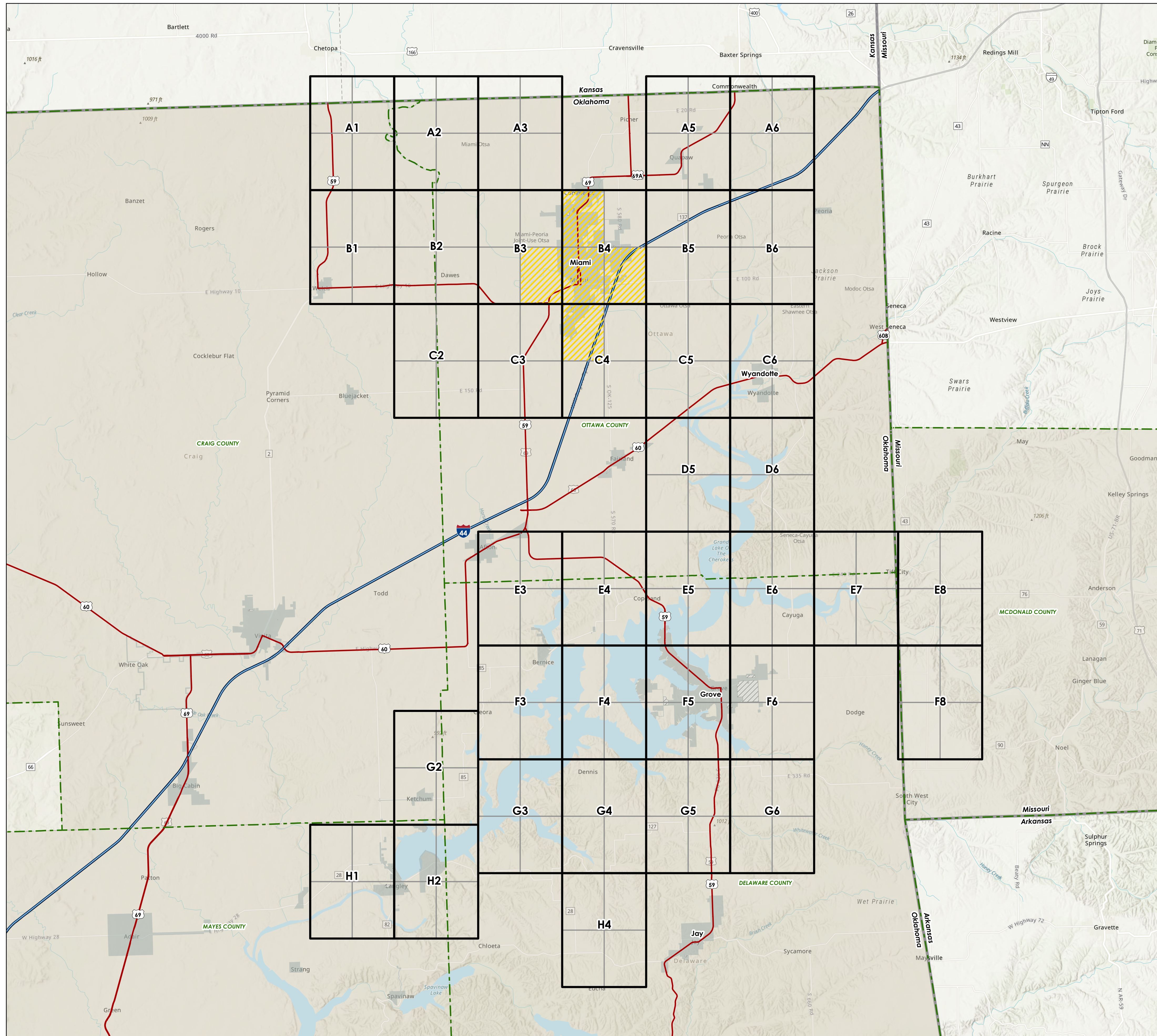


Upstream Model Results and Critical Infrastructure Overview Map

Pensacola Dam
GRAND RIVER DAM AUTHORITY
September 2022



Overview Map Legend

	1:24,000-scale Map Sheet		County Boundary		Road Class
	1:12,000-scale Detail Sheet		Municipality		Interstate
	State Boundary		Unincorporated		US Highway

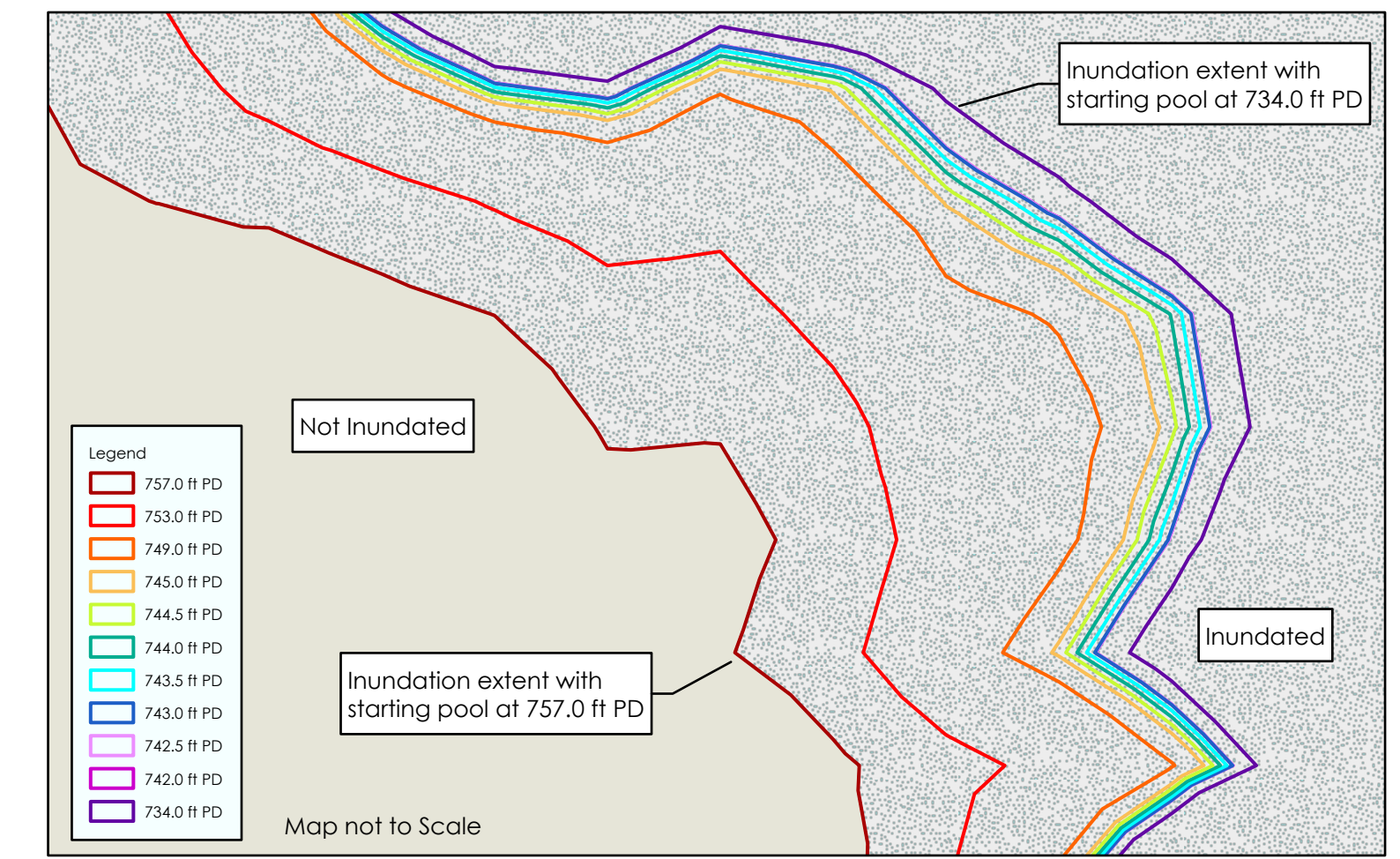
Critical Infrastructure Legend *

	Airport		Hospital		School		Wastewater Treatment
	Bridge, Off-sys		Fire Station		Shelter - Both		Water Treatment
	Bridge, On-sys		Law Enforcement		Shelter - Evac Only		
	Bridge, RR		Church		Power Plant		
	Cell Tower		Park		Substation		

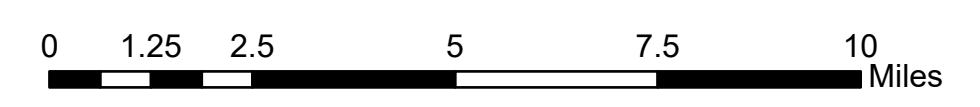
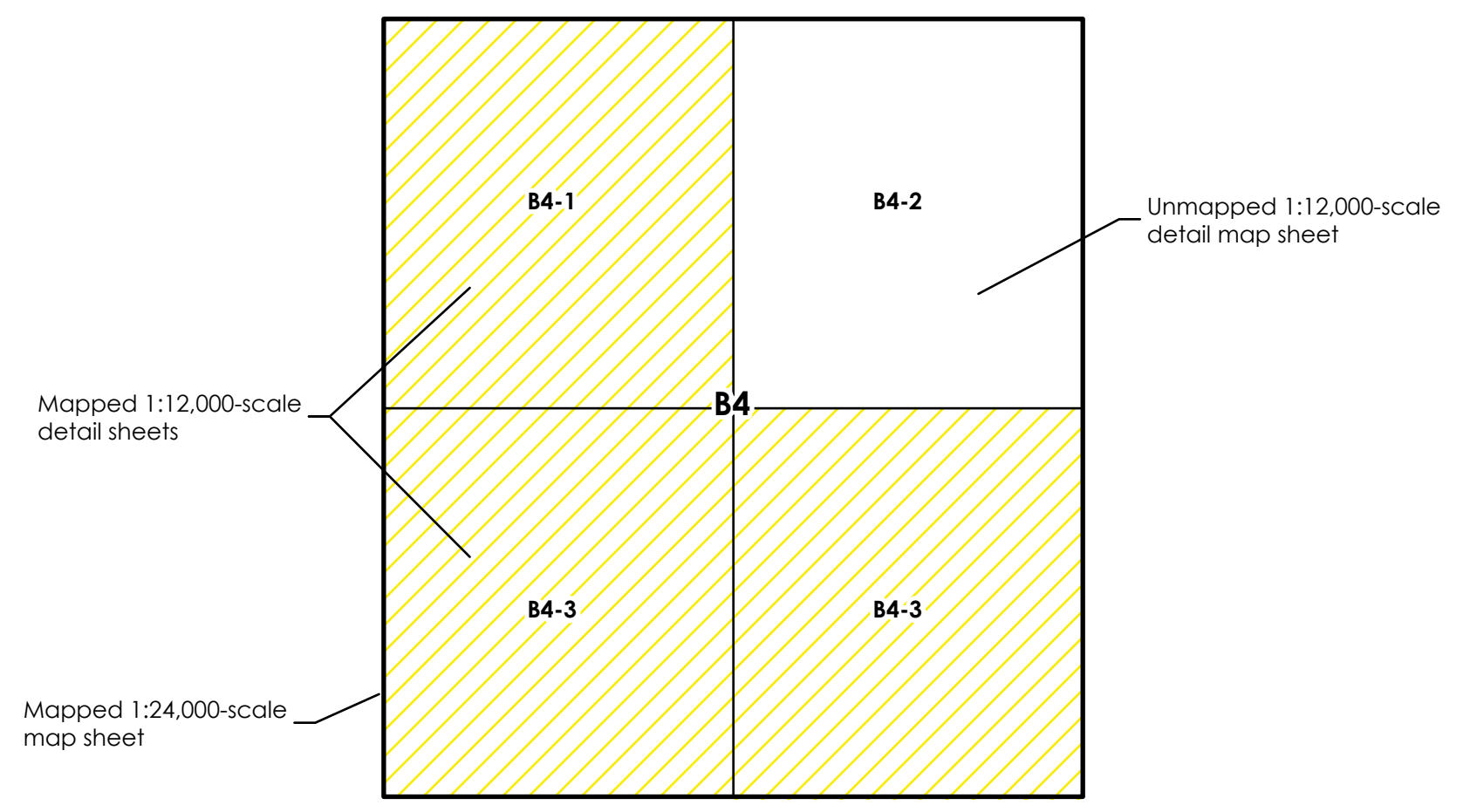
* Due to space constraints on the individual map sheets, the Critical Infrastructure symbols are provided here. Refer to this Overview Map when using the individual map sheets.

Inundation Scenario Mapping

Mapping shows the extent of inundation for the selected hydraulic event under different starting pool elevations: 734.0 ft PD, 742.0 ft PD, 742.5 ft PD, 743.0 ft PD, 743.5 ft PD, 744.0 ft PD, 744.5 ft PD, 745.0 ft PD, 749.0 ft PD, 753.0 ft PD, and 757.0 ft PD.



