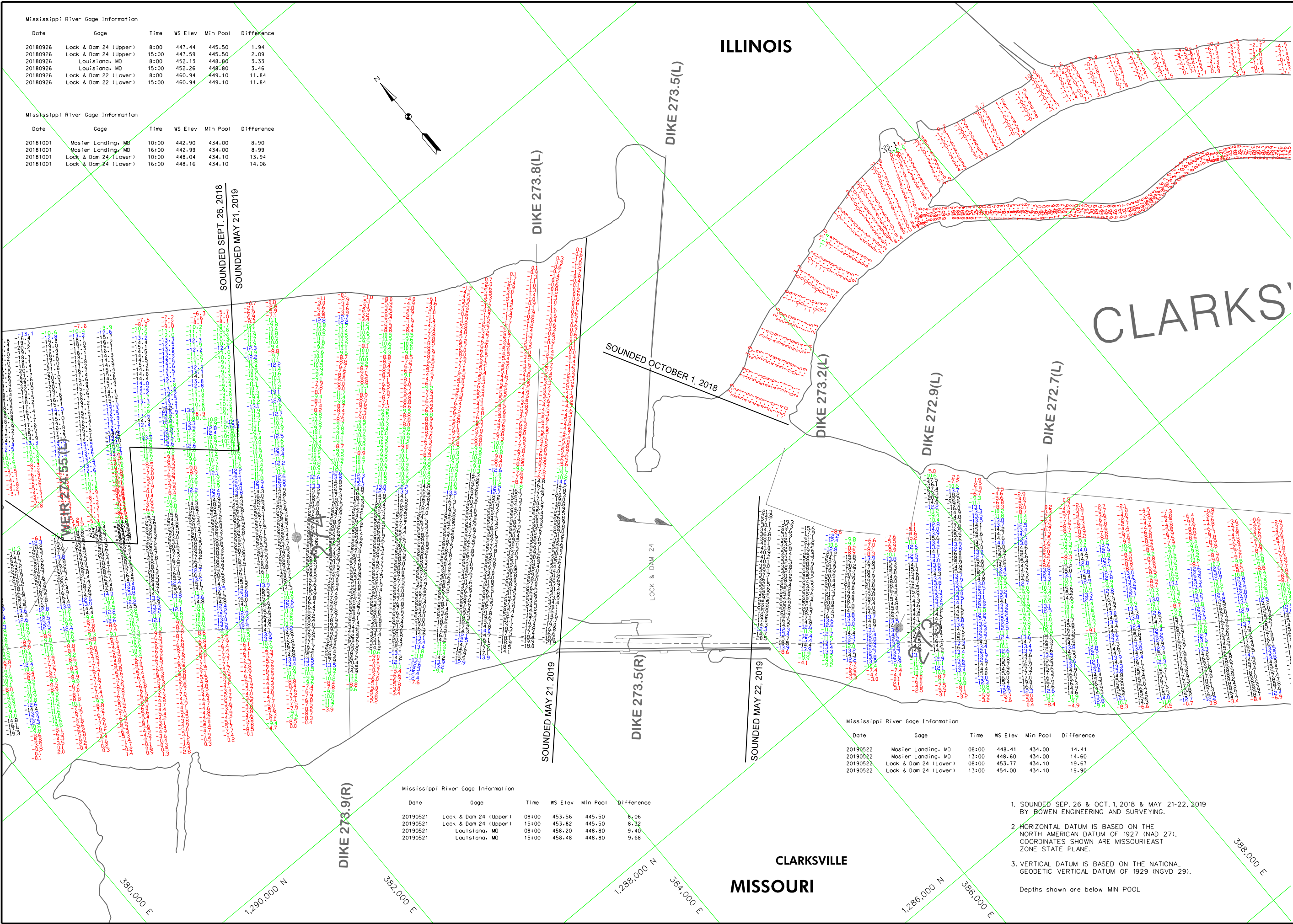




Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20180926	Lock & Dam 24 (Upper)	8:00	447.44	445.50	1.94
20180926	Lock & Dam 24 (Upper)	15:00	447.59	445.50	2.09
20180926	Louisiana, MO	8:00	452.13	448.80	3.33
20180926	Louisiana, MO	15:00	452.26	448.80	3.46
20180926	Lock & Dam 22 (Lower)	8:00	460.94	449.10	11.84
20180926	Lock & Dam 22 (Lower)	15:00	460.94	449.10	11.84

Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20181001	Mosier Landing, MO	10:00	442.90	434.00	8.90
20181001	Mosier Landing, MO	16:00	442.99	434.00	8.99
20181001	Lock & Dam 24 (Lower)	10:00	448.04	434.10	13.94
20181001	Lock & Dam 24 (Lower)	16:00	448.16	434.10	14.06

Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20190521	Lock & Dam 24 (Upper)	08:00	453.56	445.50	8.06
20190521	Lock & Dam 24 (Upper)	15:00	453.62	445.50	8.12
20190521	Louisiana, MO	08:00	458.20	448.80	9.40
20190521	Louisiana, MO	15:00	458.48	448.80	9.68

Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20190522	Mosier Landing, MO	08:00	448.41	434.00	14.41
20190522	Mosier Landing, MO	13:00	448.60	434.00	14.60
20190522	Lock & Dam 24 (Lower)	08:00	453.77	434.10	19.67
20190522	Lock & Dam 24 (Lower)	13:00	454.00	434.10	19.90

1. SOUNDED SEP. 26 & OCT. 1, 2018 & MAY 21-22, 2019 BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURI/EAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

Depths shown are below MIN POOL



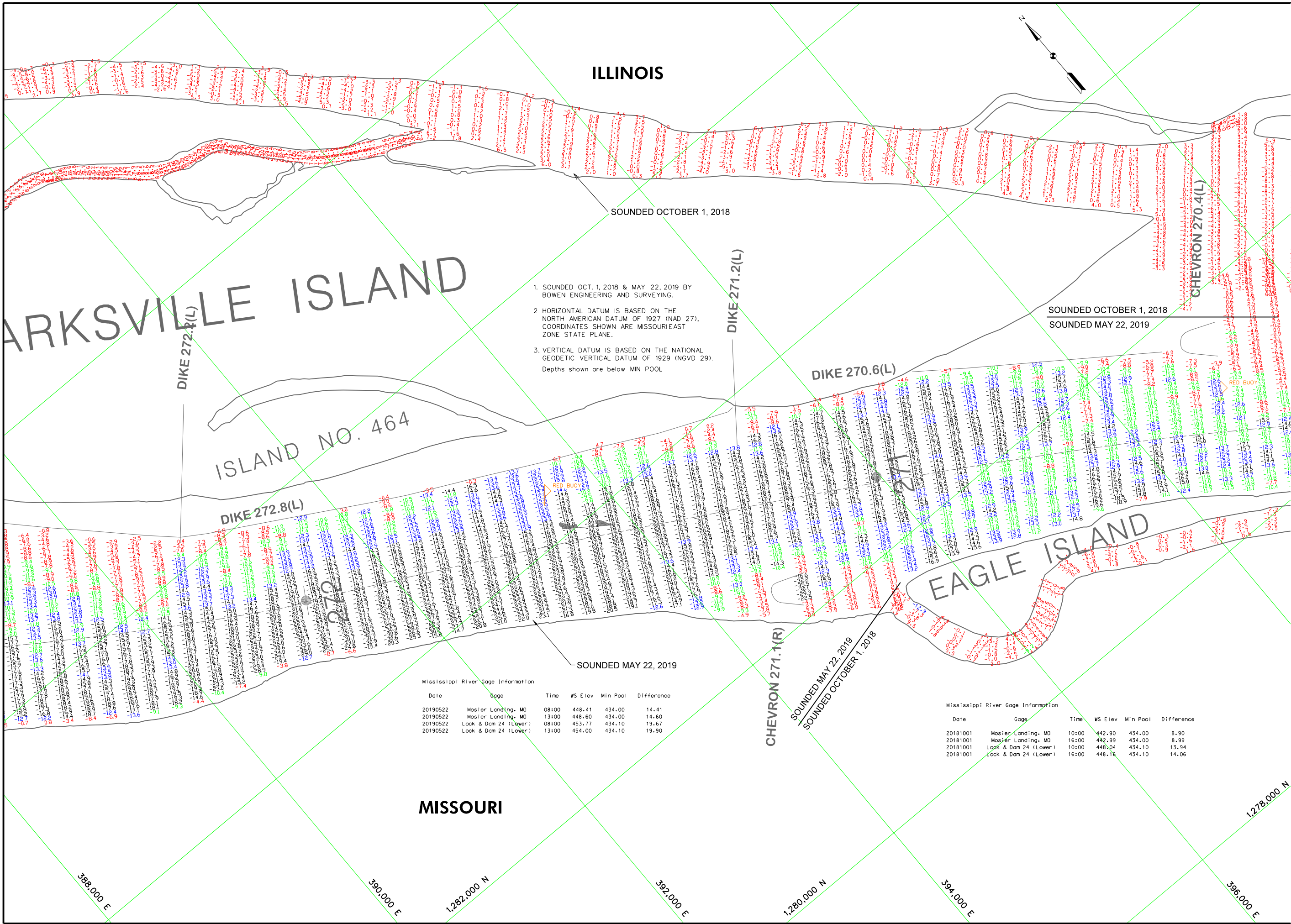
GAGE RECORD					
LOUISIANA, MO	L & D 24, UPPER	L & D 24, LOWER	MOSIER		
ZERO NGVD	437.33	431.81	400.0		
MILE	282.9	273.5	260.3		
MIN POOL	448.8	443.5	434.0		
26 SEP 2018	4,808,000 14,915,000	25,633,000 22,785,000	26,231,000 26,351,000	42,901,000 42,994,000	
01 OCT 2018	X	X	X	X	X
21 MAY 2019	28,878,000 27,151,000	31,759,000 32,015,000			
22 MAY 2019	X	X	X	X	X

