

SURVEY NOTES:

- HORIZONTAL DATUM:
NAD83 (2011) MISSOURI EAST 2401, US SURVEY FOOT
- VERTICAL DATUM:
NAVD88 (GEOID18), FOOT
- DEPTHS SHOWN ARE BELOW LWRP2014 SURFACE.
- 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-G42-B1
GNSS RECEIVER: TRIMBLE MPS865 WITH DUAL ANTENNAS
GNSS SOURCE: TRIMBLE CENTERPOINT RTX
TIDE METHOD: REAL-TIME KINEMATIC
TIDE SOURCE: TRIMBLE CENTERPOINT RTX
- THE SURVEY WAS COMPLETED IN ACCORDANCE WITH QUALITY CONTROL PLAN PROCEDURES.

**NOVEMBER 28, 2022
INTERPOLATED WATER SURFACE ELEVATIONS**

MILE	WSE @ 9:00	WSE @ 14:00	LWRP 2014	LWRP DIF @ 9:00	LWRP DIF @ 14:00
165	372.57	372.32	368.03	4.54	4.29
166	373.05	372.80	368.31	4.74	4.49
167	373.54	373.28	368.58	4.96	4.70
168	374.03	373.76	369.21	4.82	4.56
169	374.54	374.27	369.97	4.57	4.30
170	375.11	374.83	370.74	4.37	4.09

GAGE RECORD

River Mile	River Gage	Zero NAVD88	Time 1	Stage	Time 2	Stage 2
169.9	Herculaneum, MO	368.23	9:00	-2.05	14:00	-2.23
168.7	Jefferson Barracks, MO	377.34	9:00	-2.97	14:00	-3.24
170.8	Engineers Depot, MO	378.98	9:00	-0.03	14:00	-0.34

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Scale: 1 Inch = 800.00 Feet





St. Louis District

DATES OF SURVEY: NOVEMBER 28, 2022	FILE NO.: 170_165K2822 REQUEST NO.: W912P929F004
SCALE: 1" = 800' (ANSI B)	FIELD BOOKS:
Approved: _____ <small>FIELD SUPERVISOR</small>	Approved: _____ <small>CIVIL ENGINEERING TECHNICIAN</small>
Approved: _____ <small>ASST. CHIEF OF SURVEY</small>	Approved: _____ <small>CHIEF OF SURVEY</small>
U.S. ARMY CORPS OF ENGINEERS MISSOURI DISTRICT ST. LOUIS, MISSOURI	SURVEYED BY: BOWEN ENGINEERING AND SURVEYING, P.C. 2121 MEGAN DRIVE CAPE GIRARDEAU, MO 63701
UPPER MISSISSIPPI RIVER BASIN MISSISSIPPI RIVER PRE DREDGE SURVEY RIVER MILES 169.8 - 165.8	SHEET NO. _____ 1 OF 2



St. Louis District

SURVEY NOTES:

