

TENNESSEE-TOMBIGBEE WATERWAY DEVELOPMENT OPPORTUNITIES CONFERENCE

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"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."



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13 AUGUST 2021



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SAM 20/21/22 O&M PROGRAM (X1000)

	President Budget	Work Plan	President Budget	Work Plan	President Budget
Project	FY2020	FY2020	FY2021	FY2021	FY2022
TTWW	37,389	*43,698	28,880	29,030	28,986**
BW&T	25,953	28,453	23,266	23,366	24,652
Wildlife Mitigation	1,800	1,800	1,800	1,800	1,800
Mobile Harbor	26,031	47,081	24,968	66,154***	30,212

*TTWW included \$6M for additional dredging, \$9M for Project Management Office, \$2.6M for Closures

**TTWW does not include dredging funds

***Mobile Harbor Funds - High water event and hurricane shoaling in FY-20

- O&M prior to deepening

- \$4.95M Energy Transfer to ASPA

TTWW & BWT TONNAGE



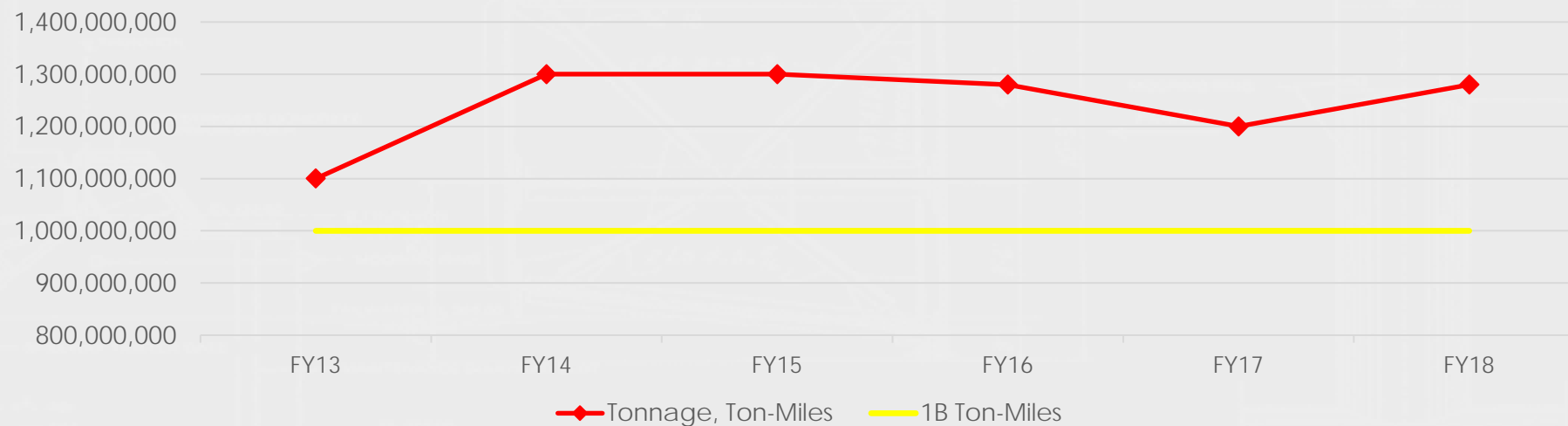
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SYSTEM TONNAGE (IN 1000S)

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>5 Yr Avg</u>
TTWW	8,799	8,100	7,931	7,290	7,412	7,907
BWT	21,192	18,400	17,705	16,910	17,010	18,240

TENNESSEE-TOMBIGBEE WATERWAY TON MILES



TENNESSEE-TOMBIGBEE WATERWAY



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COMMERCIAL AND RECREATIONAL LOCKAGES

PERIOD: 2018 TO 2020
DATA FROM LPMS

Lock	2018		2019		2020		3-Yr Average	
	Comm*	Rec	Comm*	Rec	Comm*	Rec	Comm*	Rec
Whitten	1500	768	1117	767	1048	599	1222	711
Montgomery	1327	651	904	665	883	498	1038	605
Rankin	1348	789	911	707	905	595	1055	697
Fulton	1342	822	918	747	900	530	1053	700
Wilkins	1343	808	931	745	905	581	1060	711
Amory	1333	803	924	770	899	568	1052	714
Aberdeen	1344	879	903	685	966	525	1071	696
Stennis	1521	923	1136	853	1102	653	1253	810
Bevill	1481	652	1123	738	1060	636	1221	675
Heflin	1478	767	1161	713	1018	601	1219	694

