

# Inland Waterways Users Board

## Mississippi River Low Water Update

**Mr. Eddie Belk, PE SES**

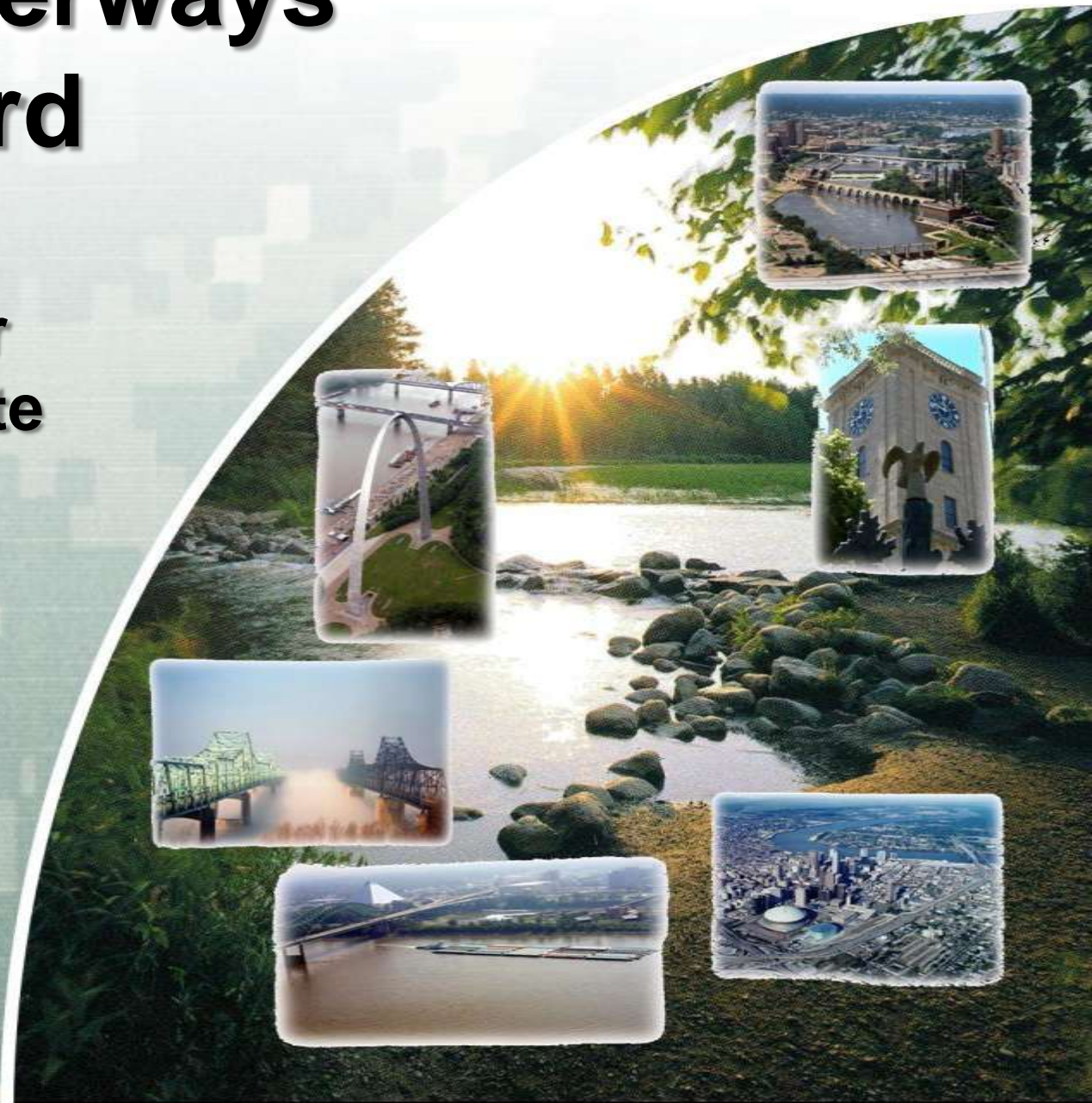
Programs Director

Mississippi Valley Division

December 19, 2012

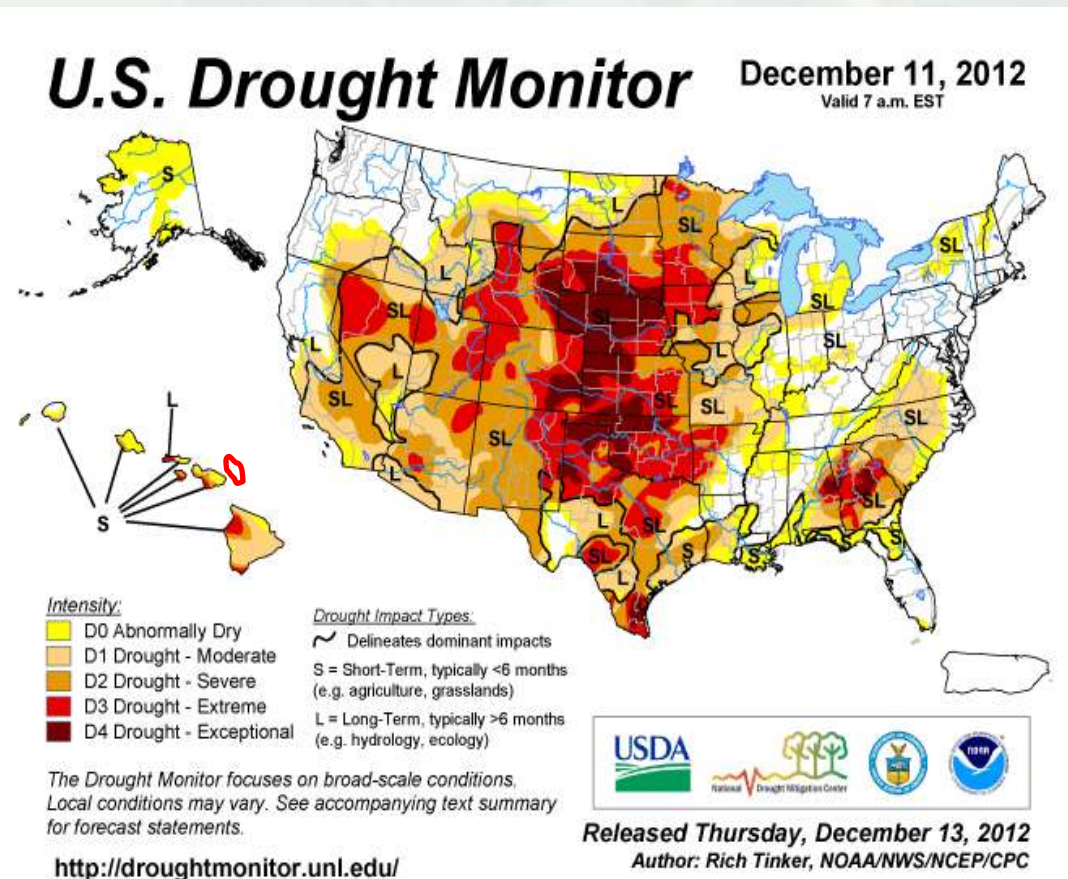


US Army Corps of Engineers  
