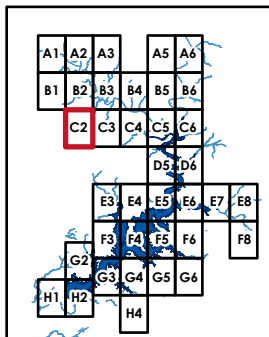
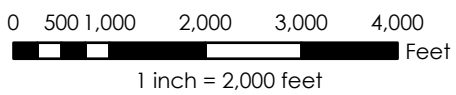




**LAKE SPAWNING SPECIES
HABITAT CHANGES**



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

**PENSACOLA DAM
GRAND RIVER DAM AUTHORITY**

MAP: C2

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

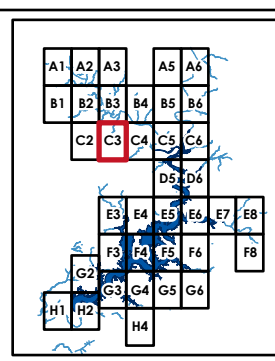


LAKE SPAWNING SPECIES HABITAT CHANGES

NORTH

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

1 inch = 2,000 feet



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

Legend

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

- Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
- Estimated inundation extent for normal (median) inflows and operations during the spawning season.
- See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

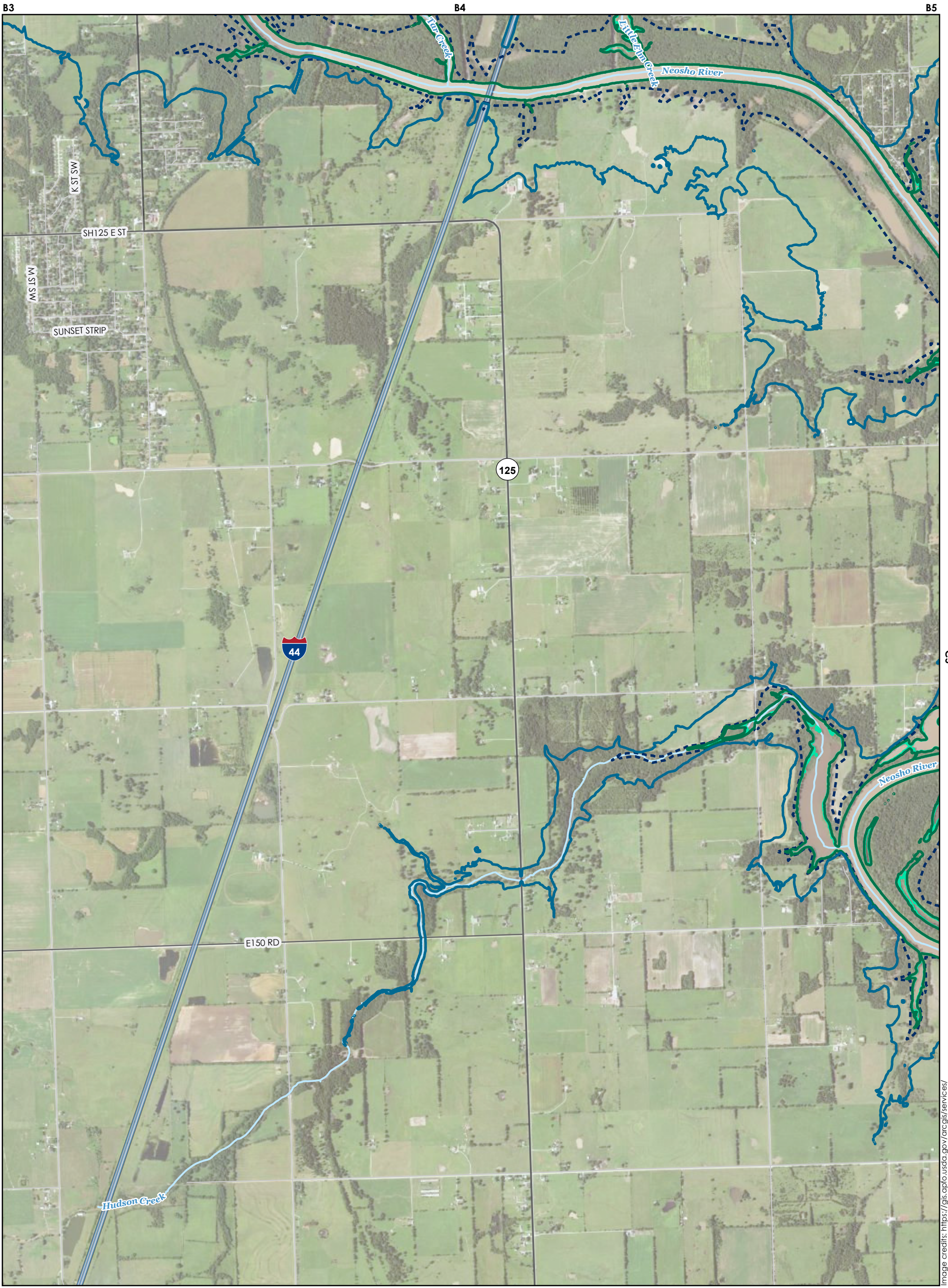
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C3

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

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

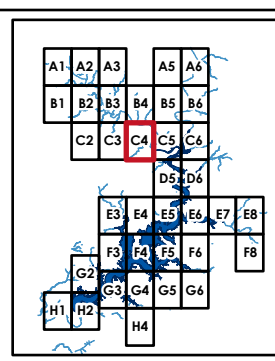


LAKE SPAWNING SPECIES HABITAT CHANGES

NORTH

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

1 inch = 2,000 feet



- INUNDATION**
- Aquatic Habitat Baseline Operations
 - Aquatic Habitat Anticipated Operations
 - Maximum Inundation

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

- Legend**
- Local Road
 - Railroad
 - Stream
 - Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

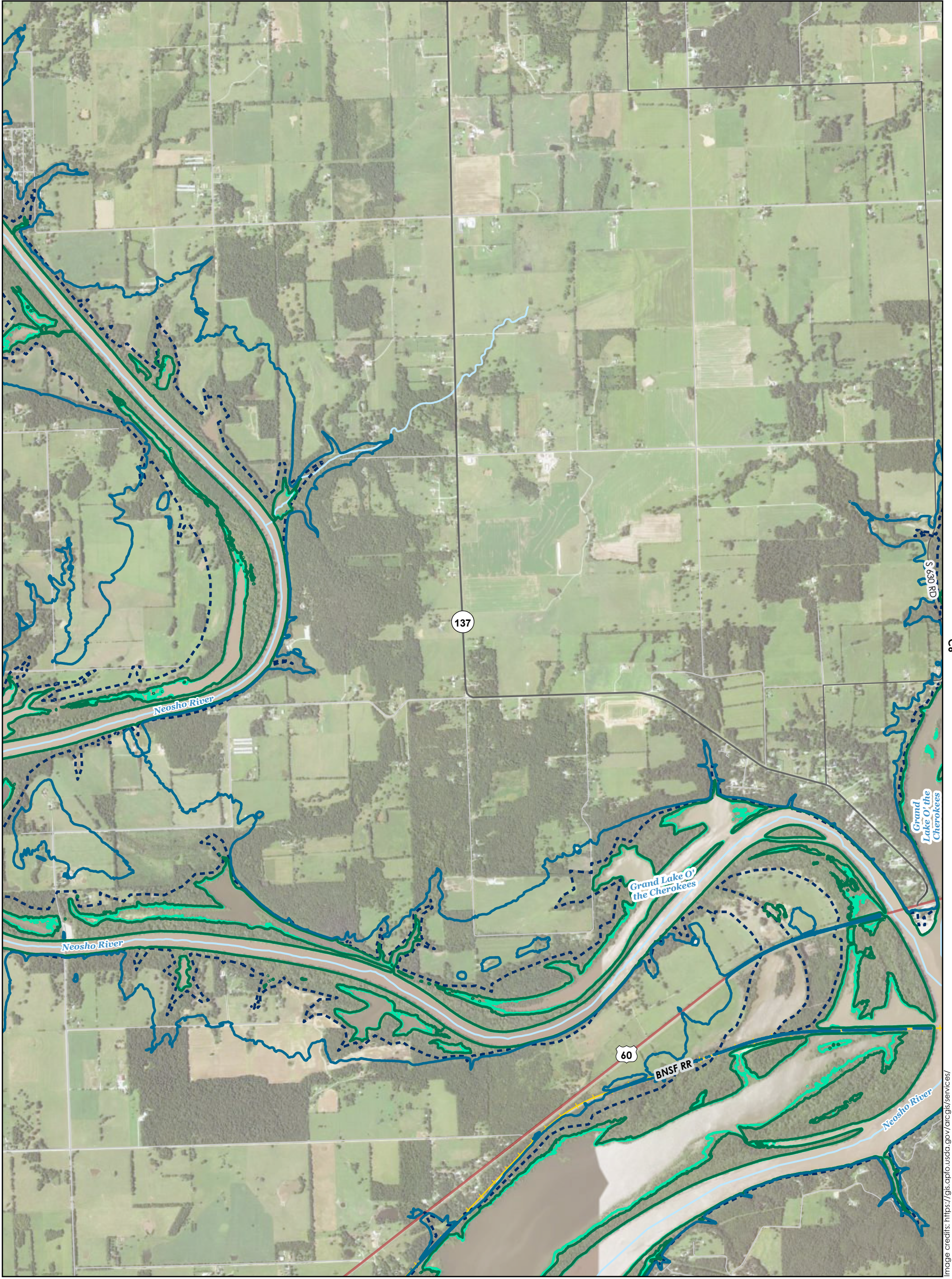
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C4

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
 September 2022

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



C4

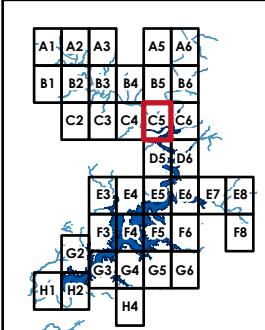
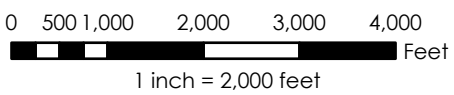
C5

