



St. Louis District



SURVEY NOTES:

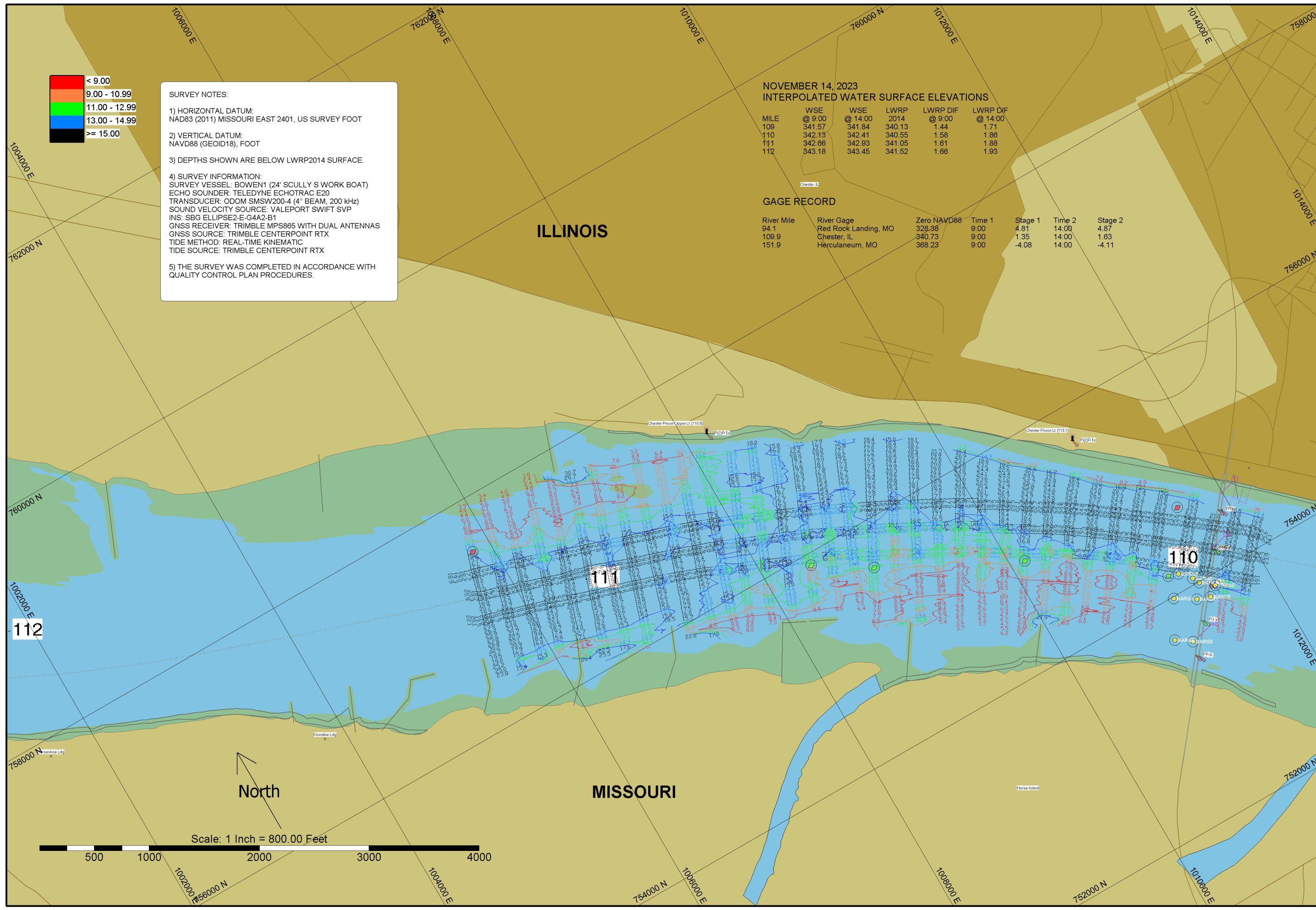
- 1) HORIZONTAL DATUM:
NAD83 (2011) MISSOURI EAST 2401, US SURVEY FOOT
- 2) VERTICAL DATUM:
NAVD88 (GEOID18), FOOT
- 3) DEPTHS SHOWN ARE BELOW LWRP2014 SURFACE.
- 4) SURVEY INFORMATION:
SURVEY VESSEL: BOWEN1 (24' SCULLY S WORK BOAT)
ECHO SOUNDER: TELEDYNE ECHOTRAC E20
TRANSDUCER: ODOM SMSW200-4 (4" BEAM, 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 14, 2023
 INTERPOLATED WATER SURFACE ELEVATIONS**

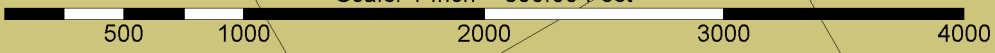
MILE	WSE @ 9:00	WSE @ 14:00	LWRP 2014	LWRP DIF @ 9:00	LWRP DIF @ 14:00
109	341.57	341.84	340.13	1.44	1.71
110	342.13	342.41	340.55	1.58	1.86
111	342.66	342.93	341.05	1.61	1.88
112	343.18	343.45	341.52	1.66	1.93

GAGE RECORD

River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
94.1	Red Rock Landing, MO	328.38	9:00	4.81	14:00	4.87
109.9	Chester, IL	340.73	9:00	1.35	14:00	1.63
151.9	Herculeanum, MO	368.23	9:00	-4.08	14:00	-4.11



Scale: 1 Inch = 800.00 Feet



DATE OF SURVEY:
NOVEMBER 14, 2023

SCALE:
1" = 800' (ANSI B)

FIELD BOOKS:
FILE NO.: 111K1423
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
 POST DREDGE SURVEY
 RIVER MILES 111.1 - 109.9

SHEET NO.
1 OF 1