Map Sheet Organization



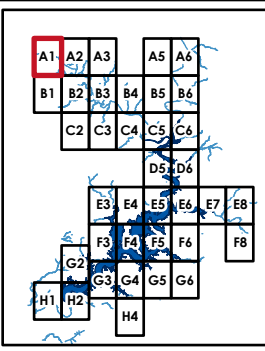
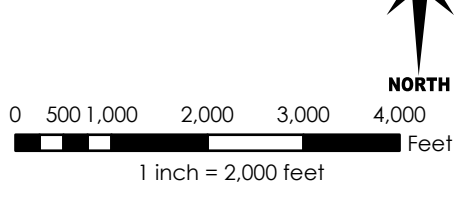
Map Notes

- 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.

Map Source: Missouri Dept. of Conservation, Missouri DNR, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS



SEPTEMBER 1993 INUNDATION SCENARIO (21-YEAR EVENT)



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS	
	Interstate
	State Highway
	US Highway
	Major Collector
	Local Road

	Railroad
	Stream
	Flowage Easements
	Project Boundary
	GRDA Ownership

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

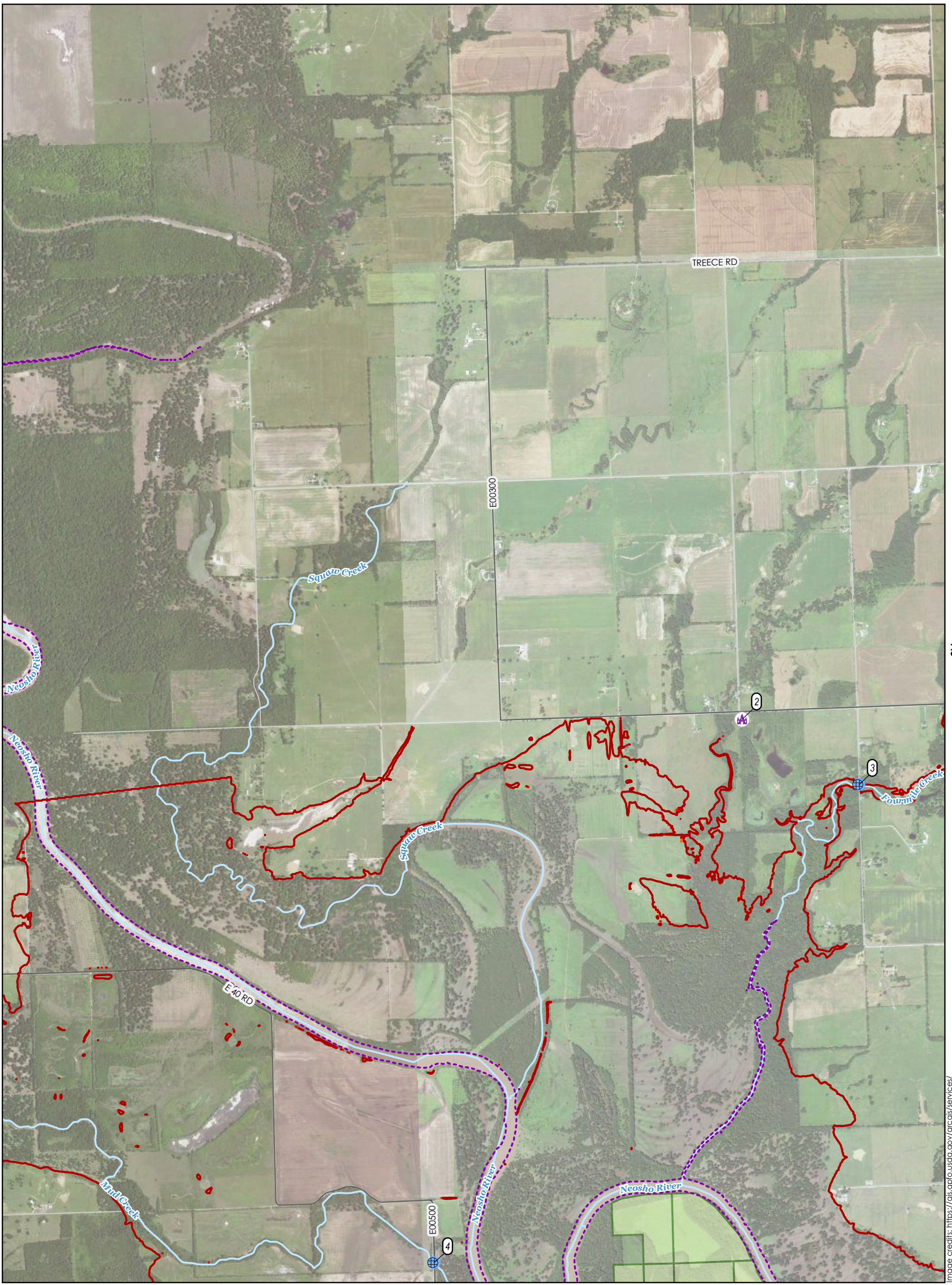
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: A1

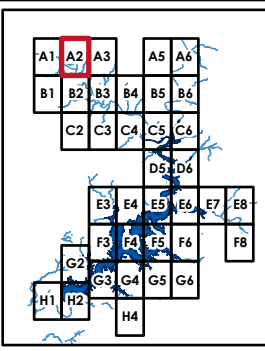
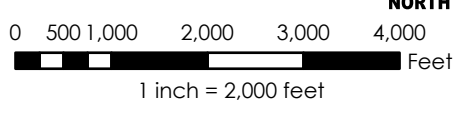
CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

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



**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS

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

Railroad	Stream	Flowage Easements	Project Boundary	GRDA Ownership
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PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: A2

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

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

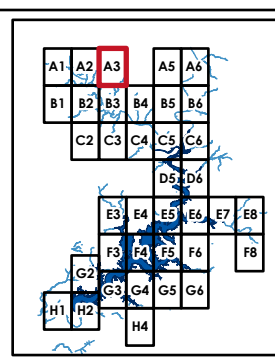


**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**

NORTH ↑

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

1 inch = 2,000 feet



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

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

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

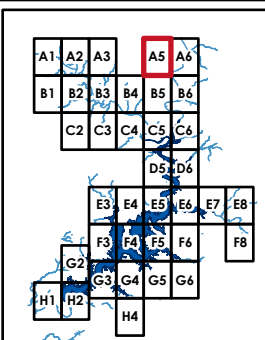
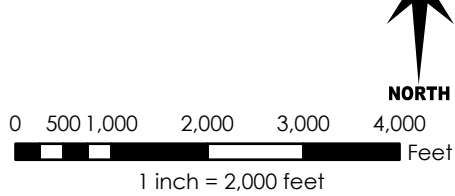
MAP: A3

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



SEPTEMBER 1993 INUNDATION SCENARIO (21-YEAR EVENT)



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS

Interstate
State Highway
US Highway
Major Collector
Local Road

Railroad
Stream
Flowage Easements
Project Boundary
GRDA Ownership

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

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, 2019

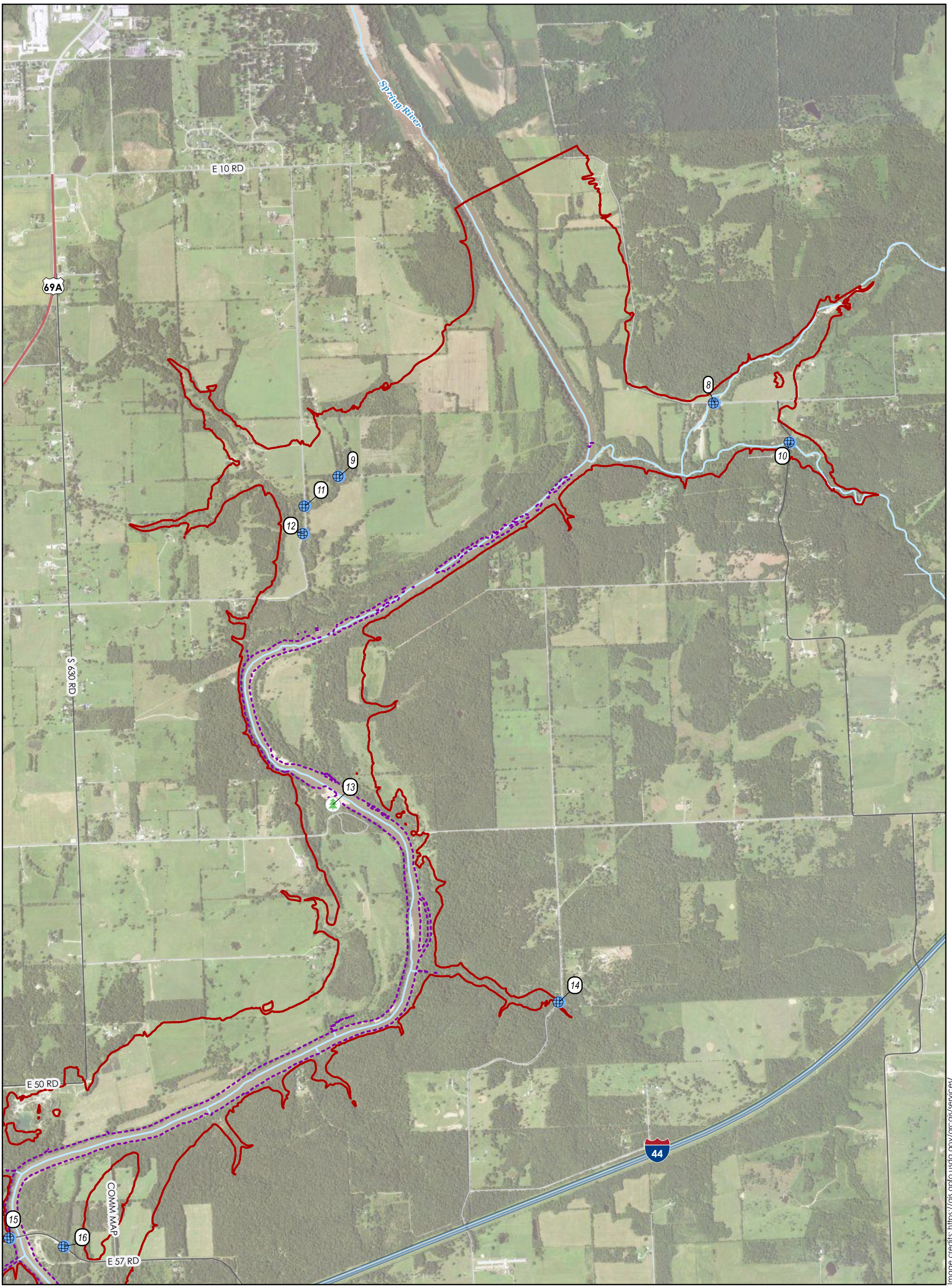


Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

SEPTEMBER 1993 INUNDATION SCENARIO (21-YEAR EVENT)

NORTH ↑

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

1 inch = 2,000 feet

SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS	Symbol
Interstate	Blue line with red border
State Highway	Grey line
US Highway	Red line
Major Collector	Black line
Local Road	Thin grey line
Railroad	Yellow line with cross-ticks
Stream	Blue line
Flowage Easements	Red dashed line
Project Boundary	Purple dashed line
GRDA Ownership	Green line

