DRAFT AFTER-ACTION ENVIRONMENTAL ASSESSMENT MKARNS

U.S. Army Corps of Engineers
Tulsa District

PRESENTER: Justyss Watson

MISSION / PEOPLE / TEAMWORK

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PURPOSE OF PRESENTATION

Inform the public and stakeholders that an After-Action Environmental Assessment (EA) for the Webbers Falls Pool and Robert S. Kerr Pool Emergency Dredging and Disposal has been drafted;

Define what an Environmental Assessment is;

Provide instructions on how to participate in the Environmental Assessment process;

Encourage participation; and

Provide links to the Draft documents.

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BACKGROUND

Record rainfall in May and June 2019 in southern and southeastern Kansas and in northeastern Oklahoma caused approximately 15 Corps of Engineers reservoirs in the Upper Arkansas River Basin, Verdigris River Basin, and Grand (Neosho) River Basin (all within Tulsa District), to fill or exceed the top floodpool elevation.

While Tulsa District worked diligently to lessen the effects of flooding downstream, significant and in some cases catastrophic flooding was unavoidable.

River flows -- measured in cubic feet per second (CFS) -- were overwhelming within large portions of the river system. Below Keystone Dam just west of Tulsa, the rate of river flow approached 300,000 CFS at its maximum volume.

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BACKGROUND CONTINUED

Approximately 50 miles southeast of Tulsa, Oklahoma on the Arkansas River below Muskogee, Oklahoma -- just downstream from the Arkansas River confluence with the Verdigris River and the Grand (Neosho) River at the location known locally as "Three Forks" -- the flow eclipsed 600,000 CFS in volume.

The Arkansas River within the Webbers Falls pool, at a sustained volume of well over 600,000 CFS over a duration of more than a week, was carrying an enormous volume of sediment which was eroded from the three upstream feeder river basins and was passed through upstream dams and into the Navigation System, where much of it was subsequently deposited.

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BACKGROUND CONTINUED

Complicating factor that contributed:

- On May 23, 2019 two fully-loaded barges moored in the Muskogee area tore loose and were carried downstream, where they collided with Webbers Falls Lock and Dam and sunk.
- After sinking the barges were forced against three of the structure's gates which had been fully open (as were all other gates) in order to pass the high river flow; because the two barges impeded the operation of the gates, those gates could not be closed.
- Removal of the barges/operation of the Webbers Falls gates was dependent on the emergency dredging action, specifically the portion within the Robert S. Kerr pool.
- A tow barge was required to perform the extraction of the sunk barges, and the tow barge had to travel the channel upstream from Arkansas through the Robert S. Kerr pool.

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PURPOSE OF NEPA

The purpose of this project is to analyze impacts to the socio-economic and natural environment resulting from implementation of the Emergency Action (declaration).

The goals of the document will be to ensure compliance with NEPA and appropriate environmental laws, regulations, agency policies and guidance, and executive orders.

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PURPOSE OF NEPA

Applies to federal actions that affect the environment such as dredging operations and disposal.

Requires federal agencies to CONSIDER and DOCUMENT the environmental impacts of their proposed actions as part of an agency's OVERALL planning and decision-making.

Requires federal agencies to cooperate with other federal, state, and local governments as well as with organizations and the public.