**BUILDING STRONG**

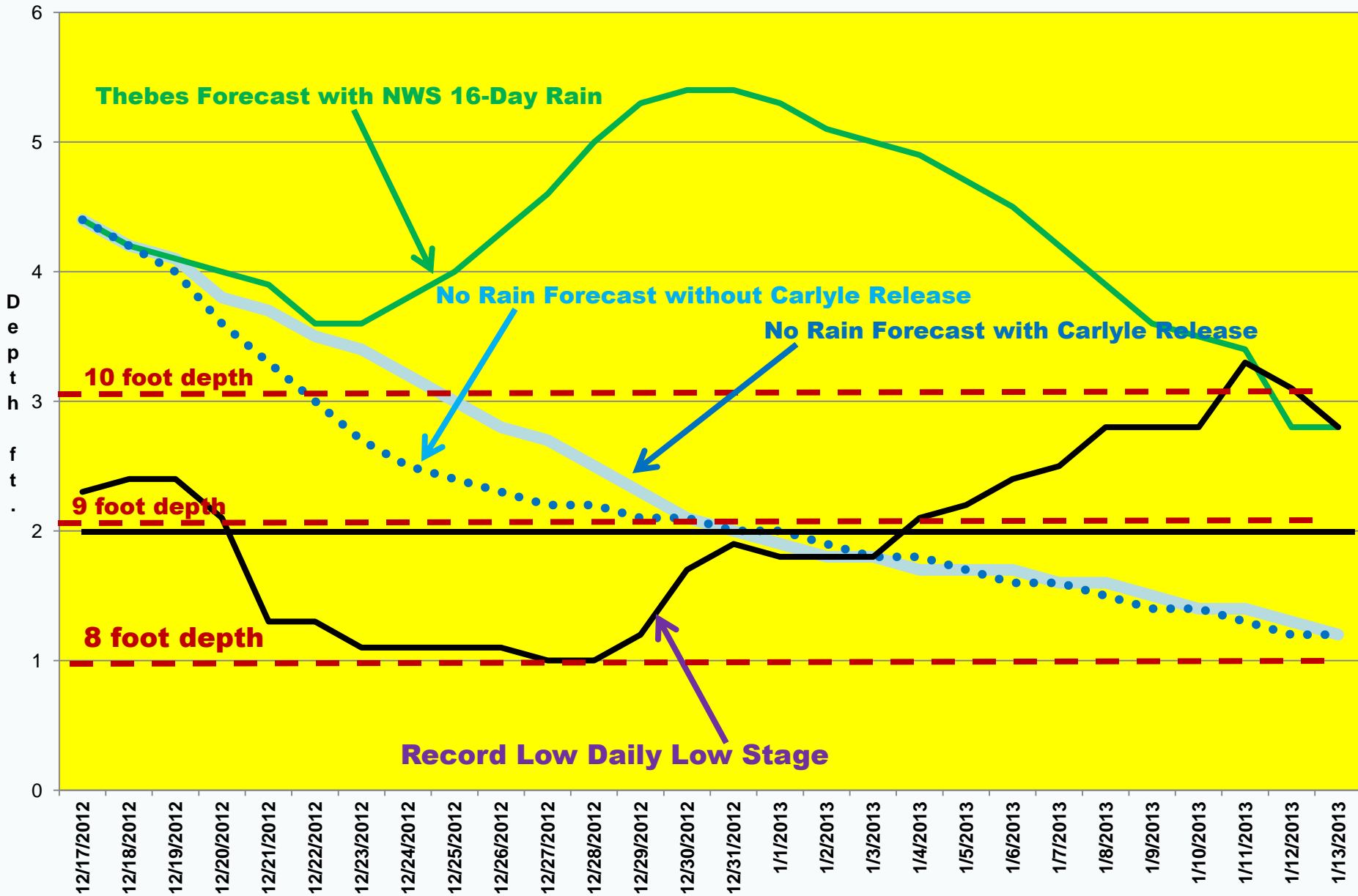


# Middle Mississippi River Current Status

- Persistent drought across much of central U.S. (not enough water in the system to meet all needs)
- Current forecasts indicate river levels may reach record lows late December or early January if no rain occurs