D4

D5

D6

LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C5

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

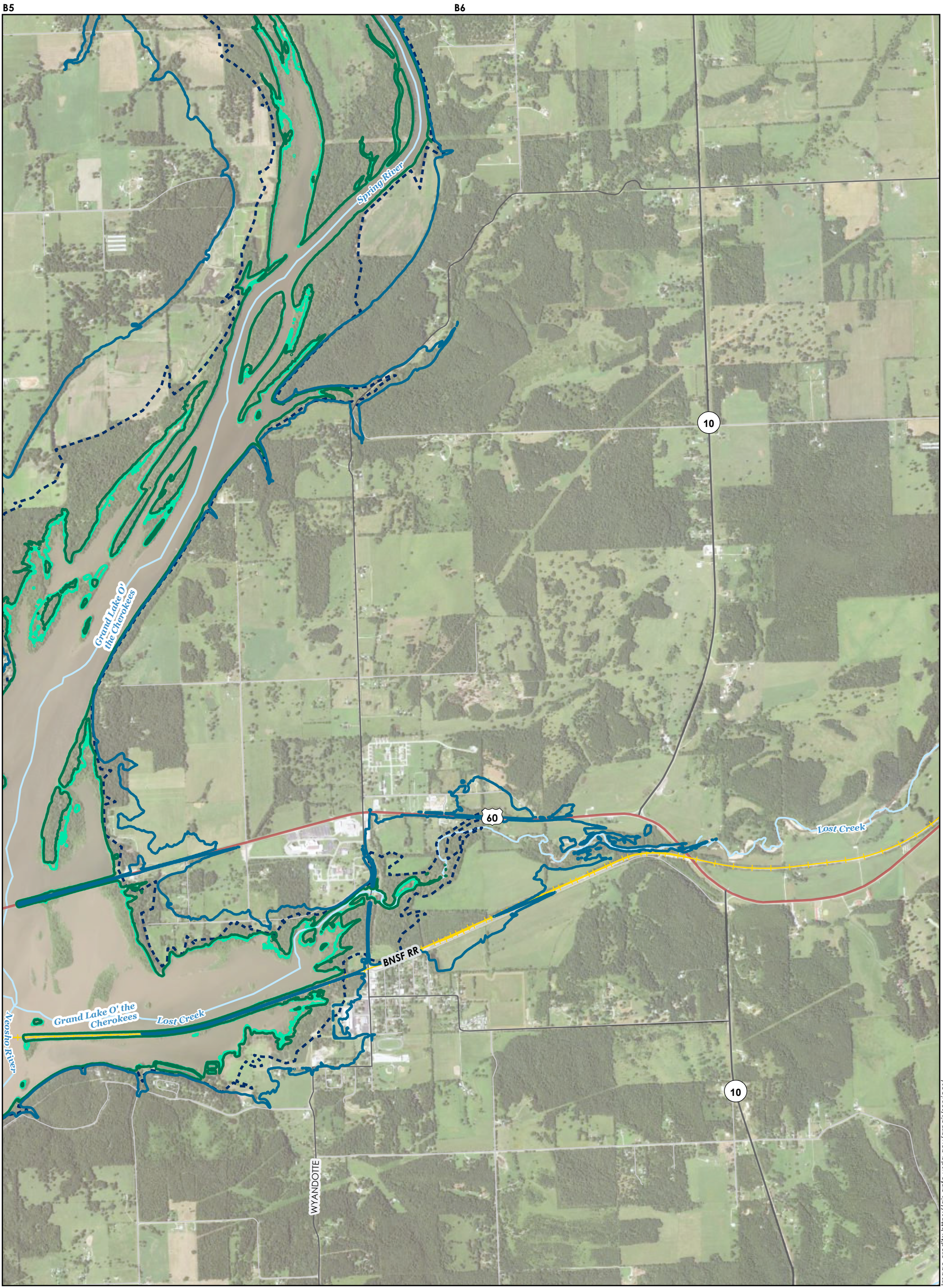


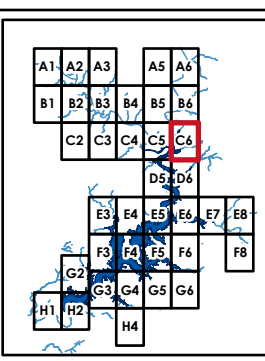
Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

LAKE SPAWNING SPECIES HABITAT CHANGES

NORTH

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

1 inch = 2,000 feet



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

Legend

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

- Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
- Estimated inundation extent for normal (median) inflows and operations during the spawning season.
- See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: C6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
 September 2022

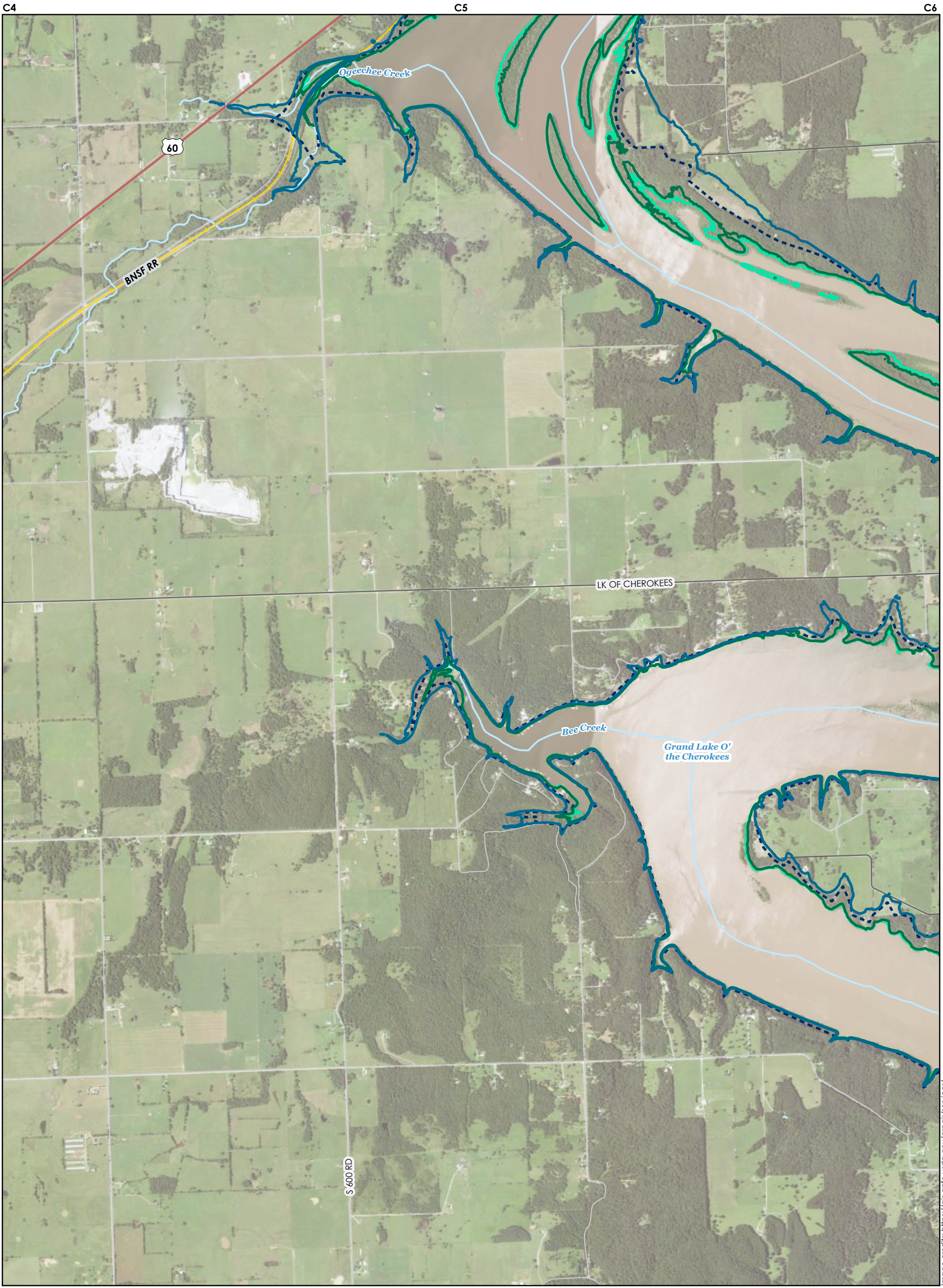
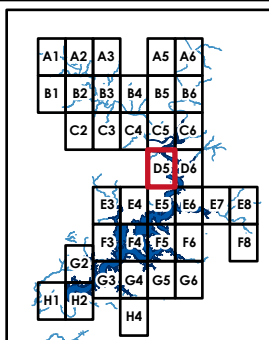
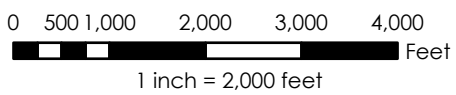


Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

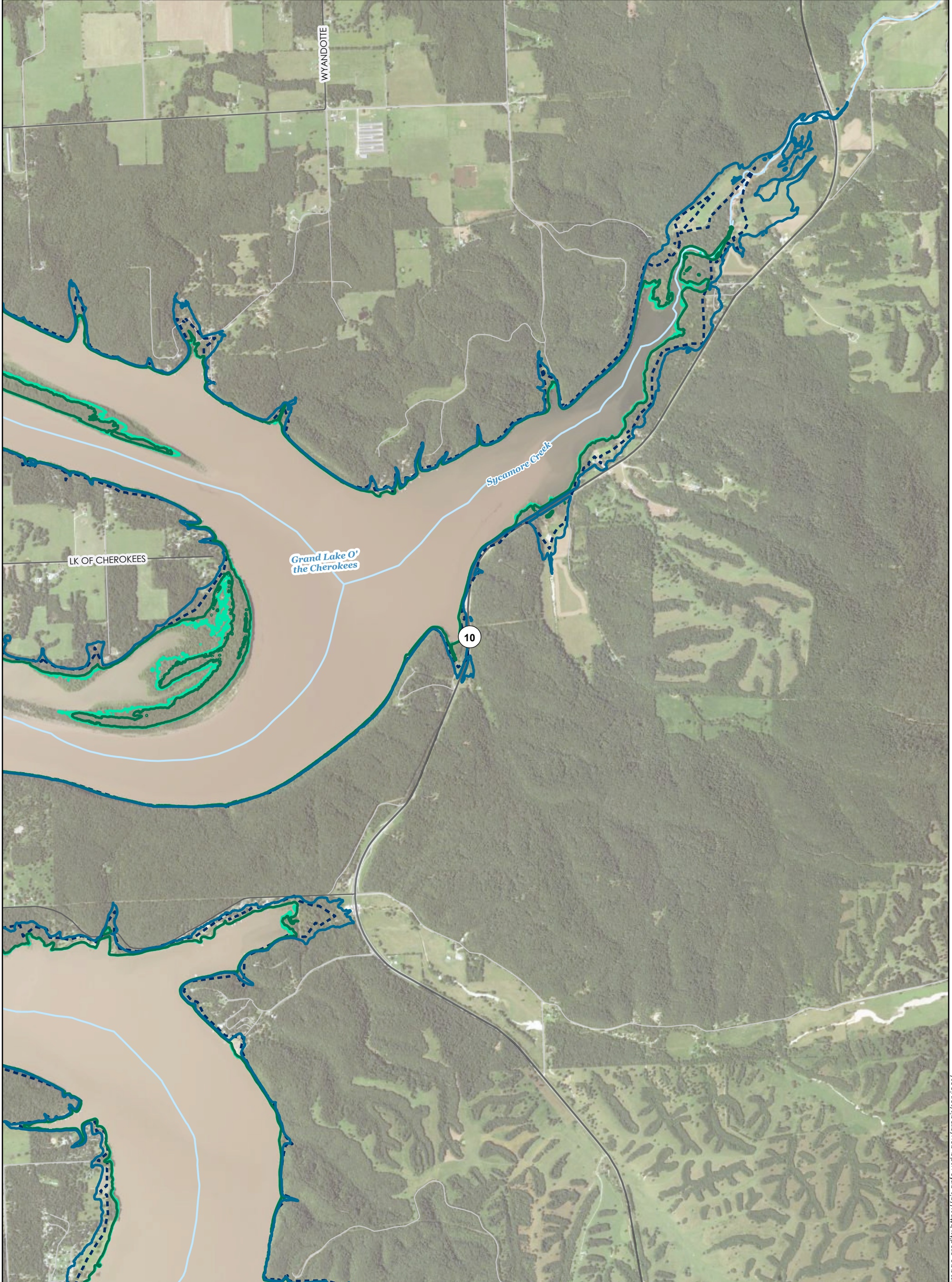
MAP: D5

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

C5

C6

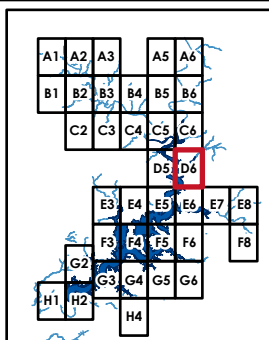
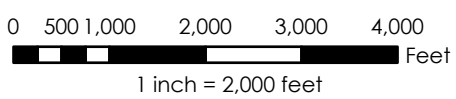