* INCLUDES COMMERCIAL AND GOVERNMENT VESSEL LOCKAGES

TENNESSEE-TOMBIGBEE WATERWAY

VISITATION AND ECONOMIC BENEFITS



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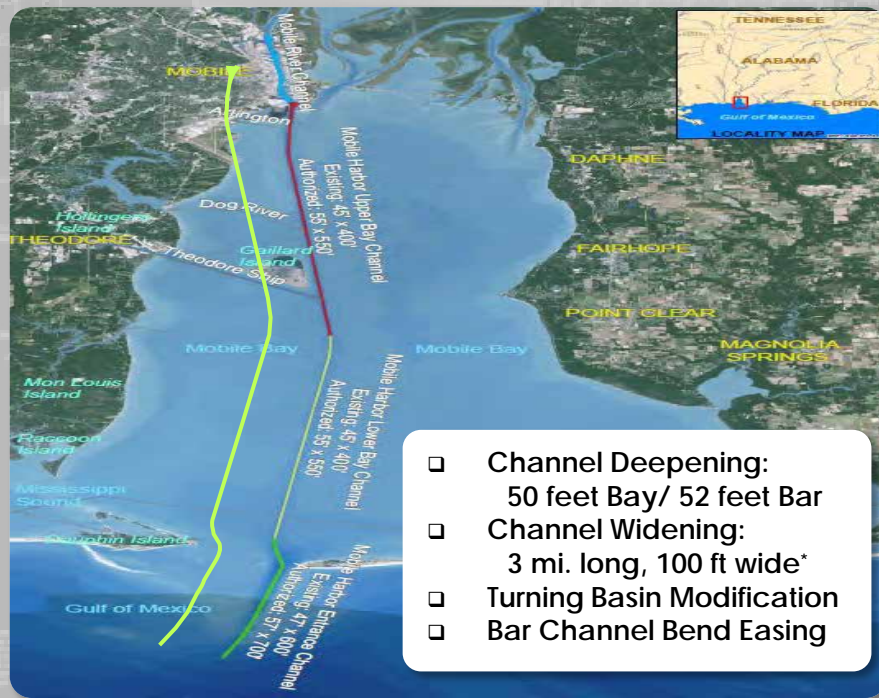
VISITATION

- 1,598,006 VISITS REPORTED IN FY20

ECONOMIC BENEFITS

- \$78.6M IN VISITOR SPENDING
- \$39.5M IN SALES
- 647 JOBS
- \$15.8M IN LABOR INCOME
- \$21.6M IN VALUE ADDED (WAGES & SALARIES, PAYROLL BENEFITS, PROFITS, RENTS, AND INDIRECT BUSINESS TAXES)





CESAM CURRENT DREDGING EFFORT				
Project	Contractor	Dredge	\$ Amount	% Complete
Mobile Bay O&M	Weeks Marine	Captain Frank	\$21.5M	85%
Mobile Deepening Ph. 1	Great Lakes	Ellis, Dodge, Padre	\$8.3M	68%
Mobile Deepening Ph. 3	Great Lakes	Ellis Island	\$53.9M	17%
Mobile River O&M	Mike Hooks	Missouri H.	\$8M	58%
Pascagoula – Bayou Casotte	Dutra	Columbia	\$2M	70%
Gulfport	Dutra	Columbia	\$2.8M	50%
TTWW Mi 290	Inland Dredging	Integrity	\$4.8M	80%
Bayou La Batre	Inland Dredging	Ingenuity	\$2M	100%

MOBILE HARBOR – IN PROGRESS



CONSTRUCTION PHASING		
<u>Phase 1:</u> Bar Channel Deepening Awarded Sep 20/Complete Oct 21 (\$8.3M)	1.7MCY	Hopper Great Lakes
<u>Phase 2:</u> Bar Channel & Bend Easing's to 52' plus Widener Adv. Jan 2022, B.O. Mar 2022	6.1MCY	Hopper
<u>Phase 3:</u> Deepening Lower Bay Channel Awarded 21 Apr 21/Complete Oct 22 (\$53.9M)	7.7MCY	Hopper Great Lakes
<u>Phase 4:</u> Deepening remainder of Lower Bay Channel and portion of Upper Bay Channel	6.1MCY	Hopper
<u>Phase 5:</u> Deepen Upper Bay Channel (Relic Shell)	4.6MCY	Pipeline
<u>Phase 6:</u> Turning Basin	2.1MCY	Bucket and Scow