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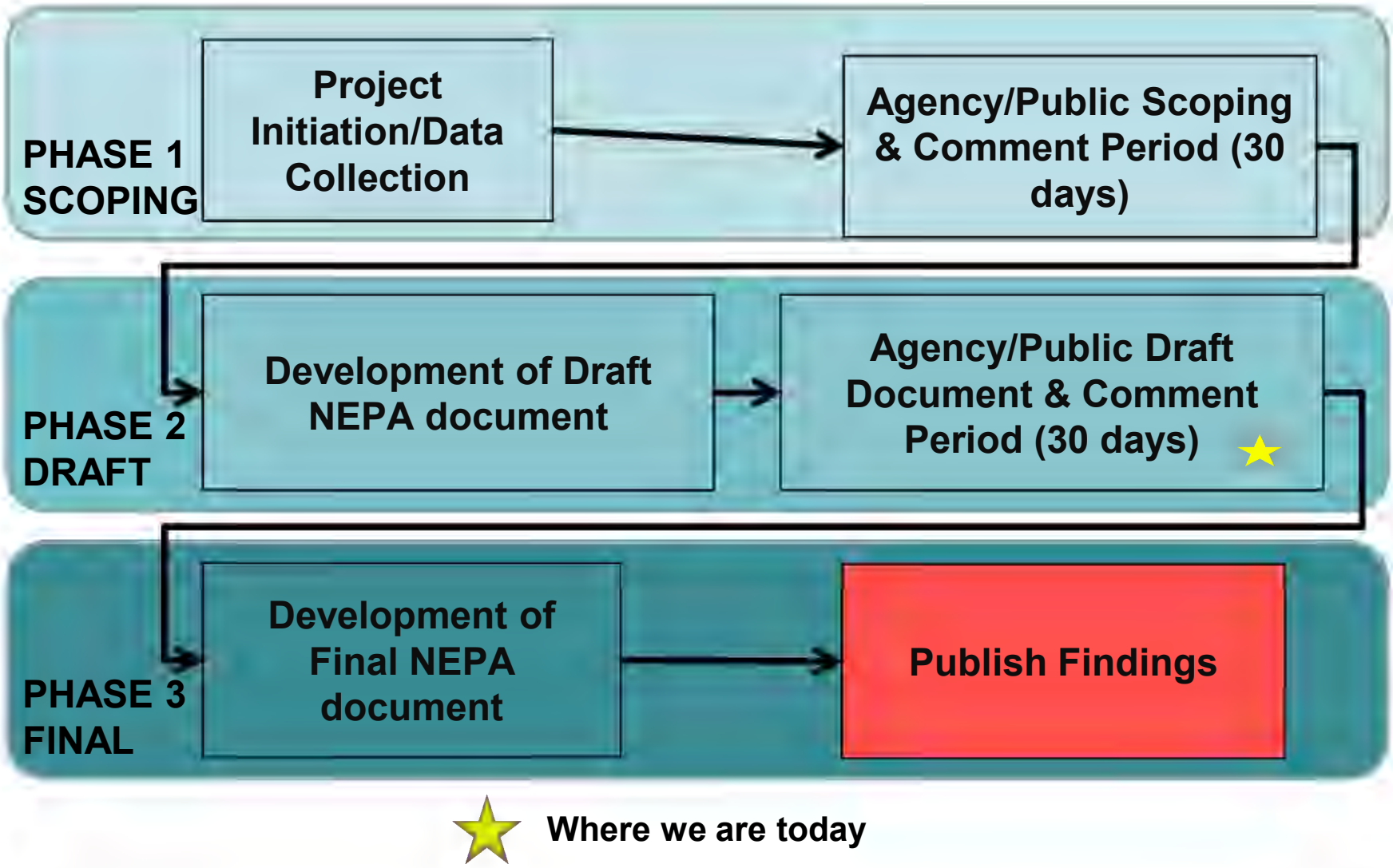
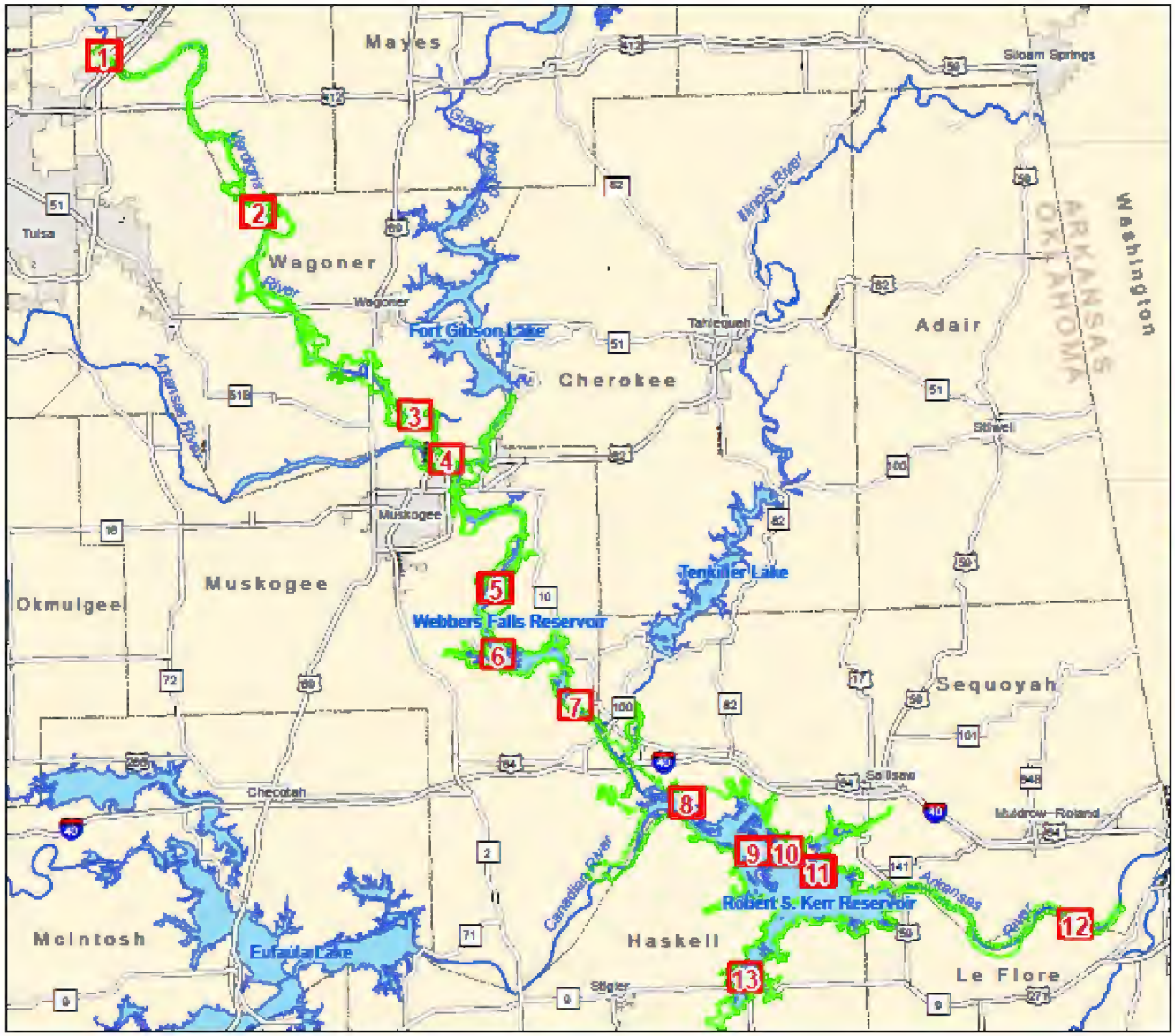
NEPA PROCESS



ALL DREDGE AND DISPOSAL AREAS



INDEX GRID
DREDGE AREA
STUDY AREA
DMMP DISPOSAL SITE

ADVERSE IMPACT
BOTTOMLAND HARDWOOD DISPOSAL SITE
EMERGENT WETLAND DISPOSAL SITE
FORESTED WETLAND DISPOSAL SITE
OPEN WATER DISPOSAL SITE

