



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.

**OCTOBER 26, 2023  
INTERPOLATED WATER SURFACE ELEVATIONS**

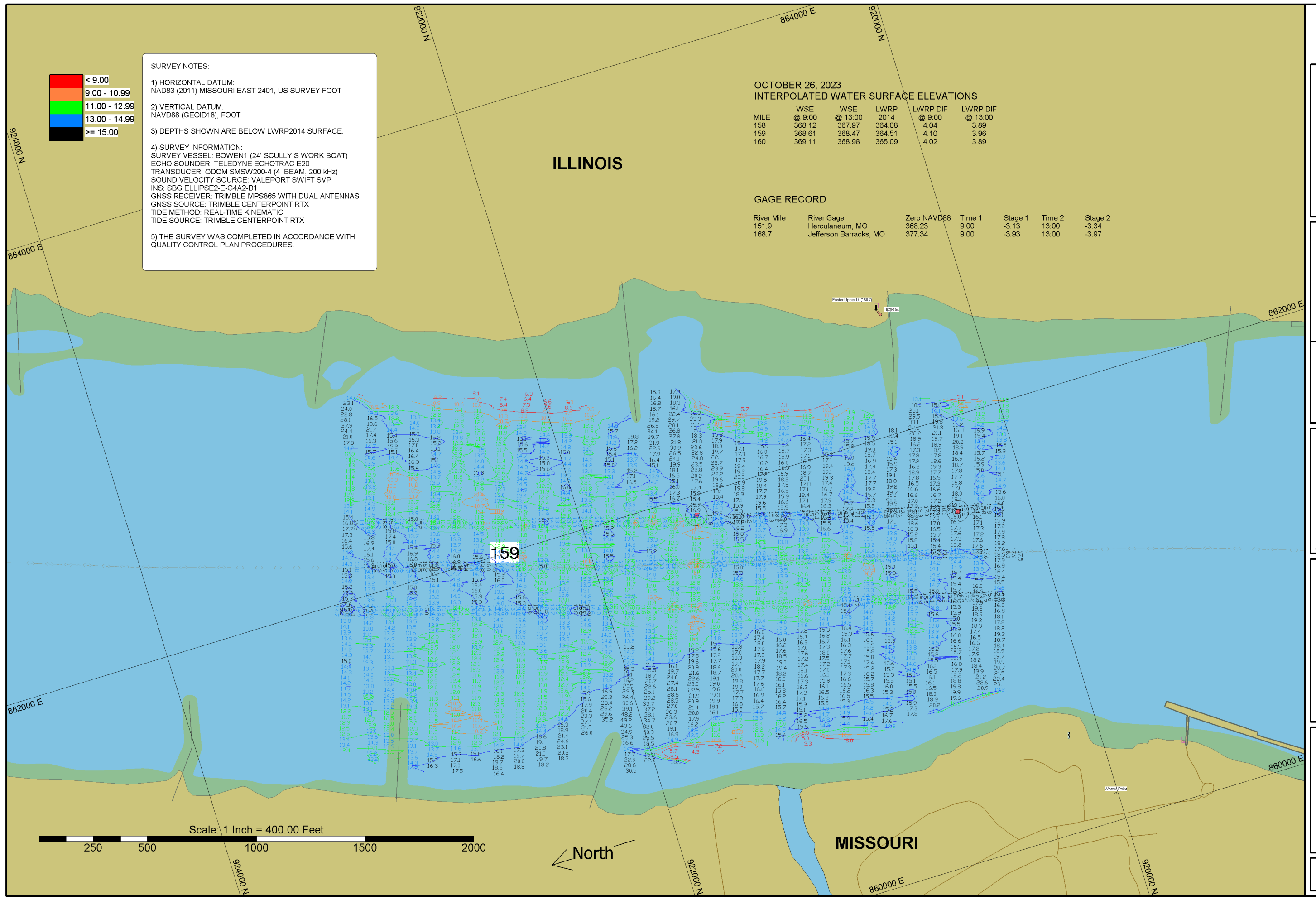
MILE	WSE @ 9:00	WSE @ 13:00	LWRP 2014	LWRP DIF @ 9:00	LWRP DIF @ 13:00
158	368.12	367.97	364.08	4.04	3.89
159	368.61	368.47	364.51	4.10	3.96
160	369.11	368.98	365.09	4.02	3.89

**GAGE RECORD**

River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
151.9	Herculeum, MO	368.23	9:00	-3.13	13:00	-3.34
168.7	Jefferson Barracks, MO	377.34	9:00	-3.93	13:00	-3.97

ILLINOIS

MISSOURI



DATE OF SURVEY:  
OCTOBER 26, 2023

SCALE:  
1" = 400' (ANSI B)

FIELD BOOKS:  
FILE NO.: 159J2623  
TASK NO.: W912P923F0086

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

UPPER MISSISSIPPI RIVER BASIN  
MISSISSIPPI RIVER  
POST DREDGE SURVEY  
RIVER MILES 159.1 - 158.6

SHEET NO.  
1 OF 1

Approved: \_\_\_\_\_  
FIELD CARTOGRAPHER

Approved: \_\_\_\_\_  
CIVIL ENGINEERING TECH

Approved: \_\_\_\_\_  
ASST. CHIEF OF SURVEY

Approved: \_\_\_\_\_  
CHIEF OF SURVEY

Date: \_\_\_\_\_

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