Surveyed by		Survey Date		Survey Date	
BOWEN ENGINEERING		SEP. 26, 2018 - MAY 22, 2019			
Drawn by	X	Reviewed by	X	Checked by	
SUBMITTED	X	APPROVED	X		
File Name:		Plot Date:			
BOWEN ENGINEERING					

U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS ST. LOUIS, MISSOURI	UPPER MISSISSIPPI RIVER BASIN MISSISSIPPI RIVER
--	--

120 400 800 1200 240 METERS	0 400 800 1200 2400 FEET
THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE BY THE U.S. ARMY ENGINEER DIVISION AND IS NOT TO BE CONSIDERED A GUARANTEE OF THE DATA SHOWN OR A STATEMENT OF THE ACTUAL CONDITION OF THE AREA.	
HYDROGRAPHIC SURVEYS	
MILE: 272.6 - 274.5	

PLATE NUMBER
14



- 1. SOUNDED OCT. 1, 2018 & MAY 22, 2019 BY BOWEN ENGINEERING AND SURVEYING.
- 2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27), COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.
- 3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29). Depths shown are below MIN POOL

Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20190522	Mosier Landing, MO	08:00	448.41	434.00	14.41
20190522	Mosier Landing, MO	13:00	448.60	434.00	14.60
20190522	Lock & Dam 24 (Lower)	08:00	453.77	434.10	19.67
20190522	Lock & Dam 24 (Lower)	13:00	454.00	434.10	19.90

Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20181001	Mosier Landing, MO	10:00	442.90	434.00	8.90
20181001	Mosier Landing, MO	16:00	442.99	434.00	8.99
20181001	Lock & Dam 24 (Lower)	10:00	448.04	434.10	13.94
20181001	Lock & Dam 24 (Lower)	16:00	448.16	434.10	14.06

US Army Corps of Engineers
St. Louis District

CAGE RECORD		L & D 24 LOWER		MOSIER		LMO 25 UPPER	
ZERO NGVD	421.81	421.81	400.0	400.0	407.0	407.0	407.0
MIN POOL	434.0	434.0	260.3	260.3	241.5	241.5	241.5
01 OCT 2018	26.23(0.00) 42.34(6.00)	42.34(6.00)	42.34(6.00)	42.34(6.00)	42.34(6.00)	42.34(6.00)	42.34(6.00)
22 MAY 2019	31.96(0.00) 42.34(6.00)	42.34(6.00)	42.34(6.00)	42.34(6.00)	42.34(6.00)	42.34(6.00)	42.34(6.00)

Drawn by: X	Reviewed by: X	Survey Date: OCT 1, 2018 & MAY 22, 2019	Plot Date: 8/8/2019
Submitted: X	Approved: X	File Name: HYDROG-270.3-272.5	

120
400
800
1200

0
400
800
1200

240 METERS

0
400
800
1200

0
400
800
1200

240 METERS

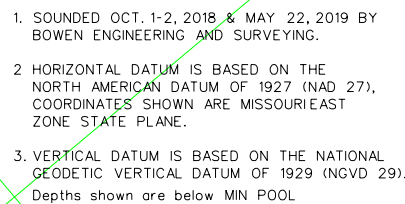
THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND SHOULD BE CONSIDERED AS A GUIDE ONLY. THE DATA IS NOT TO BE USED FOR ANY OTHER PURPOSE.