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MCCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

AFTER ACTION ENVIRONMENTAL ASSESSMENT

INDEX SHEET

N 0 3.75 7.5 15 Miles

DATE:	MAP NO.
MARCH 2021	MKARNS-EA-00

PROJECT AREAS

Location	River Mile	Cubic Yards Dredged	Disposal Location	Acres Impacted by Disposal	NEPA Approved Disposal Location
Sandtown Bottom	346-349	778,330	Open Water	97.7	No
			Emergent Wetland	16.4	No
Below Lock 16	366	70,322	Bottomland Hardwood Forest	10	No
Spaniard Creek	375	110,635	Open Water	146	No
Salt Creek	380	259,322	Open Water	1.3	No
			Emergent Wetland	7.4	No
			Forested Wetland	2.4	No
Stoney Point	355	76,444	Open Water	4.9	No
			Emergent Wetland	7.6	No
San Bois Creek	6.5 - 8	161,639	Open Water	30	No
Kerr Lake (RM 343)	343	55,586	Open Water	8.3	No
Three Forks	394.5 – 395	23,578	Disposal Site 16B	14.6	Yes
RM 400	400	13,875	Disposal Site 16A-1	14	Yes
Below Lock 18	421	35,688	Disposal Site 17A	30.3	Yes
Above Lock 18	422 – 422.5	37,367	Disposal Site 18C	11.6	Yes
Catoosa	445	14,525	Disposal Site 18B	11.5	Yes
Below Lock 14	319	21,578	Disposal Site 13A	1.5	Yes

Total Dredged: 1.6 million cubic yards

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HABITAT IMPACTS

Location	River Mile	Cubic Yards Dredged	Disposal Location	Acres Impacted by Disposal	NEPA Approved Disposal Location
Sandtown Bottom	346-349	778,330	Open Water	97.7	No
			Emergent Wetland	16.4	No
Below Lock 16	366	70,322	Bottomland Hardwood Forest	10	No
Spaniard Creek	375	110,635	Open Water	146	No
Salt Creek	380	259,322	Open Water	1.3	No
			Emergent Wetland	7.4	No
			Forested Wetland	2.4	No
Stoney Point	355	76,444	Open Water	4.9	No
			Emergent Wetland	7.6	No
San Bois Creek	6.5 - 8	161,639	Open Water	30	No
Kerr Lake (RM 343)	343	55,586	Open Water	8.3	No

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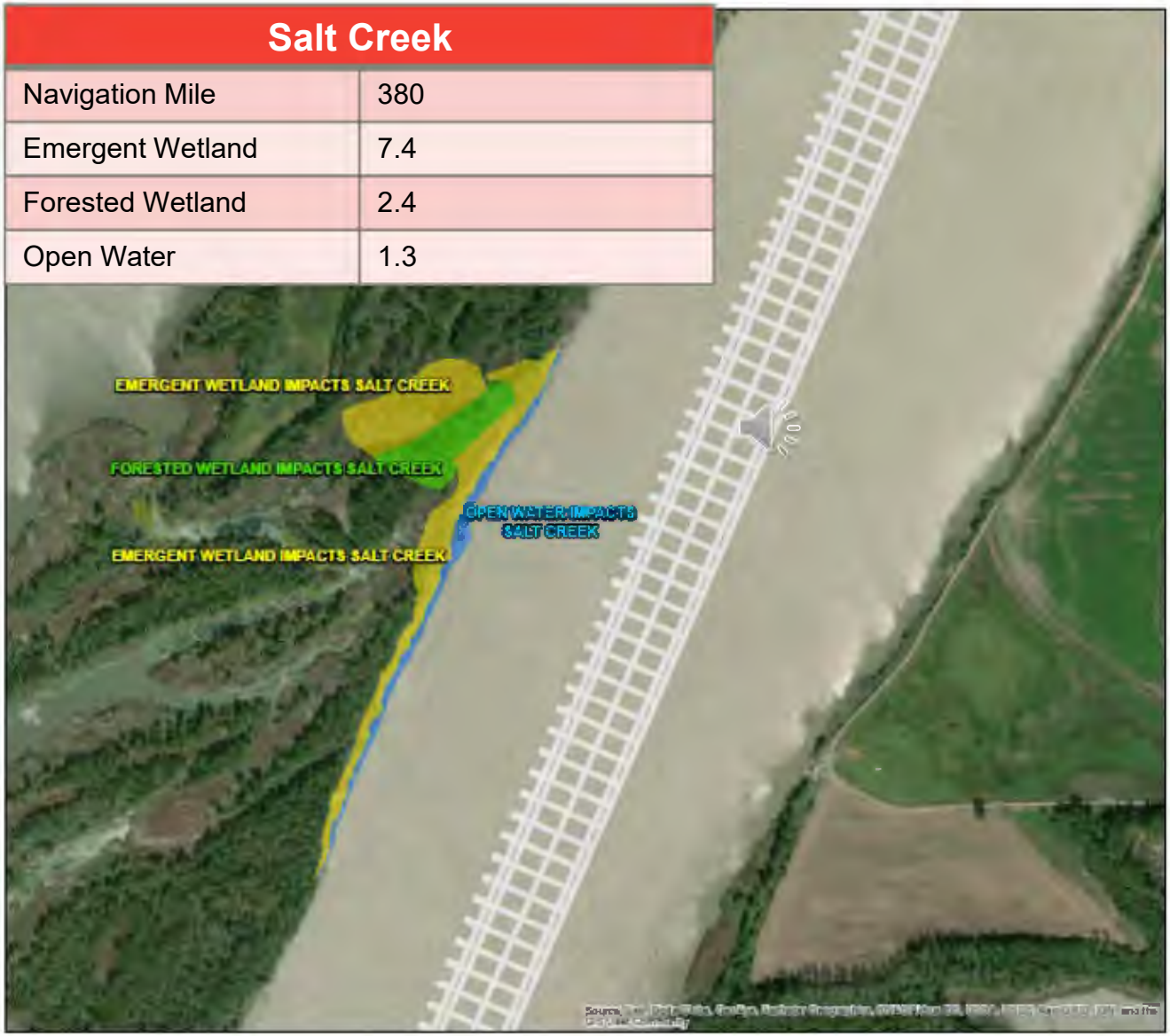
SALT CREEK

