



St. Louis District



**SURVEY NOTES:**

- 1) HORIZONTAL DATUM:  
NAD83 (2011) MISSOURI EAST 2401, US SURVEY FOOT
- 2) VERTICAL DATUM:  
NAVD88 (GEOID18), FOOT
- 3) DEPTHS SHOWN ARE BELOW LWRP2014 SURFACE.
- 4) SURVEY INFORMATION:  
SURVEY VESSEL: BOWEN1 (24' SCULLY S WORK BOAT)  
ECHO SOUNDER: TELEDYNE ECHOTRAC E20  
TRANSDUCER: ODOM SMSW200-4 (4" BEAM, 200 kHz)  
SOUND VELOCITY SOURCE: VALEPORT SWIFT SVP  
INS: SBG ELLIPSE2-E-G4A2-B1  
GNSS RECEIVER: TRIMBLE MPS865 WITH DUAL ANTENNAS  
GNSS SOURCE: TRIMBLE CENTERPOINT RTX  
TIDE METHOD: REAL-TIME KINEMATIC  
TIDE SOURCE: TRIMBLE CENTERPOINT RTX
- 5) THE SURVEY WAS COMPLETED IN ACCORDANCE WITH QUALITY CONTROL PLAN PROCEDURES.

**NOVEMBER 15, 2023  
INTERPOLATED WATER SURFACE ELEVATIONS**

MILE	WSE @ 9:00	WSE @ 14:00	LWRP 2014	LWRP DIF @ 9:00	LWRP DIF @ 14:00
71	322.12	322.11	319.86	2.26	2.25
72	322.65	322.63	320.40	2.25	2.23
73	323.17	323.16	321.22	1.95	1.94
74	323.70	323.69	321.79	1.91	1.90

**GAGE RECORD**

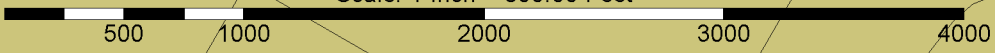
River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
52.1	Cape Girardeau, MO	304.27	9:00	7.64	14:00	7.59
66.3	Moccasin Springs, MO	313.33	9:00	6.31	14:00	6.30
81.9	Grand Tower, IL	321.43	9:00	6.44	14:00	6.42

ILLINOIS

MISSOURI

North

Scale: 1 Inch = 800.00 Feet



DATE OF SURVEY:  
NOVEMBER 15, 2023

SCALE:  
1" = 800' (ANSI B)

FIELD BOOKS:  
FILE NO.: 073K1523  
TASK NO.: W912P923F0086

APPROVED BY:  
FIELD CARTOGRAPHER: \_\_\_\_\_  
CIVIL ENGINEERING TECH: \_\_\_\_\_  
ASST. CHIEF OF SURVEY: \_\_\_\_\_  
CHIEF OF SURVEY: \_\_\_\_\_  
Date: \_\_\_\_\_

U.S. ARMY CORPS OF ENGINEERS  
ST. LOUIS DISTRICT  
ST. LOUIS, MISSOURI

SURVEYED BY:  
BOWEN ENGINEERING & SURVEYING, P.C.  
2121 MEGAN DRIVE, CAPE GIRARDEAU, MO

UPPER MISSISSIPPI  
RIVER BASIN  
MISSISSIPPI RIVER

PRE DREDGE SURVEY  
RIVER MILES 73.4 - 71.9

SHEET NO.  
1 OF 1