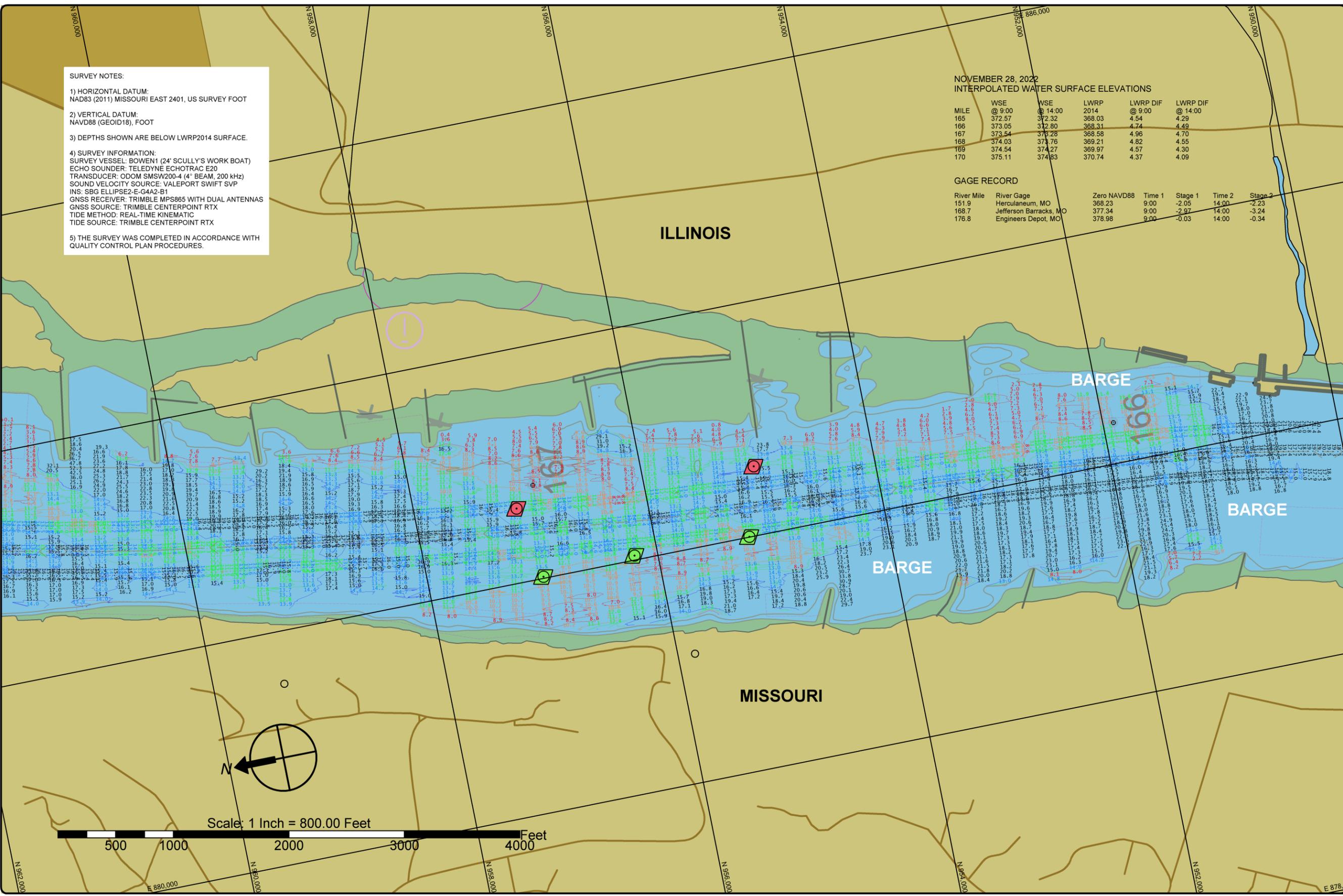
- 1) HORIZONTAL DATUM:
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- 2) VERTICAL DATUM:
NAVD88 (GEOID18), FOOT
- 3) DEPTHS SHOWN ARE BELOW LWRP2014 SURFACE.
- 4) SURVEY INFORMATION:
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TRANSDUCER: ODOM SMSW200-4 (4" BEAM, 200 kHz)
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INS: SBG ELLIPSE2-E-G4A2-B1
GNSS RECEIVER: TRIMBLE MPS865 WITH DUAL ANTENNAS
GNSS SOURCE: TRIMBLE CENTERPOINT RTX
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NOVEMBER 28, 2022

FILE NO.: 170_165K2822
REQUEST NO.: W912P922F004

SCALE:
1" = 800' (ANSI B)

FIELD BOOKS:

Approved: FIELD COORDINATOR
Approved: CIVIL ENGINEERING TECHNICIAN
Approved: ASSIST. CHIEF OF SURVEY
Approved: CHIEF OF SURVEY
Date:

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

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER
BASIN
MISSISSIPPI RIVER
PRE DREDGE SURVEY
RIVER MILES 169.8 - 165.8

SHEET NO.