PENSACOLA DAM

GRAND RIVER DAM AUTHORITY

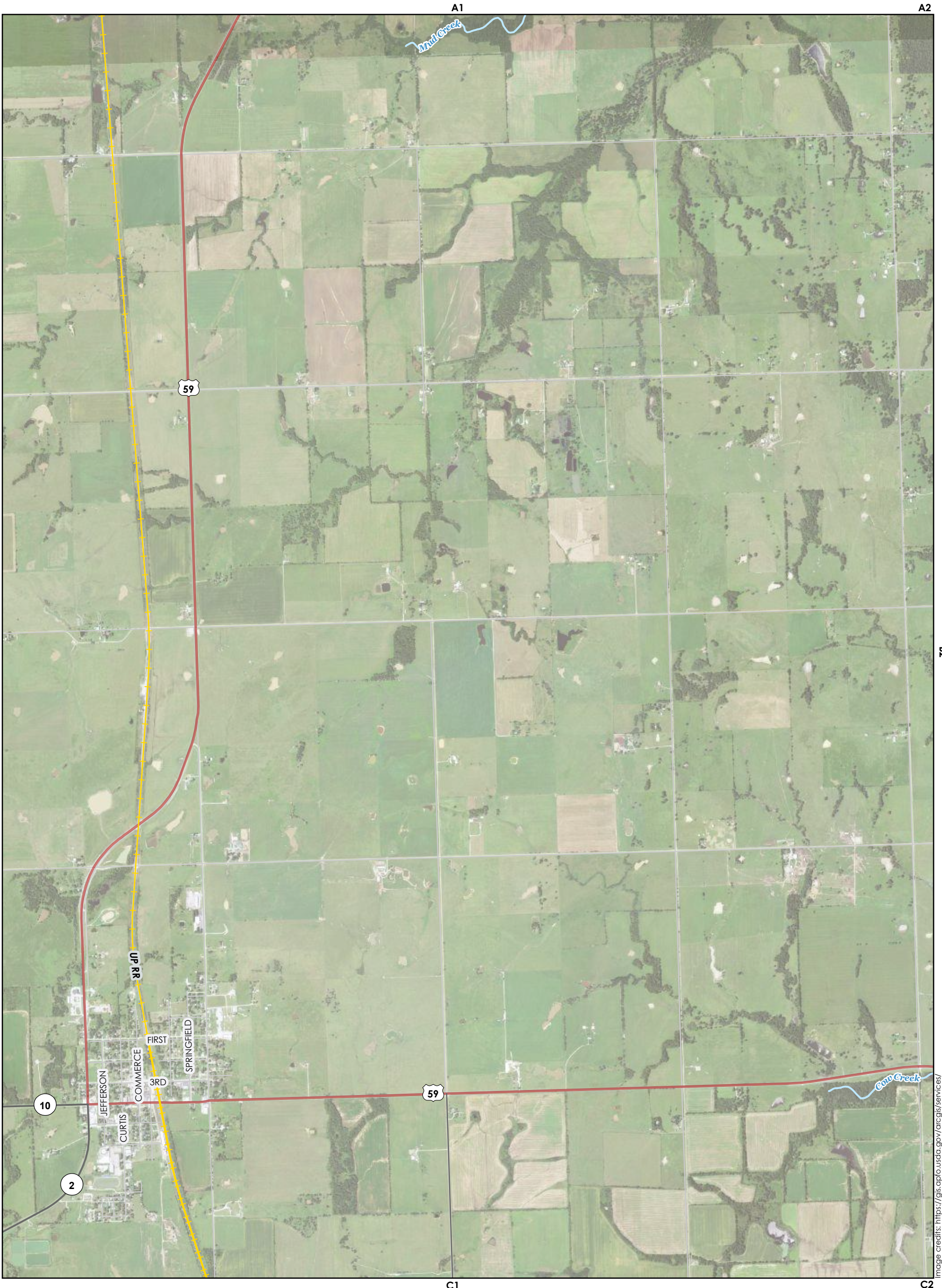
MAP: A6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

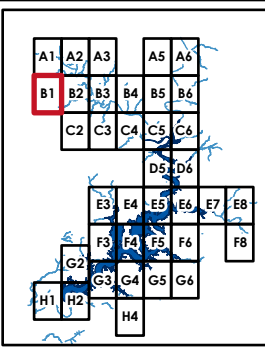


**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**

NORTH ↑

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

1 inch = 2,000 feet



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

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

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

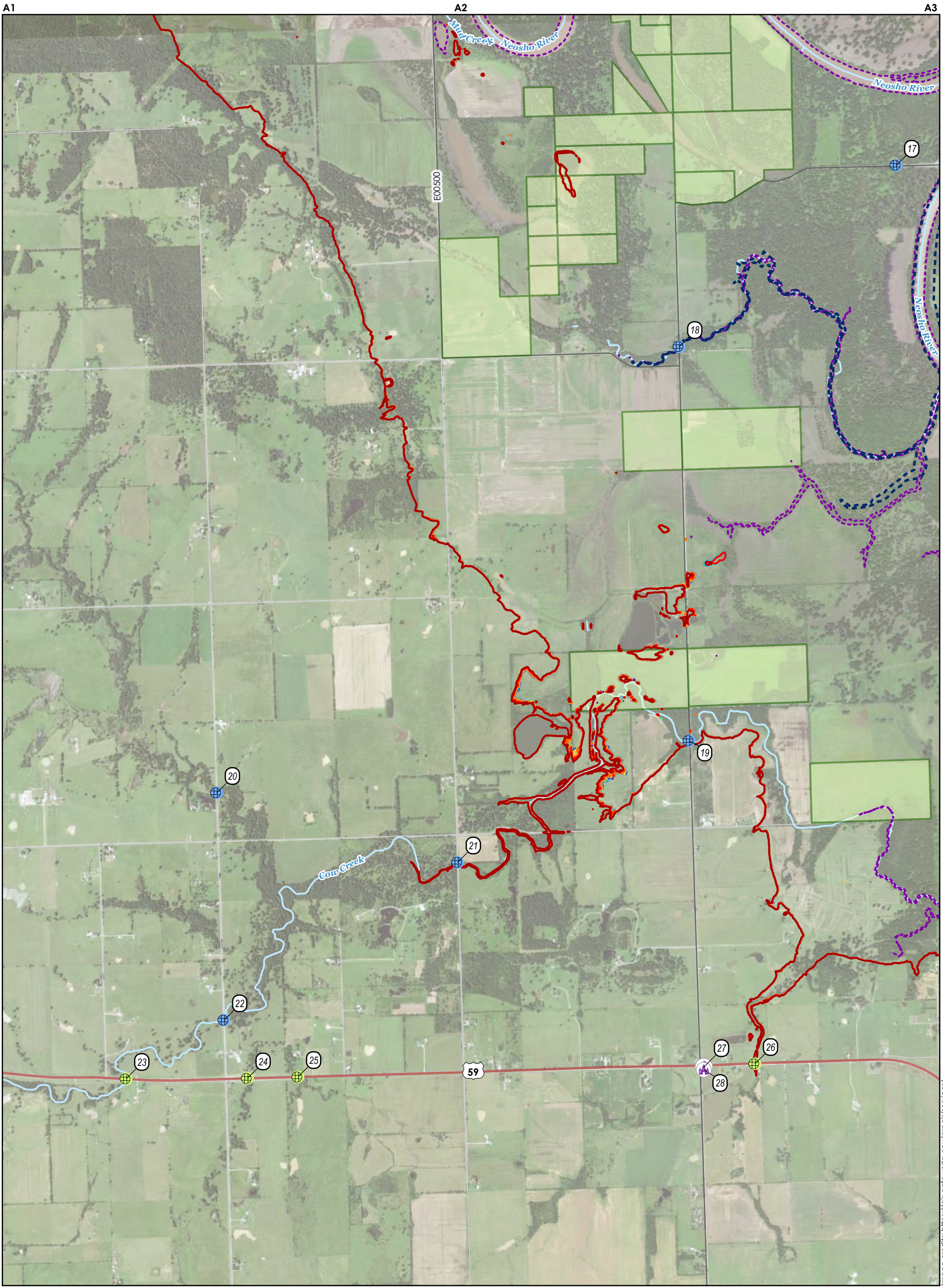
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: B1

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

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



SEPTEMBER 1993 INUNDATION SCENARIO (21-YEAR EVENT)

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
			F3	F4	F5
			G2	G3	G4
			H1	H2	H4

SEP 1993 MAX INUNDATION		Legend	
757.0 ft PD	743.5 ft PD	Interstate	Railroad
753.0 ft PD	743.0 ft PD	State Highway	Stream
749.0 ft PD	742.5 ft PD	US Highway	Flowage Easements
745.0 ft PD	742.0 ft PD	Major Collector	Project Boundary
744.5 ft PD	734.0 ft PD	Local Road	GRDA Ownership
744.0 ft PD			

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

PENSACOLA DAM

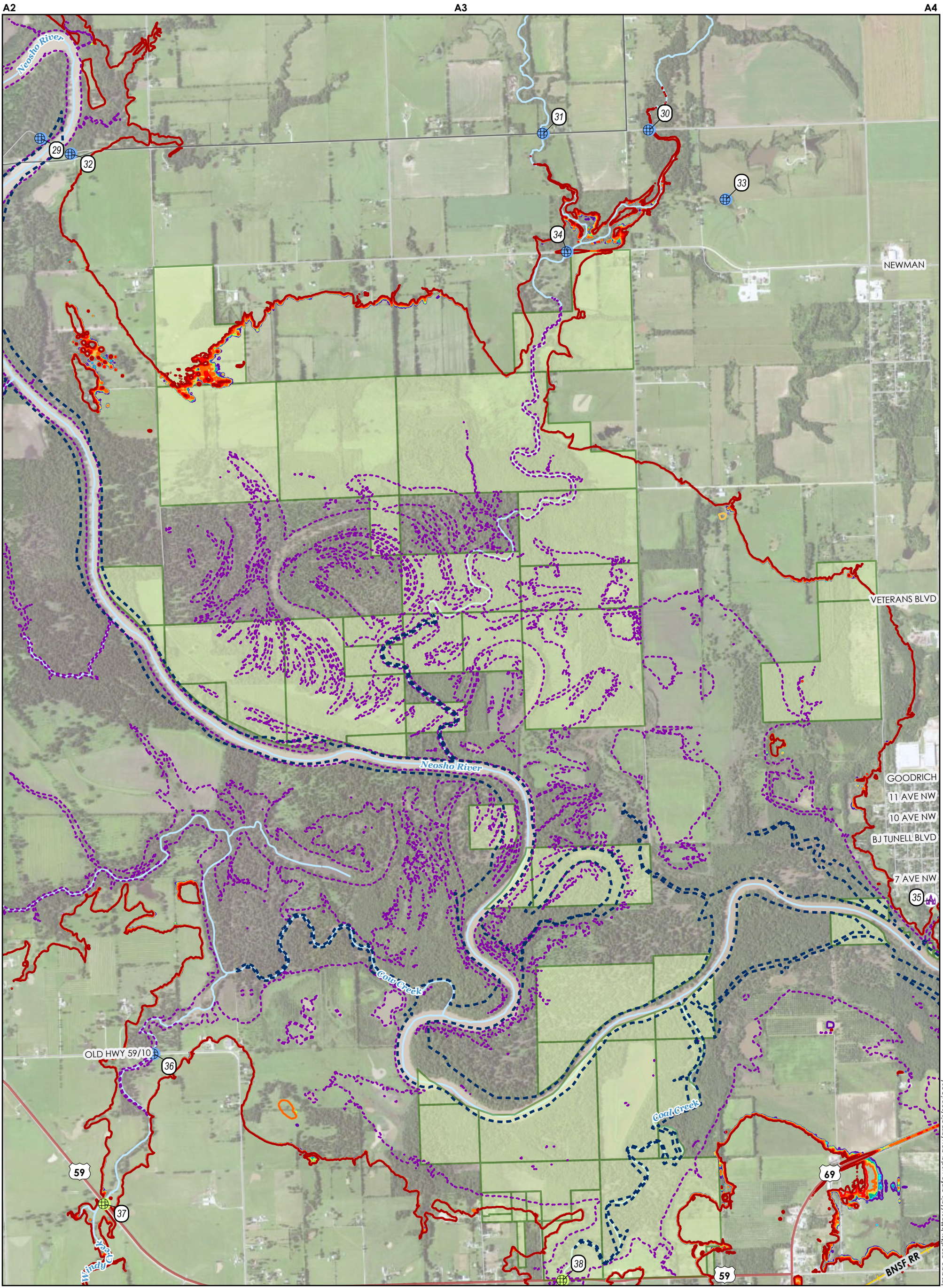
GRAND RIVER DAM AUTHORITY

MAP: B2

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, 2019

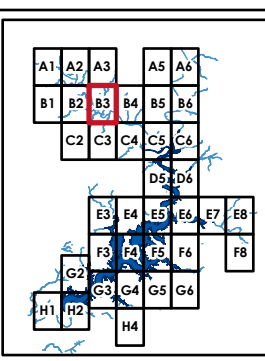


**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**

NORTH ↑

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

1 inch = 2,000 feet



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS	Symbol
Interstate	Blue dashed line
State Highway	Grey dashed line
US Highway	Red dashed line
Major Collector	Black dashed line
Local Road	Thin grey line
Railroad	Yellow line with cross-ticks
Stream	Blue line
Flowage Easements	Blue dashed line with dots
Project Boundary	Blue dashed line with squares
GRDA Ownership	Green outline