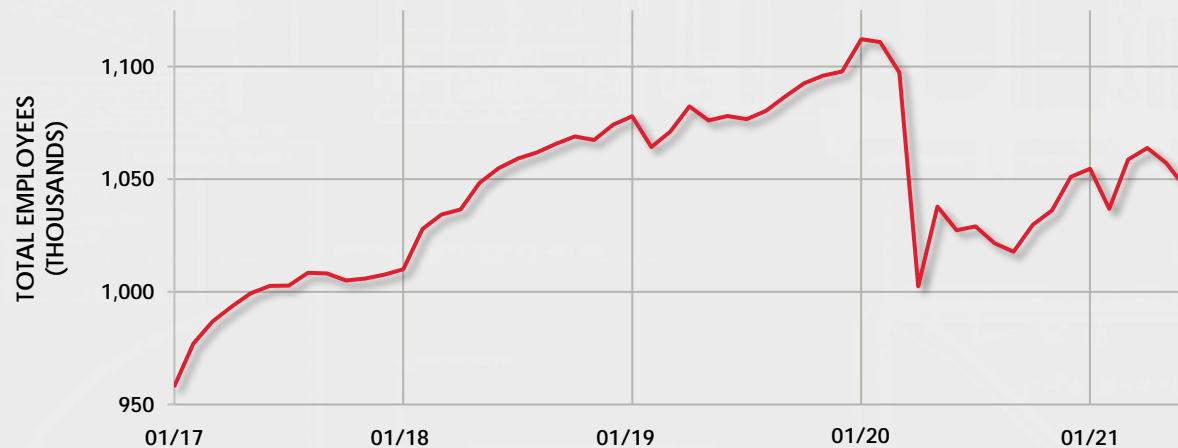
MOBILE DISTRICT SAFETY PROCESS IMPROVEMENTS



OBSERVATIONS

- Large, established companies lead the way in dredge crew safety
- COVID caused increased turnover in dredge crew members
 - Untrained, inexperienced employees exposed to a hazardous environment

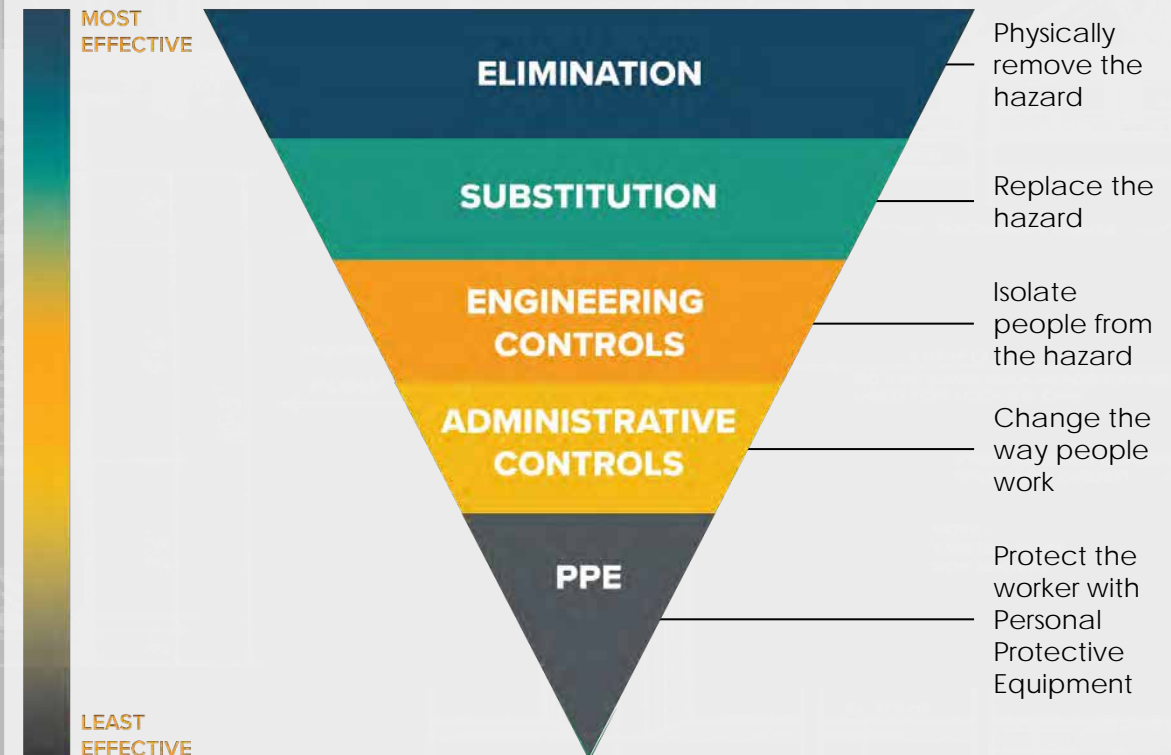
NATIONWIDE HEAVY & CIVIL CONSTRUCTION EMPLOYMENT