E5

E6

E7

**LAKE SPAWNING SPECIES
HABITAT CHANGES**



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

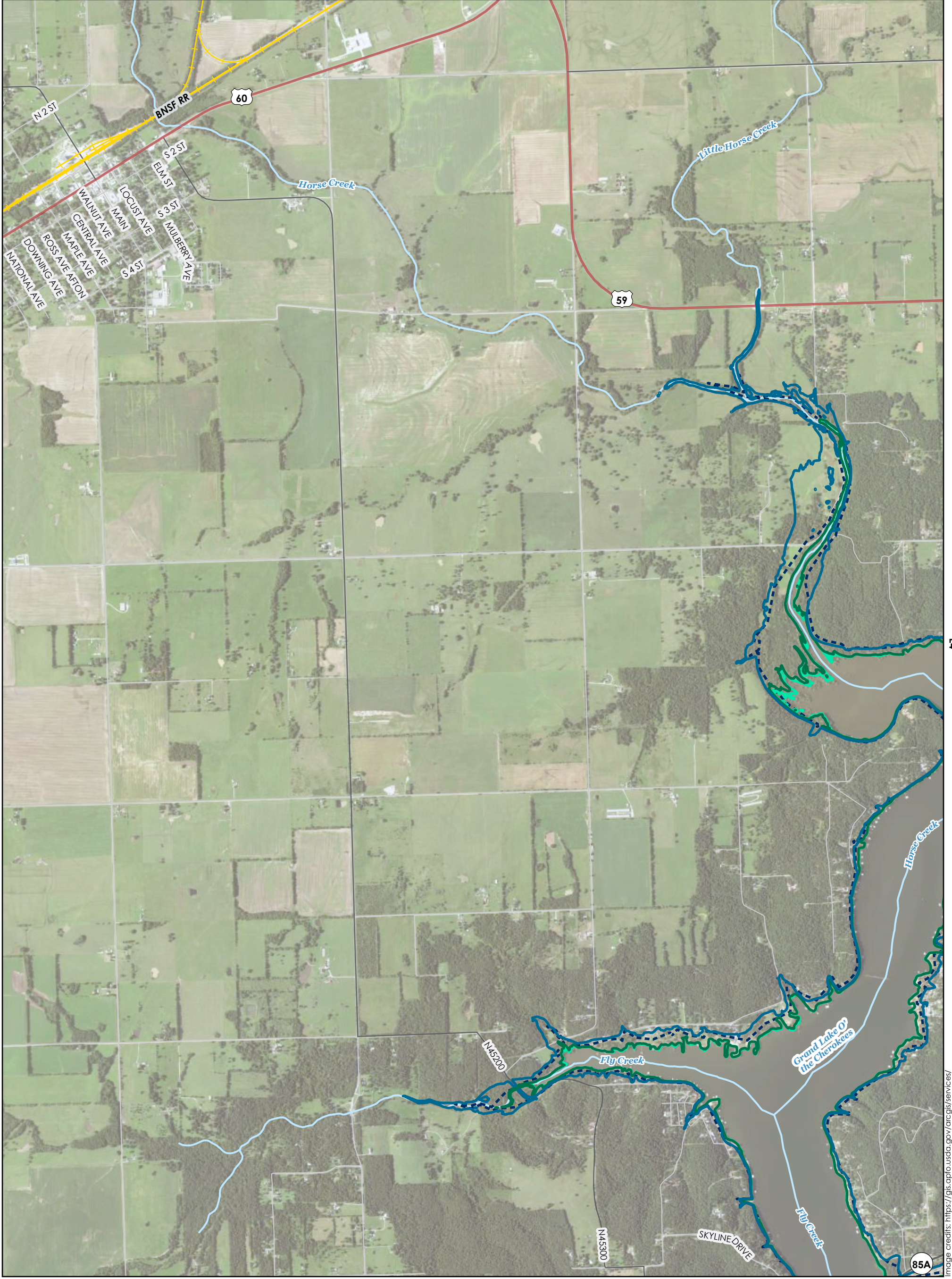
**PENSACOLA DAM
GRAND RIVER DAM AUTHORITY**

MAP: D6

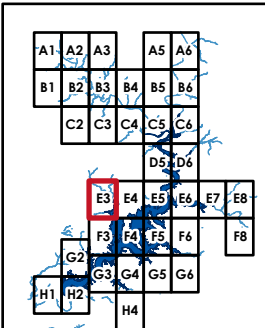
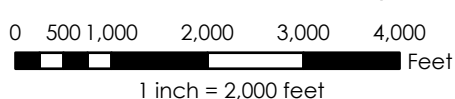
CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

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



LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

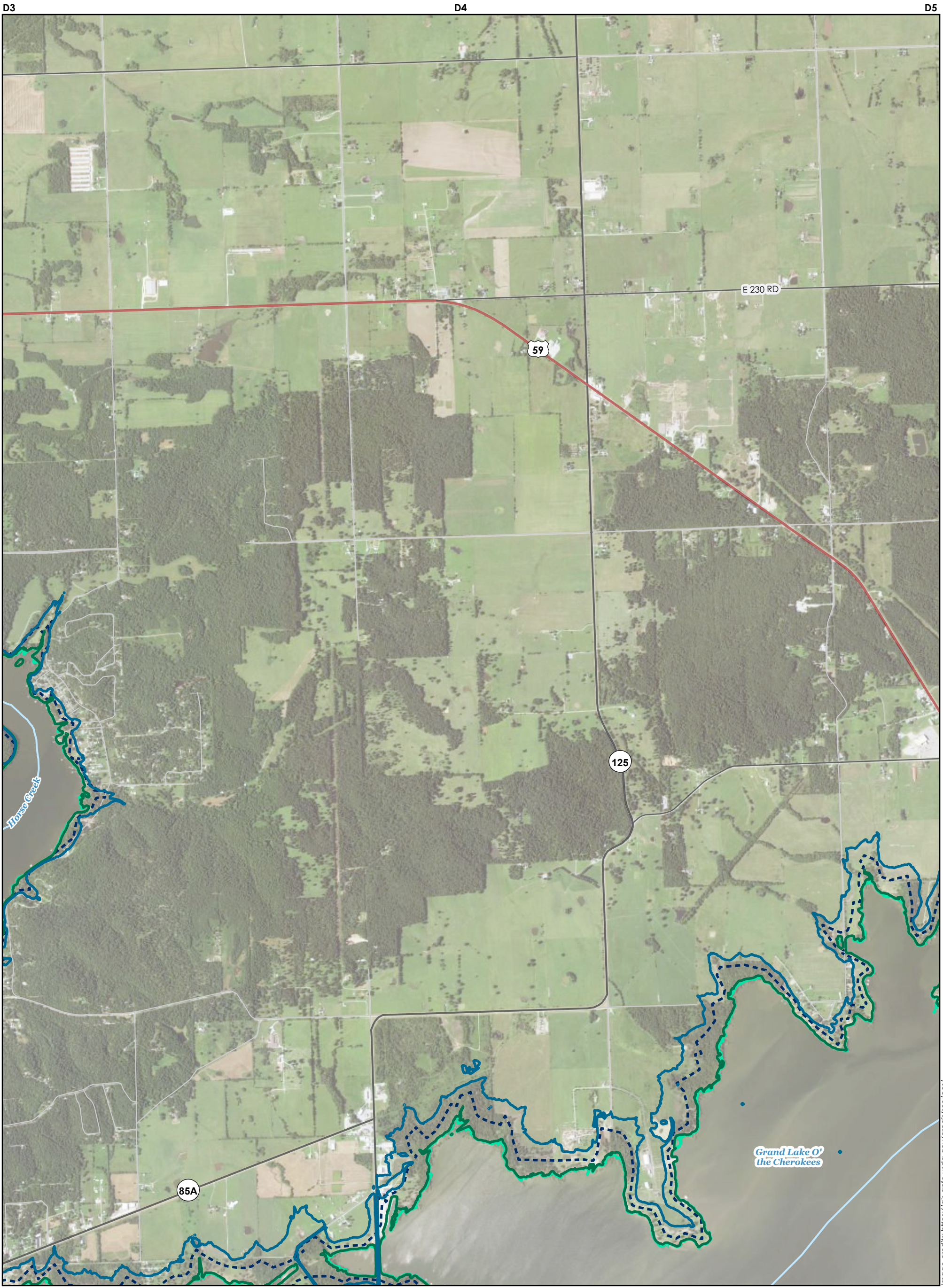
MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

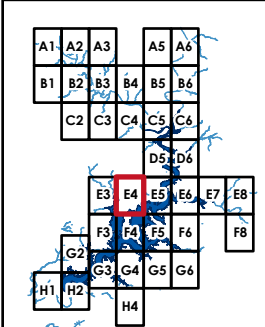
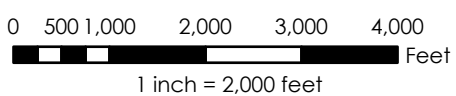
PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: E3