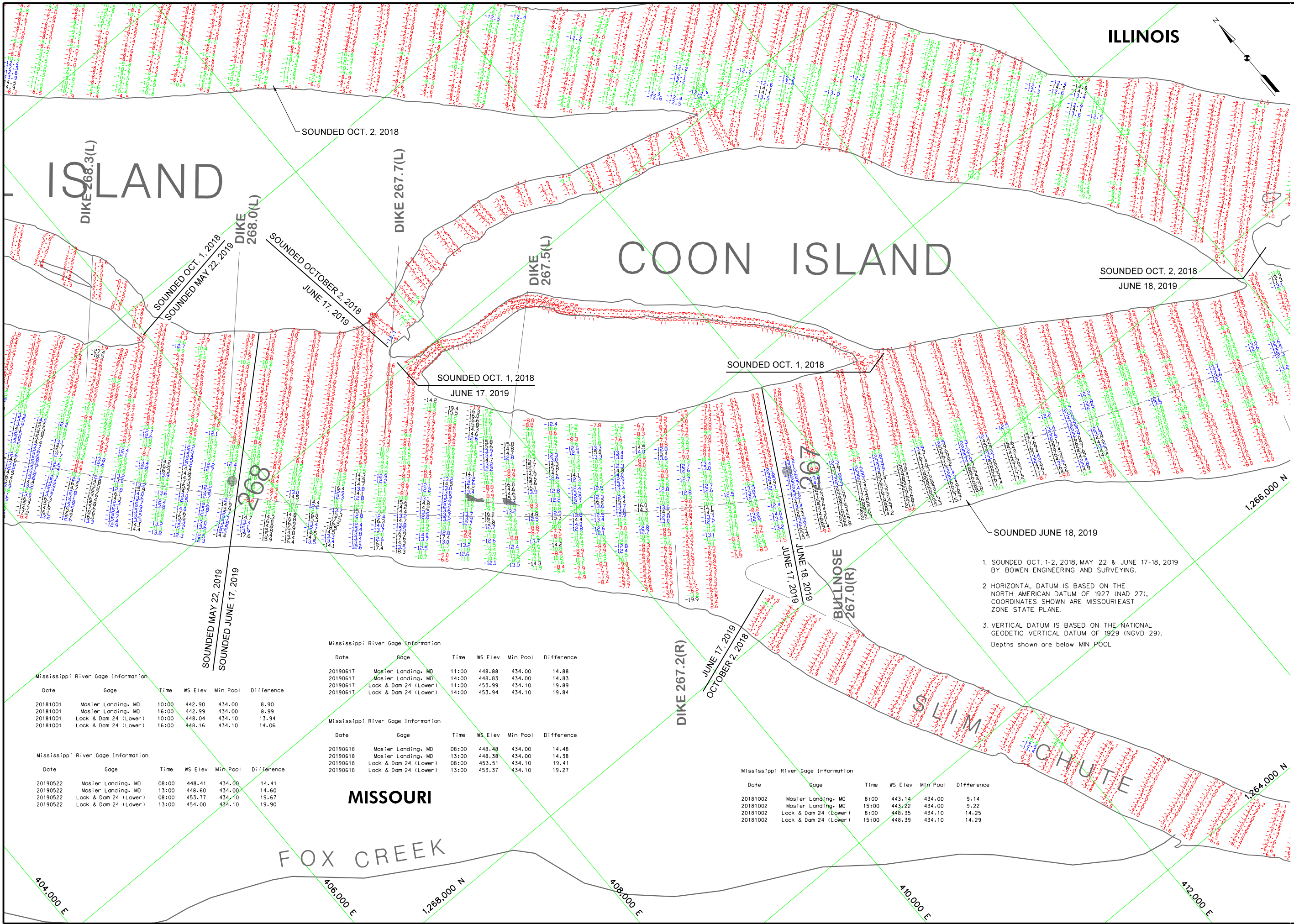
HYDROGRAPHIC SURVEYS

1278,000 N
388,000 E
390,000 E
1,282,000 N
392,000 E
1,280,000 N
394,000 E
396,000 E

PLATE NUMBER

15





Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20181001	Mosier Landing, MO	10:00	442.90	434.00	8.90
20181001	Mosier Landing, MO	16:00	442.99	434.00	8.99
20181001	Lock & Dam 24 (Lower)	10:00	448.04	434.10	13.94
20181001	Lock & Dam 24 (Lower)	16:00	448.16	434.10	14.06

Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20190522	Mosier Landing, MO	08:00	448.41	434.00	14.41
20190522	Mosier Landing, MO	13:00	448.60	434.00	14.60
20190522	Lock & Dam 24 (Lower)	08:00	453.77	434.10	19.67
20190522	Lock & Dam 24 (Lower)	13:00	454.00	434.10	19.90

Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20190617	Mosier Landing, MO	11:00	448.88	434.00	14.88
20190617	Mosier Landing, MO	14:00	448.83	434.00	14.83
20190617	Lock & Dam 24 (Lower)	11:00	453.99	434.10	19.89
20190617	Lock & Dam 24 (Lower)	14:00	453.94	434.10	19.84

Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20190618	Mosier Landing, MO	08:00	448.48	434.00	14.48
20190618	Mosier Landing, MO	13:00	448.38	434.00	14.38
20190618	Lock & Dam 24 (Lower)	08:00	453.51	434.10	19.41
20190618	Lock & Dam 24 (Lower)	13:00	453.37	434.10	19.27

Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20181002	Mosier Landing, MO	8:00	443.14	434.00	9.14
20181002	Mosier Landing, MO	15:00	443.22	434.00	9.22
20181002	Lock & Dam 24 (Lower)	8:00	448.35	434.10	14.25
20181002	Lock & Dam 24 (Lower)	15:00	448.39	434.10	14.29

US Army Corps of Engineers
St. Louis District

GAGE RECORD		L & D 24 LOWER		L & D 25 UPPER	
ZERO NGVD	421.81	400.0	407.0		
MIN. POOL	434.2	260.3	241.5		
01 OCT. 2018	26.23(0.00) 26.58(0.00)	42.95(0.00) 42.98(0.00)	43.0	429.7	
02 OCT. 2018	26.54(0.00) 26.58(0.00)	43.18(0.00) 43.22(0.00)			X
22 MAY. 2019	31.98(0.00) 32.18(0.00)	44.10(0.00) 44.60(0.00)			X
17 JUN. 2019	32.81(0.00) 32.13(0.00)	43.88(0.00) 43.83(0.00)			X
18 JUN. 2019	37.00(0.00) 31.50(0.00)	43.48(0.00) 42.38(0.00)			X

Surveyed by: BOWEN ENGINEERING	Survey Date: OCT 1, 2018 - JUNE 18, 2019	Reviewed by: X	Checked by: X
Drawn by: X	Submitted: X	Approved: X	Plot Date: #BOWEN/180604
File Name: #BOWEN/180604/180604.DWG			

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

170 0 120 240 METERS
400 0 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE IN THE PAST. THE DATA, INDICATED AS SUCH, ARE CONSIDERED CORRECT AND ACCURATE FOR THE PURPOSES OF THIS MAP.

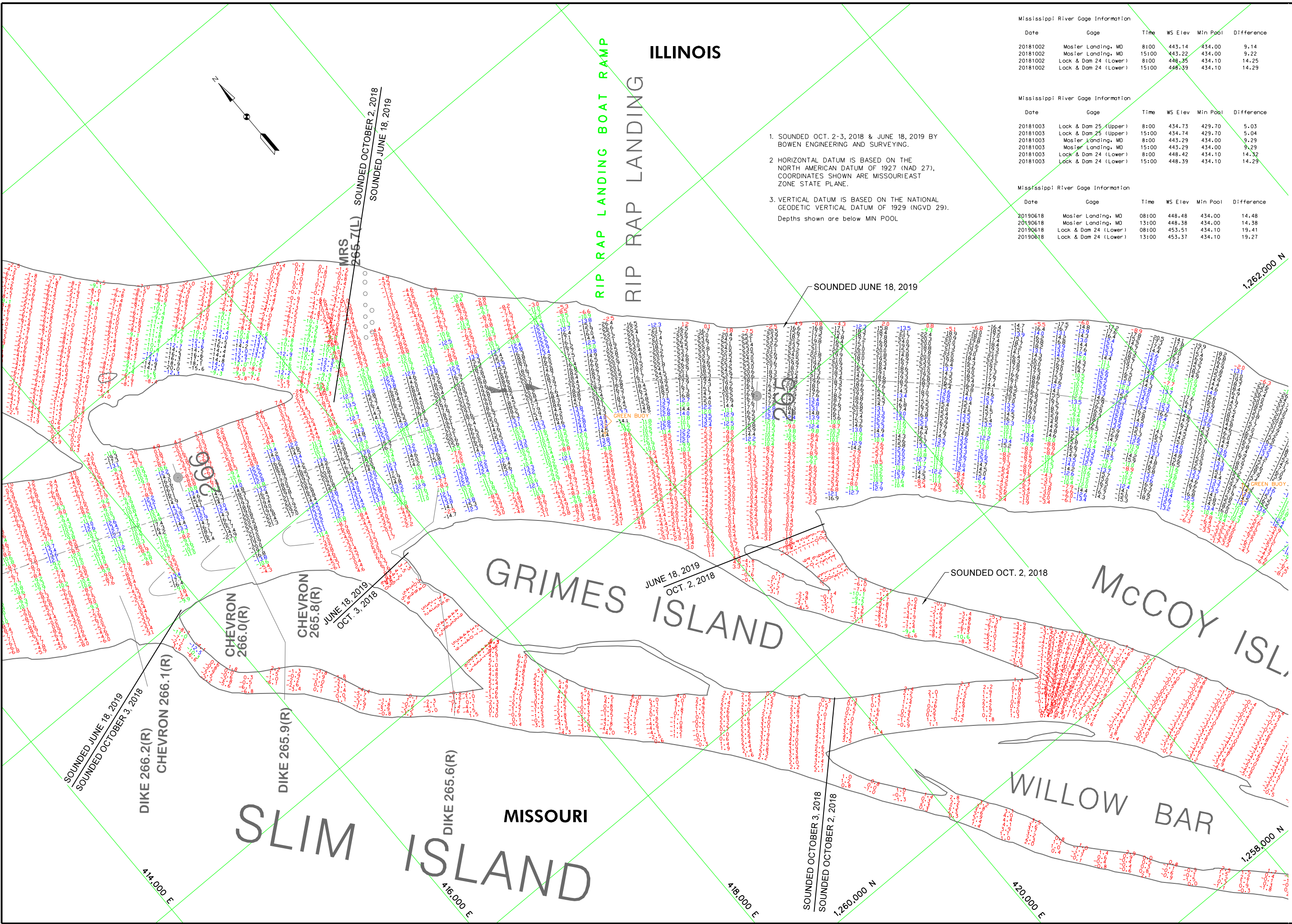
HYDROGRAPHIC SURVEYS

MILE: 266.3 - 268.3

PLATE NUMBER

17

1. SOUNDED OCT. 1-2, 2018, MAY 22 & JUNE 17-18, 2019 BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29). Depths shown are below MIN POOL