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

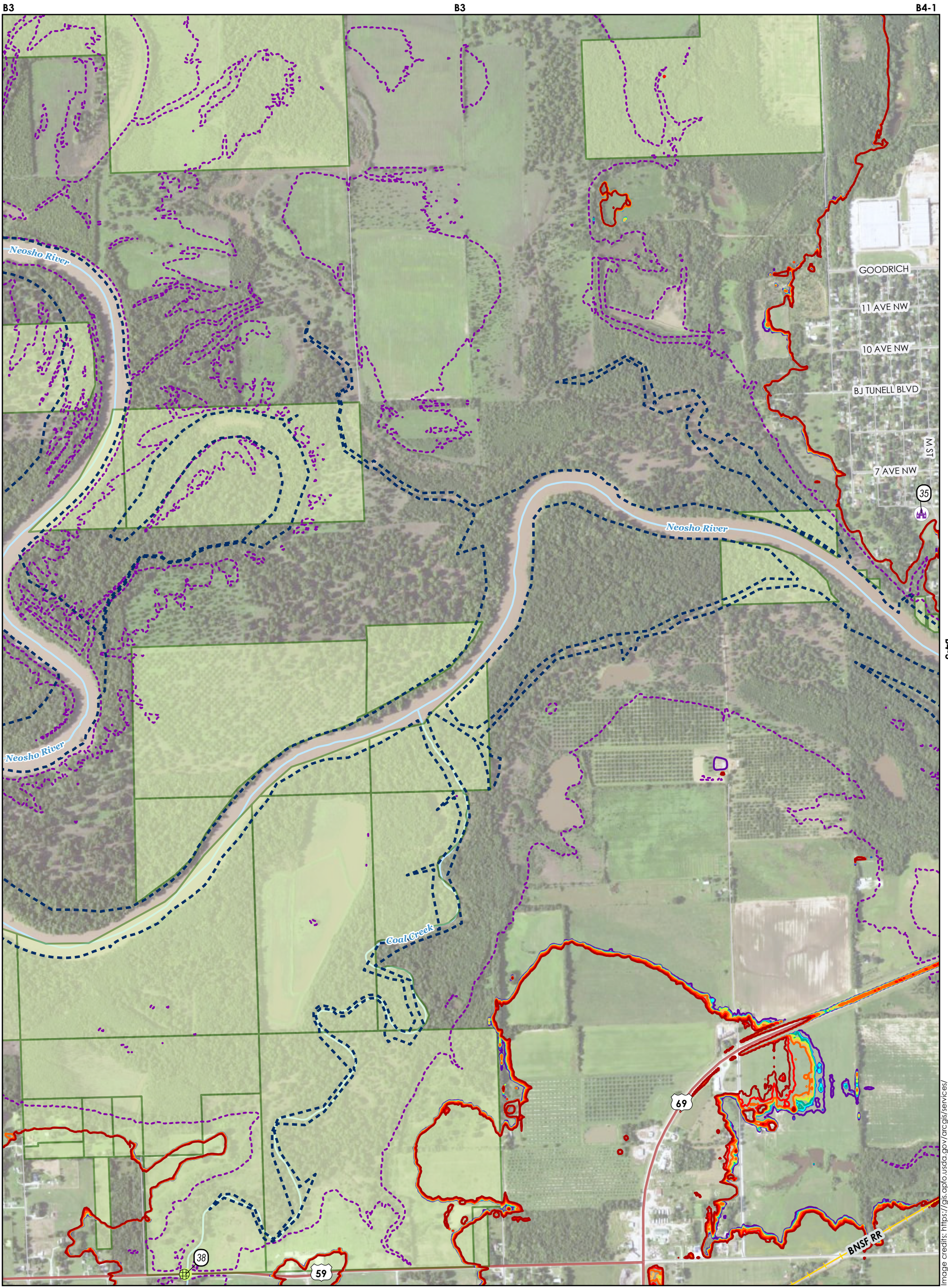
**PENSACOLA DAM
GRAND RIVER DAM AUTHORITY**

MAP: B3

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

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

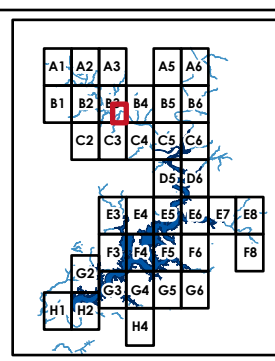


**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**

NORTH

0 250 500 1,000 1,500 2,000
Feet

1 inch = 1,000 feet



SEP 1993 MAX INUNDATION		Legend	
757.0 ft PD	743.5 ft PD	ROAD CLASS	Railroad
753.0 ft PD	743.0 ft PD	Interstate	Stream
749.0 ft PD	742.5 ft PD	State Highway	Flowage Easements
745.0 ft PD	742.0 ft PD	US Highway	Project Boundary
744.5 ft PD	734.0 ft PD	Major Collector	GRDA Ownership
744.0 ft PD		Local Road	

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

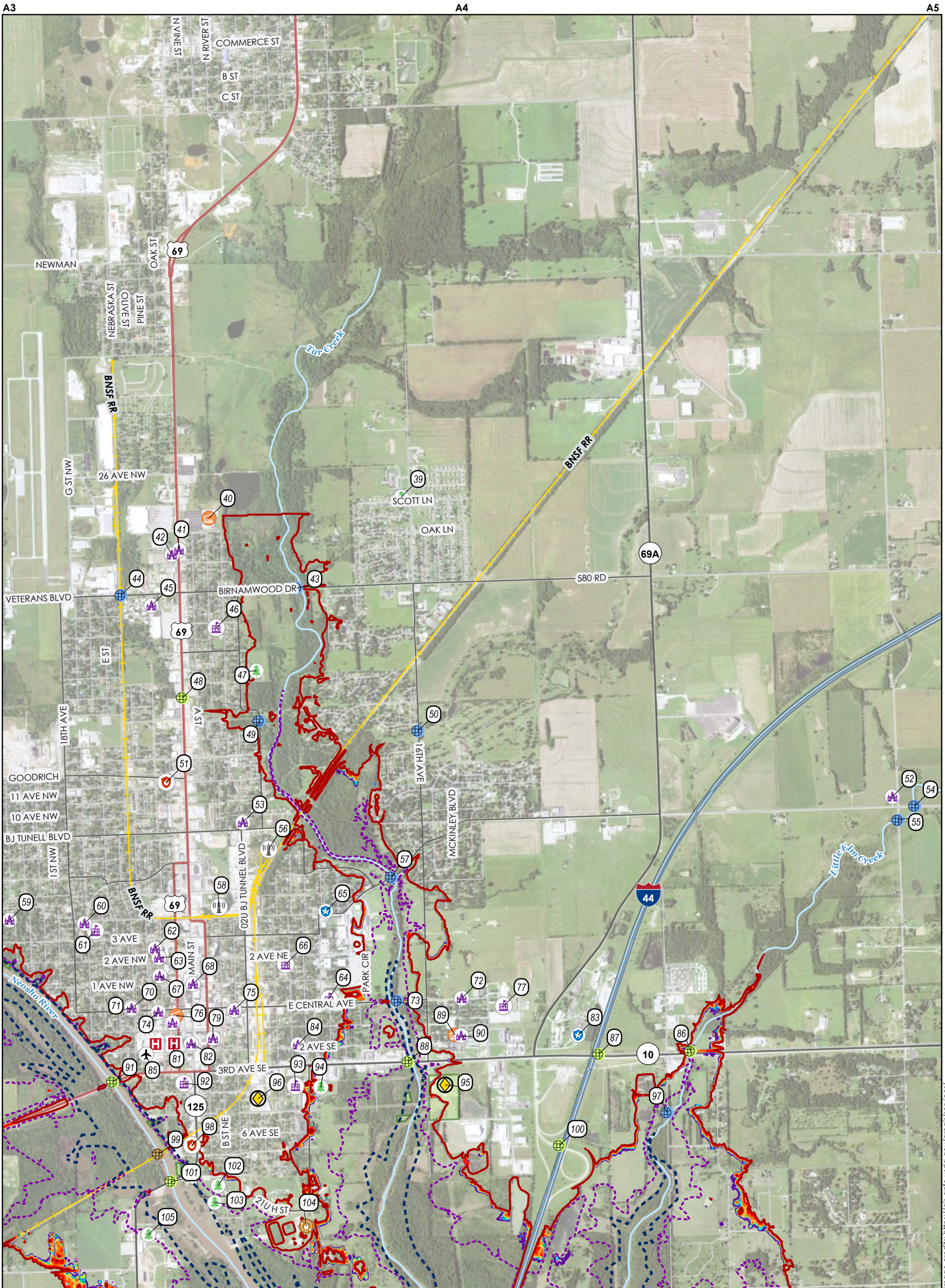
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: B3-4

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

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



SEPTEMBER 1993 INUNDATION SCENARIO (21-YEAR EVENT)

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
	F3	F4	F5	F6	F8
	G2	G3	G4	G5	G6
H1	H2	H4			

SEP 1993 MAX INUNDATION		Legend	
 757.0 ft PD	 743.5 ft PD	 Interstate	 Railroad
 753.0 ft PD	 743.0 ft PD	 State Highway	 Stream
 749.0 ft PD	 742.5 ft PD	 US Highway	 Flowage Easements
 745.0 ft PD	 742.0 ft PD	 Major Collector	 Project Boundary
 744.5 ft PD	 734.0 ft PD	 Local Road	 GRDA Ownership
 744.0 ft PD			

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

PENSACOLA DAM

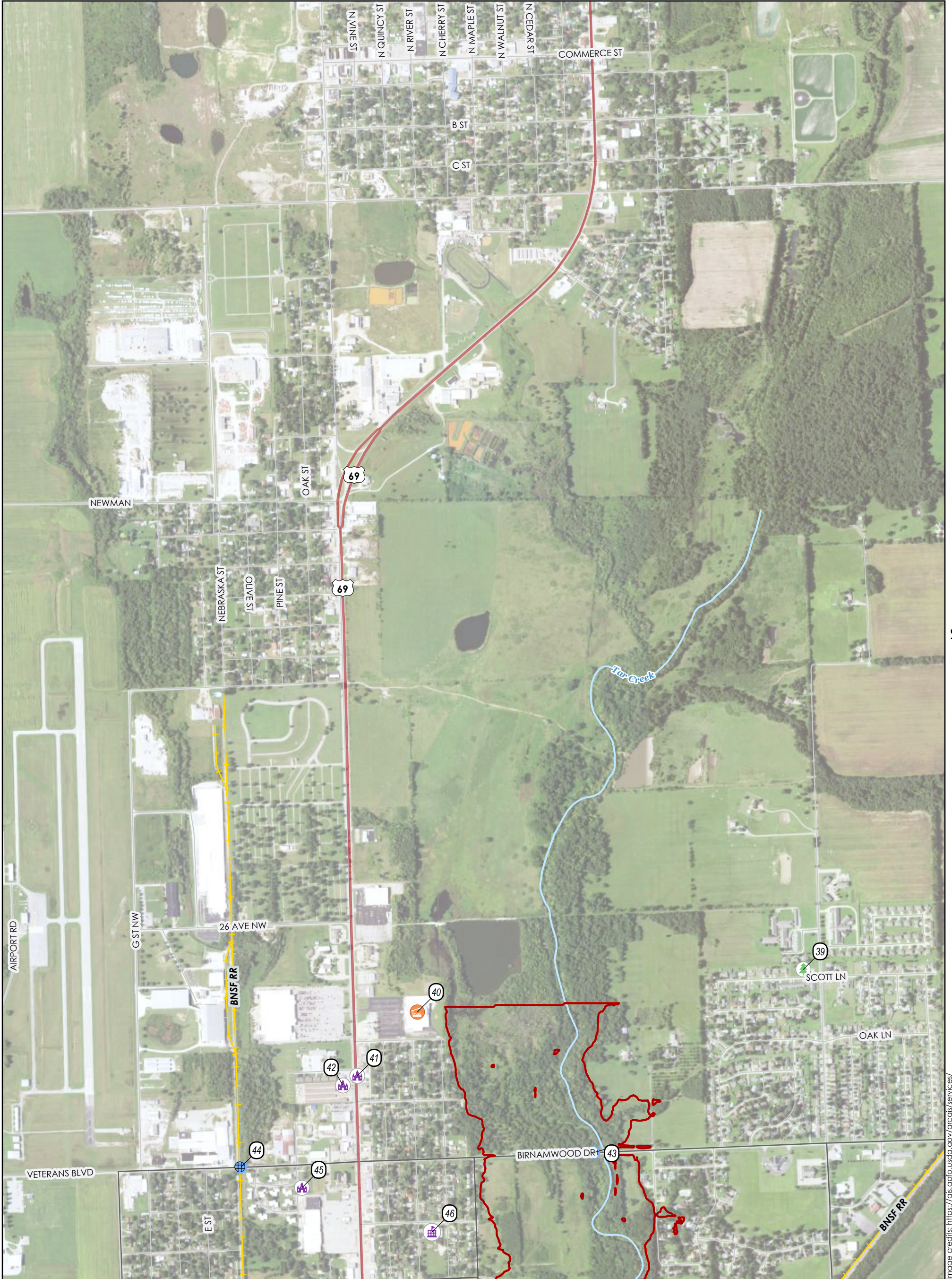
GRAND RIVER DAM AUTHORITY

MAP: B4

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

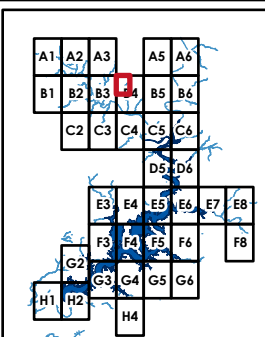
Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019