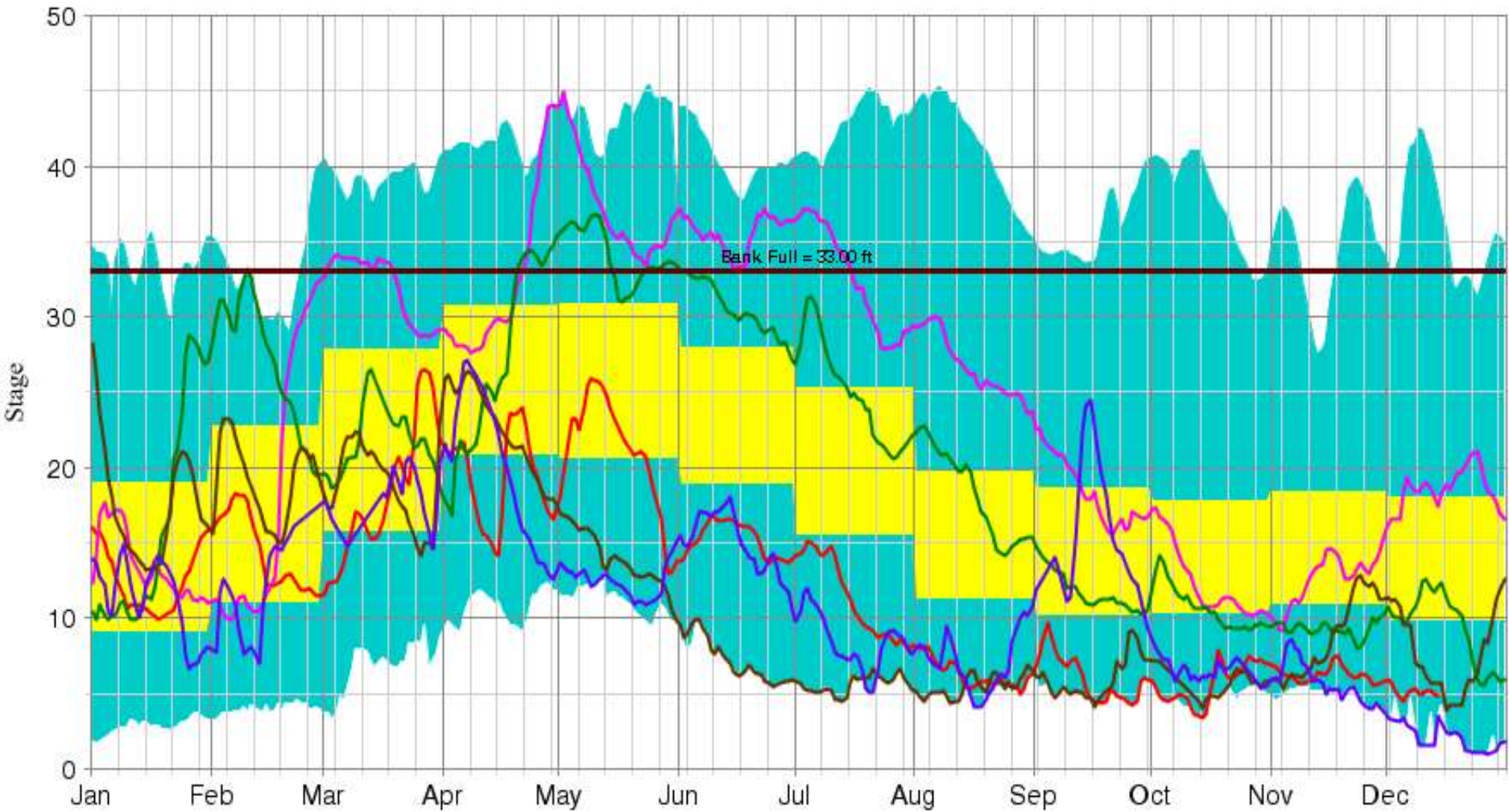


# Middle Mississippi River NWS Forecast 12/17-1/13 (Thebes Gage)

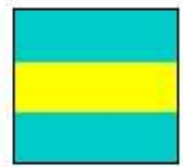




# Mississippi River at Thebes



Maximum Limit



Maximum Monthly Mean  
Grouped by Year  
Minimum Monthly Mean  
Grouped by Year

Minimum Limit

Time

— 2012 — 2011 — 1999 — 1988 — 1989

STATISTICAL RECORD: 1944 - 2012

# Middle Mississippi River Actions

## Top 10 Low Water Stages at St. Louis:

1.	<b>-6.2 (JAN 1940)</b>	6.	-4.8 (JAN 1957)
2.	-5.8 (JAN 1963)	7.	-4.6 (JAN 1956)
3.	-5.6 (JAN 1964)	8.	<b>-4.4 (JAN 2003)</b>
4.	-5.5 (DEC 1937)	9.	-4.3 (DEC 1933)
5.	<b>-5.2 (DEC 1989)</b>	10.	-4.3 (JAN 1954)

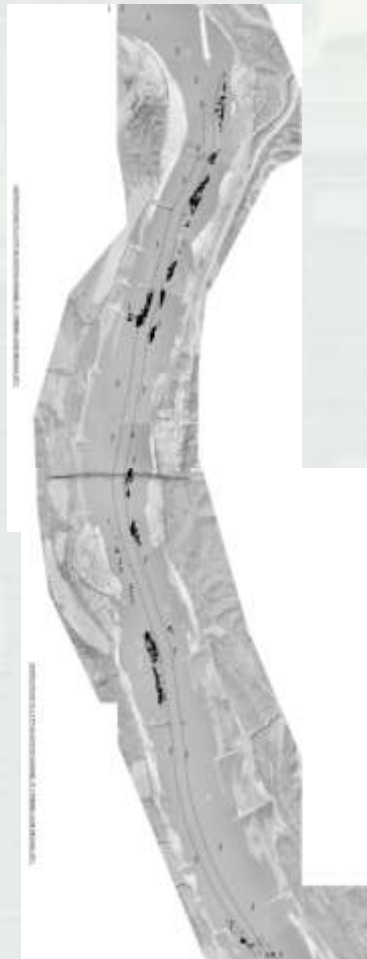


- Since last drought in 1989 (-5.2, Dec 1989), USACE Regulating Works channel improvement project has continued to increase channel efficiency
- Continuous dredging operations since July 2012 continue to provide authorized project dimensions (9' deep x 300' wide)
- Weekly RIETF calls between Corps, Coast Guard, & Industry to coordinate latest channel conditions, stage forecasts, and dredging priorities
- Releases from Mississippi River tributary reservoirs timed to supplement Middle Mississippi River flows for navigation
- Rock removal contracts underway in Thebes Reach