LESSONS LEARNED:

- Inspectors must periodically board dredges to observe condition of equipment and crew safety practices
- Training of crew will be assessed periodically

HIERARCHY OF CONTROLS

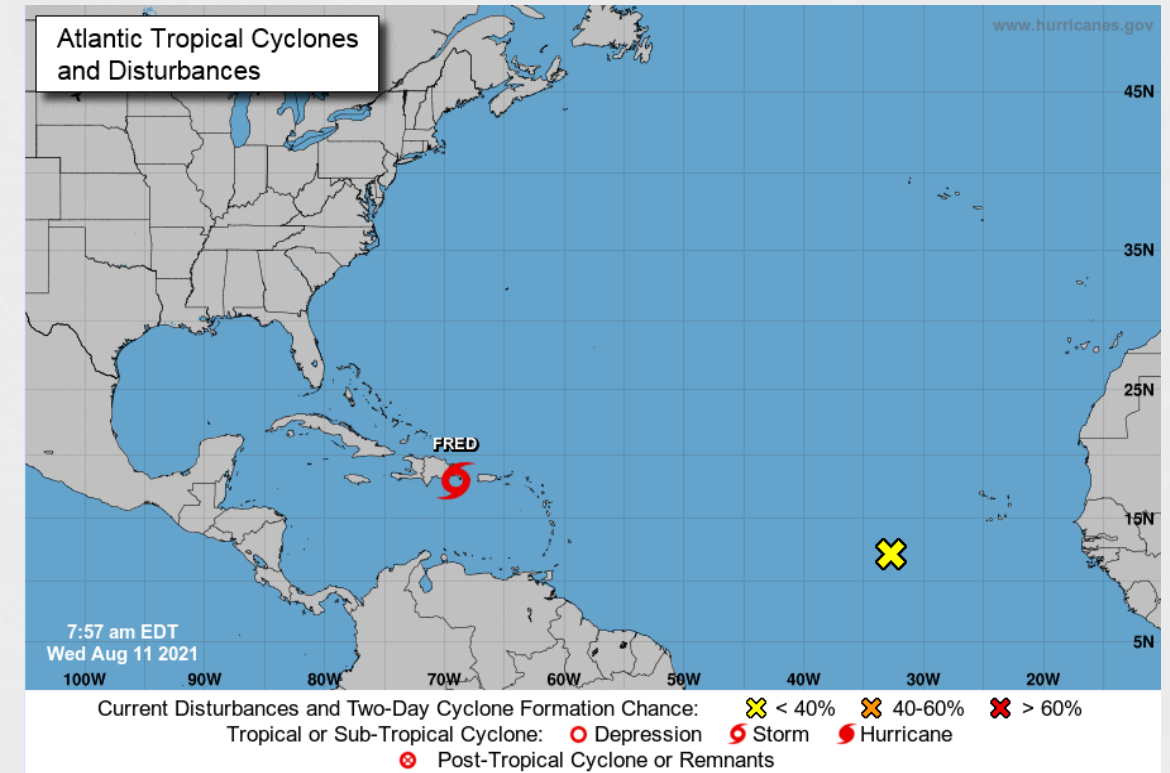
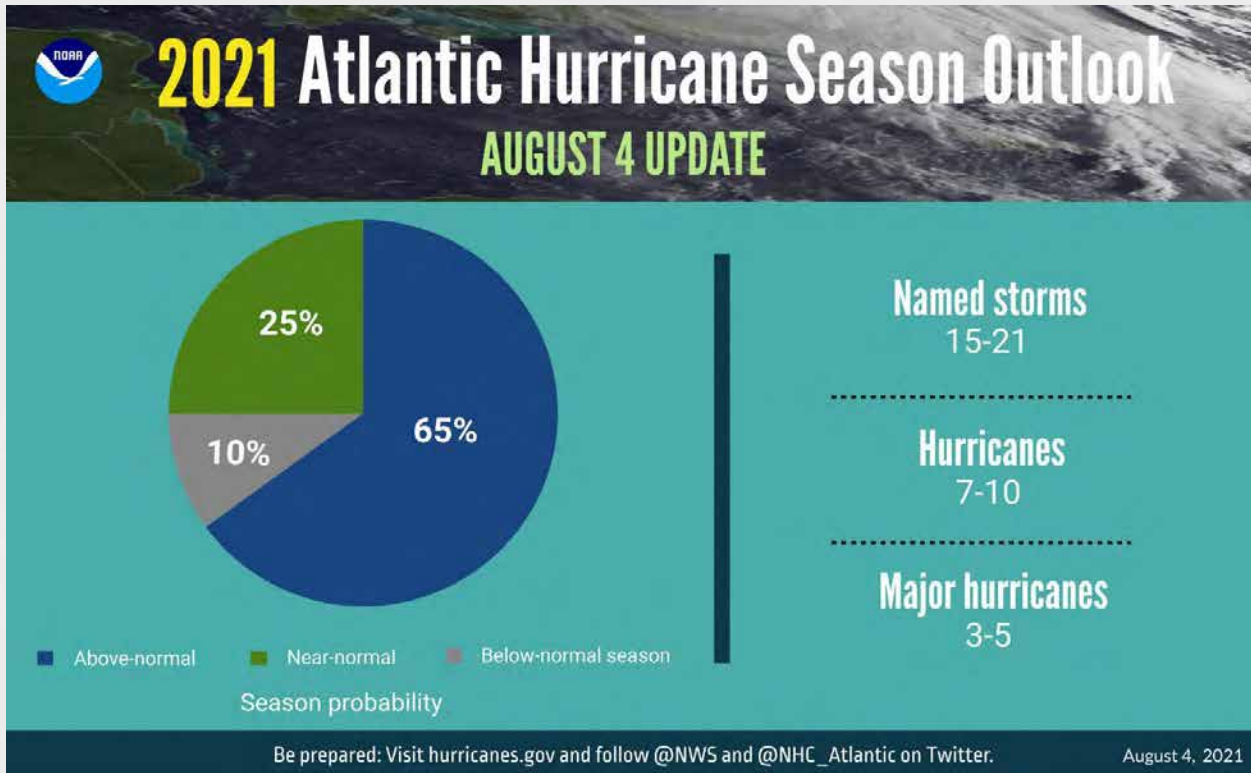
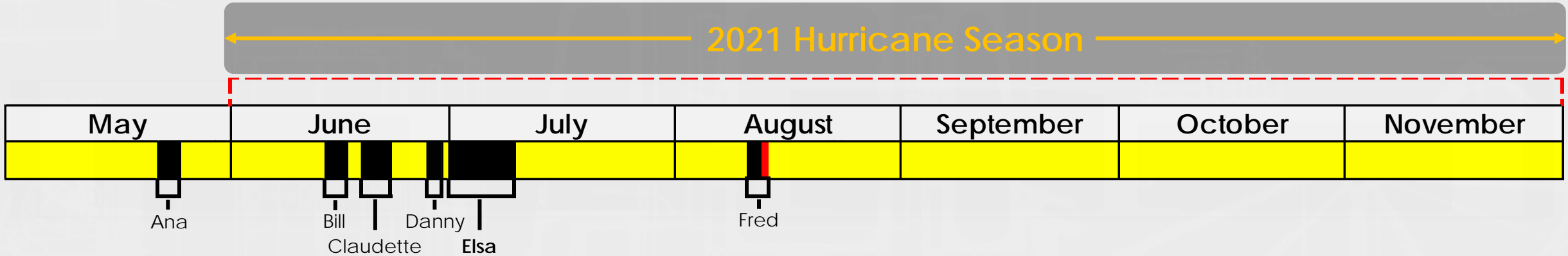