ILLINOIS

RIP RAP LANDING
BOAT RAMP

1. SOUNDED OCT. 2-3, 2018 & JUNE 18, 2019 BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURIEAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29). Depths shown are below MIN POOL

Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20181002	Mosier Landing, MO	8:00	443.14	434.00	9.14
20181002	Mosier Landing, MO	15:00	443.22	434.00	9.22
20181002	Lock & Dam 24 (Lower)	8:00	448.35	434.10	14.25
20181002	Lock & Dam 24 (Lower)	15:00	448.39	434.10	14.29

Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20181003	Lock & Dam 25 (Upper)	8:00	434.73	429.70	5.03
20181003	Lock & Dam 25 (Upper)	15:00	434.74	429.70	5.04
20181003	Mosier Landing, MO	8:00	443.29	434.00	9.29
20181003	Mosier Landing, MO	15:00	443.29	434.00	9.29
20181003	Lock & Dam 24 (Lower)	8:00	448.42	434.10	14.32
20181003	Lock & Dam 24 (Lower)	15:00	448.39	434.10	14.29

Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20190618	Mosier Landing, MO	08:00	448.48	434.00	14.48
20190618	Mosier Landing, MO	13:00	448.38	434.00	14.38
20190618	Lock & Dam 24 (Lower)	08:00	453.51	434.10	19.41
20190618	Lock & Dam 24 (Lower)	13:00	453.37	434.10	19.27



GAGE RECORD		L & D 24 LOWER		MOSIER		L & D 25 UPPER	
ZERO NGVD	421.81	421.81	400.0	400.0	407.0		
MIN POOL	434.2	434.2	260.3	260.3	241.5		
02 OCT 2018	26.54(60)	26.54(60)	43.14(60)	43.14(60)	429.7		
03 OCT 2018	26.58(60)	26.58(60)	43.28(60)	43.28(60)	27.74(60)		
18 JUN 2019	37.00(60)	37.00(60)	48.46(60)	48.46(60)			

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

Survey Date: OCT 2, 2018 - JUNE 18, 2019

Drawn by: X Reviewed by: X

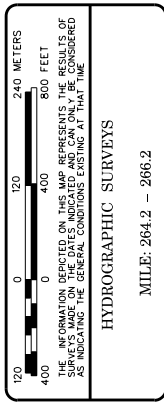
Submitted: X

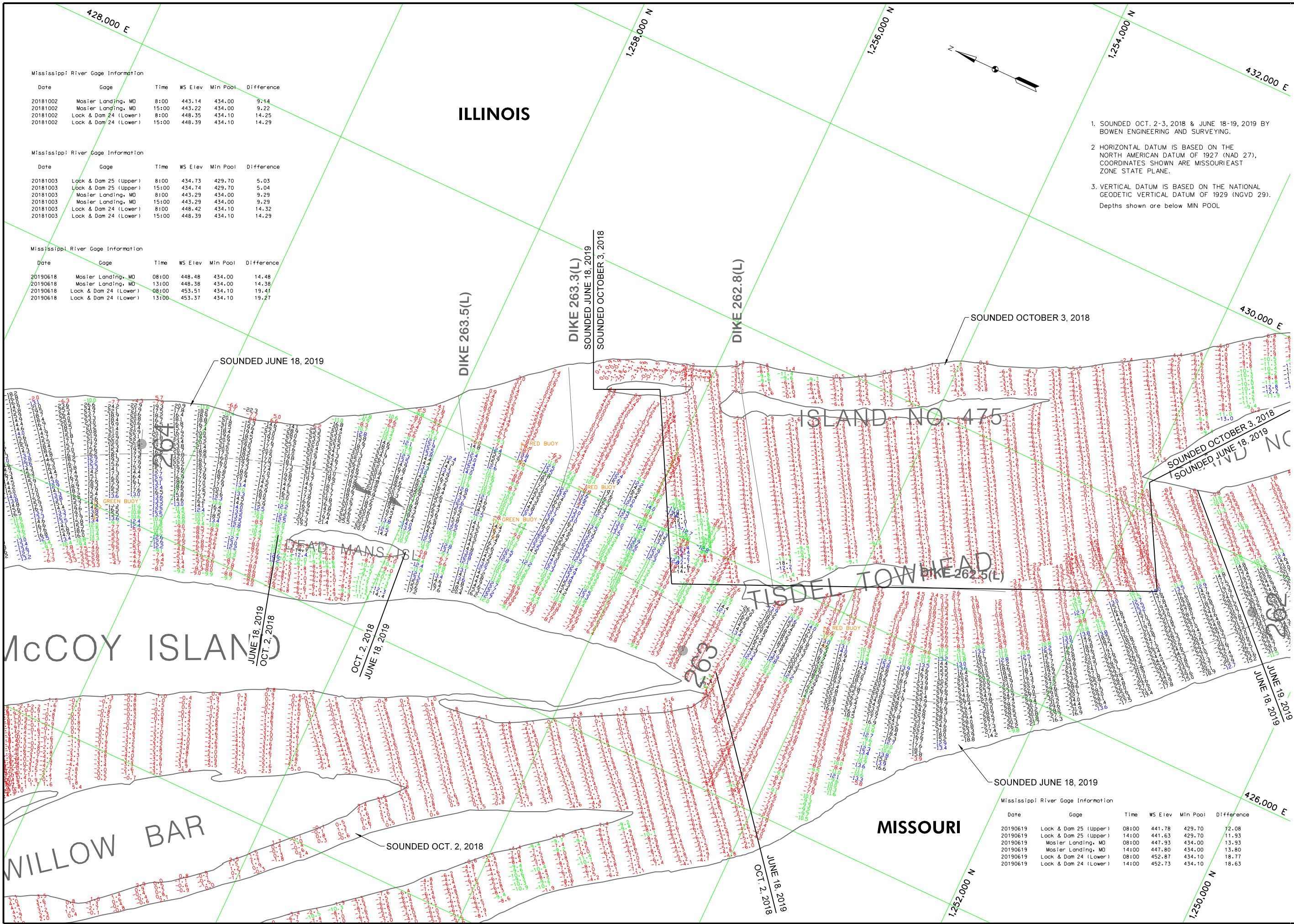
Approved: X

Plot Date: 8/8/2019

File Name: 266.2 - 266.2

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER





Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20181002	Mosier Landing, MO	8:00	443.14	434.00	9.14
20181002	Mosier Landing, MO	15:00	443.22	434.00	9.22
20181002	Lock & Dam 24 (Lower)	8:00	448.35	434.10	14.25
20181002	Lock & Dam 24 (Lower)	15:00	448.39	434.10	14.29

Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20181003	Lock & Dam 25 (Upper)	8:00	434.73	429.70	5.03
20181003	Lock & Dam 25 (Upper)	15:00	434.74	429.70	5.04
20181003	Mosier Landing, MO	8:00	443.29	434.00	9.29
20181003	Mosier Landing, MO	15:00	443.29	434.00	9.29
20181003	Lock & Dam 24 (Lower)	8:00	448.42	434.10	14.32
20181003	Lock & Dam 24 (Lower)	15:00	448.39	434.10	14.29

Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20190618	Mosier Landing, MO	08:00	448.48	434.00	14.48
20190618	Mosier Landing, MO	13:00	448.38	434.00	14.38
20190618	Lock & Dam 24 (Lower)	08:00	453.51	434.10	19.41
20190618	Lock & Dam 24 (Lower)	13:00	453.37	434.10	19.27

Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20190619	Lock & Dam 25 (Upper)	08:00	441.78	429.70	12.08
20190619	Lock & Dam 25 (Upper)	14:00	441.63	429.70	11.93
20190619	Mosier Landing, MO	08:00	447.93	434.00	13.93
20190619	Mosier Landing, MO	14:00	447.80	434.00	13.80
20190619	Lock & Dam 24 (Lower)	08:00	452.87	434.10	18.77
20190619	Lock & Dam 24 (Lower)	14:00	452.73	434.10	18.63

1. SOUNDED OCT. 2-3, 2018 & JUNE 18-19, 2019 BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29). Depths shown are below MIN POOL.