Salt Creek	
Navigation Mile	380
Emergent Wetland	7.4
Forested Wetland	2.4
Open Water	1.3



DREDGE AREA
STUDY AREA
ADVERSE IMPACT AREAS
EMERGENT WETLAND DISPOSAL SITE
FORESTED WETLAND DISPOSAL SITE
OPEN WATER DISPOSAL SITE

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AFTER ACTION ENVIRONMENTAL ASSESSMENT

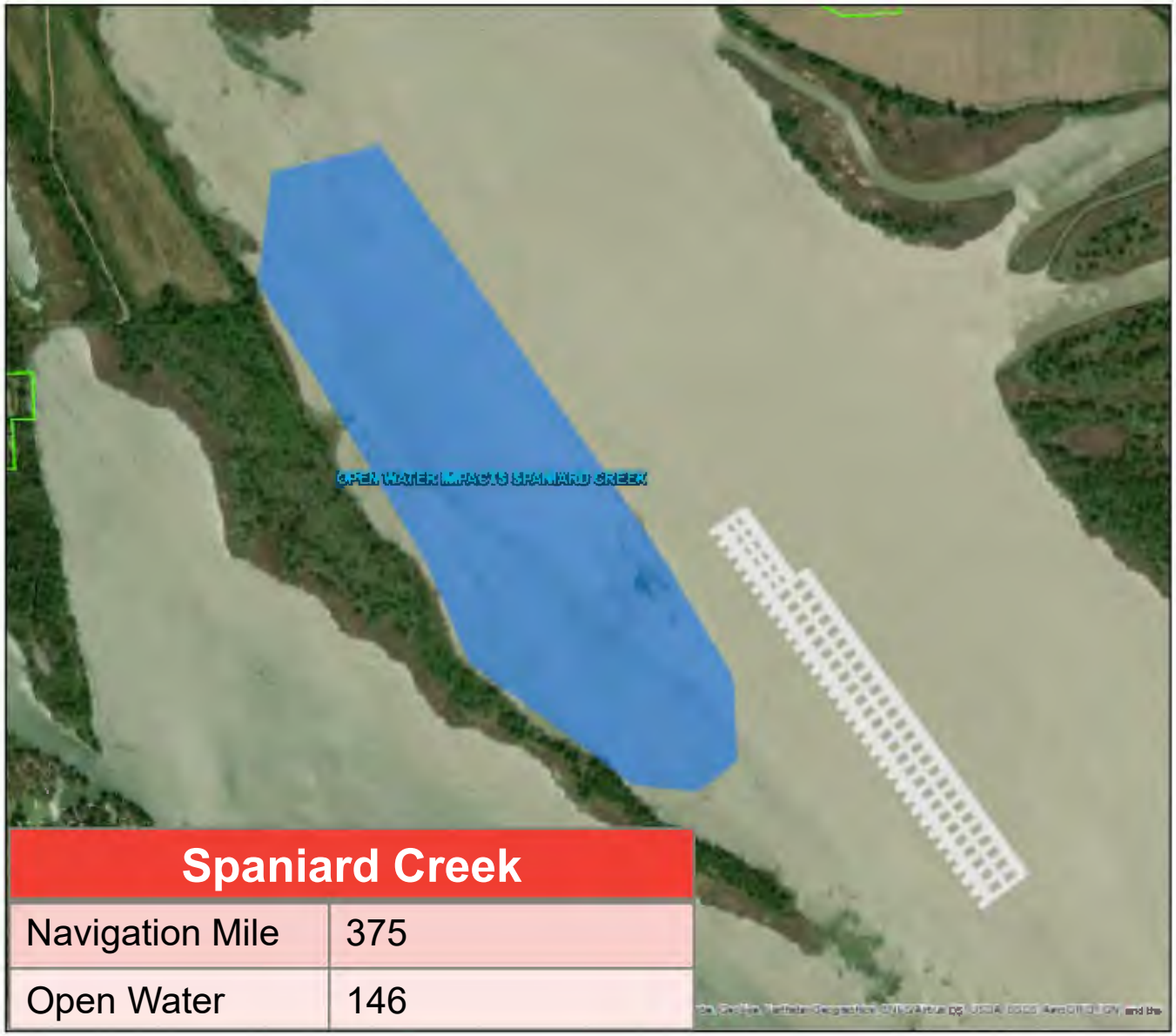
INDEX SHEET 05

0 250 500 1,000 Feet

DATE:	MAP NO.
MARCH 2021	MKARNS-EA-05

SALT CREEK

SPANIARD CREEK



Spaniard Creek	
Navigation Mile	375
Open Water	146

DREDGE AREA
STUDY AREA
ADVERSE IMPACT AREAS
OPEN WATER DISPOSAL SITE

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INDEX SHEET 06

0 400 800 1,600 Feet

DATE:	MAP NO.
MARCH 2021	MKARNS-EA-06

SPANIARD CREEK

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BELOW LOCK 16

DREDGE AREA

ADVERSE IMPACT AREAS

BOTTOMLAND HARDWOOD DISPOSAL SITE

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AFTER ACTION ENVIRONMENTAL ASSESSMENT