**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**



0 250 500 1,000 1,500 2,000 Feet
1 inch = 1,000 feet



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS

Interstate	US Highway
State Highway	Major Collector
Local Road	

Railroad	Stream
Flowage Easements	Project Boundary
GRDA Ownership	

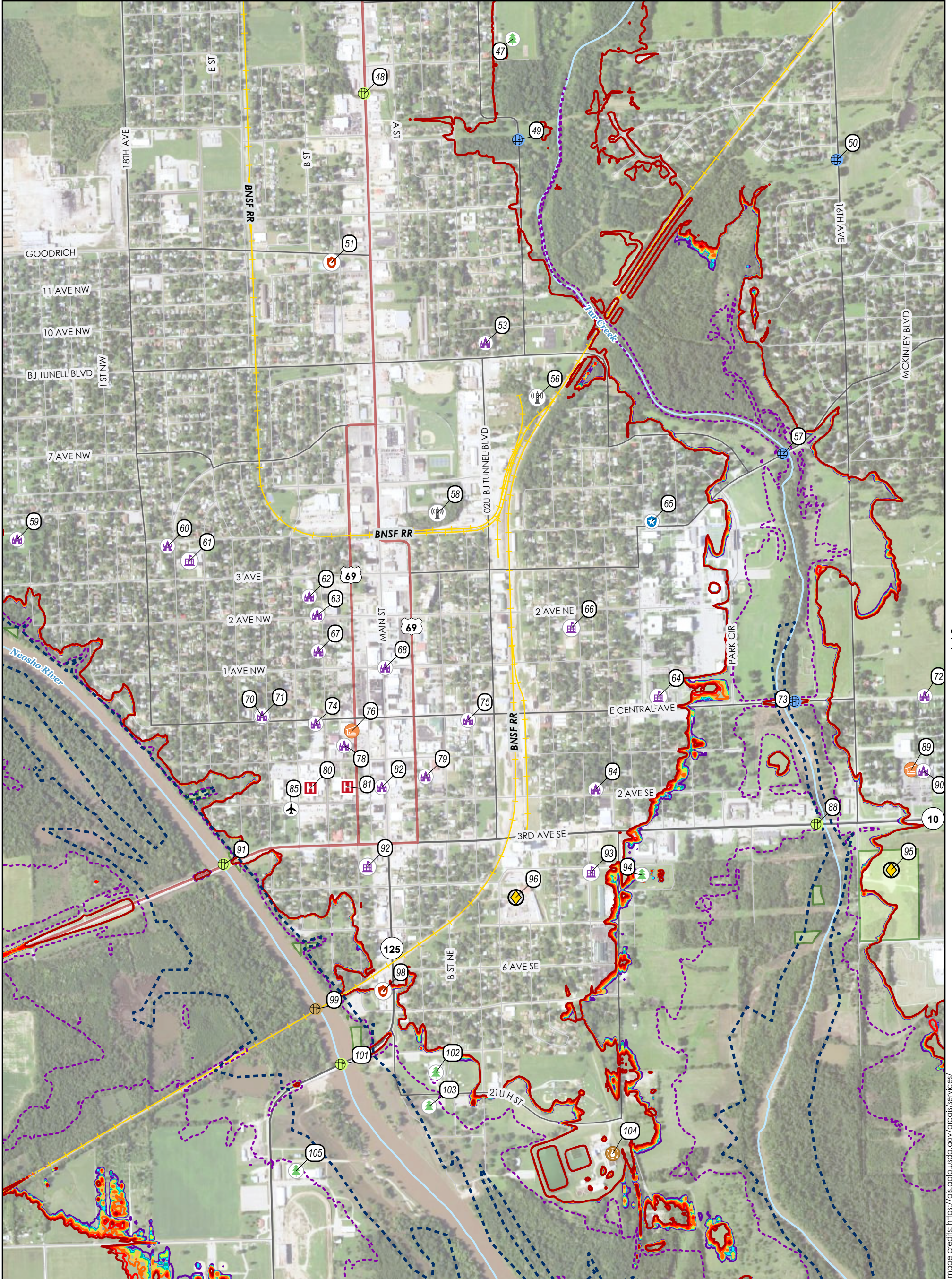
MAP AND LEGEND NOTES

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 and the Critical Infrastructure symbols.

**PENSACOLA DAM
GRAND RIVER DAM AUTHORITY**

MAP: B4-1

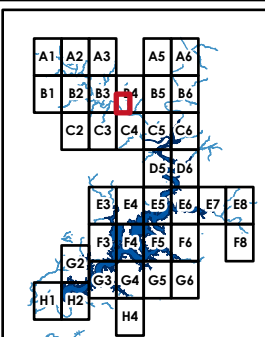
CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA
FERC No. 1494
September 2022



**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**



0 250 500 1,000 1,500 2,000 Feet
1 inch = 1,000 feet



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS

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

Railroad
Stream
Flowage Easements
Project Boundary
GRDA Ownership

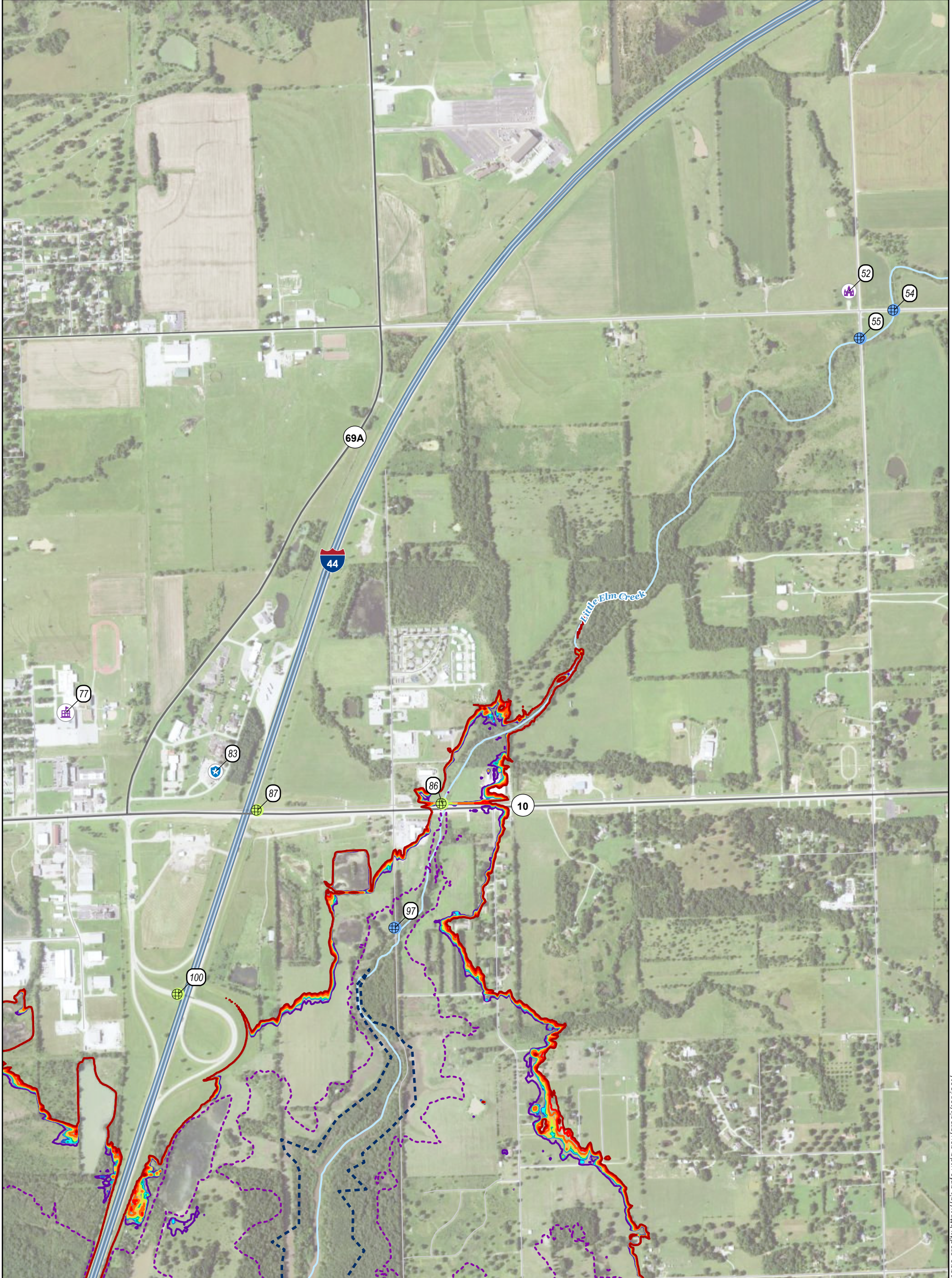
MAP AND LEGEND NOTES

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 and the Critical Infrastructure symbols.

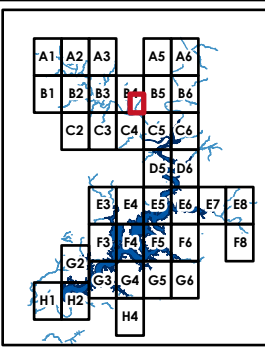
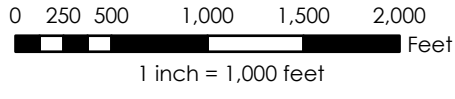
**PENSACOLA DAM
GRAND RIVER DAM AUTHORITY**

MAP: B4-3

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



**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS

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

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

MAP AND LEGEND NOTES

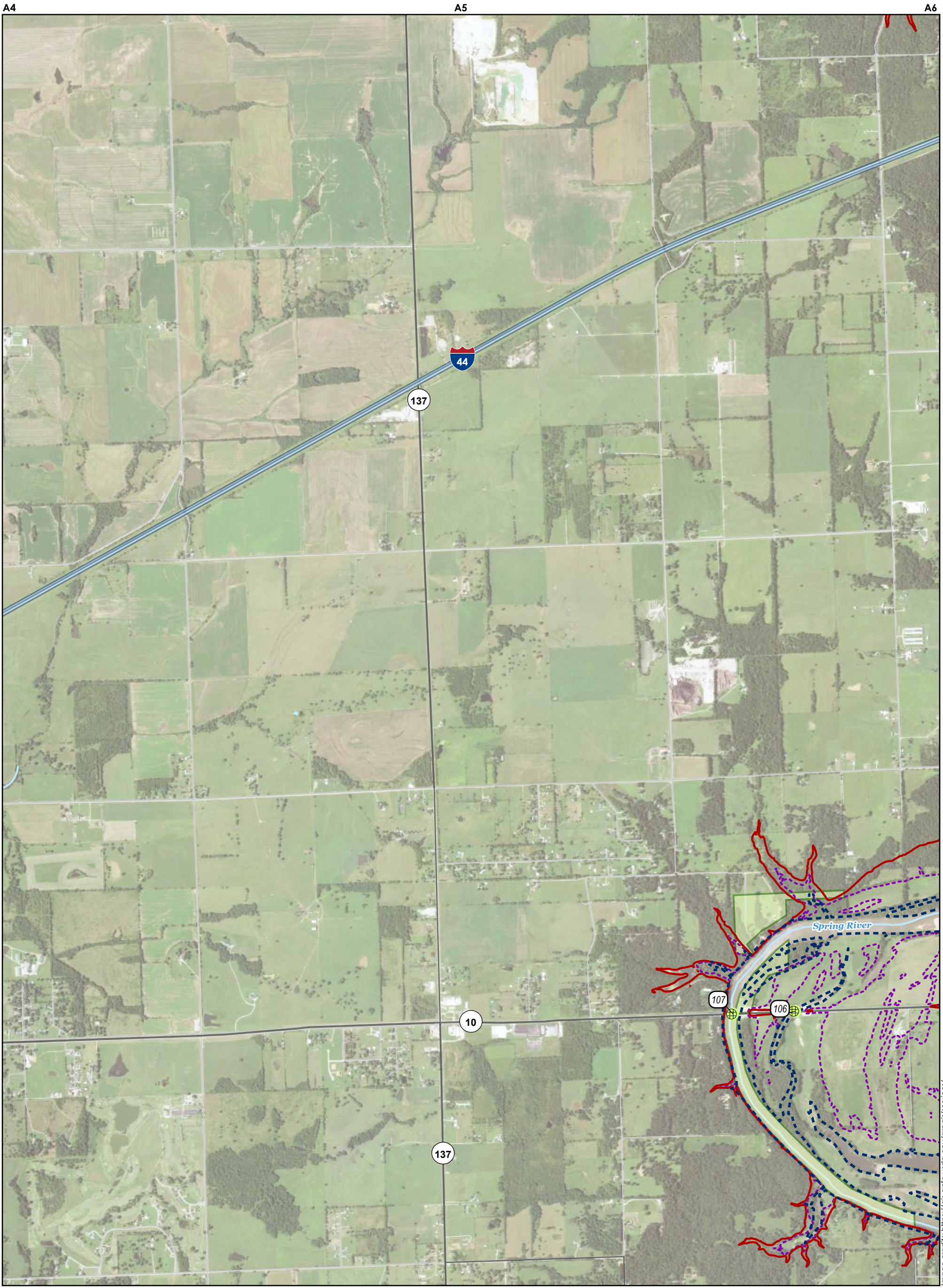
1. For areas where only the highest starting elevation inundation boundary is visible, the inundation from other starting elevations is nearly identical.
2. See Overview Map for notes on data sources and the Critical Infrastructure symbols.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