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



**LAKE SPAWNING SPECIES
HABITAT CHANGES**



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

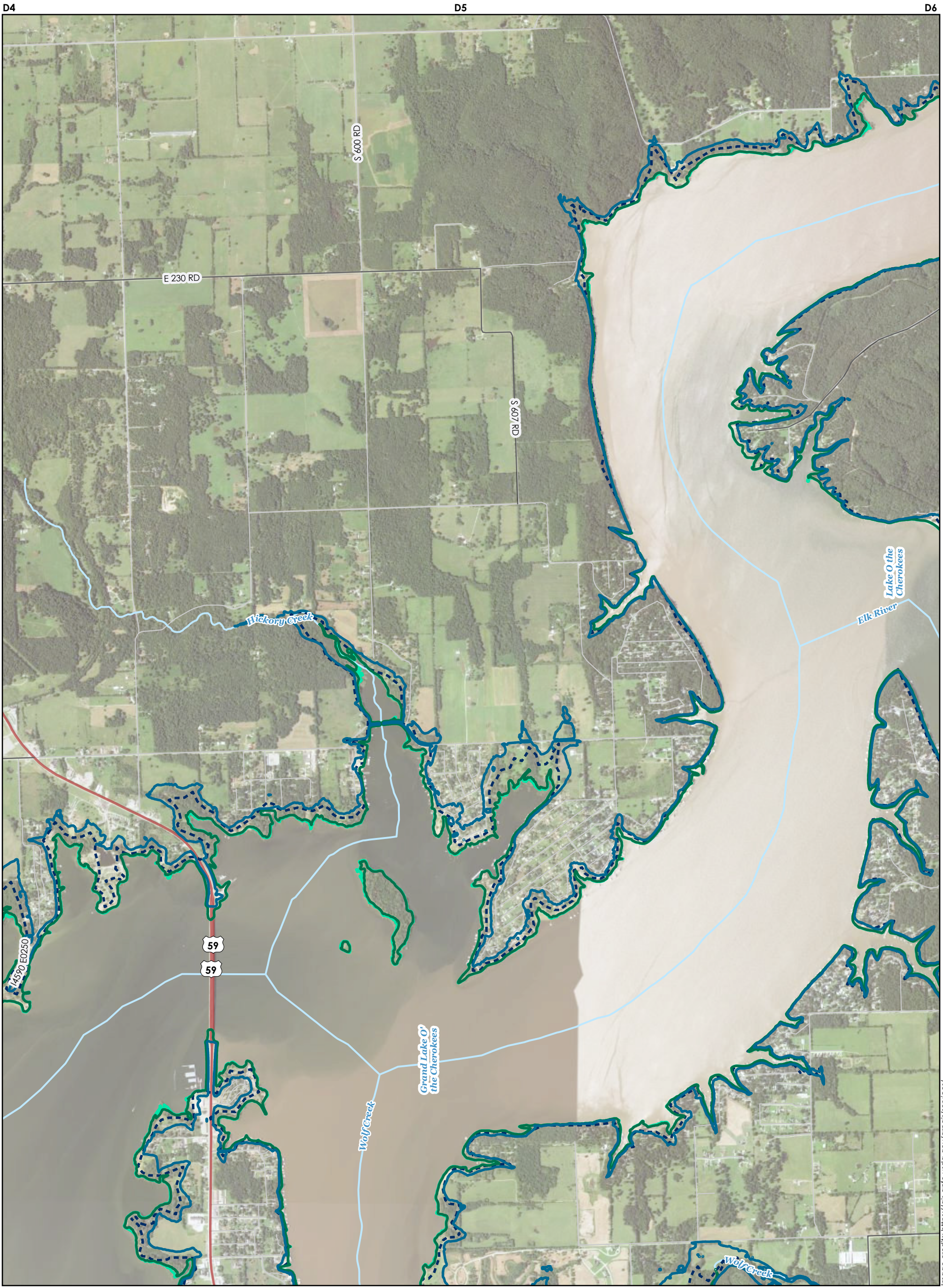
1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

**PENSACOLA DAM
GRAND RIVER DAM AUTHORITY**

MAP: E4

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

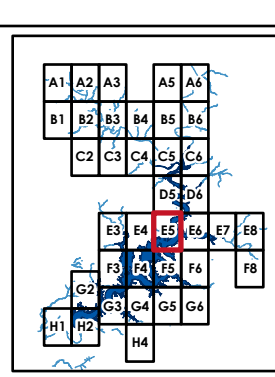


LAKE SPAWNING SPECIES HABITAT CHANGES

NORTH

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

1 inch = 2,000 feet



Legend

INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: E5

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

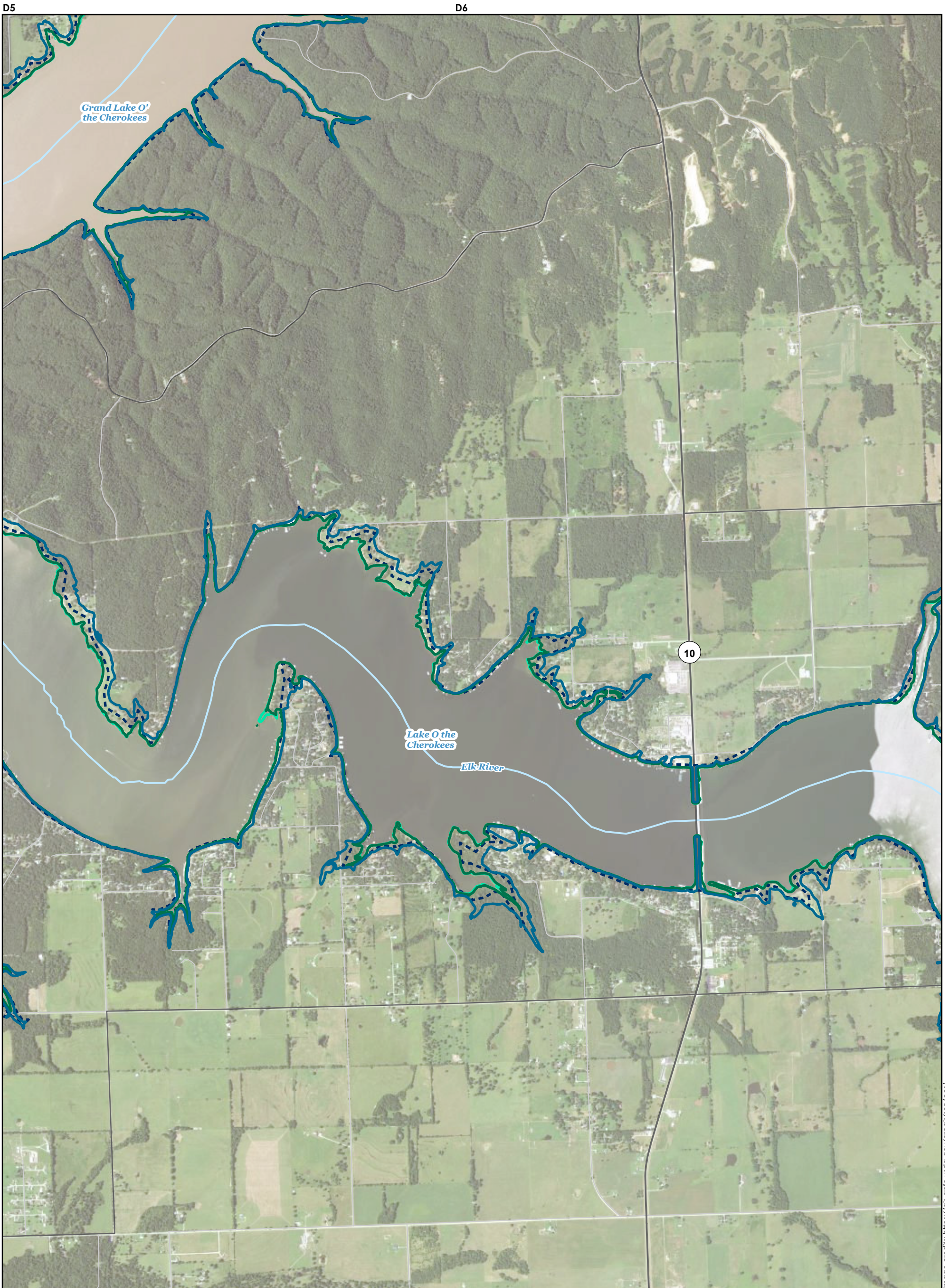


Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

LAKE SPAWNING SPECIES HABITAT CHANGES

NORTH

INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

Legend

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

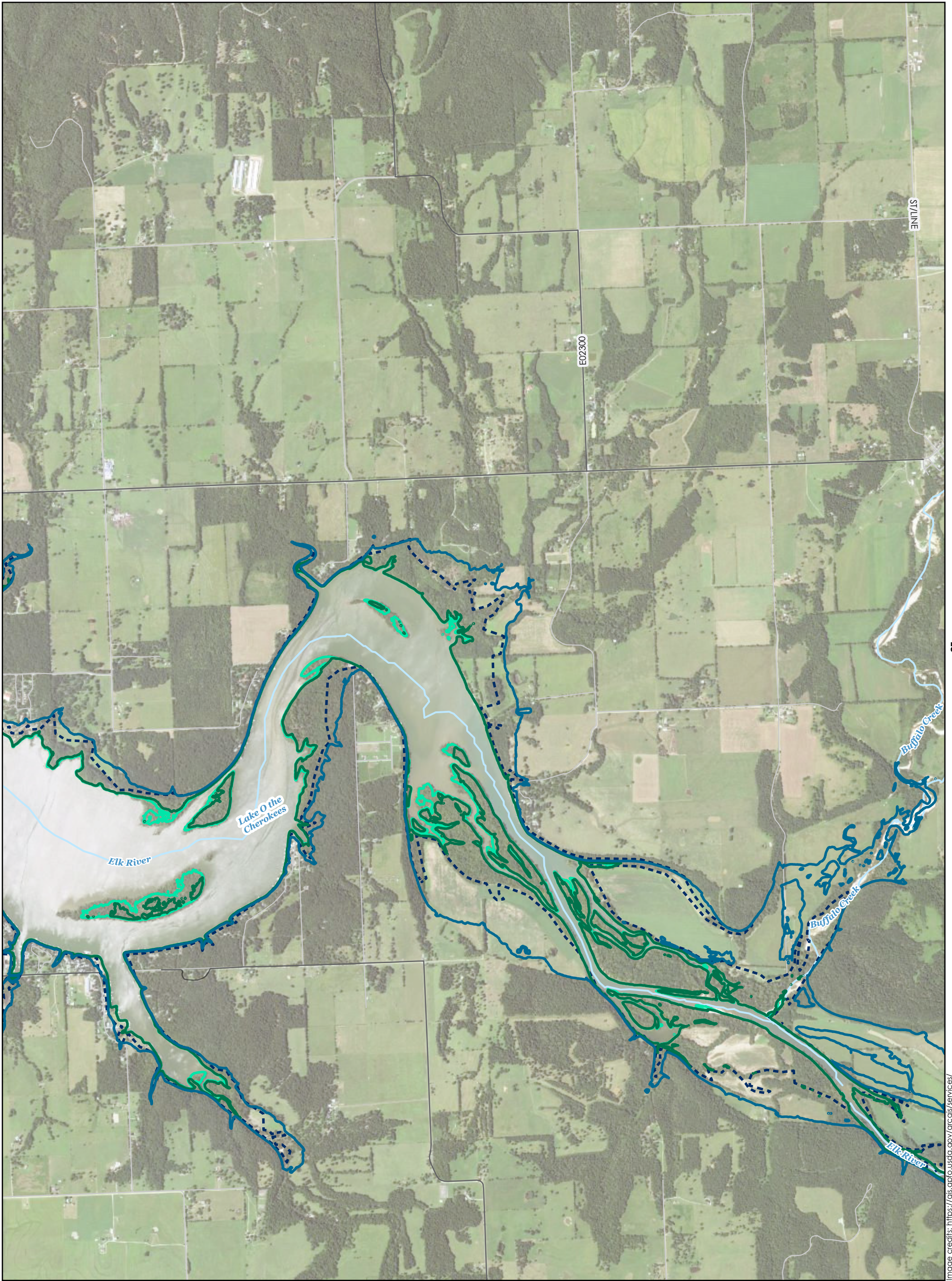
1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