INDEX SHEET 07

0 300 600 1,200 Feet

DATE:	MAP NO.
MARCH 2021	MKARNS-EA-07

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Below Lock 16	
Navigation Mile	380
Bottomland Hardwood	10

BELOW LOCK 16

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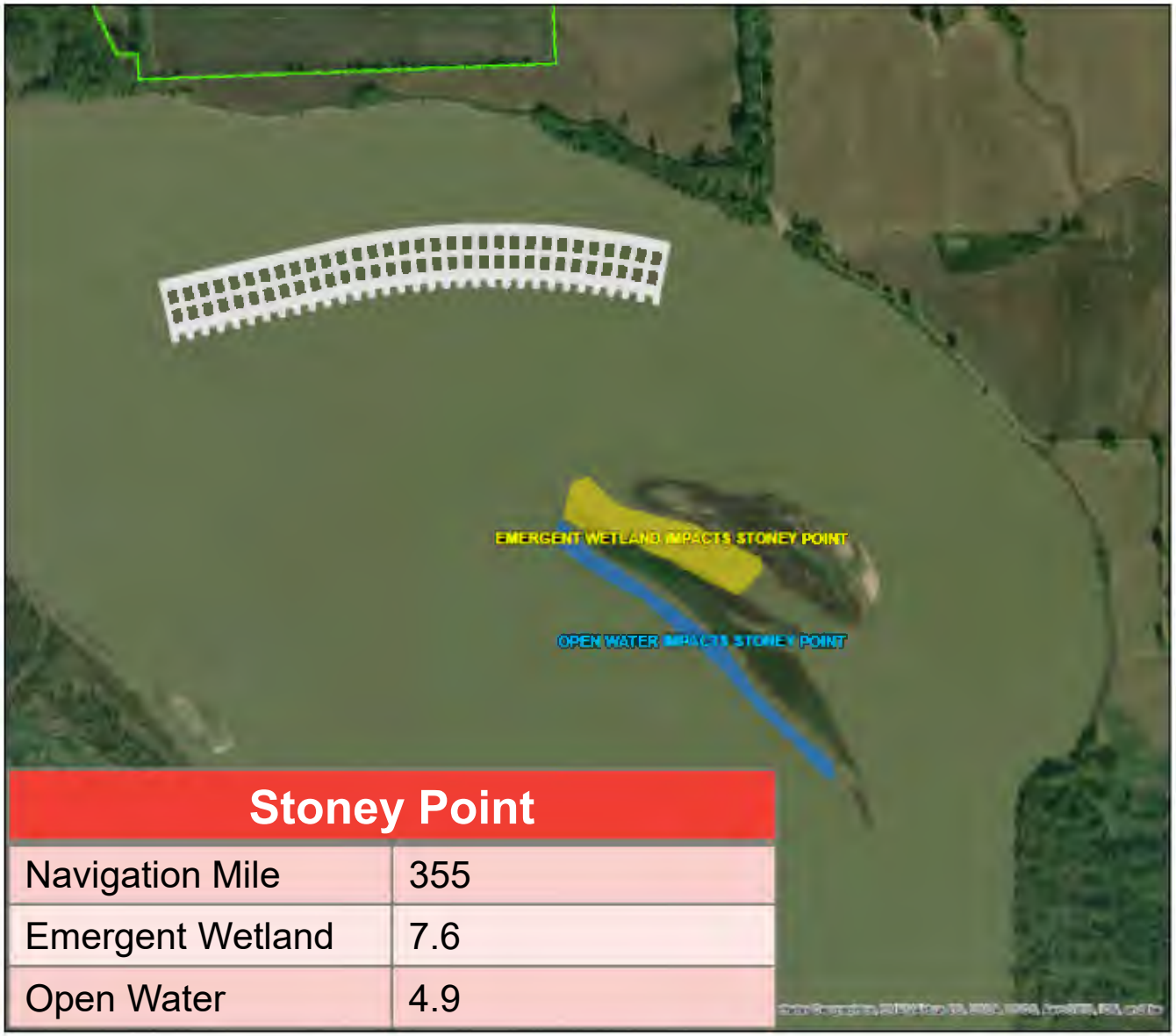
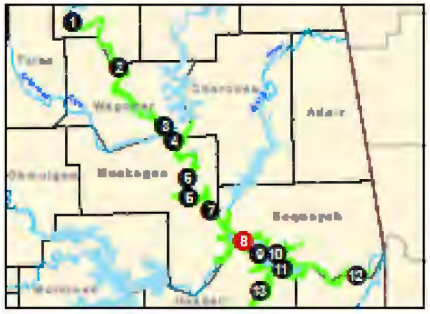
STONEY POINT



Stoney Point	
Navigation Mile	355
Emergent Wetland	7.6
Open Water	4.9



DREDGE AREA
STUDY AREA
ADVERSE IMPACT AREAS
EMERGENT WETLAND DISPOSAL SITE
OPEN WATER DISPOSAL SITE

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MCCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

AFTER ACTION ENVIRONMENTAL ASSESSMENT

INDEX SHEET 08

N
0 350 700 1,400 Feet

DATE:	MAP NO.
MARCH 2021	MKARNS-EA-08

STONEY POINT

SANDTOWN BOTTOM

Sandtown Bottom	
Navigation Mile	346-348
Emergent Wetland	16.4
Open Water	97.7

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SANDTOWN BOTTOM

KERR LAKE

DREDGE AREA
STUDY AREA
ADVERSE IMPACT AREAS
OPEN WATER DISPOSAL SITE

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MCCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