# Rock Pinnacle Removal

- Two Contractors Mobilized, On-Site Saturday (15 Dec)
- Mechanical Removal Initially, Start Blasting
- Rock Removal Ops 0600-2200; Pass Traffic 2200-0600
- Rock Pinnacles Lowered by 1.5' Minimum w/i 30 Days
- Longer Term Rock Removal Contract Awarded Jan 13

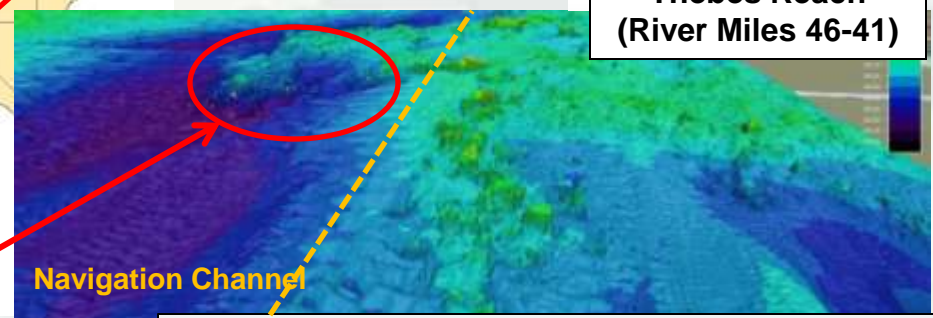


Thebes Reach  
(River Miles 46-41)



Mechanically Removed Rock  
on Sunday (16 Dec 12)

Typical view of rock formation impacting  
the navigation channel



DS View - Rock Pinnacles near River Mile 41,  
Thebes, IL

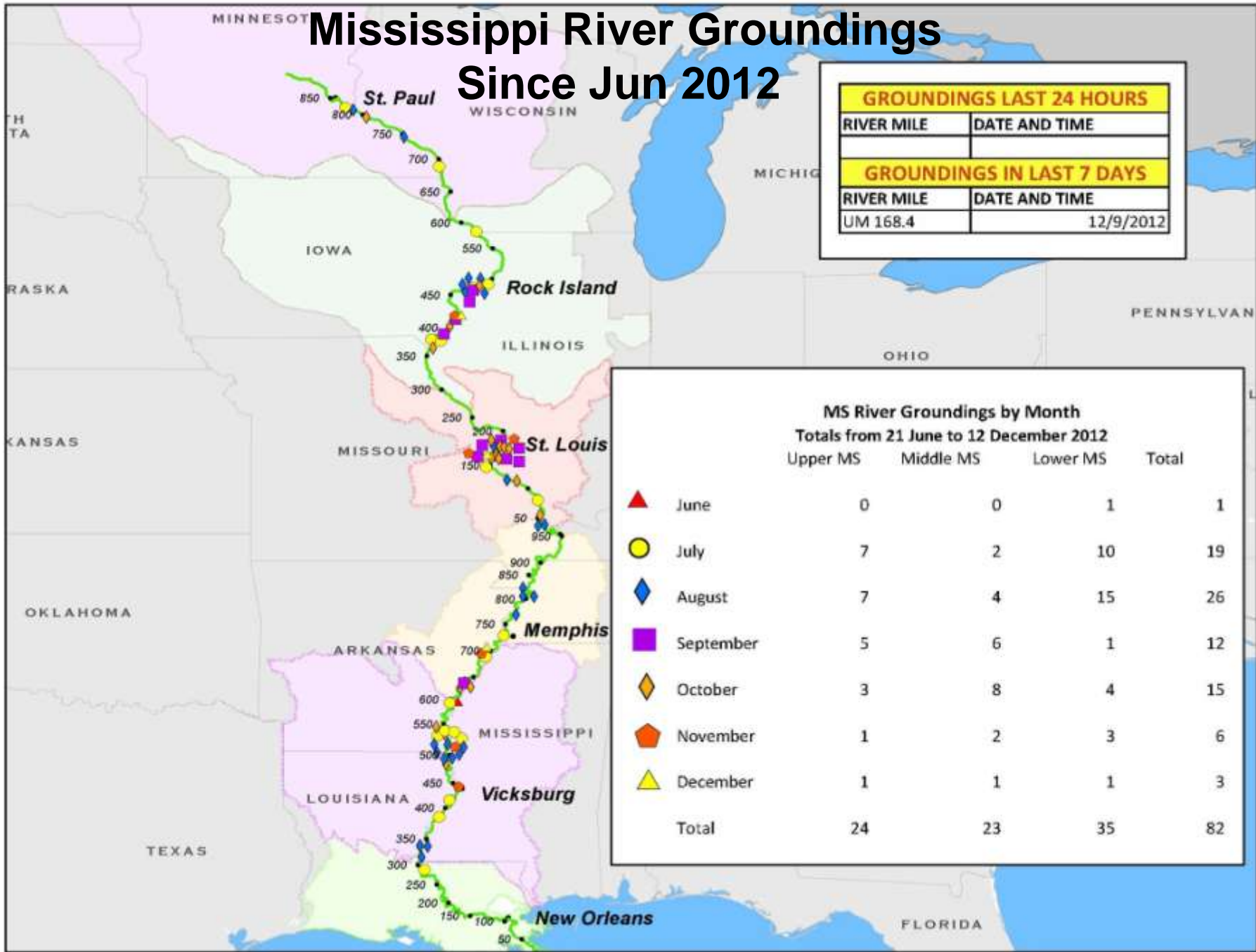
# Middle Mississippi River Dredging

---

- **Dredging to maintain authorized channel (9 ft deep x 300 ft wide)**
- **Currently two dredges operating on Middle Mississippi River**
  - **Dredge Potter has cleared more than 6 million cubic yards (cy) of material from 7 July to 4 Dec (five months) in 2012**
  - **Dredge Hurley recently mobilized and tasked to operate between Thebes and Cairo, IL**
- **USACE has two additional dustpan dredges available in reserve to address any further dredging requirements**