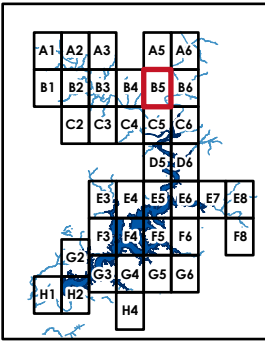
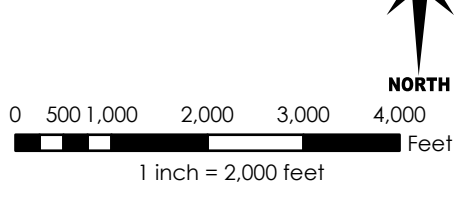
MAP: B4-4

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS

Interstate
State Highway
US Highway
Major Collector
Local Road

Railroad
Stream
Flowage Easements
Project Boundary
GRDA Ownership

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

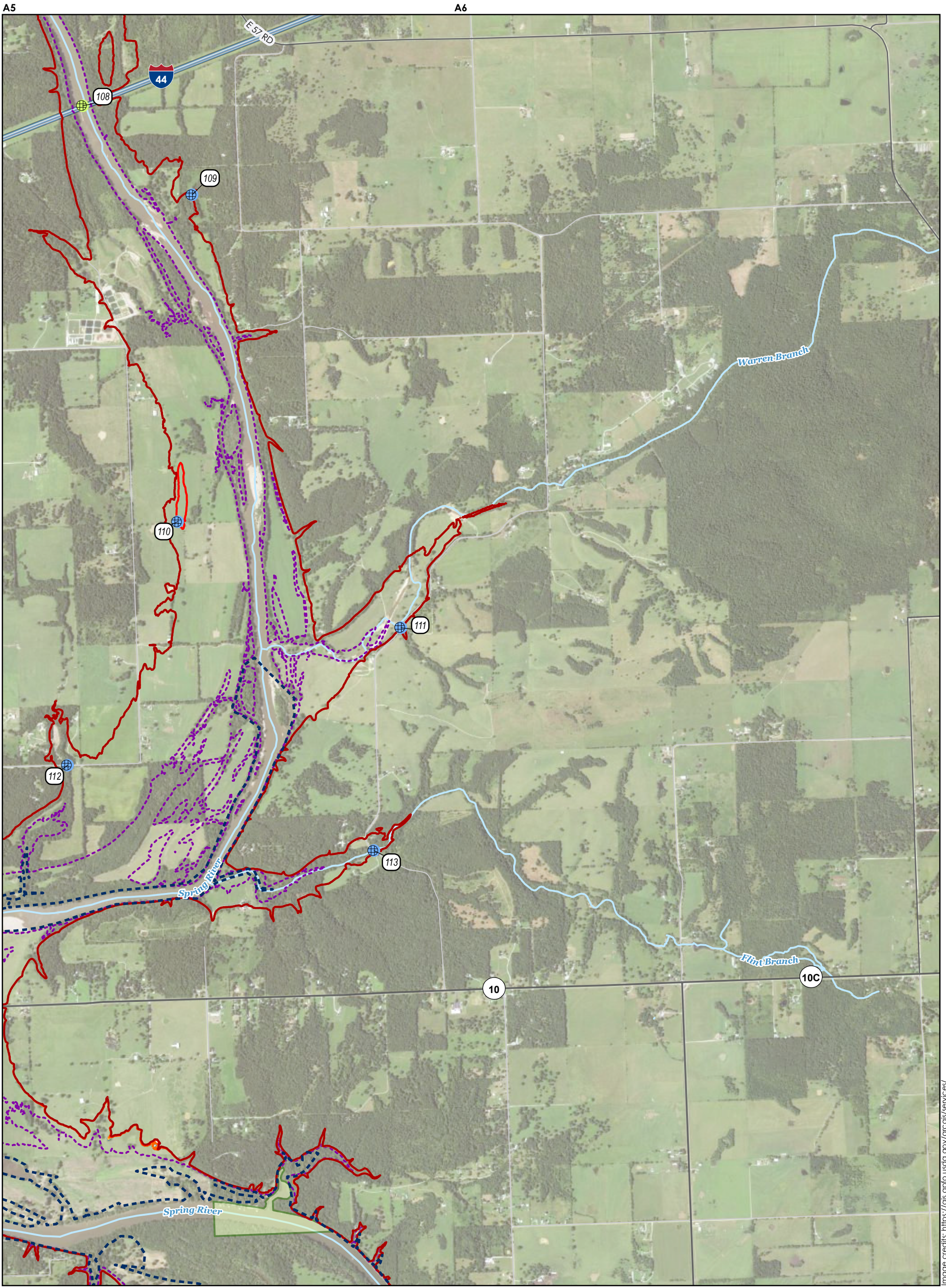
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

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, 2019

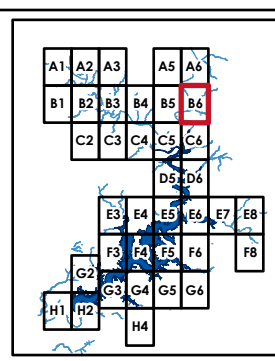


**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**

NORTH

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

1 inch = 2,000 feet



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

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

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: B6

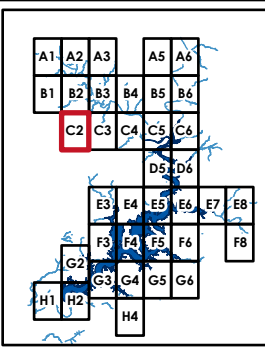
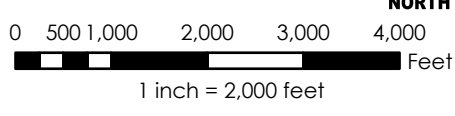
CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

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



**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS

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

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

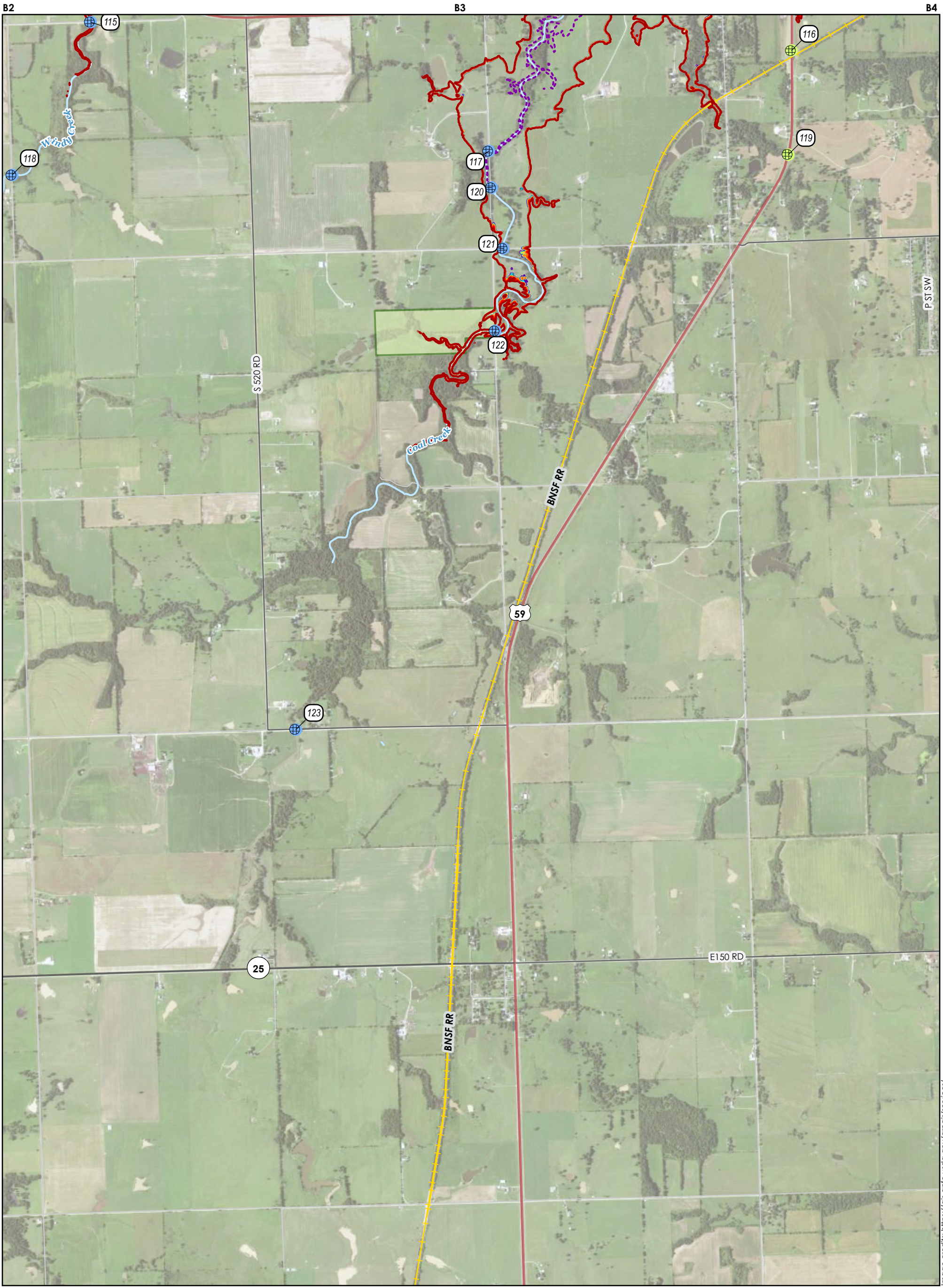
MAP AND LEGEND NOTES

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 and the Critical Infrastructure symbols.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C2

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

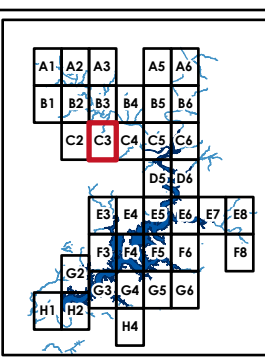


**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**

NORTH ↑

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

1 inch = 2,000 feet



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS

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

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

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

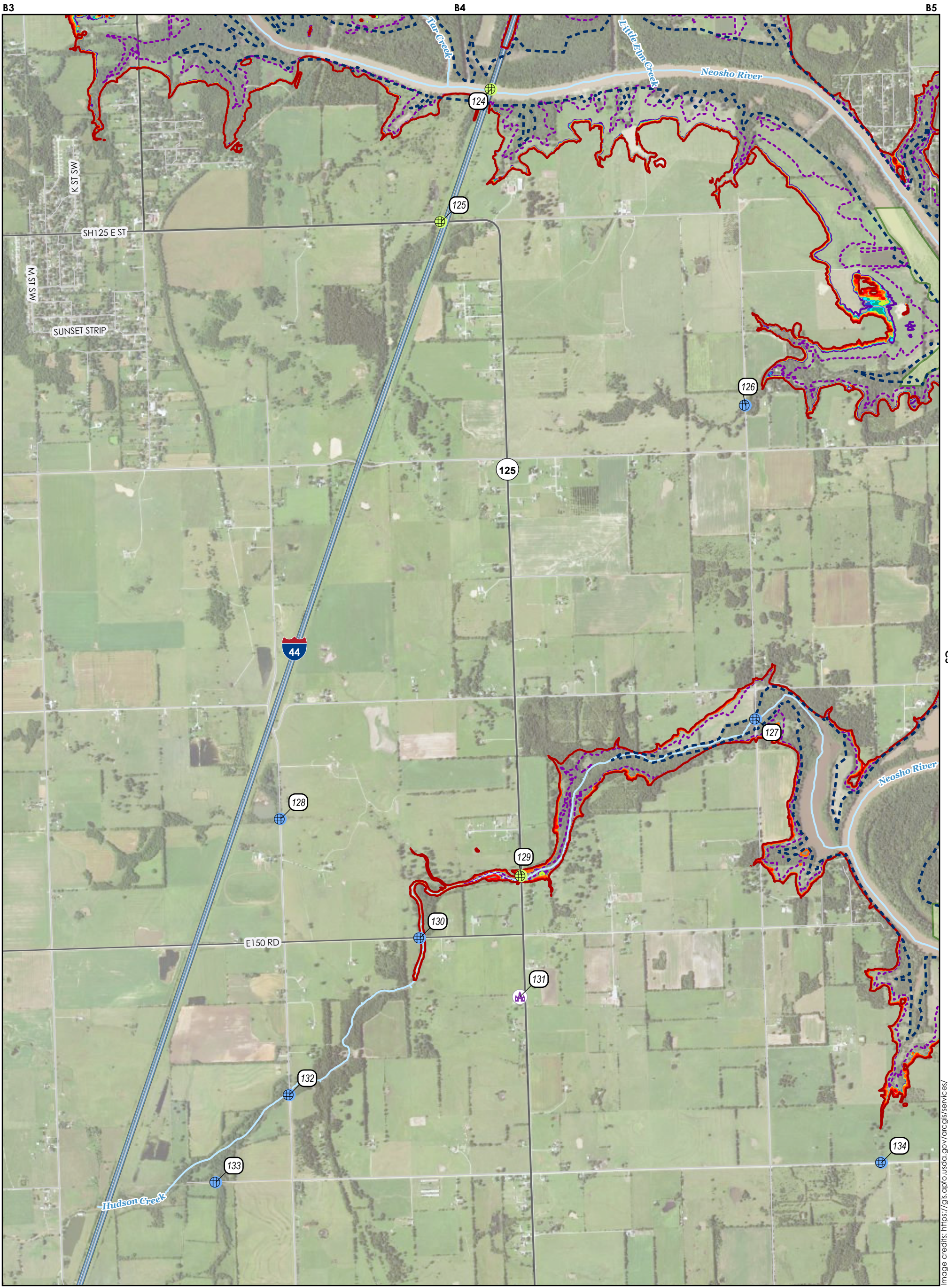
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C3