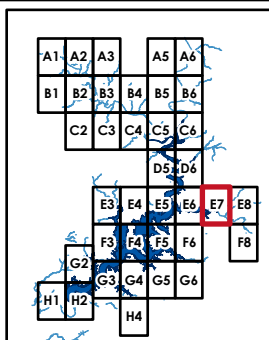
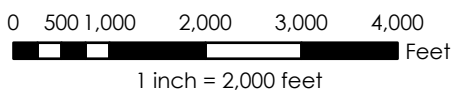
MAP: E6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: E7

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

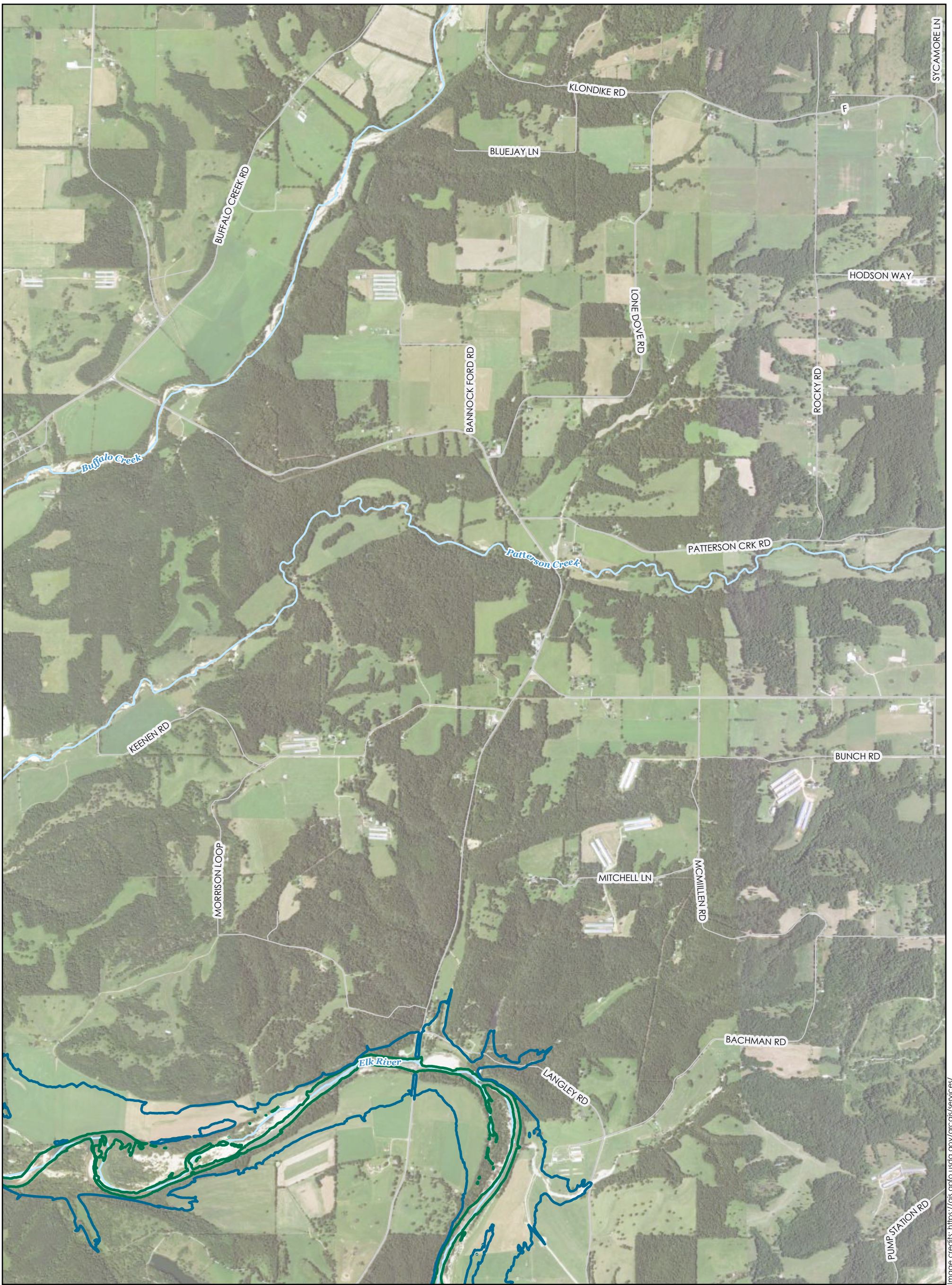
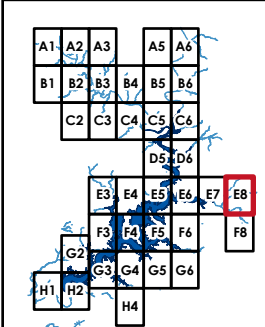
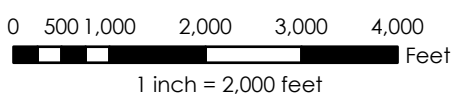


Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

F7

F8

LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

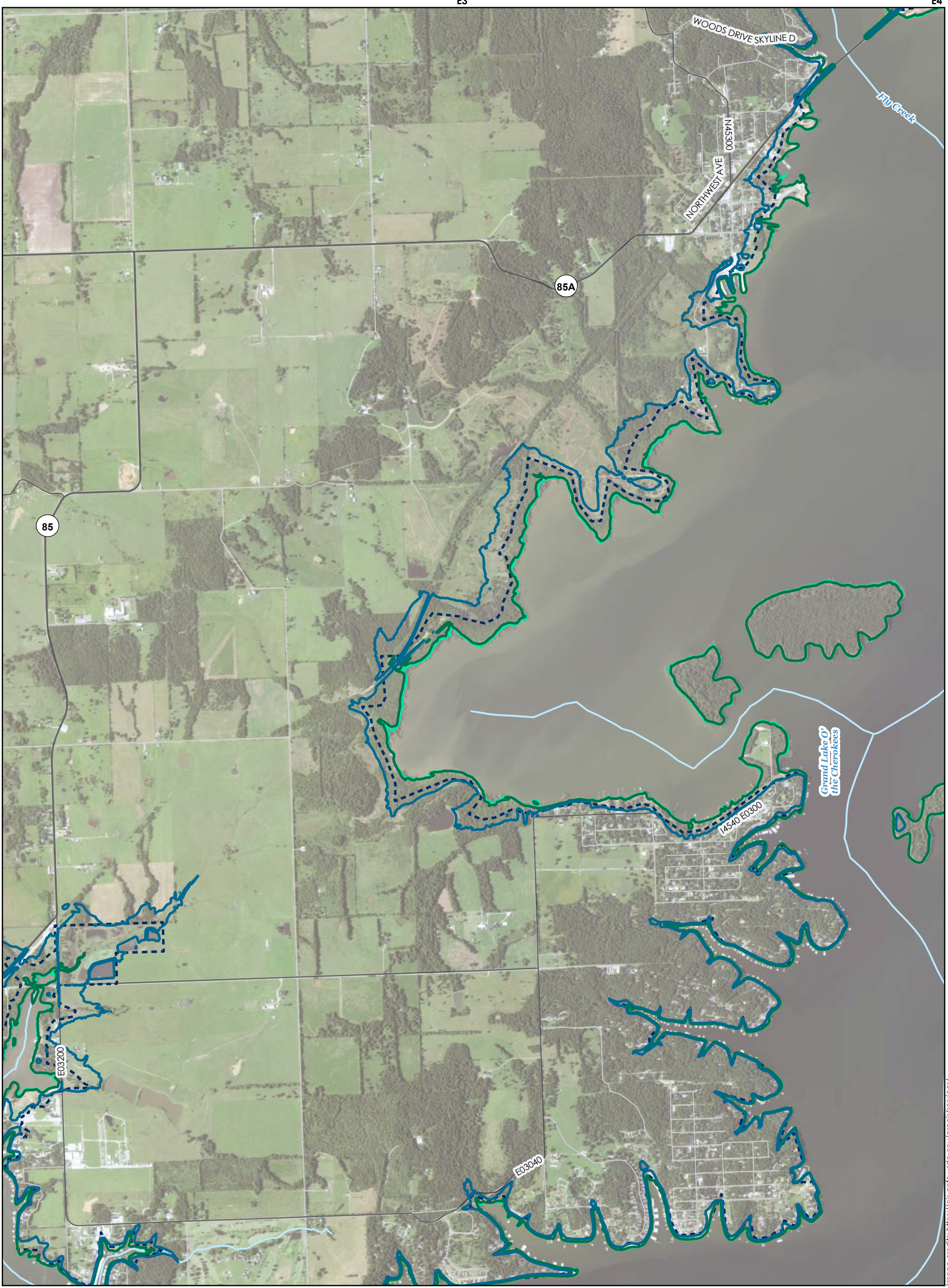
1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: E8

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

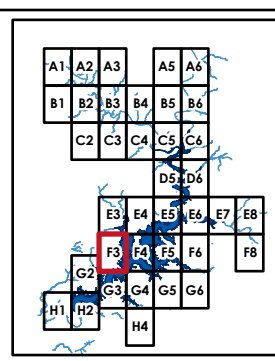


LAKE SPAWNING SPECIES HABITAT CHANGES

NORTH

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

1 inch = 2,000 feet



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector
- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: F3

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

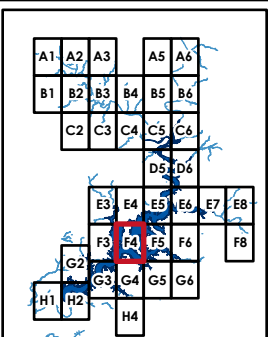
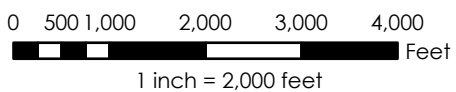
FERC No. 1494
September 2022

Image credits: https://gis.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

**LAKE SPAWNING SPECIES
HABITAT CHANGES**



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: F4

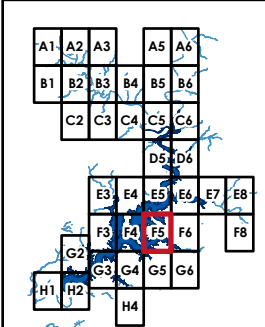
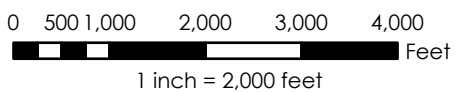
CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