# Mississippi River Groundings Since Jun 2012

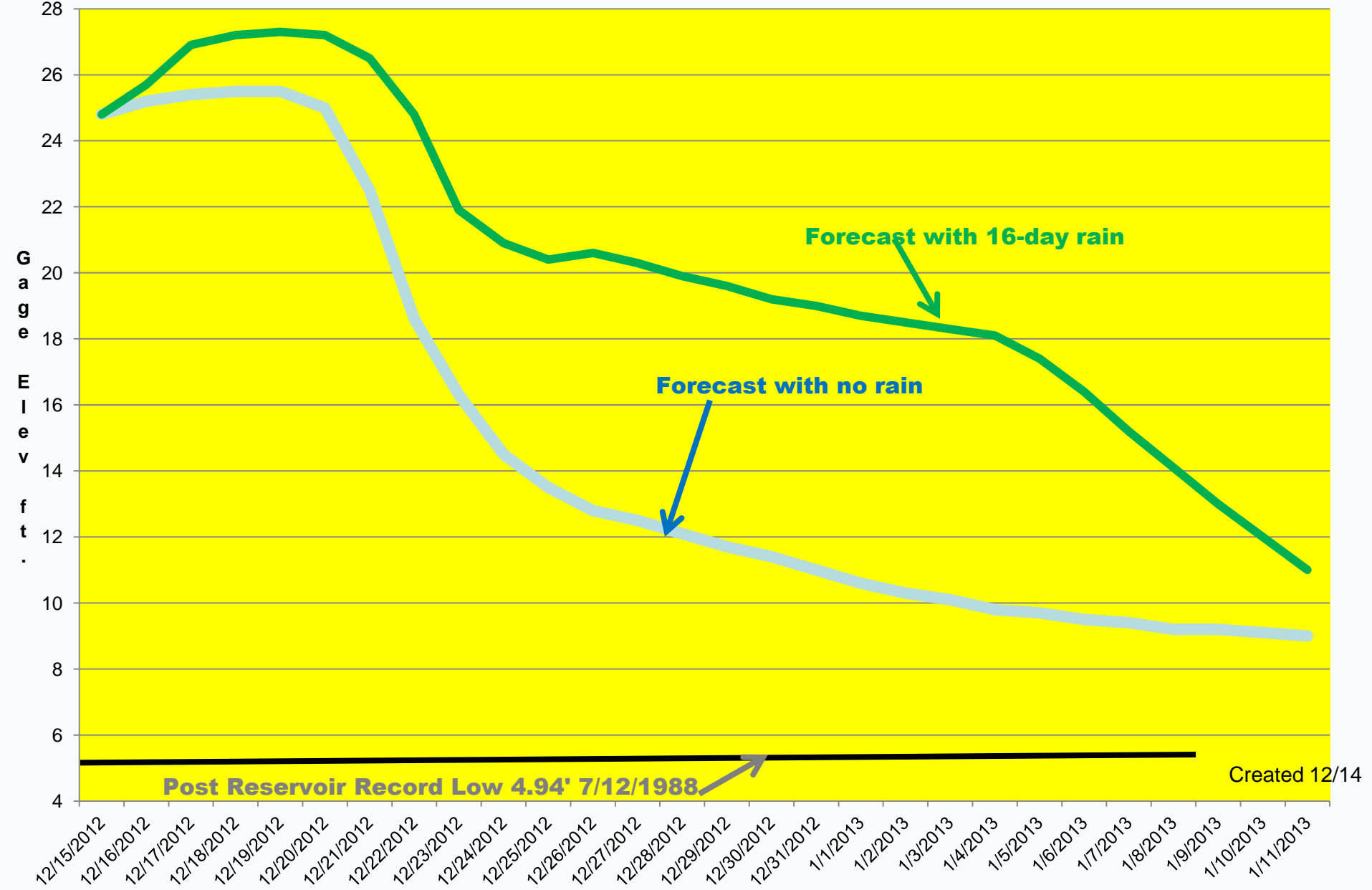


GROUNDINGS LAST 24 HOURS	
RIVER MILE	DATE AND TIME
GROUNDINGS IN LAST 7 DAYS	
RIVER MILE	DATE AND TIME
UM 168.4	12/9/2012