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, 2019

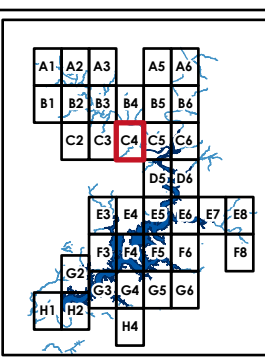


**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**

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

1 inch = 2,000 feet

NORTH



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

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

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

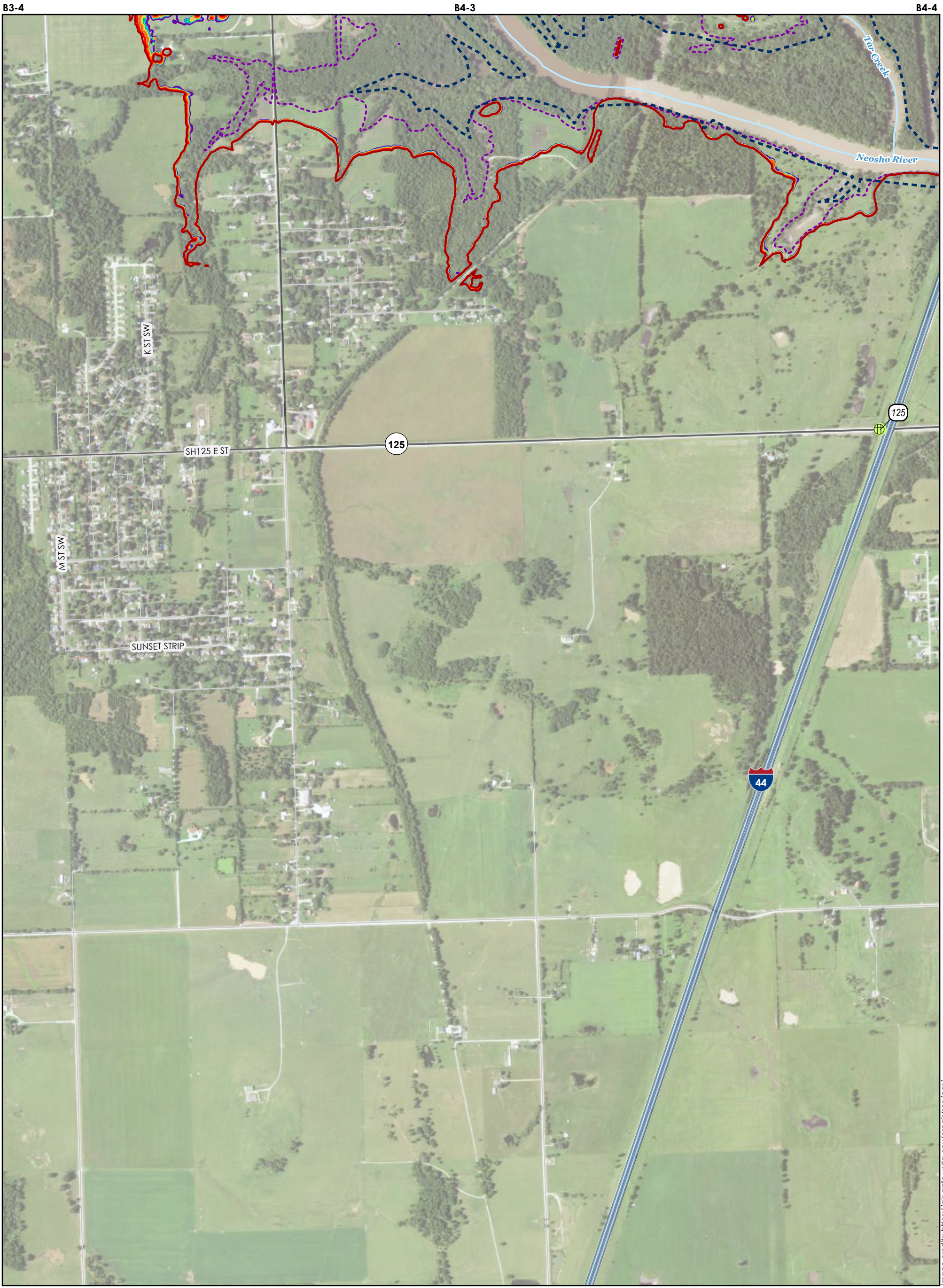
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C4

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

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



SEPTEMBER 1993 INUNDATION SCENARIO (21-YEAR EVENT)

NORTH

0 250 500 1,000 1,500 2,000 Feet

1 inch = 1,000 feet

SEP 1993 MAX INUNDATION

█ 757.0 ft PD	█ 743.5 ft PD
█ 753.0 ft PD	█ 743.0 ft PD
█ 749.0 ft PD	█ 742.5 ft PD
█ 745.0 ft PD	█ 742.0 ft PD
█ 744.5 ft PD	█ 734.0 ft PD
█ 744.0 ft PD	

Legend

ROAD CLASS

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

Other Symbols:

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

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C4-1

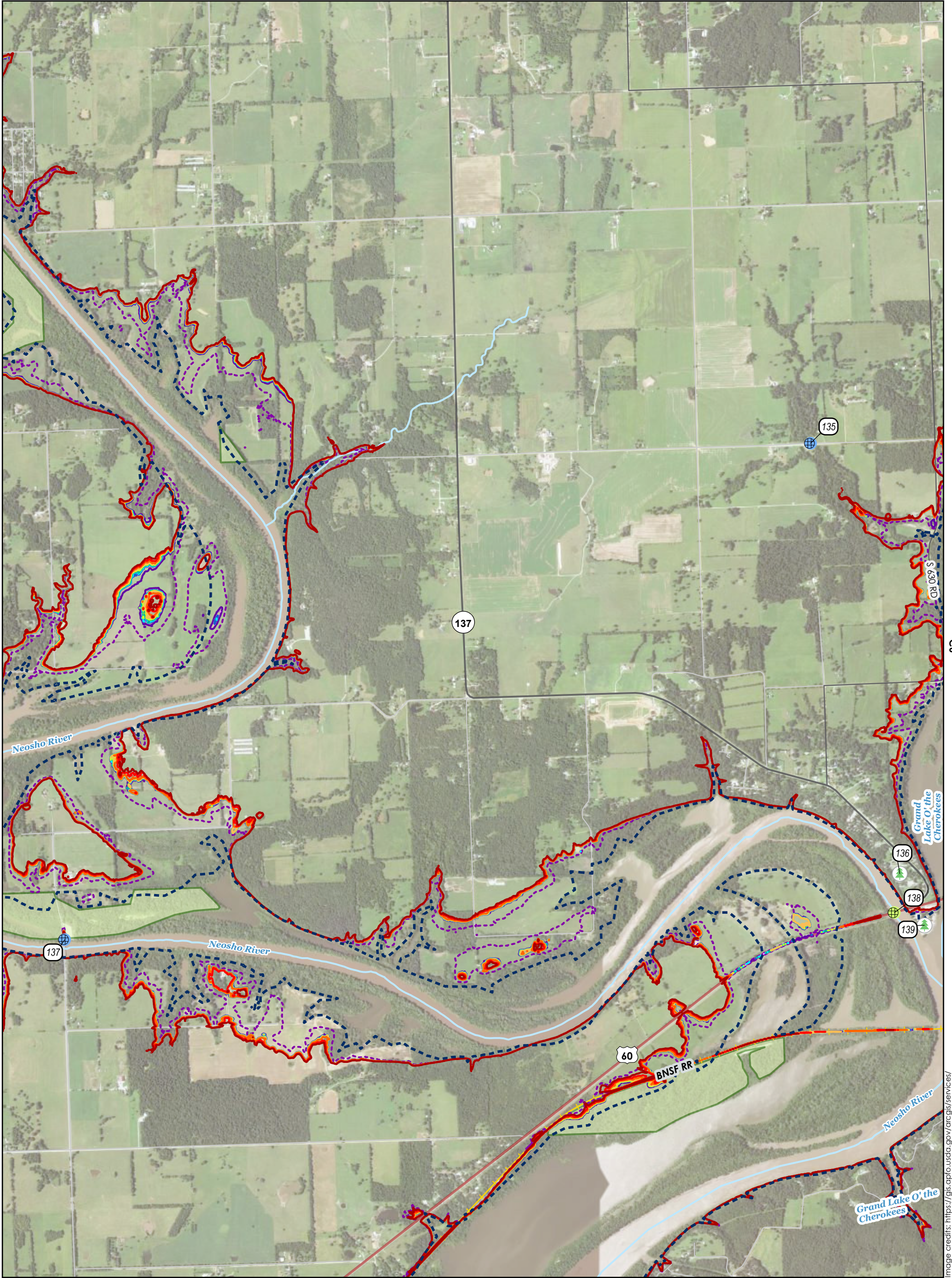
CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