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

LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

MAP: F5

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

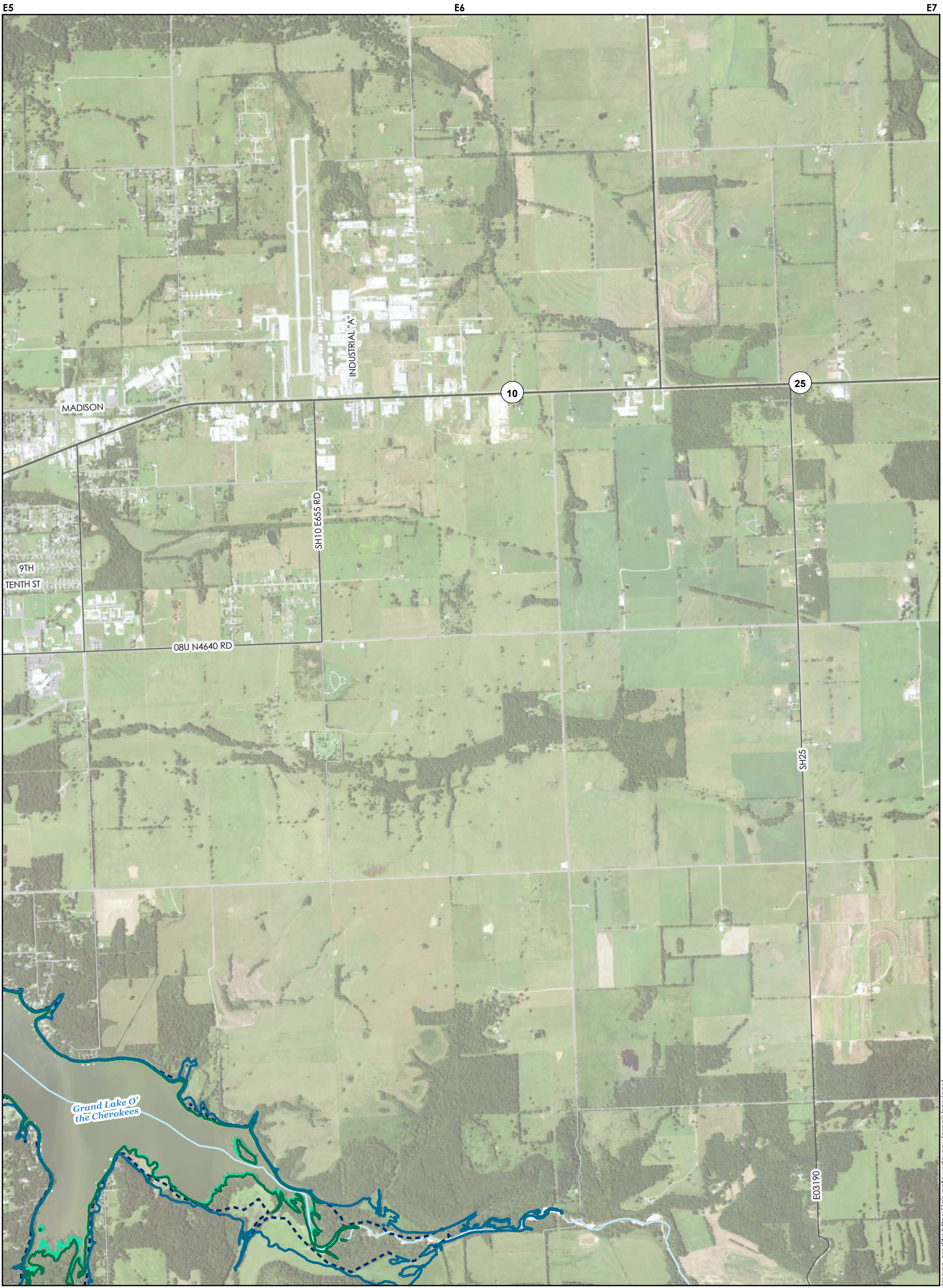
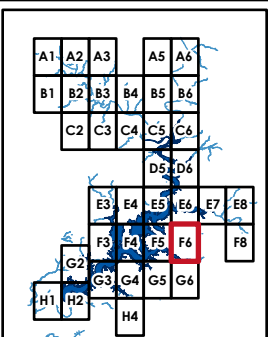
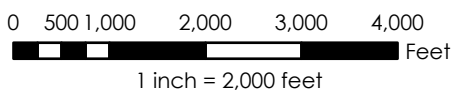


Image credits: https://gis.dplfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: F6

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

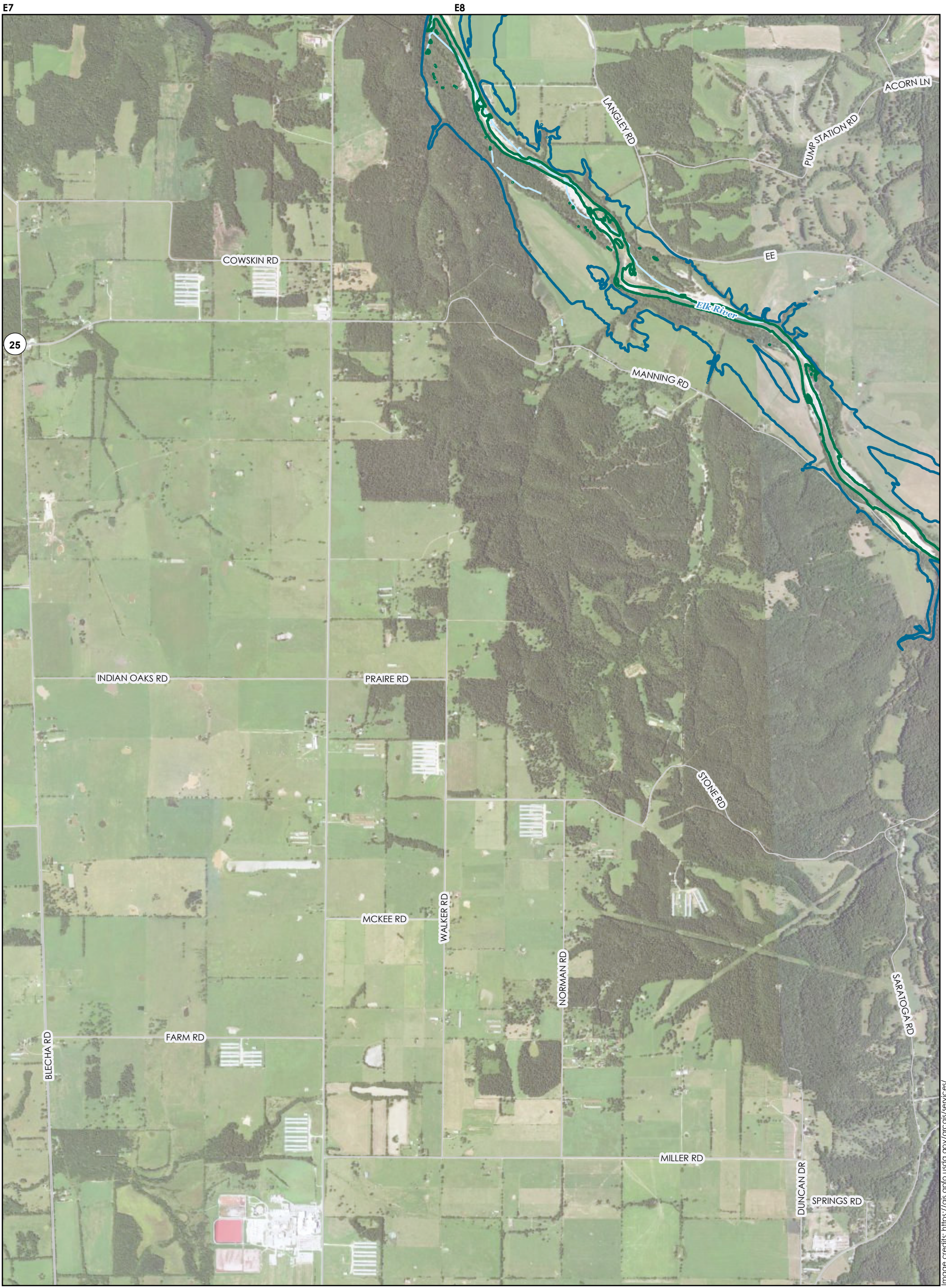
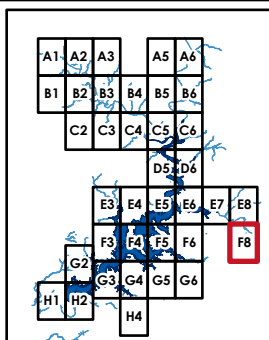
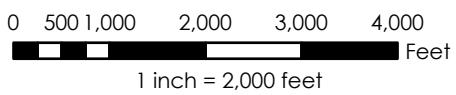


Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

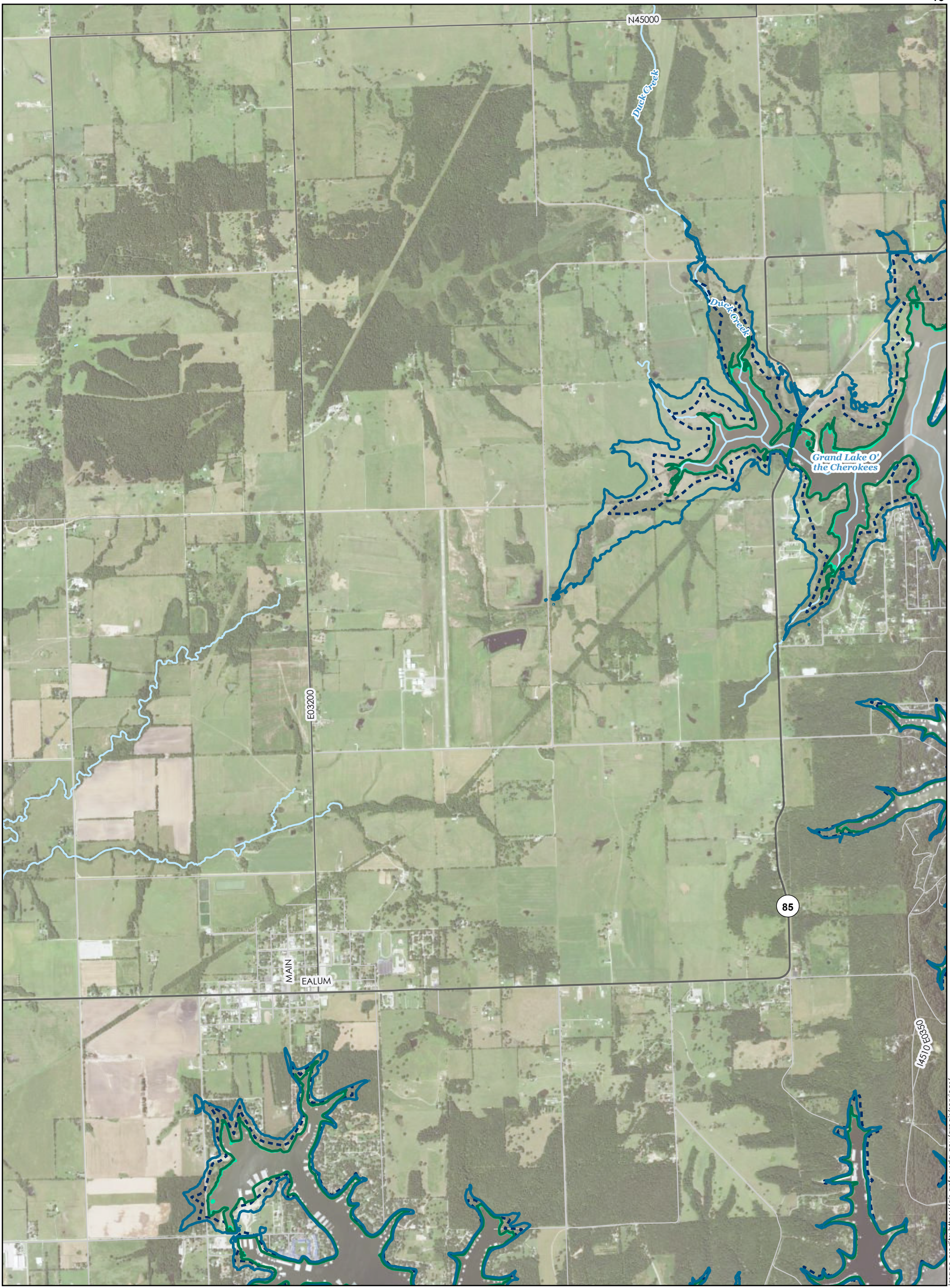
1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