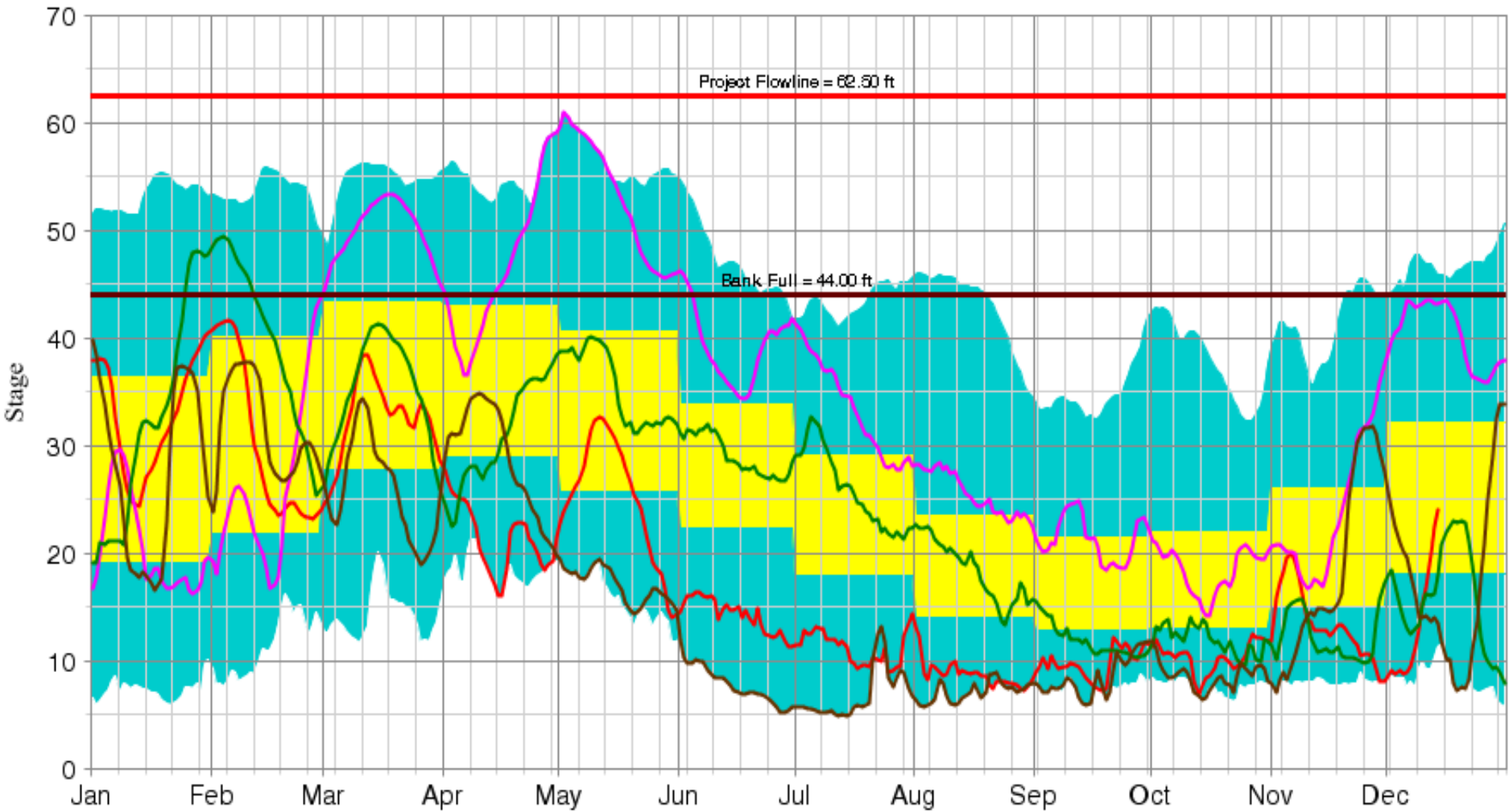
	Upper MS	Middle MS	Lower MS	Total
▲ June	0	0	1	1
● July	7	2	10	19
◆ August	7	4	15	26
■ September	5	6	1	12
◇ October	3	8	4	15
⬠ November	1	2	3	6
▲ December	1	1	1	3
<b>Total</b>	<b>24</b>	<b>23</b>	<b>35</b>	<b>82</b>



# Lower Mississippi River NWS Forecast 12/15-1/11 (Cairo Gage)



# Mississippi River at Cairo, IL



Maximum Limit



Maximum Monthly Mean  
Grouped by Year  
Minimum Monthly Mean  
Grouped by Year

Minimum Limit

Time

— 2012    — 2011    — 1999    — 1988

STATISTICAL RECORD: 1944 - 2012

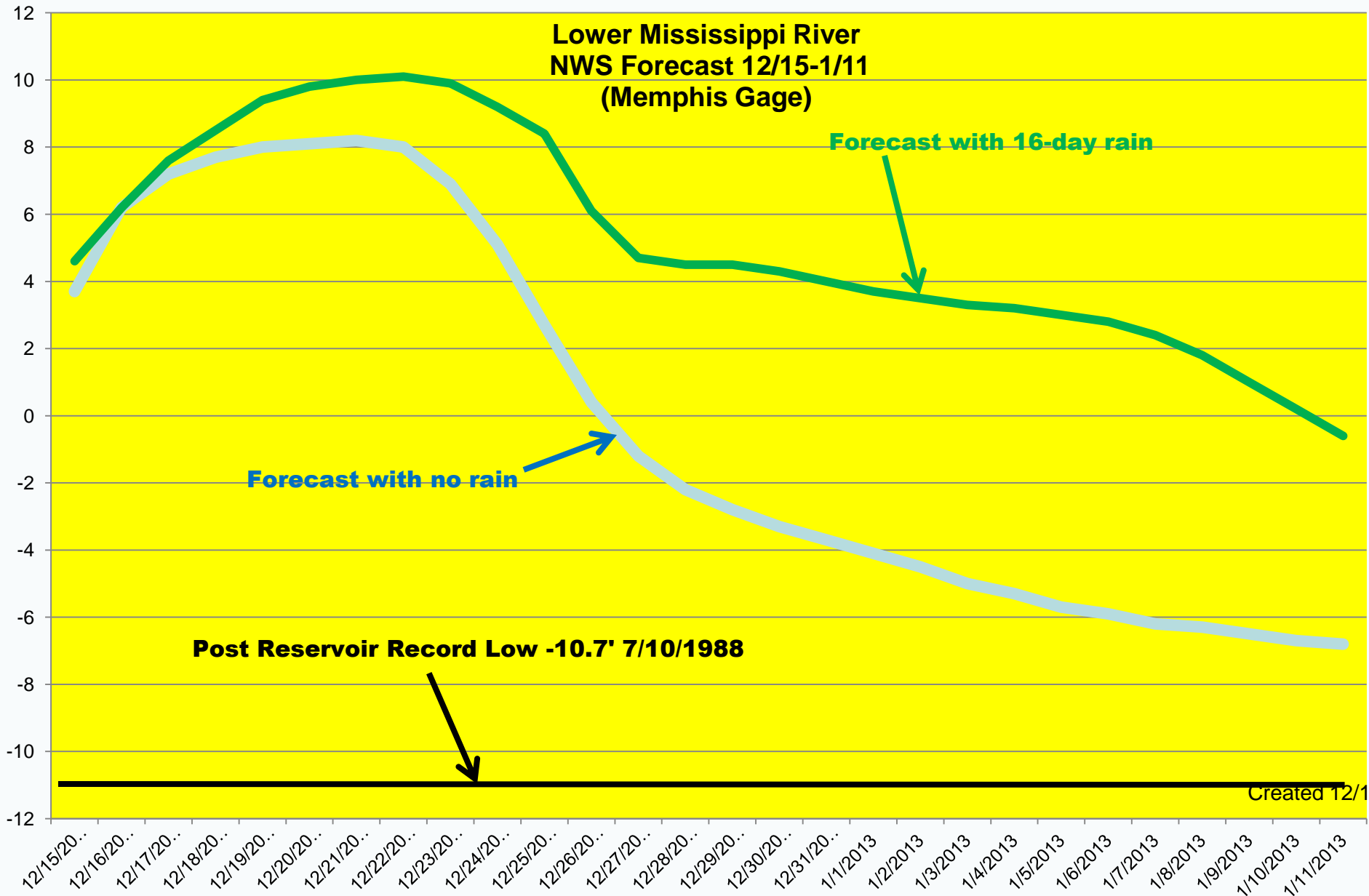
**Lower Mississippi River  
NWS Forecast 12/15-1/11  
(Memphis Gage)**