2021 ATLANTIC HURRICANE SEASON OUTLOOK



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OPERATIONS DIVISION PARTNERSHIPS



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PRE- AND POST-STORM COORDINATION

- ❑ USACE hosts Industry Day at AL Port prior to hurricane season
- ❑ Coordinate Dredge Pre-Storm and Post-Storm actions with USCG and Port to open waterways quickly and safely
- ❑ Prioritize survey efforts
- ❑ Coordinate with USCG post-storm to survey channels and open waterways as quickly as possible

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TENNESSEE-TOMBIGBEE WATERWAY DEVELOPMENT OPPORTUNITIES CONFERENCE



PROJECT PERSPECTIVES



JOHN C. STENNIS SPILLWAY GATE INSTALL



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R&D MAINTENANCE SERVICES

- O&M CONTRACTOR
- COST PLUS AWARD FEE

USACE'S FLOATING PLANT

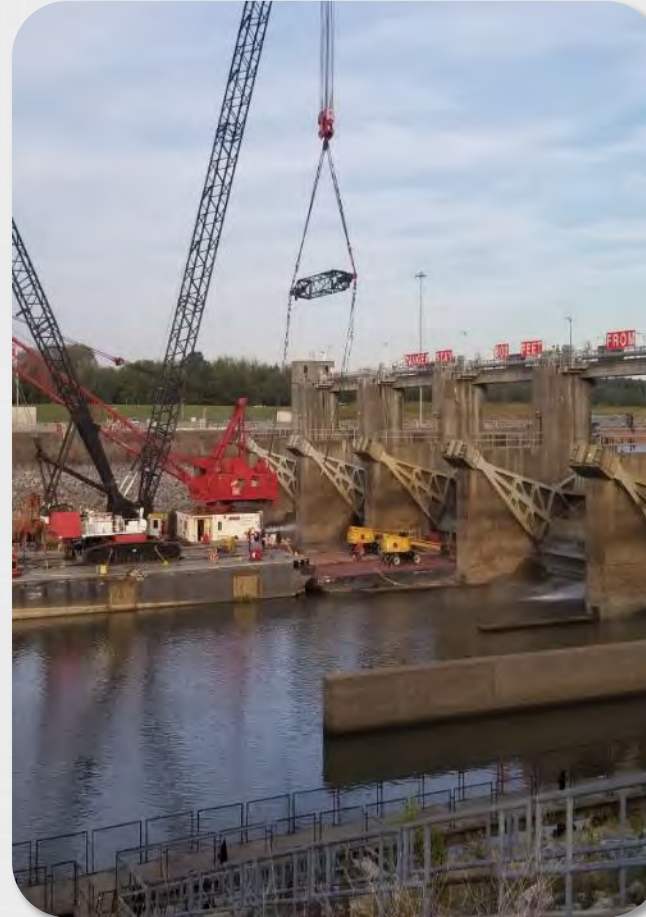
- MV TENN TOM
- R.W. DAVIS

BARNHART CRANE & RIGGING

- BIG AL
- 400 TON CAPACITY
- 3 LIFT DAYS

10 OCTOBER 2019 – 15 NOVEMBER 2019

- ~25 WORKING DAYS (MAJORITY 8 HR DAYS)
- SIX 12 HR DAYS DURING BARNHART ASSISTANCE
- GATE PLACED IN SERVICE 15 NOVEMBER 2019



JOHN C. STENNIS SPILLWAY GATE INSTALL



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NORDBAK BACKING MATERIAL



JOHN C. STENNIS SPILLWAY GATE INSTALL



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JOHN C. STENNIS SPILLWAY GATE INSTALL