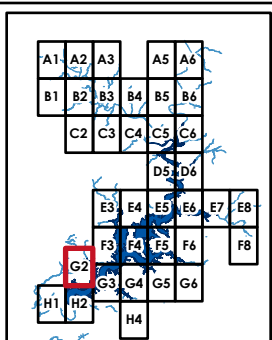
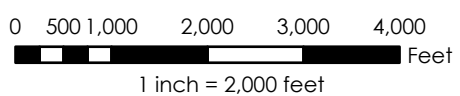
MAP: F8

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: G2

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022

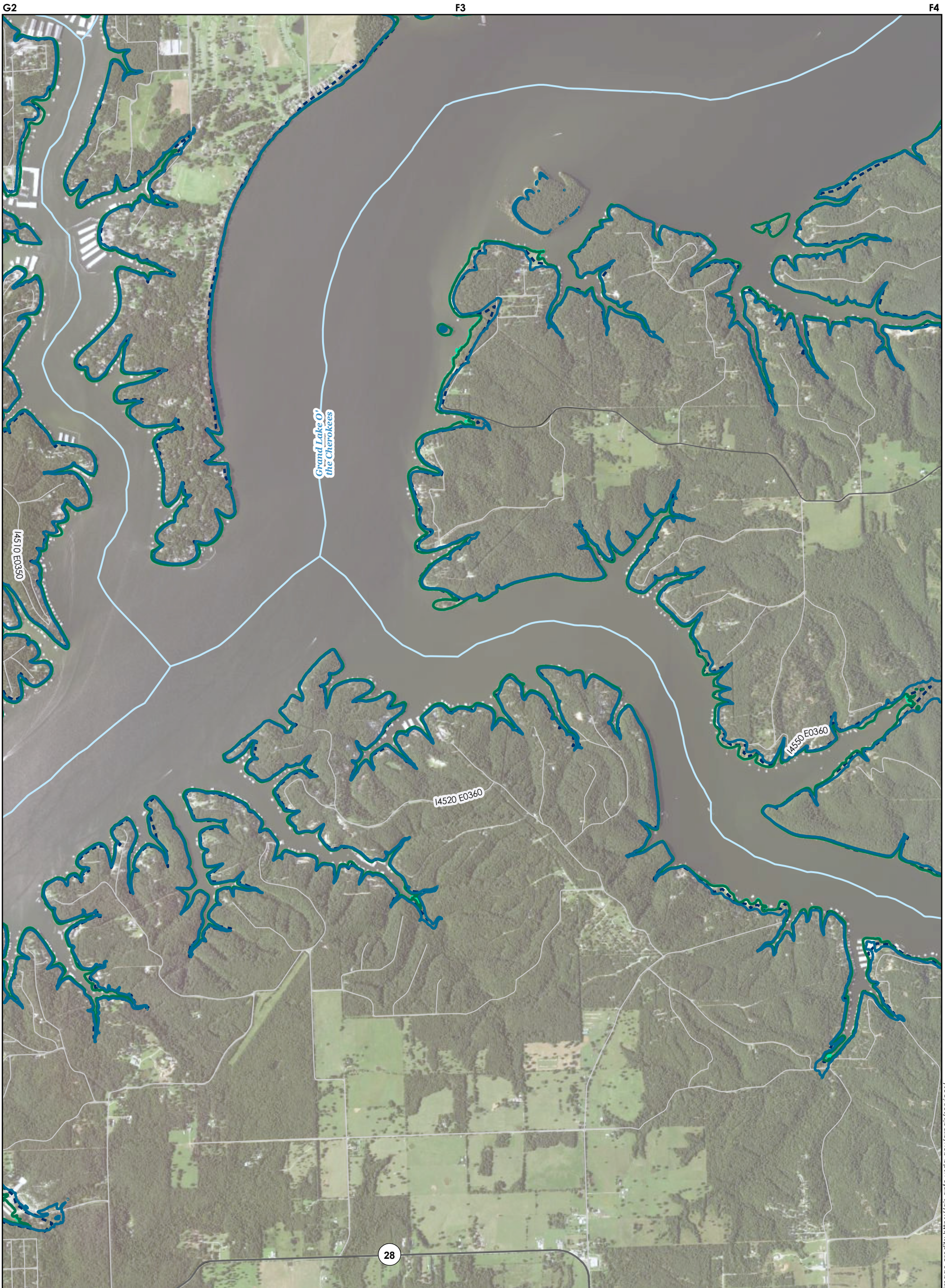


Image credits: https://gis.apfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

LAKE SPAWNING SPECIES HABITAT CHANGES

<p>INUNDATION</p> <ul style="list-style-type: none"> Aquatic Habitat Baseline Operations Aquatic Habitat Anticipated Operations Maximum Inundation 	<p>ROAD CLASS</p> <ul style="list-style-type: none"> Interstate State Highway US Highway Major Collector 	<p>Legend</p> <ul style="list-style-type: none"> Local Road Railroad Stream Project Boundary (2014)
---	---	--

MAP AND LEGEND NOTES

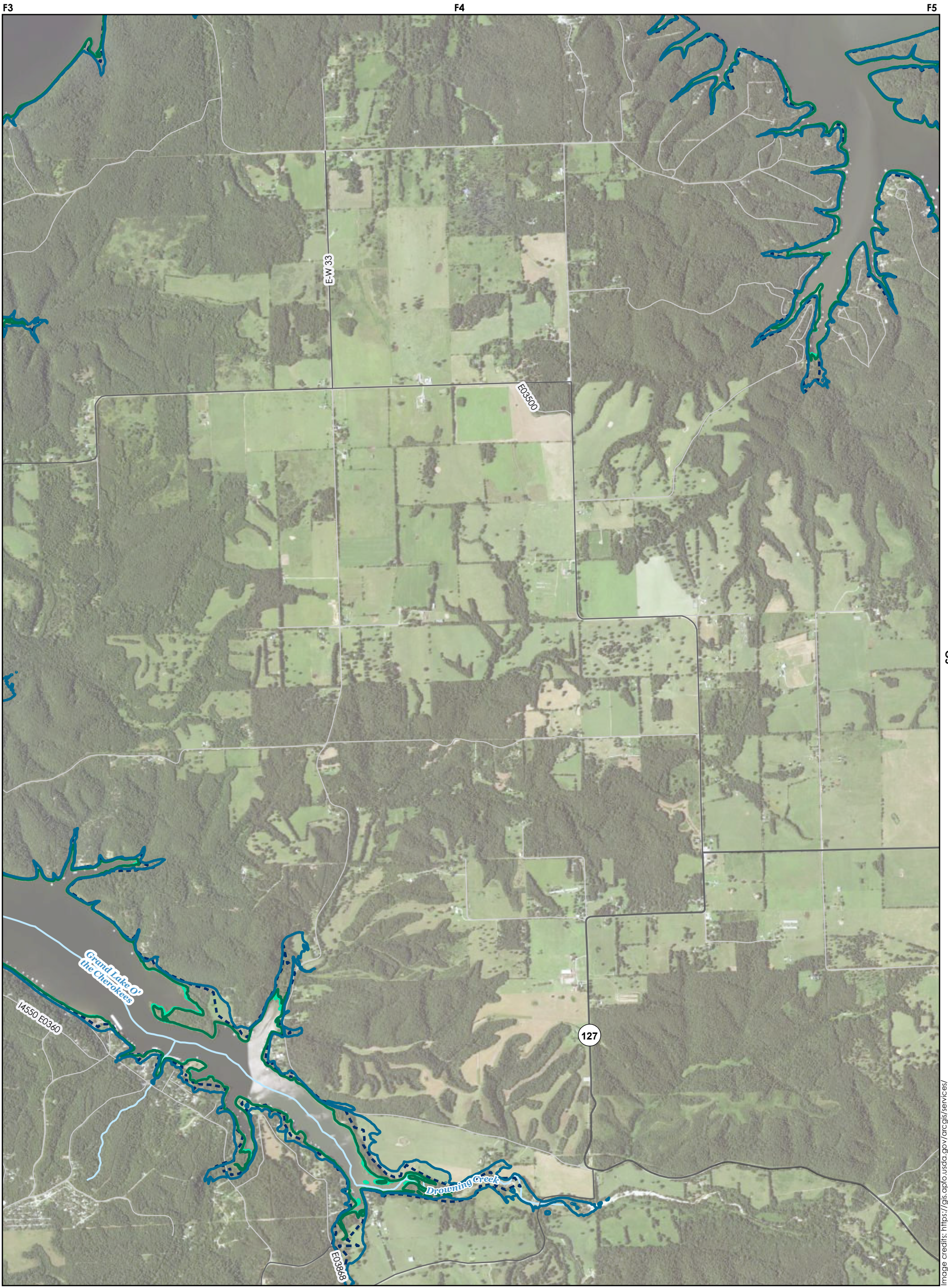
1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: G3

