

SURVEY NOTES:

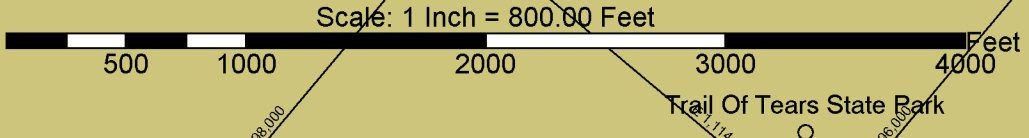
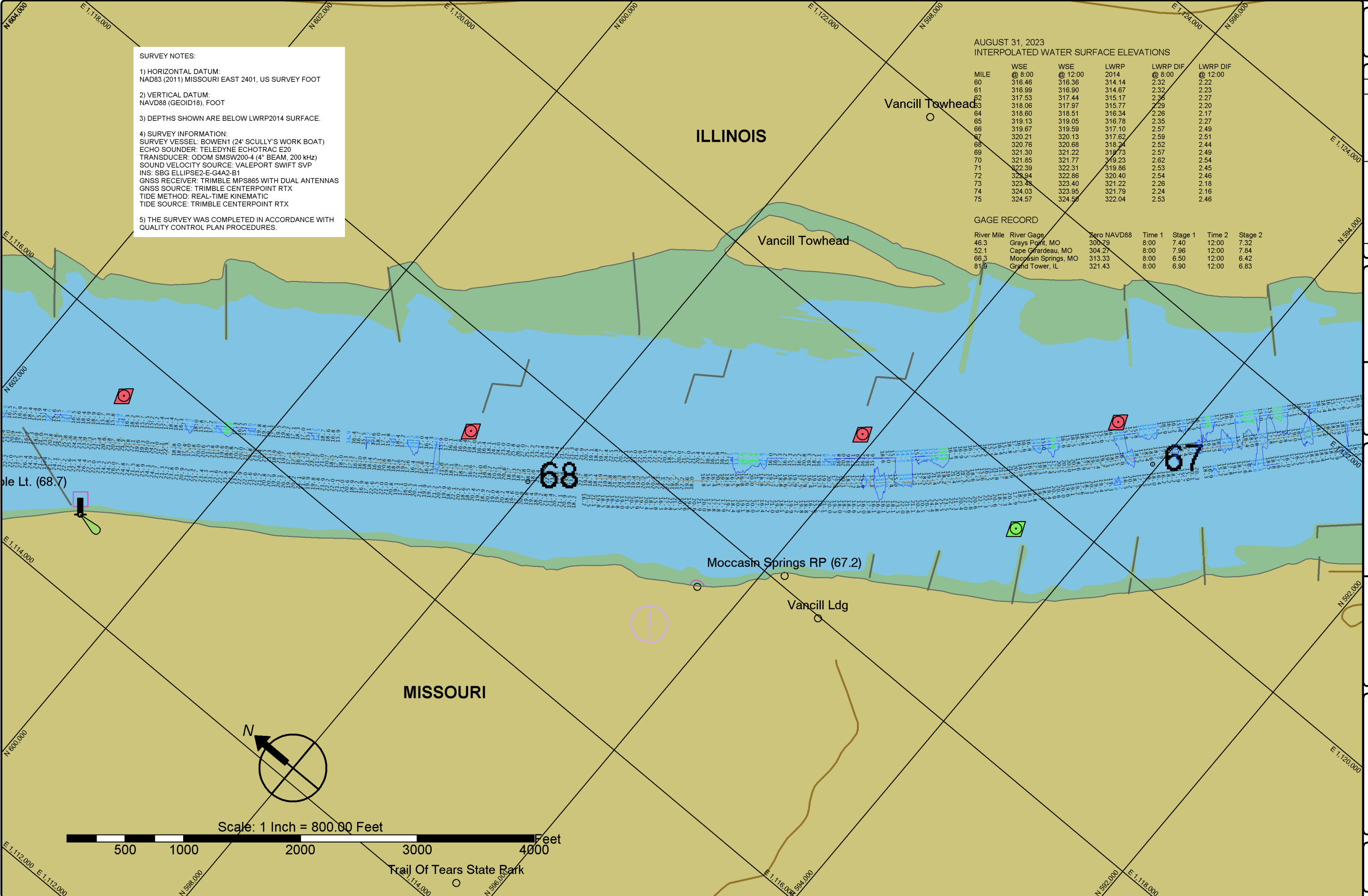
- 1) HORIZONTAL DATUM:
NAD83 (2011) MISSOURI EAST 2401, US SURVEY FOOT
- 2) VERTICAL DATUM:
NAVD88 (GEOID18), FOOT
- 3) DEPTHS SHOWN ARE BELOW LWRP2014 SURFACE.
- 4) SURVEY INFORMATION:
SURVEY VESSEL: BOWEN1 (24' SCULLY'S WORK BOAT)
ECHO SOUNDER: TELEDYNE ECHOTRAC E20
TRANSDUCER: ODOM SMSW200-4 (4" BEAM, 200 KHZ)
SOUND VELOCITY SOURCE: VALEPORT SWIFT SVP
INS: SBG ELLIPSE2-E-04A2-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.

**AUGUST 31, 2023
INTERPOLATED WATER SURFACE ELEVATIONS**

MILE	WSE @ 8:00	WSE @ 12:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 12:00
60	316.46	316.36	314.14	2.32	2.22
61	316.99	316.90	314.67	2.32	2.23
62	317.53	317.44	315.17	2.36	2.27
63	318.06	317.97	315.77	2.29	2.20
64	318.60	318.51	316.34	2.26	2.17
65	319.13	319.05	316.78	2.35	2.27
66	319.67	319.59	317.10	2.57	2.49
67	320.21	320.13	317.62	2.59	2.51
68	320.76	320.68	318.24	2.52	2.44
69	321.30	321.22	318.73	2.57	2.49
70	321.85	321.77	319.23	2.62	2.54
71	322.39	322.31	319.86	2.53	2.45
72	322.94	322.86	320.40	2.54	2.46
73	323.48	323.40	321.22	2.26	2.18
74	324.03	323.95	321.79	2.24	2.16
75	324.57	324.50	322.04	2.53	2.46

GAGE RECORD

River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
46.3	Grays Point, MO	300.79	8:00	7.40	12:00	7.32
52.1	Cape Girardeau, MO	304.27	8:00	7.96	12:00	7.84
66.3	Moccasin Springs, MO	313.33	8:00	6.50	12:00	6.42
81.9	Grand Tower, IL	321.43	8:00	6.90	12:00	6.83



St. Louis District

DATES OF SURVEY: <small>AUGUST 31, 2023</small>	FIELD BOOKS: _____ _____ _____
SCALE: 1" = 800' (ANSI B)	FIELD BOOKS: _____ _____ _____
APPROVED: <small>FIELD CARTOGRAPHER</small> _____ <small>CIVIL ENGINEERING TECHNICIAN</small> APPROVED: _____ <small>ASST. CHIEF OF SURVEY</small> APPROVED: _____ <small>CHIEF OF SURVEY</small> Date: _____	APPROVED BY: <small>BOWEN ENGINEERING AND SURVEYING, P.C.</small> <small>2121 MEGAN DRIVE</small> <small>CAPE GIRARDEAU, MO 63701</small>
UPPER MISSISSIPPI RIVER BASIN MISSISSIPPI RIVER CHANNEL PATROL RIVER MILES 66.7 - 68.7	
SHEET NO. _____	