**Forecast with 16-day rain**

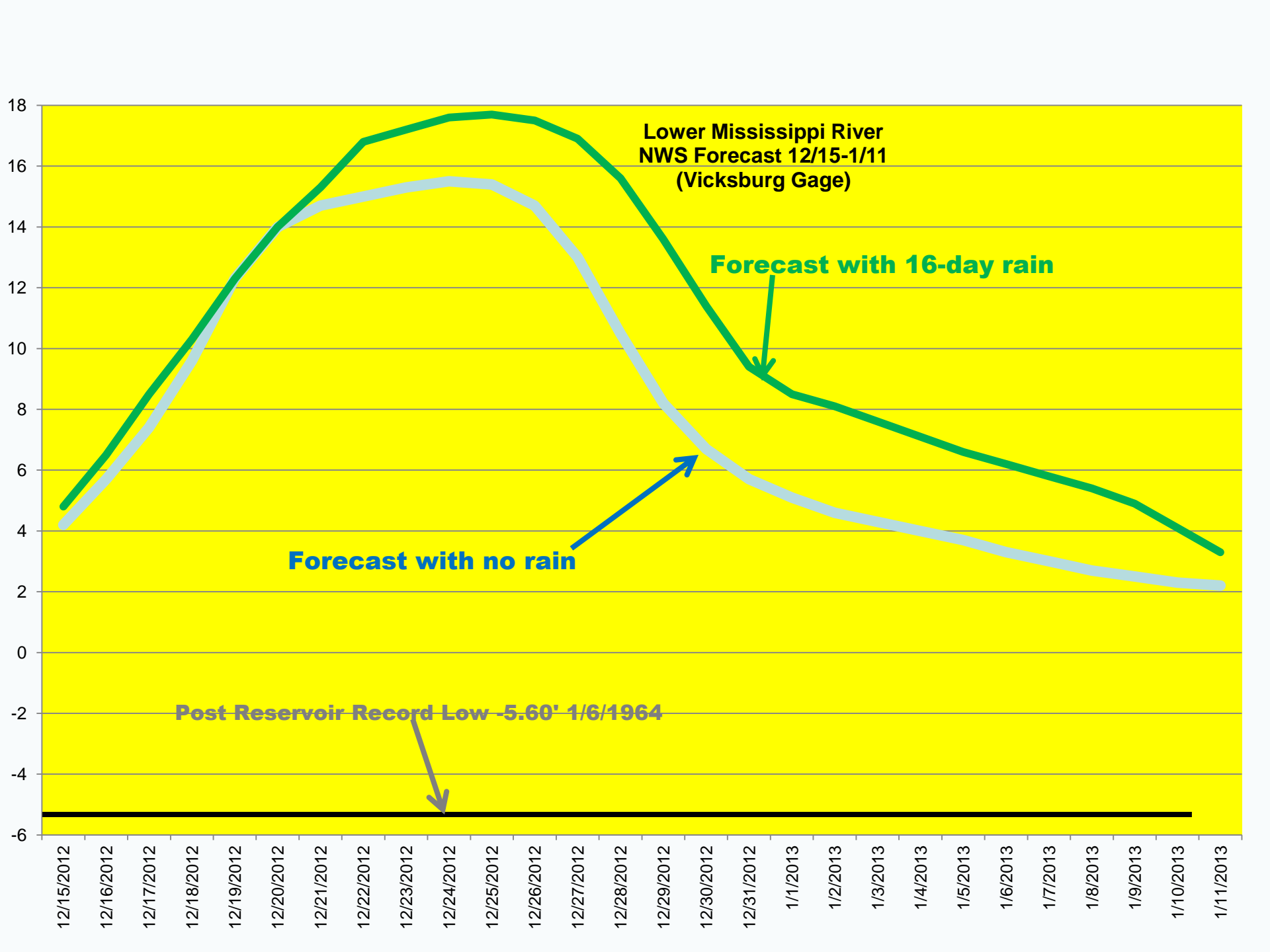
**Forecast with no rain**

**Post Reservoir Record Low -10.7' 7/10/1988**

Created 12/14







# In Closing...

## We Need Rain!



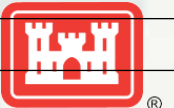
®

US Army Corps of Engineers  
**BUILDING STRONG**®

# Mississippi River Channel Conditions

MVD River Conditions on 14 DEC, and 10 JAN 2013 Forecast

Crossing	River Mile	Survey Date	Controlling Depth	Gage Reading	Gage Location	28-day Depth	28-day Gage	Last Dredged	Remarks - Schedule
Commerce	697.5	10-Dec	11.2	-6.8	Memphis	12	-6.0	AUG 12	
Arsenal Island	174.3	06-Dec	12.5	-2.8	St. Louis	8.8	-6.4	Nov-11	ECD 18 DEC
Moro Island	119.0	08-Dec	11.3	0.3	Chester	7.3	-3.7	Sep-12	ECD 21 DEC
Vancill Landing	67.5	26-Nov	11.1	6.6	Cape Girardeau	6.8	2.0	Aug-12	ECD 24 DEC
Hanging Dog	69.5	13-Nov	12.5	6.6	Cape Girardeau	8.2	2.0	Oct 26	ECD 27 DEC
Hines Light	75.0	08-Dec	12.0	4.6	Grand Tower	8.0	0.6		ECD 29 DEC
Cottonwood	78.0	08-Dec	13.3	4.6	Grand Tower	9.5	0.6		ECD 1 JAN
Chester	110.5	08-Dec	13.4	0.3	Chester	9.4	-3.7	Nov-07	ECD 4JAN
Cherokee Landing	113.0	26-Nov	12.7	0.3	Chester	8.7	-3.7	Nov-07	ECD 6 JAN
<b>Street Oil</b>	<b>171.5</b>	<b>13-Dec</b>	<b>12.8</b>	<b>-2.8</b>	<b>St. Louis</b>	<b>9.1</b>	<b>-6.4</b>		<b>ECD 9 Jan</b>
Uncle Joe Light	41.5	20-Nov	11.5	4.9	Thebes	7.2	0.6	Sep-01	Hurley - St. 15 DEC, ECD 18 DEC
Burnham Island	39.0	20-Nov	13.5	4.9	Thebes	9.2	0.6	Aug 12	Hurley - ECD 21 DEC
Hurricane Light	11.3	13-Nov	26.7	20.1	Birds Point	14.1	7.5		Hurley - ECD 26 DEC
Scudder Lower	15.0	06-Dec	27.0	20.1	Birds Point	14.4	7.5	Sep-09	Hurley - ECD 28 DEC
Sliding Towhead	24.4	06-Dec	26.7	20.1	Birds Point	14.1	7.5	Nov-10	Hurley - ECD 30 DEC