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



LAKE SPANNING SPECIES HABITAT CHANGES

NORTH

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

1 inch = 2,000 feet

INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

Legend

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: G4

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

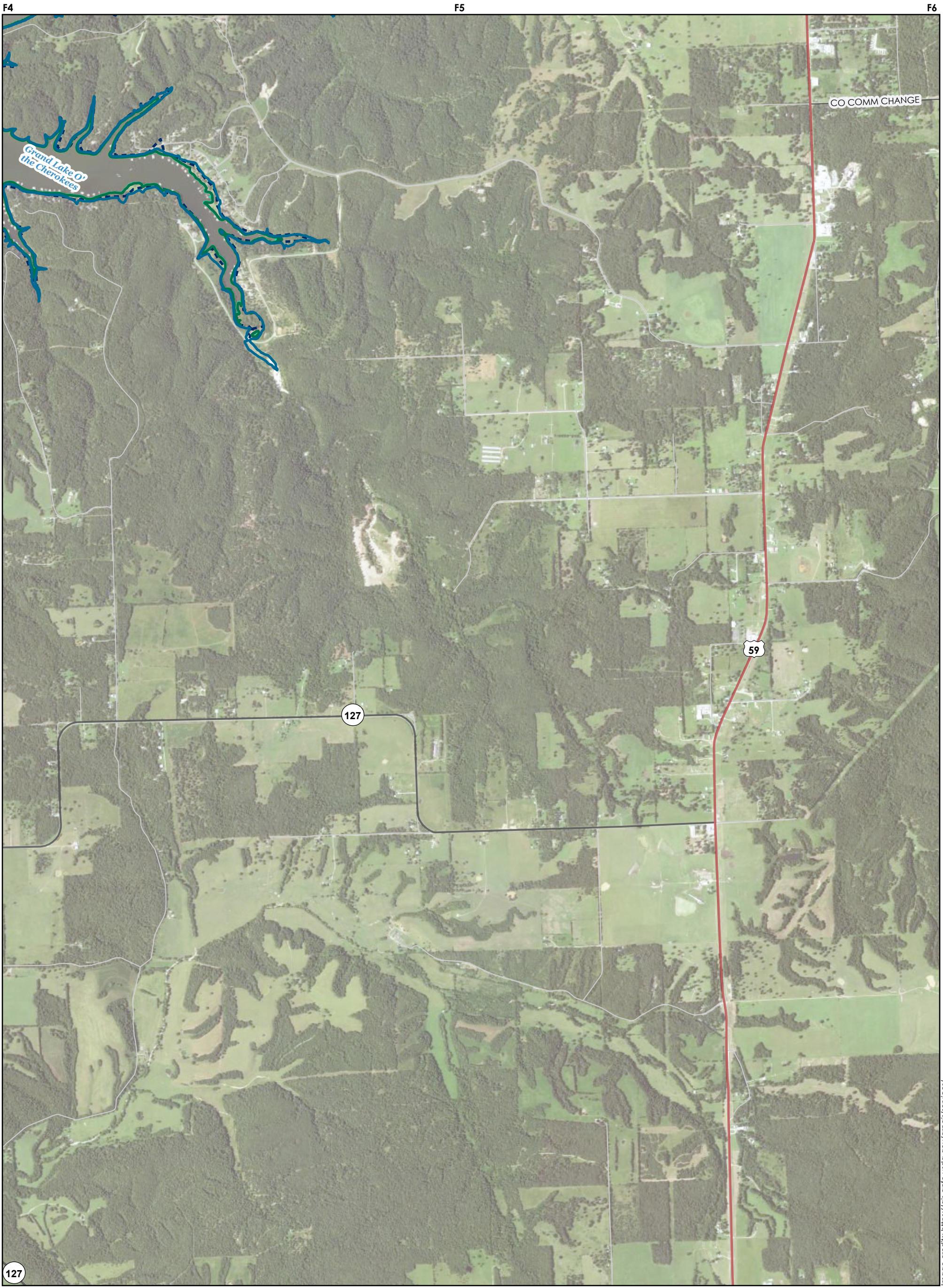
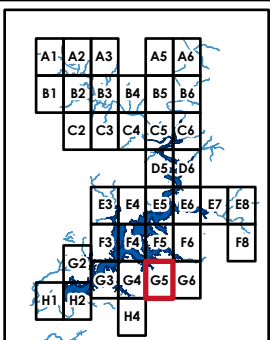
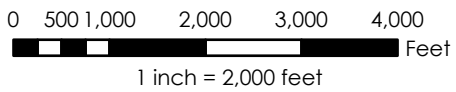


Image credits: https://gis.dplfo.usda.gov/arcgis/services/NAIP/USDA_CONUS_PRIME/ImageServer, 2019

LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: G5

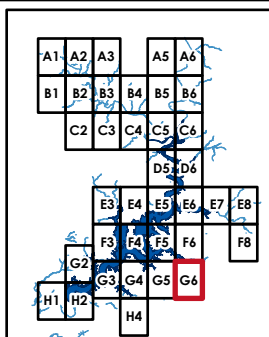
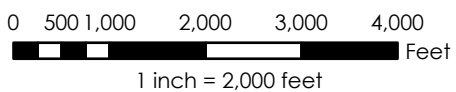
CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



F5 F6 F7
G5 G6 G7
H5 H6 H7

LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

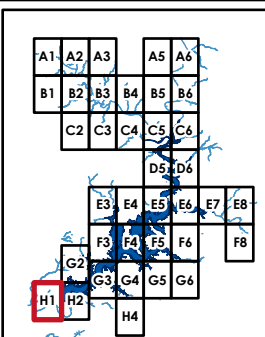
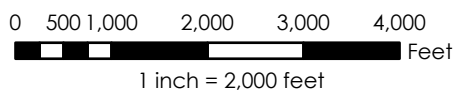
MAP: G6

CRAIG, DELAWARE, MAYES, AND
OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

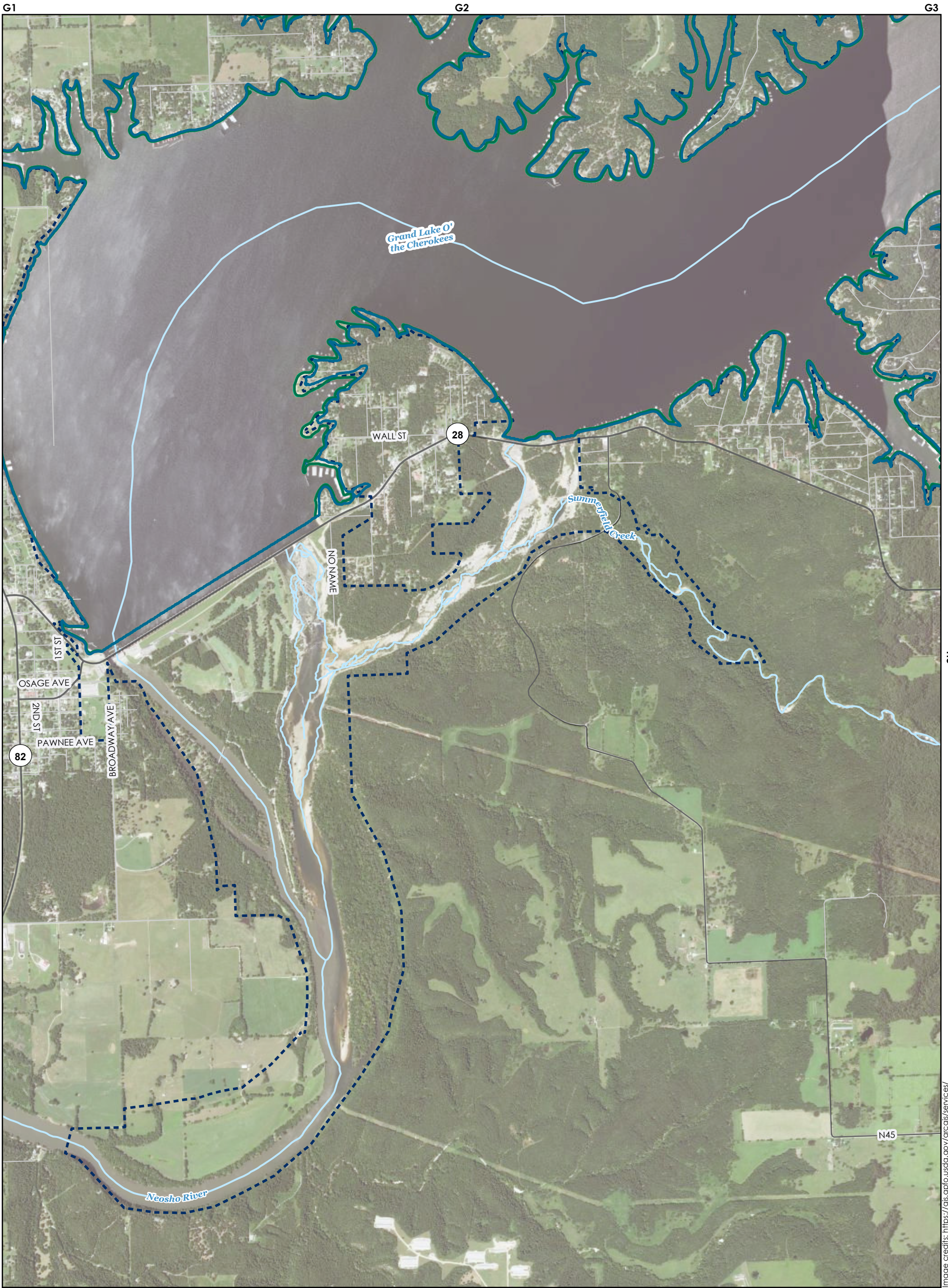
1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM GRAND RIVER DAM AUTHORITY

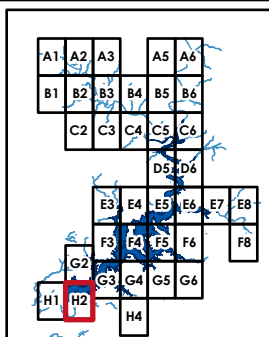
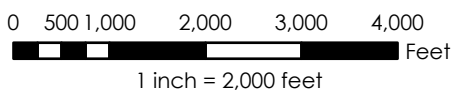
MAP: H1

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: H2

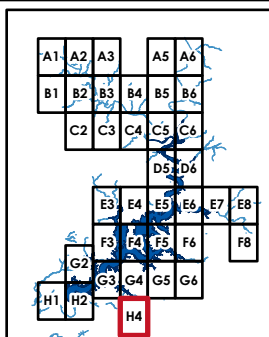
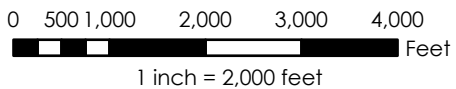
CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022



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

LAKE SPAWNING SPECIES HABITAT CHANGES



INUNDATION

- Aquatic Habitat Baseline Operations
- Aquatic Habitat Anticipated Operations
- Maximum Inundation

Legend

ROAD CLASS

- Interstate
- State Highway
- US Highway
- Major Collector

- Local Road
- Railroad
- Stream
- Project Boundary (2014)

MAP AND LEGEND NOTES

1. Mapping shows the extent of inundation calculated using the H&H Study Operations Model and Upstream Hydraulic Model. **These maps represent the work of the H&H Study and are not to be used as shown for resource analysis purposes.**
2. Estimated inundation extent for normal (median) inflows and operations during the spawning season.
3. See Overview Map for an explanation of the maximum inundation extent and notes on data sources.

PENSACOLA DAM
GRAND RIVER DAM AUTHORITY

MAP: H4

CRAIG, DELAWARE, MAYES, AND OTTAWA COUNTIES, OKLAHOMA

FERC No. 1494
September 2022