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2021 TTWW DREDGING



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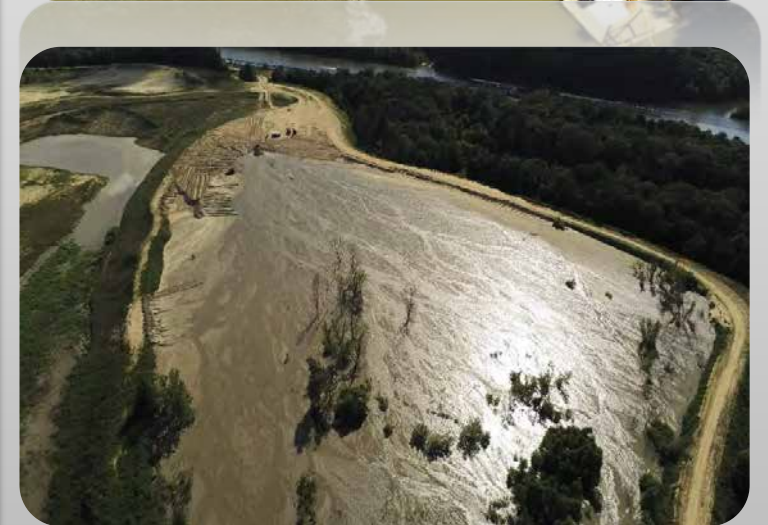
TENNESSEE-TOMBIGBEE WATERWAY

Dredging started Mar 21':

Areas Dredged

- ~~Mile 366.0 – 168,000 CY~~
- ~~Mile 357.3 – 25,000 CY~~
- ~~Mile 353.5 – 55,000 CY~~
- ~~Mile 349.5 – 64,000 CY~~
- ~~Mile 305.0 – 31,000 CY~~
- ~~Mile 300.0 – 86,000 CY~~
- Mile 290.0 – 160,000 CY
- Mile 288.5– 100,000 CY
- Mile 266.0 – 35,000 CY
- Mile 251.5 – 57,000 CY

Total CY: 831,000 \$8,199,844.57



TTWW FUTURE PROCUREMENT



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LONG-REACH EXCAVATOR WITH CUTTERHEAD ATTACHMENT

FOR EMERGENCY OPERATIONS AND SMALL ASSIGNMENTS

- CAT 325 LONG REACH
- 10 INCH HYDRAULIC CUTTERHEAD WITH POWER PACK
- OPERATED BY O&M CONTRACTOR
- NEW WORK BARGE EXPECTED IN CALENDAR YEAR 2022



OPERATING LEVELS

MIN FLOW	1200 GPM
MAX FLOW	5000 GPM
HEAD RANGE	Up to 200 ft
DISCHARGE SIZE	10 inch
SUCTION SIZE	12 inch
SOLIDS HANDLING	Solids up to 9 inches
MAX SPEED	1800 RPM
PERCENT SOLIDS	Up to 40-70% Solids
CU YD MATERIAL HR	300-350

LOCK CLOSURES



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HOWELL HEFLIN LOCK AND DAM

CLOSED:

07 JULY 2020 - 25 JULY 2020

Routine Maintenance:

- **Painting**
- Valve rehab
- **Cathodic Protection repair**
- MT/UT pintles, anchor links, bolts, gate cracks
- **Crack repairs**
- Quoin block work
- **Asbestos abatement**
- Grease line repairs
- **Wall armor repairs**



**O&M CONTRACTOR:
R&D MAINTENANCE SERVICES,
INC.
TULSA, OK**

JAMIE WHITTEN LOCK AND DAM

CLOSED:

30 JUNE 2020 – 10 AUGUST 2020

Extensive Modification:

- **Lower Miter gates webbing replacement**
- Lower miter gates stiffener replacement
- **Culvert ceiling repairs**
- Valve rehab
- **Cathodic Protection repair**
- MT/UT pintles, anchor links, bolts, gate cracks
- **Crack repairs**
- Grease line repairs
- **Wall armor repairs**

HOWELL HEFLIN LOCK CLOSURE 2020



ASBESTOS ABATEMENT

- APPROX. 200 LINEAR FEET OF SOFFIT BOARD REMOVED
- APPROX. 300 SQ. FT. OF BITUMEN REMOVED



HOWELL HEFLIN LOCK CLOSURE 2020



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CATHODIC PROTECTION ISSUES

- REVERSE POLARITY: 8 LOCATIONS CUT-OUT & REPLACED

GATE CRACKS

- 27 LOCATIONS IDENTIFIED AND REPAIRED

MITER GATE PAINTING

- UPPER & LOWER GATES SAND BLASTED AND PAINTED

FILLING & EMPTYING VALVES

- REPLACED ALL HEAD SILLS AND SIDE SILLS
- REPLACED ALL GREASE LINES
- REMOVED "SLACK" IN PINS
- REPAIRED/REPLACED KEEPER BARS & BOLTS

GATE TIMBERS

- ALL WOODEN GATE TIMBERS REPLACED WITH COMPOSITE

