



**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: PRAIRIE 20' BOAT  
ECHO SOUNDER: TELEDYNE ECHOTRAC E20  
GNSS RECEIVER: TRIMBLE R10  
GNSS SOURCE: MODOT RTN  
TIDE METHOD: REAL-TIME KINEMATIC  
TIDE SOURCE: MODOT RTN
- 5) THE SURVEY WAS COMPLETED IN ACCORDANCE WITH QUALITY CONTROL PLAN PROCEDURES.

**JULY 24, 2023**  
**INTERPOLATED WATER SURFACE ELEVATIONS**

| MILE | WSE @ 15:30 | WSE @ 18:00 | LWRP 2014 @ 15:30 | LWRP DIF @ 15:30 | LWRP DIF @ 18:00 |
|------|-------------|-------------|-------------------|------------------|------------------|
| 172  | 376.23      | 376.19      | 372.21            | 4.02             | 3.98             |
| 173  | 376.88      | 376.83      | 372.95            | 3.93             | 3.88             |
| 174  | 377.52      | 377.48      | 373.73            | 3.79             | 3.75             |

**GAGE RECORD**

| River Mile | River Gage             | Zero NAVD88 | Time 1 | Stage 1 | Time 2 | Stage 2 |
|------------|------------------------|-------------|--------|---------|--------|---------|
| 168        | Jefferson Barracks, MO | 377.34      | 15:30  | -3.22   | 18:00  | -3.28   |
| 176.8      | Engineers Depot, MO    | 378.98      | 15:30  | 0.33    | 18:00  | 0.30    |

ILLINOIS

BARGE

BARGE

173

174

BARGE

MISSOURI

Scale: 1 Inch = 800.00 Feet



St. Louis District

| DATES OF SURVEY:        |  |
|-------------------------|--|
| JULY 24, 2023           |  |
| FILE NO.: 173G243       |  |
| REQUEST NO.: W12P23P086 |  |

| SCALE:             | FIELD BOOKS: |
|--------------------|--------------|
| 1" = 800' (ANSI B) |              |

| APPROVED: | DATE: |
|-----------|-------|
|           |       |

| U.S. ARMY CORPS OF ENGINEERS<br>ST. LOUIS, MISSOURI |  |
|---|--|
| SURVEYED BY:<br>PRAIRIE ENGINEERS, P.C.             | PROCESSED BY:<br>BOYEN ENGINEERING AND SURVEYING, P.C. |

UPPER MISSISSIPPI RIVER  
BASIN  
MISSISSIPPI RIVER  
PRE DREDGE SURVEY  
RIVER MILES 173.9 - 172.7

SHEET NO.  
1 OF 1