Birds Point	2.0	07-Dec	27.3	20.1	Birds Point	14.7	7.5	Oct-08	Hurley - ECD 02 Jan



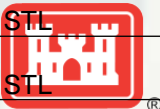
**BUILDING STRONG®**

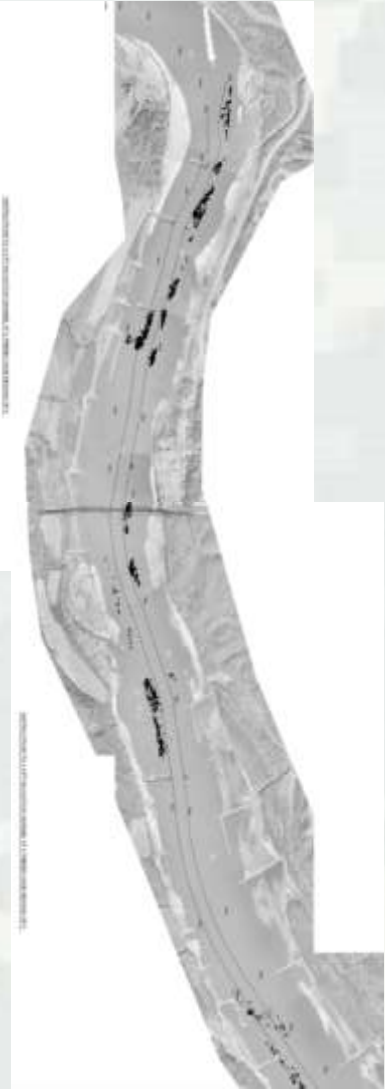


# Mississippi River Channel Conditions

Mississippi River Conditions on 14 DEC, and 10 JAN 2013 Forecast

Crossing	River Mile	Survey Date	Controlling Depth	Gage Reading	Gage Location	28-day Depth	28-day Gage	Last Dredged	Remarks - Schedule
Flora Creek	55.5	08-Dec	14.0	6.6	Cape Girardeau	9.9	2.2	Oct 19	Watch, Curr >=9' @-7 STL
Neely Landing	70.8	27-Aug	13.8	6.6	Cape Girardeau	9.7	2.2	Aug-12	Watch, Curr >=9' @-7 STL
Hat Island	87.0	09-Dec	14.0	4.6	Grand Tower	10.2	0.8	Nov 7	Watch, Curr >=9' @-7 STL
Beaver Island	115.4	28-Nov	13.5	0.3	Chester	9.5	-3.7	NONE	Watch, Curr >=9' @-7 STL
Farmers Landing	115.5	12-Oct	14.1	0.3	Chester	10.1	-3.7	SEP 2012	Watch, Curr >=9' @-7 STL
Little Rock Landing	125.0	07-Dec	13.7	0.3	Chester	9.7	-3.7		Watch, Curr >=9' @-7 STL
Establishment	130.0	07-Dec	14.0	-2.8	Brickeys	10.0	-6.8		Watch, Curr >=9' @-7 STL
Meremac	160.7	04-Dec	13.6	-2.8	St. Louis	9.8	-6.4	Aug-12	Watch, Curr >=9' @-7 STL
JB Bridge - above	169.0	20-Nov	13.3	-2.8	St. Louis	9.6	-6.4	Aug-12	Watch, Curr >=9' @-7 STL
City Docks	181.5	26-Nov	14.1	-2.8	St. Louis	10.4	-6.4	Nov-05	Watch, Curr >=9' @-7 STL
Merchants Bridge	183.8	26-Nov	13.5	-2.8	St. Louis	9.8	-6.4	Jul-12	Watch, Curr >=9' @-7 STL
Daniels Landing	31.0	06-Dec	14.6	4.9	Thebes	10.7	1.0		Watch, Curr >=9' @-7 STL
Stevenson Light	5.0	13-Nov	27.6	20.1	Birds Point	14.2	6.7		Watch, Curr >=9' @-7 STL
I-57 Bridge	7.4	16-Aug	27.4	20.1	Birds Point	14.0	6.7		Watch, Curr >=9' @-7 STL





**BUILDING STRONG®**