US Army Corps of Engineers
St. Louis District

GAGE RECORD	
L & D 24 LOWER	MOSIER
421.81	400.0
273.2	260.3
434.2	434.0
26.54(600) 25.58(500)	43.54(600) 43.21(500)
26.81(600) 25.58(500)	43.29(600) 43.29(500)
31.70(600) 31.56(500)	48.48(600) 48.38(500)
31.06(600) 30.92(400)	47.83(600) 47.80(400)
	34.78(600) 34.63(400)

Surveyed by	Survey Date	Reviewed by	Checked by
BOWEN ENGINEERING	OCT 2, 2018 - JUNE 19, 2019	X	X

Submitted	Approved	Plot Date
X	X	06/19/2019

File Name: BOWEN_Engineering_2019_06_19_2019

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

HYDROGRAPHIC SURVEYS

MILE: 262.0 - 264.2

PLATE NUMBER

19

ILLINOIS



US Army Corps
of Engineers
St. Louis District

		GAGE RECORD			
		L & D 24 LOWER	MOSIER	L&D 25 UPPER	
ZERO	N.G.V.D.	421.81		4207.0	
		421.81	434.0	4267.7	
MAX POOL		434.1		4287.7	
03 OCT 1989		43.284500	43.294500	27.741500	
18 JUN 2019		31.701600	48.381300	27.738000	
19 JUN 2019		31.066800	47.801400	34.633400	

U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS ST. LOUIS, MISSOURI	Surveyed by: BOWEN ENGINEERING	Survey Date: OCT. 3, 2018	JUNE 19, 2019
	Drawn by:	Reviewed by:	Old by:
	SUBMITTED:	APPROVED:	
UPPER MISSISSIPPI RIVER BASIN			
MISSISSIPPI RIVER			
	File name:	Plot date:	REVISED NUMBER
	INTERVIEW CERTIFICATE NUMBER		

HYDROGRAPHIC SURVEYS

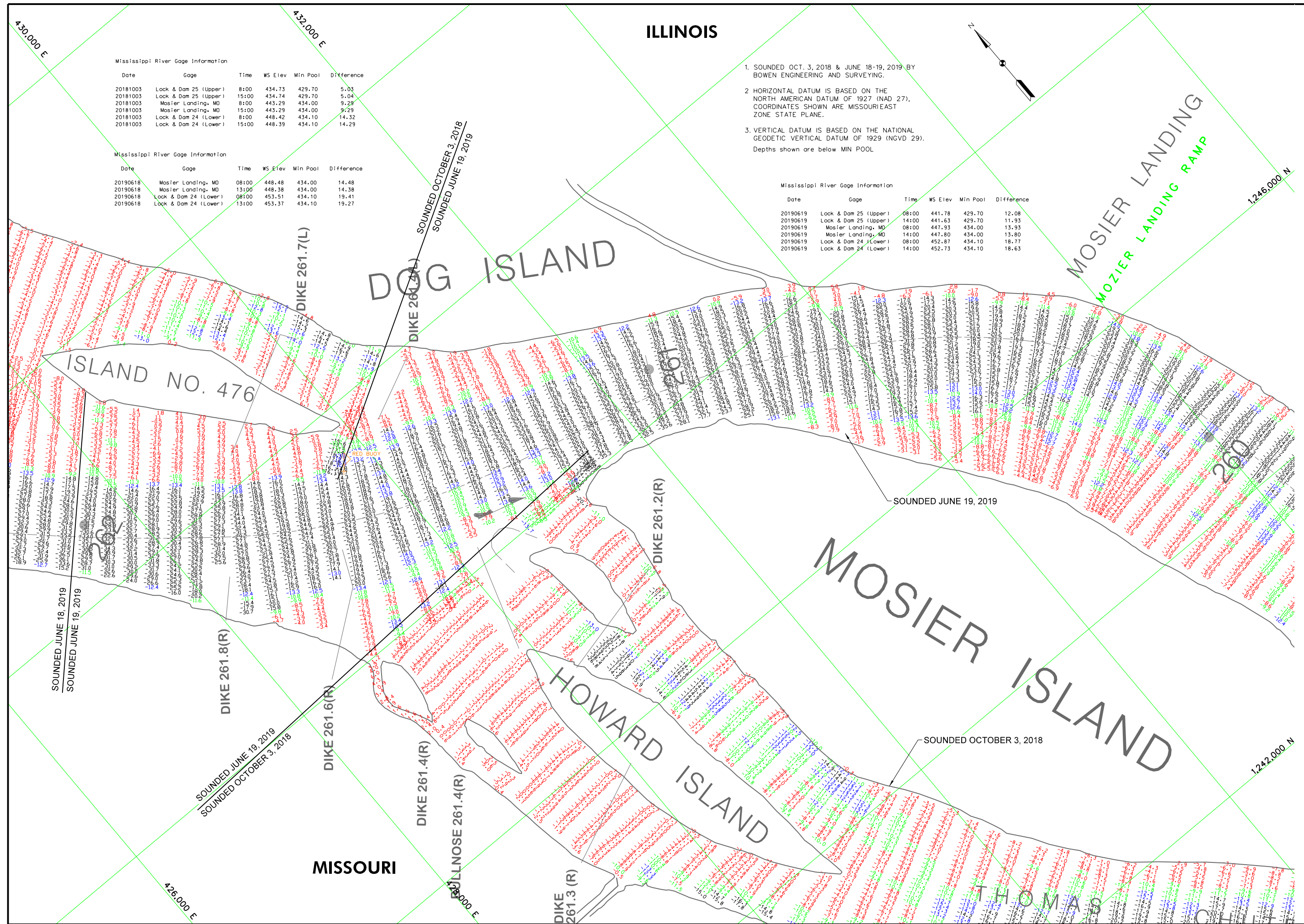
THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS CONDUCTED BY THE U.S. NAVY AND IS NOT TO BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