AFTER ACTION ENVIRONMENTAL ASSESSMENT

INDEX SHEET 11

0 250 500 1,000 Feet

DATE:	MAP NO.
MARCH 2021	MKARNS-EA-11

Kerr Lake	
Navigation Mile	343
Open Water	8.3

KERR LAKE

SAN BOIS CREEK

DREDGE AREA
STUDY AREA
ADVERSE IMPACT AREAS
OPEN WATER DISPOSAL SITE

San Bois Creek	
Navigation Mile	6.5 – 8
Open Water	30

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MCCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

AFTER ACTION ENVIRONMENTAL ASSESSMENT

INDEX SHEET 13

0 450 900 1,800 Feet

DATE	MAP NO
MARCH 2021	MKARNS-EA-13

SAN BOIS CREEK

TOTAL HABITAT IMPACTED FROM DISPOSAL

Emergent Wetland

- 31.4

Forested Wetland

- 2.4

Bottomland Hardwood Forest

- 10

Open Water

- 258.2

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TOTAL HABITAT PROPOSED FOR MITIGATION

Emergent Wetland

- 86.2 acres

Forested Wetland

- 20.7 acres

Bottomland Hardwood

- 49.9 acres

Open Water

- 0 acres

Additional Considerations

- Cultural Resources

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OPEN WATER

Open water disposal

- It is the viewpoint of USACE, that open water disposal is self-mitigating because sediment was simply moved from one location in the MKARNS to an adjacent location.
- The action created new interior least tern nesting habitat, wading bird habitat, and increased the degree of aquatic habitat heterogeneity relative to conditions before the flood.

Interior Least Tern (ILT) Habitat

- At the time of flooding, ILT was a listed species.
- Nesting habitat creation was a major focus of dredge disposal.

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CULTURAL RESOURCES

Cultural Resources Survey

- Surveys will be conducted on all proposed mitigation sites.
- If cultural resources are found, the portions of the site with the resource will be avoided.
- USACE does not expect to affect cultural resources as long as sites are avoided appropriately.

Timing

- Surveys are expected to take up to one month to complete.
- Final reports are expected to take at least 6 months.
- Surveys must be completed before mitigation construction can begin.

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REQUIRED MITIGATION ASPECTS

- Security Fencing & Gates
- Signs
- Grading/Contouring
- Planting
- Invasive Species Management