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

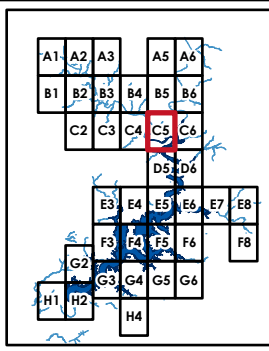


**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**

NORTH

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

1 inch = 2,000 feet



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS

Interstate	US Highway
State Highway	Major Collector
Local Road	

Railroad	Stream
Flowage Easements	Project Boundary
GRDA Ownership	

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

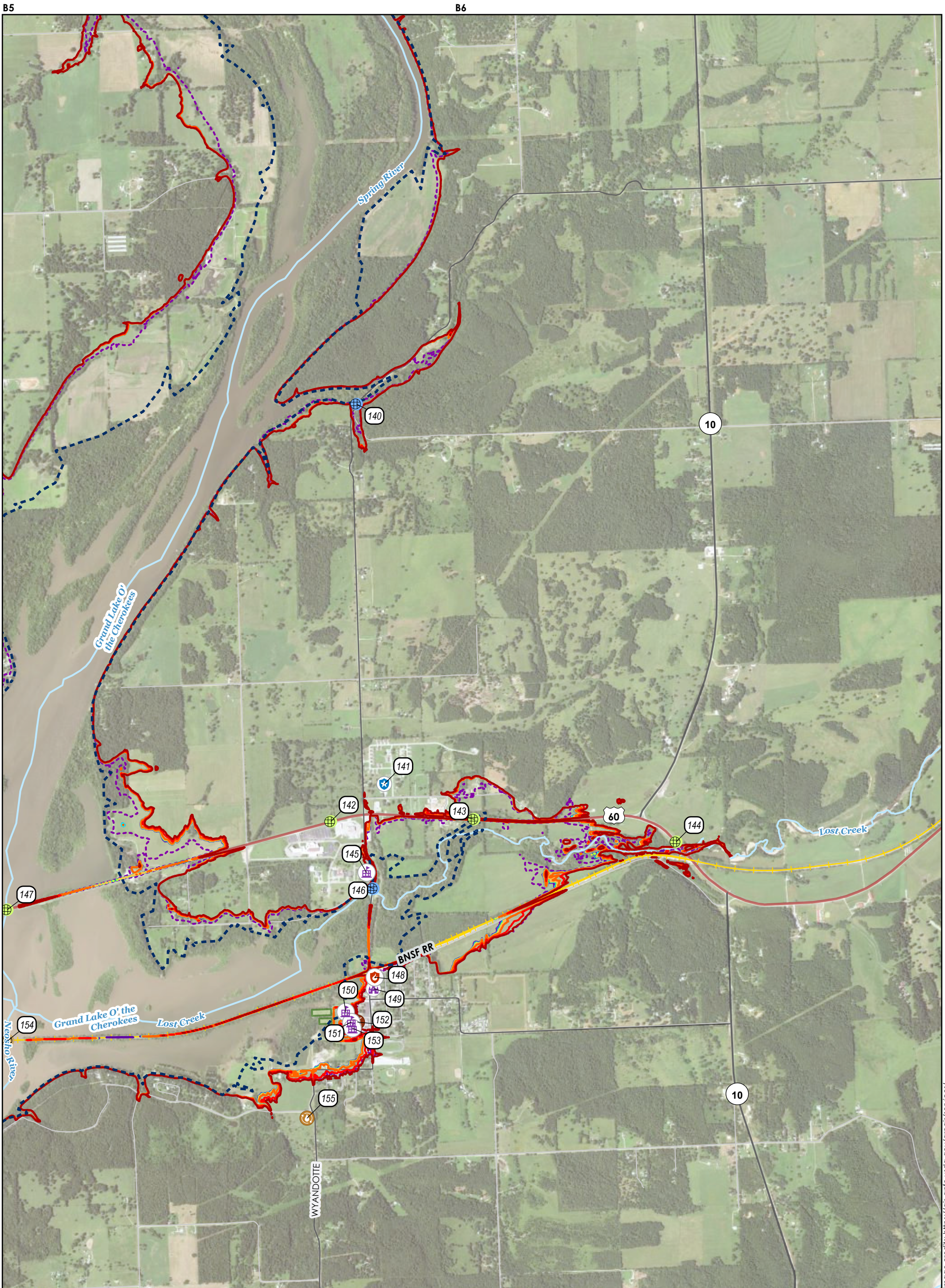
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C5

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

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

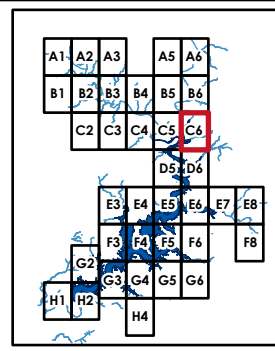


**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**

NORTH

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

1 inch = 2,000 feet



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS	Symbol
Interstate	Blue dashed line
State Highway	Grey dashed line
US Highway	Red dashed line
Major Collector	Black dashed line
Local Road	Thin grey line
Railroad	Yellow dashed line
Stream	Blue solid line
Flowage Easements	Purple dashed line
Project Boundary	Blue dashed line
GRDA Ownership	Green dashed line

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

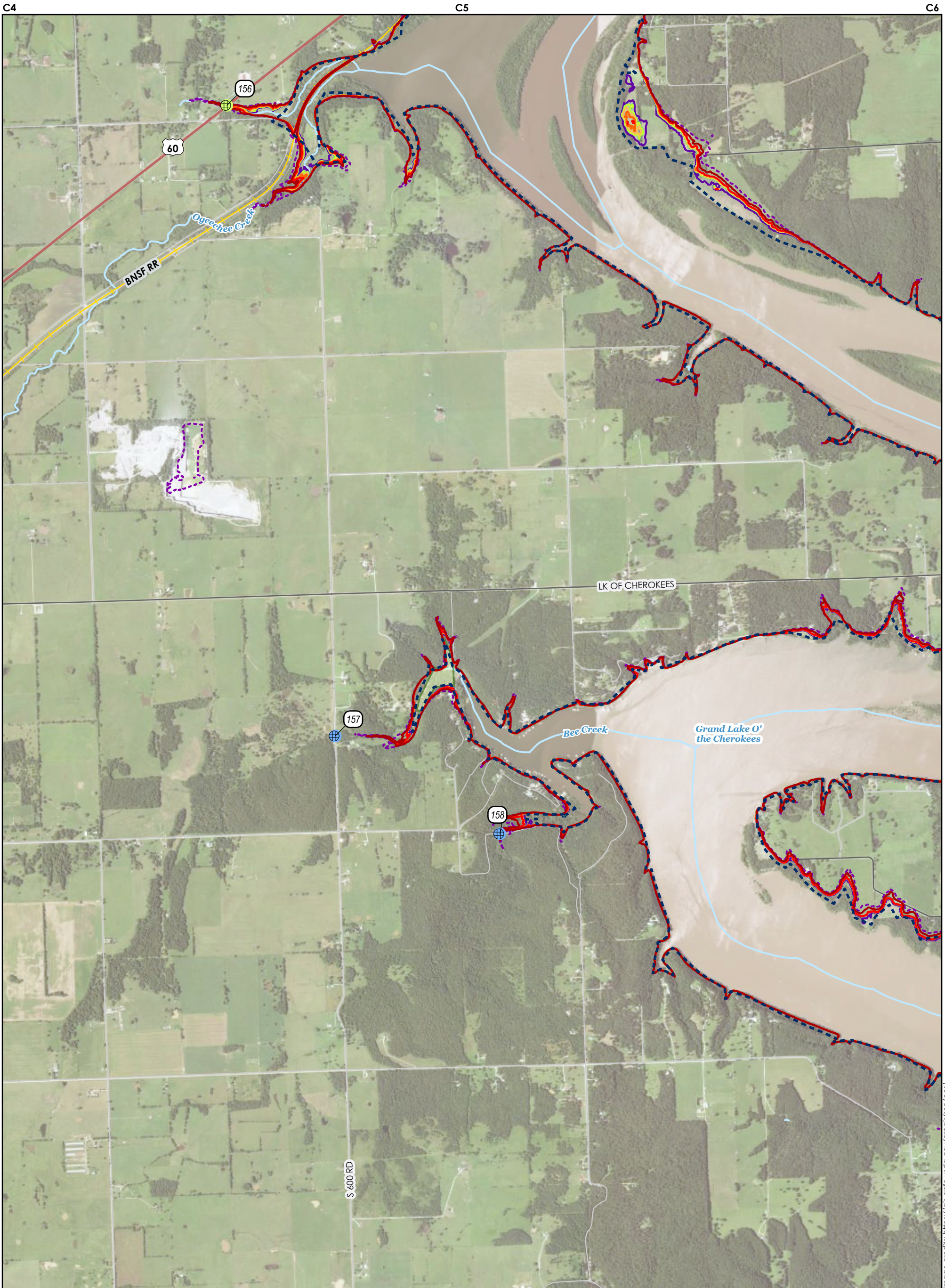
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C6

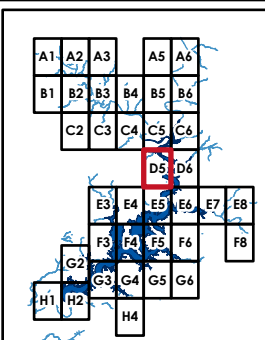
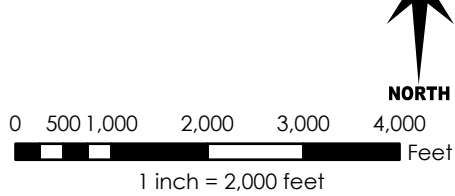
CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

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



**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**



SEP 1993 MAX INUNDATION

757.0 ft PD	743.5 ft PD
753.0 ft PD	743.0 ft PD
749.0 ft PD	742.5 ft PD
745.0 ft PD	742.0 ft PD
744.5 ft PD	734.0 ft PD
744.0 ft PD	

Legend

ROAD CLASS

Interstate	Major Collector
State Highway	Local Road
US Highway	

Railroad	Stream
Flowage Easements	Project Boundary
GRDA Ownership	

MAP AND LEGEND 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 and the Critical Infrastructure symbols.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: D5

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, 2019

C5

C6

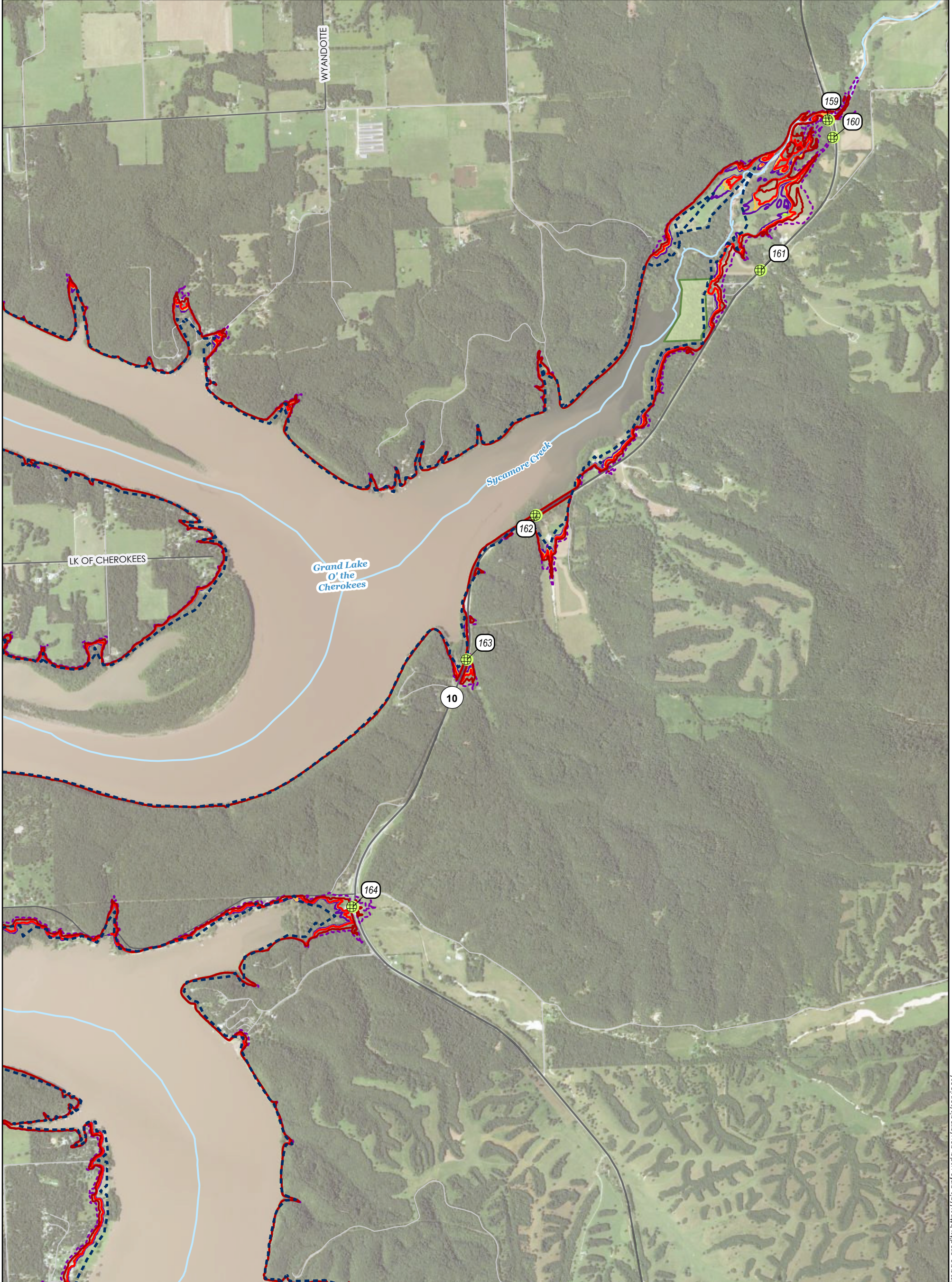


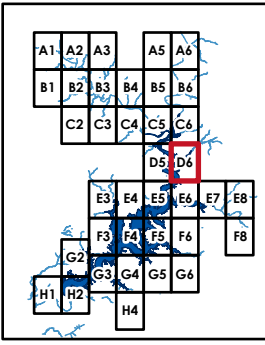
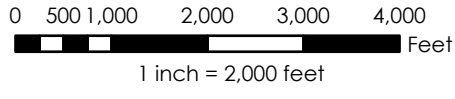
Image credits: https://gis.dplfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

E5

E6

E7

**SEPTEMBER 1993
INUNDATION SCENARIO
(21-YEAR EVENT)**



SEP 1993 MAX INUNDATION

- 757.0 ft PD
- 753.0 ft PD
- 749.0 ft PD
- 745.0 ft PD
- 744.5 ft PD
- 744.0 ft PD
- 743.5 ft PD
- 743.0 ft PD
- 742.5 ft PD
- 742.0 ft PD
- 734.0 ft PD

Legend

ROAD CLASS

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

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

MAP AND LEGEND 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: D6

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022