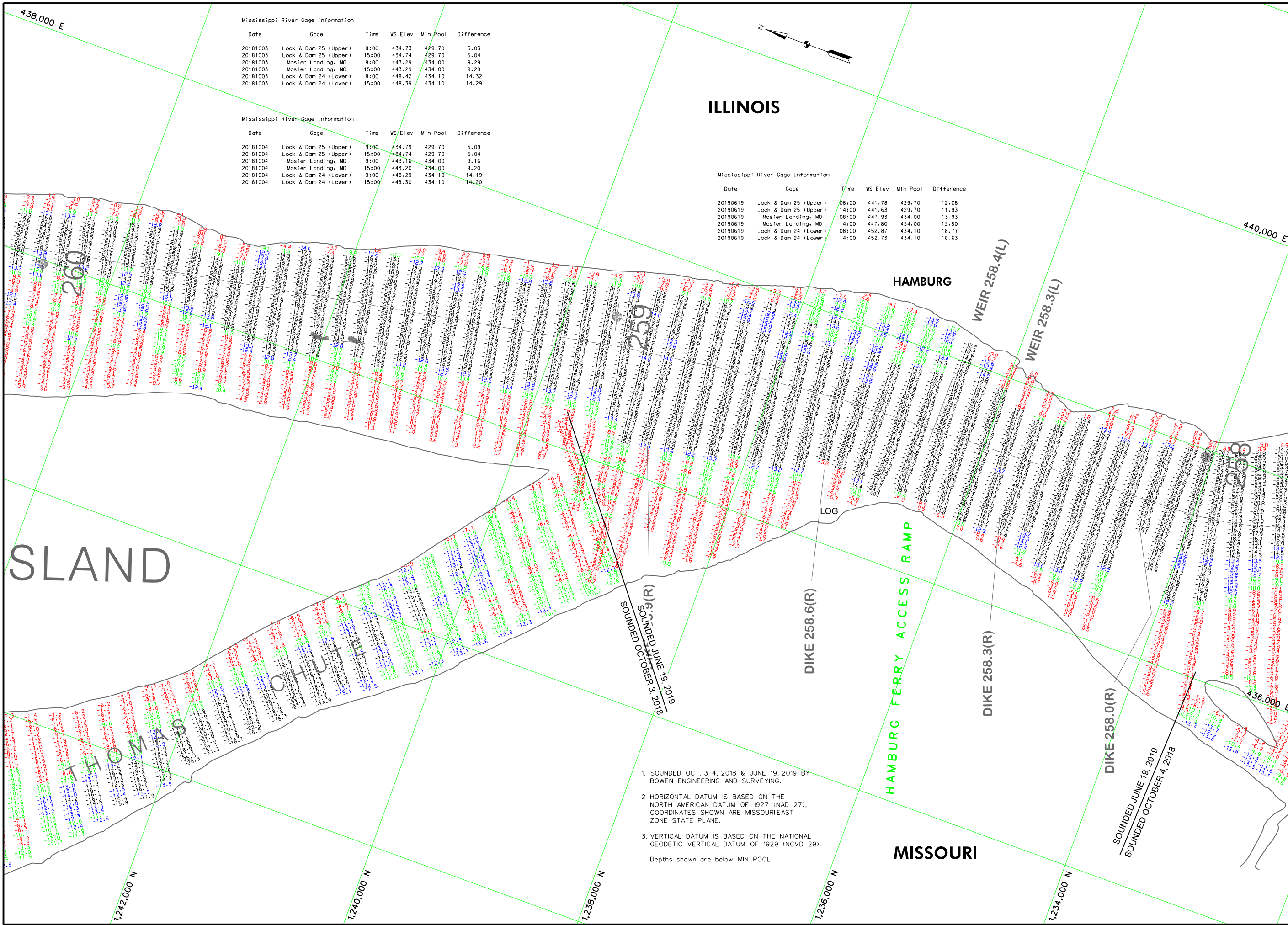
120 0 120 240 METERS
400 0 400 800 FEET

MILE: 260.0 - 262.0

PLATE
NUMBER

20





Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20181003	Lock & Dam 25 (Upper)	8:00	434.73	429.70	5.03
20181003	Lock & Dam 25 (Upper)	15:00	434.74	429.70	5.04
20181003	Mosier Landing, MD	8:00	443.29	434.00	9.29
20181003	Mosier Landing, MD	15:00	443.29	434.00	9.29
20181003	Lock & Dam 24 (Lower)	8:00	448.42	434.10	14.32
20181003	Lock & Dam 24 (Lower)	15:00	448.39	434.10	14.29

Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20181004	Lock & Dam 25 (Upper)	9:00	434.79	429.70	5.09
20181004	Lock & Dam 25 (Upper)	15:00	434.74	429.70	5.04
20181004	Mosier Landing, MD	9:00	443.16	434.00	9.16
20181004	Mosier Landing, MD	15:00	443.20	434.00	9.20
20181004	Lock & Dam 24 (Lower)	9:00	448.29	434.10	14.19
20181004	Lock & Dam 24 (Lower)	15:00	448.30	434.10	14.20

Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20190619	Lock & Dam 25 (Upper)	08:00	441.78	429.70	12.08
20190619	Lock & Dam 25 (Upper)	14:00	441.63	429.70	11.93
20190619	Mosier Landing, MD	08:00	447.93	434.00	13.93
20190619	Mosier Landing, MD	14:00	447.80	434.00	13.80
20190619	Lock & Dam 24 (Lower)	08:00	452.87	434.10	18.77
20190619	Lock & Dam 24 (Lower)	14:00	452.73	434.10	18.63

1. SOUNDED OCT. 3-4, 2018 & JUNE 19, 2019 BY BOWEN ENGINEERING AND SURVEYING.
 2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.
 3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).
- Depths shown are below MIN POOL



GAUGE RECORD

L & D 24 LOWER	MOSIER	L & D 25 UPPER
ZERO NGVD	400.0	407.0
MILE	260.3	241.5
MIN POOL	434.0	429.7
03 OCT 2018	432.96(00) 43.29(600)	27.39(600) 27.74(500)
04 OCT 2018	432.96(00) 43.29(600)	27.79(600) 27.74(500)
19 JUN 2019	473.04(00) 47.30(400)	54.78(600) 54.63(400)

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

Survey Date: OCT 3, 2018 - JUNE 19, 2019

Drawn by: X Reviewed by: X

SUBMITTED: X

APPROVED: X

Plot date: 8/8/2019

File name: 180806P001.DAT

HYDROGRAPHIC SURVEYS

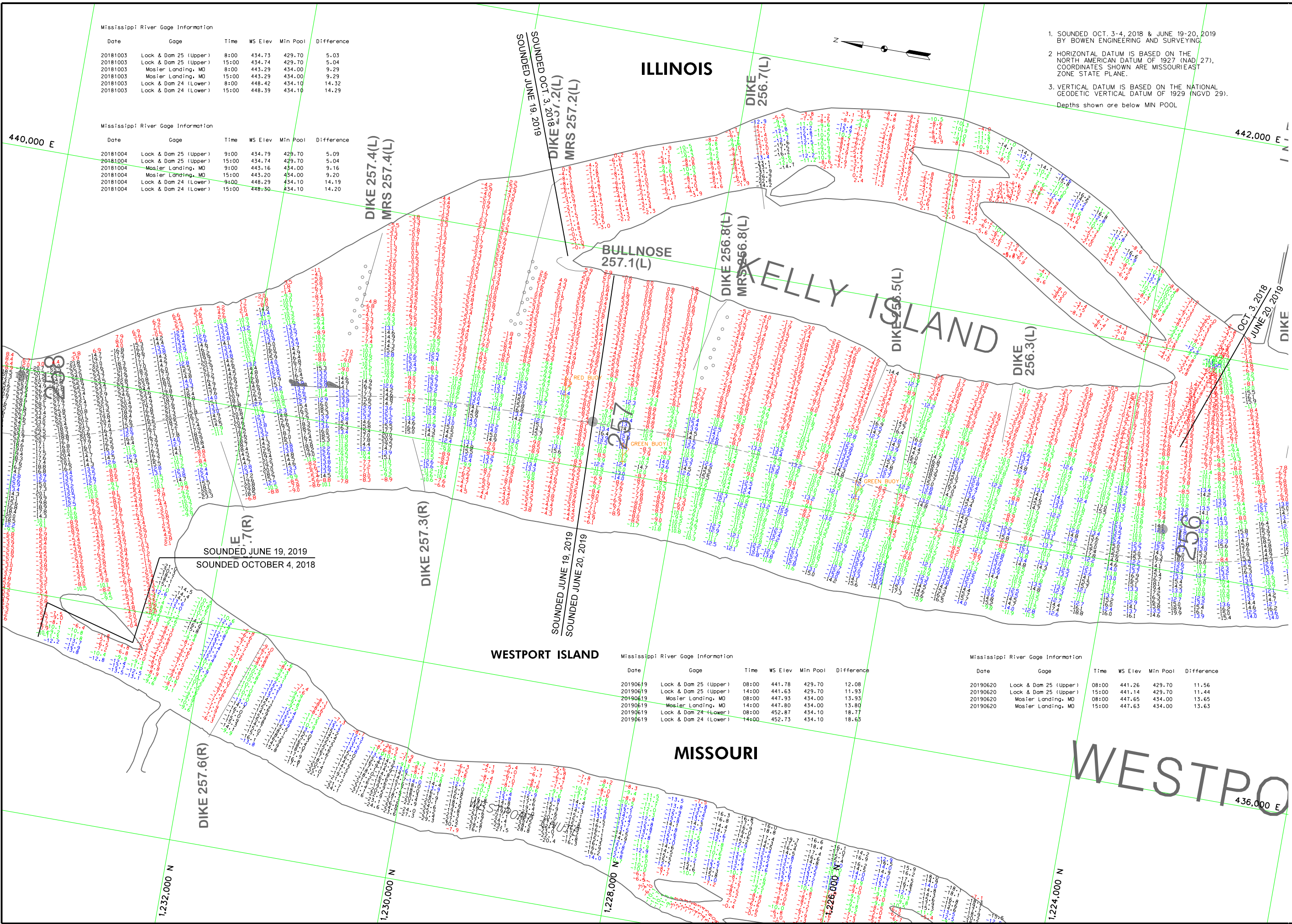
170 400 800 1200 240 METERS

0 400 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN BE CONSIDERED UNRELIABLE FOR GENERAL PURPOSES AND NOT A FINAL PRODUCT.