- Monitoring
- Adaptive Management
- Maintenance

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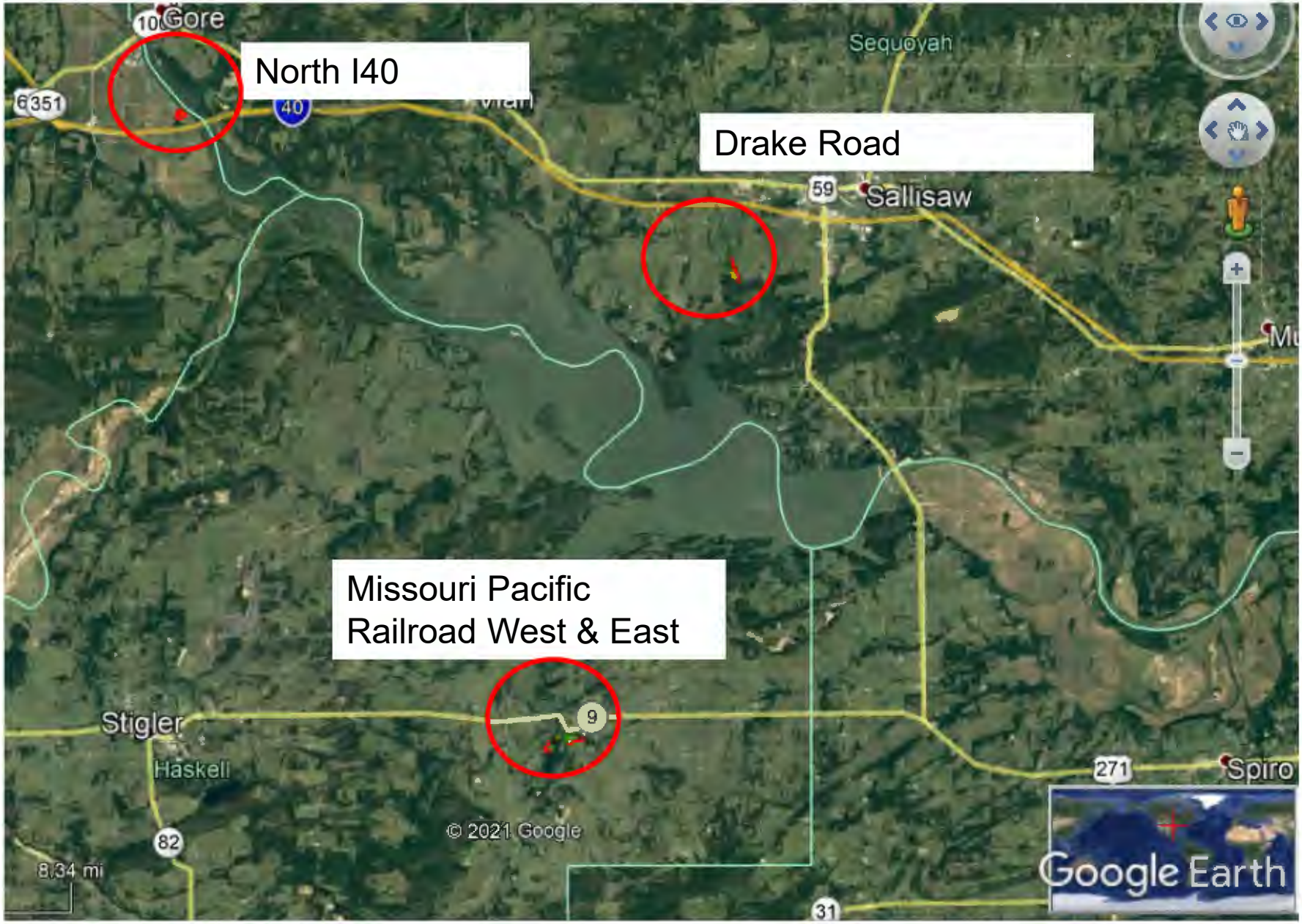
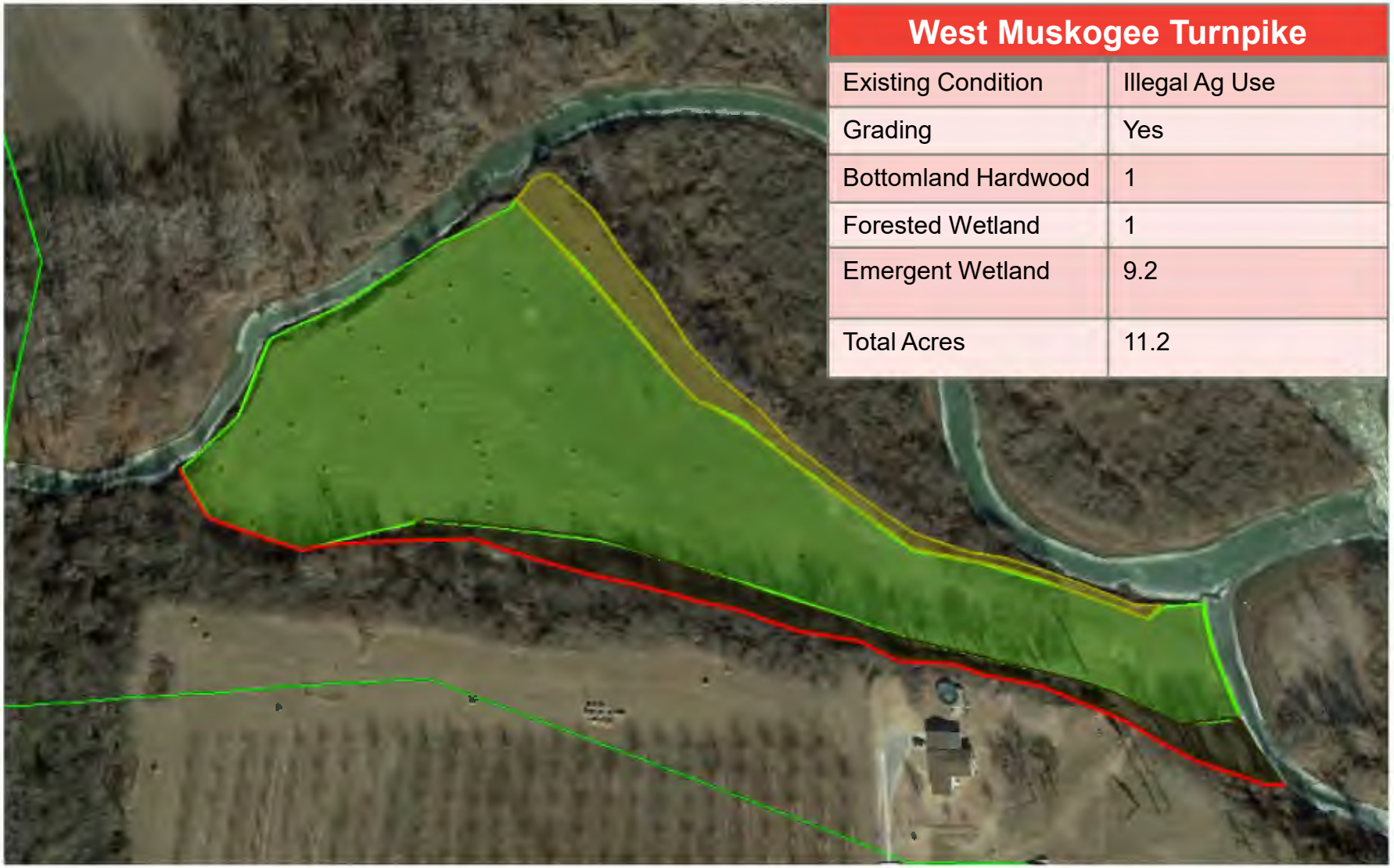
West Muskogee Turnpike
Port Gibson
N York St
W Okmulgee Ave
Muskogee
165
Muskogee
69
Summit
Braggs
E0960 Road
River Bottom
64
10
© 2021 Google
351
5.95 mi


North I40
Drake Road
Missouri Pacific
Railroad West & East
Gore
Sequoyah
Sallisaw
Stigler
Haskell
Spiro
© 2021 Google
Google Earth

WEST MUSKOGEE TURNPIKE



West Muskogee Turnpike	
Existing Condition	Illegal Ag Use
Grading	Yes
Bottomland Hardwood	1
Forested Wetland	1
Emergent Wetland	9.2
Total Acres	11.2

WEST MUSKOGEE TURNPIKE

E0960

E0960	
Existing Condition	Leased Ag Use
Grading	Yes
Bottomland Hardwood	13
Forested Wetland	4.7
Emergent Wetland	40.5
Total Acres	58.2

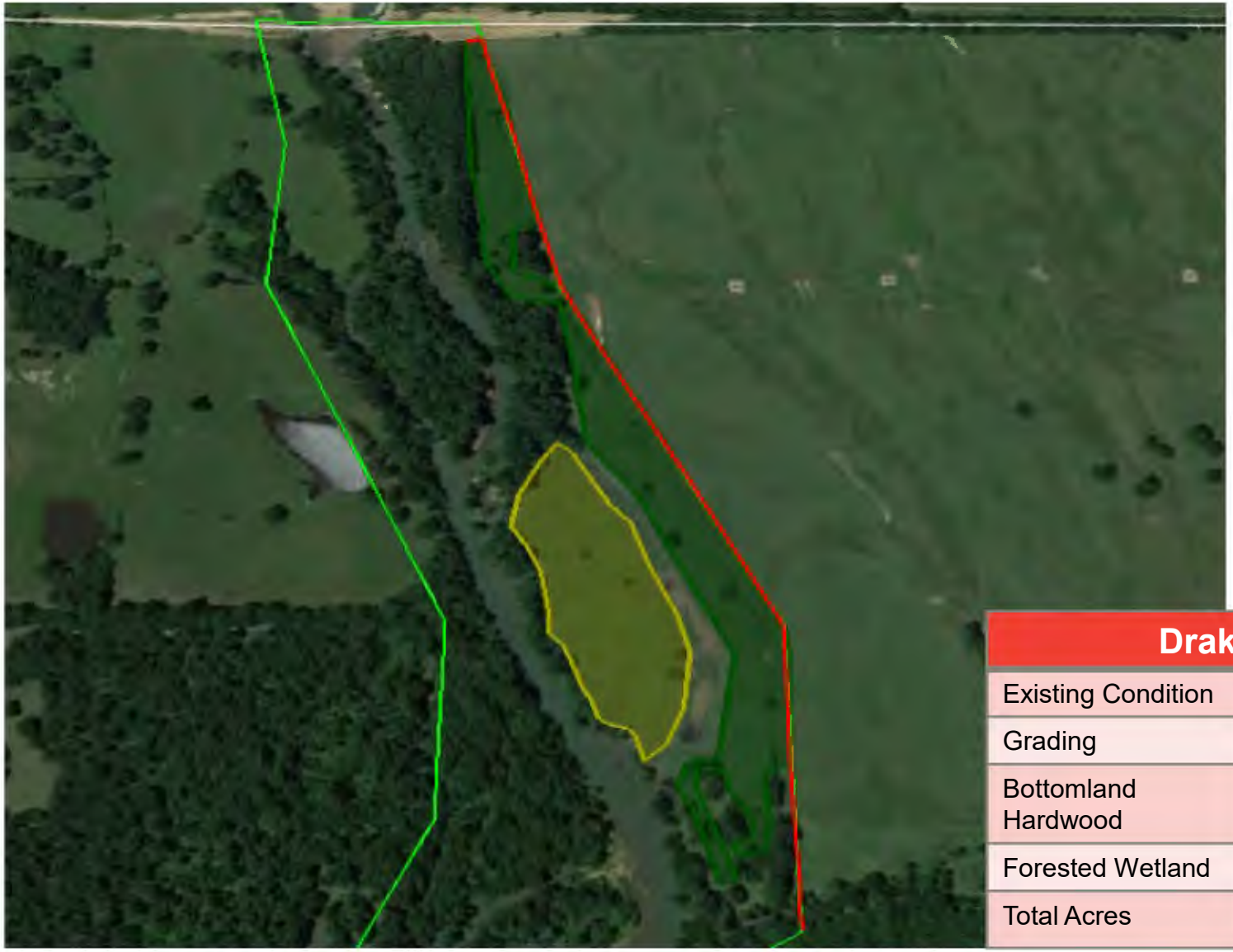
E0960

NORTH I40

North I40	
Existing Condition	Illegal Clearing & Leased Ag Use
Grading	No
Bottomland Hardwood	13.2
Forested Wetland	3.2
Emergent Wetland	8.1
Total Acres	24.5

NORTH I40

DRAKE ROAD



Drake Road	
Existing Condition	Leased Ag Use
Grading	No
Bottomland Hardwood	11.8
Forested Wetland	7.1
Total Acres	18.9

DRAKE ROAD

MISSOURI PACIFIC RAILROAD - WEST

Missouri Pacific Railroad - Small	
Existing Condition	Leased Ag Use
Grading	Yes
Bottomland Hardwood	2.6
Forested Wetland	4.7
Emergent Wetland	10.0
Total Acres	17.3

MISSOURI PACIFIC RAILROAD - WEST

MISSOURI PACIFIC RAILROAD - EAST

Missouri Pacific Railroad – Large	
Existing Condition	Leased Ag Use
Grading	Yes
Bottomland Hardwood	8.3
Emergent Wetland	18.4
Total Acres	26.7

MISSOURI PACIFIC RAILROAD - EAST

MITIGATION COSTS

Ecological

- Native species planting & invasive species management
- Total: ~$2.57 million

Cultural Resources Survey

- ~ $300,000

Construction

- Security Fencing
- Grading/Contouring
- Signs
- Total: ~$1.87 million

Overall Total: ~$4,740,000

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DRAFT PUBLIC REVIEW PERIOD

There will be a 30-day public comment period

Public Review

- Begins August 30, 2021
- Ends September 29, 2021

- The presentation and Draft EA & Appendices can be found here: http://www.swt.usace.army.mil/

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HOW CAN I PARTICIPATE?

Submit your written comments by September 29, 2021 (post-marked)

- Email to:

  Justyss.A.Watson@usace.army.mil

- Or Mail to:

  Justyss Watson
  Biologist, Environmental Branch
  Regional Planning and Environmental Center
  P.O. Box 17300 Room 3A12
  819 Taylor Street
  Fort Worth, TX 76102-300

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