PLATE NUMBER

21



Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20181003	Lock & Dam 25 (Upper)	8:00	434.73	429.70	5.03
20181003	Lock & Dam 25 (Upper)	15:00	434.74	429.70	5.04
20181003	Mosier Landing, MO	8:00	443.29	434.00	9.29
20181003	Mosier Landing, MO	15:00	443.29	434.00	9.29
20181003	Lock & Dam 24 (Lower)	8:00	448.42	434.10	14.32
20181003	Lock & Dam 24 (Lower)	15:00	448.39	434.10	14.29

Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20181004	Lock & Dam 25 (Upper)	9:00	434.79	429.70	5.09
20181004	Lock & Dam 25 (Upper)	15:00	434.74	429.70	5.04
20181004	Mosier Landing, MO	9:00	443.16	434.00	9.16
20181004	Mosier Landing, MO	15:00	443.20	434.00	9.20
20181004	Lock & Dam 24 (Lower)	9:00	448.29	434.10	14.19
20181004	Lock & Dam 24 (Lower)	15:00	448.30	434.10	14.20

Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20190619	Lock & Dam 25 (Upper)	08:00	441.78	429.70	12.08
20190619	Lock & Dam 25 (Upper)	14:00	441.63	429.70	11.93
20190619	Mosier Landing, MO	08:00	447.93	434.00	13.93
20190619	Mosier Landing, MO	14:00	447.80	434.00	13.80
20190619	Lock & Dam 24 (Lower)	08:00	452.87	434.10	18.77
20190619	Lock & Dam 24 (Lower)	14:00	452.73	434.10	18.63

Mississippi River Gage Information

Date	Gage	Time	WS Elev	Min Pool	Difference
20190620	Lock & Dam 25 (Upper)	08:00	441.26	429.70	11.56
20190620	Lock & Dam 25 (Upper)	15:00	441.14	429.70	11.44
20190620	Mosier Landing, MO	08:00	447.65	434.00	13.65
20190620	Mosier Landing, MO	15:00	447.63	434.00	13.63

1. SOUNDED OCT. 3-4, 2018 & JUNE 19-20, 2019 BY BOWEN ENGINEERING AND SURVEYING.
 2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.
 3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).
- Depths shown are below MIN POOL



GAGE RECORD

L & D 24 LOWER	MOSIER	L & D 25 UPPER
421.81	400.0	407.0
273.2	260.3	241.5
434.0	434.0	430.7
26.818(00)	26.581(00)	43.298(00)
43.298(00)	43.298(00)	27.739(00)
26.489(00)	26.489(00)	27.739(00)
31.061(00)	30.971(00)	47.658(00)
X	X	34.268(00)

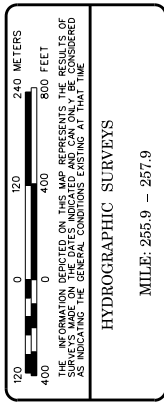
U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

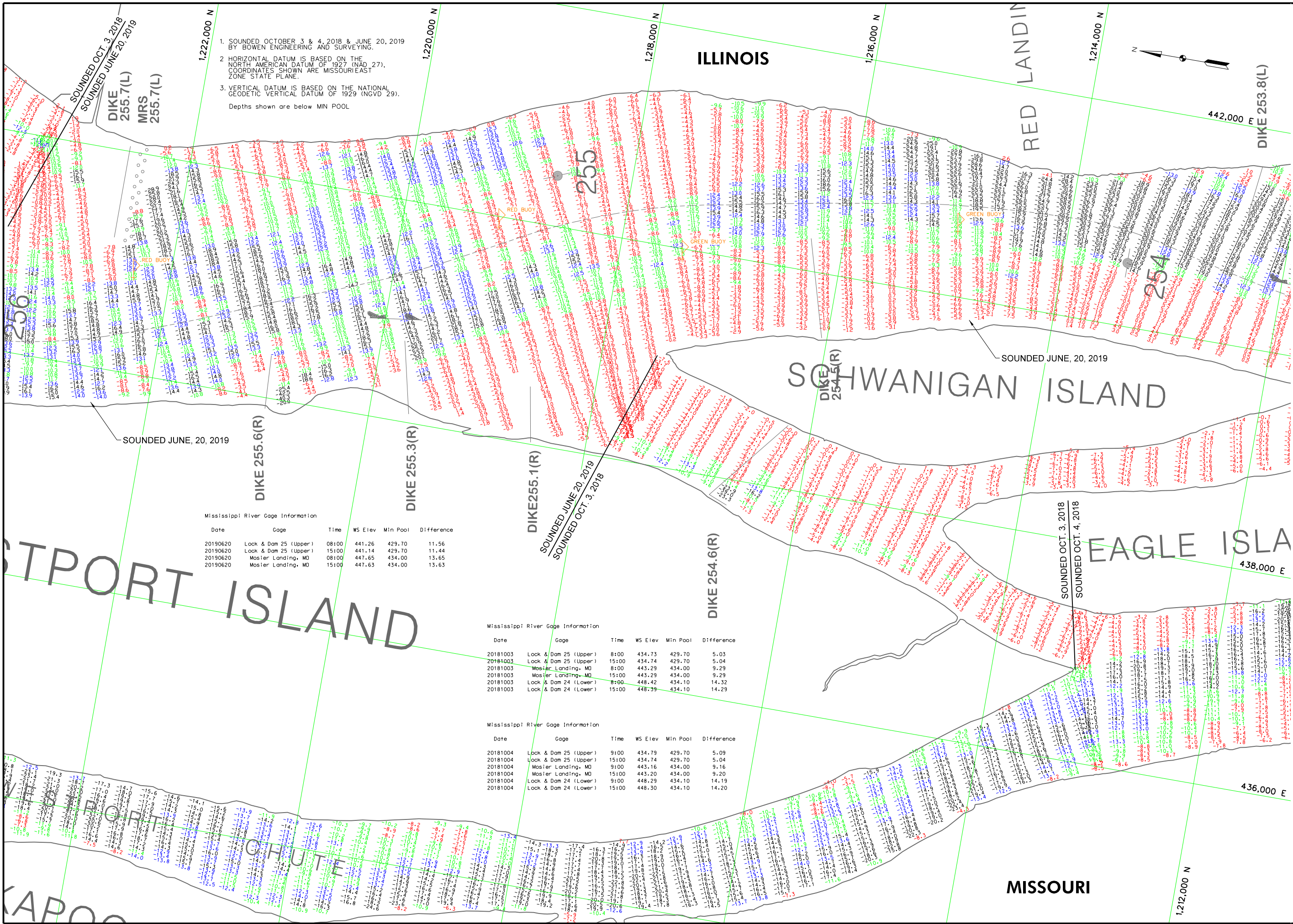
UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

Survey Date: OCT 3, 2018 - JUNE 20, 2019

Drawn by: X
Reviewed by: X
Submitted: X
Approved: X

Plot Date: 8/1/2019





1. SOUNDED OCTOBER 3 & 4, 2018 & JUNE 20, 2019 BY BOWEN ENGINEERING AND SURVEYING.
 2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURI-EAST ZONE STATE PLANE.
 3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).
- Depths shown are below MIN POOL

Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20190620	Lock & Dam 25 (Upper)	08:00	441.26	429.70	11.56
20190620	Lock & Dam 25 (Upper)	15:00	441.14	429.70	11.44
20190620	Mosier Landing, MO	08:00	447.65	434.00	13.65
20190620	Mosier Landing, MO	15:00	447.63	434.00	13.63

Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20181003	Lock & Dam 25 (Upper)	8:00	434.73	429.70	5.03
20181003	Lock & Dam 25 (Upper)	15:00	434.74	429.70	5.04
20181003	Mosier Landing, MO	8:00	443.29	434.00	9.29
20181003	Mosier Landing, MO	15:00	443.29	434.00	9.29
20181003	Lock & Dam 24 (Lower)	8:00	448.42	434.10	14.32
20181003	Lock & Dam 24 (Lower)	15:00	448.39	434.10	14.29

Mississippi River Gage Information					
Date	Gage	Time	WS Elev	Min Pool	Difference
20181004	Lock & Dam 25 (Upper)	9:00	434.79	429.70	5.09
20181004	Lock & Dam 25 (Upper)	15:00	434.74	429.70	5.04
20181004	Mosier Landing, MO	9:00	443.16	434.00	9.16
20181004	Mosier Landing, MO	15:00	443.20	434.00	9.20
20181004	Lock & Dam 24 (Lower)	9:00	448.29	434.10	14.19
20181004	Lock & Dam 24 (Lower)	15:00	448.30	434.10	14.20

US Army Corps of Engineers
St. Louis District

GAGE RECORD		L & D 24 LOWER		MOSIER		LMO 25 UPPER	
ZERO NGVD	421.81	421.81	400.0	400.0	407.0	407.0	407.0
MILE	273.2	273.2	260.3	260.3	241.5	241.5	241.5
MIN POOL	434.0	434.0	434.0	434.0	430.7	430.7	430.7
03 OCT 2018	26.816(00)	26.5815(00)	43.296(00)	43.296(00)	43.296(00)	27.736(00)	27.7415(00)
04 OCT 2018	43.69(00)	43.2015(00)	43.69(00)	43.2015(00)	43.69(00)	27.799(00)	27.7415(00)
20 JUN 2019	26.489(00)	26.4915(00)	x	x	47.656(00)	47.6315(00)	54.268(00)

U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS ST. LOUIS, MISSOURI		Survey Data OCT 3, 2018 - JUNE 20, 2019	
Drawn by:	X	Reviewed by:	X
Submitted:	X	Approved:	X
File Name:	BOWEN ENGINEERING		
Plot Date:	BOWEN ENGINEERING		

240 METERS
800 FEET

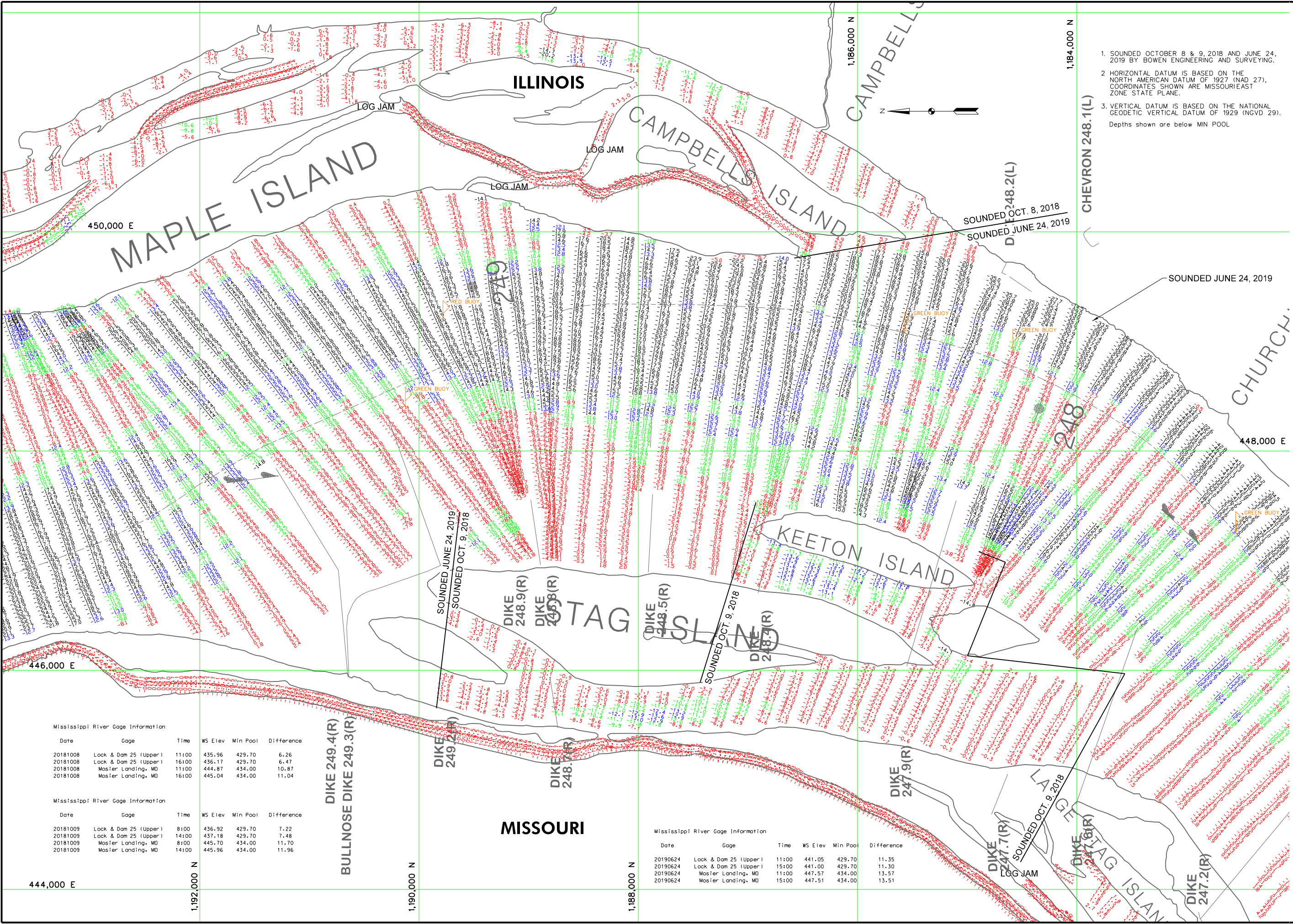
THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED ACCURATE FOR THE DATES INDICATED AND NOT BE USED FOR ANY OTHER PURPOSE.

HYDROGRAPHIC SURVEYS

MILE: 253.8 - 255.9

PLATE NUMBER

23



1. SOUNDED OCTOBER 8 & 9, 2018 AND JUNE 24, 2019 BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27), COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).
Depths shown are below MIN POOL



US Army Corps
of Engineers
St. Louis District

GAGE RECORD		L & D 24 LOWER	MOSIER	LND 25 UPPER
ZERO NGVD	421.81	400.0	407.0	
MILE	273.2	260.3	241.5	
MIN POOL	434.0	434.0	434.0	429.7
08 OCT 2018	28.5N(ND) 28.8N(ND)	44.8N(ND) 45.0N(ND)	28.8N(ND) 29.1N(ND)	28.8N(ND) 29.1N(ND)
09 OCT 2018	45.0N(ND) 45.0N(ND)	44.8N(ND) 45.0N(ND)	29.1N(ND) 29.1N(ND)	29.1N(ND) 29.1N(ND)
24 JUN 2019	47.5N(ND) 47.5N(ND)	47.5N(ND) 47.5N(ND)	47.5N(ND) 47.5N(ND)	47.5N(ND) 47.5N(ND)

Survey Data		Survey Date		Survey Date	
Bowen Engineering		OCT 8, 2018 - JUNE 24, 2019		OCT 8, 2018 - JUNE 24, 2019	
Drawn by:	X	Reviewed by:	X	Checked by:	X
Submitted:	X	Approved:	X	Plot date:	8/8/2019
File Name:		PROJECT: HYDROGRAPHIC SURVEYS		MILE: 247.8 - 249.8	

U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS ST. LOUIS, MISSOURI	UPPER MISSISSIPPI RIVER BASIN	MISSISSIPPI RIVER
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170 400 800 1200 1600 2000 2400 METERS	0 400 800 1200 1600 2000 2400 FEET
THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE BY THE DISTRICT OF ENGINEERS AND SURVEYORS OF THE ARMY CORPS OF ENGINEERS. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE.	
HYDROGRAPHIC SURVEYS	

PLATE NUMBER
26

