

**MISSISSIPPI RIVER
AND
TRIBUTARIES
WATERWAYS ACTION
PLAN**

LOWER MISSISSIPPI RIVER

Mile Marker 869 – 303

ANNEX 2020



LOWER MISSISSIPPI RIVER ANNEX

Executive Summary

This annex provides general information and reference gauges to be used as guidelines for a high and low water events on the Lower Mississippi River between river miles marker 869 to 303. It is the responsibility of the United States Coast Guard (USCG), U.S. Army Corps of Engineers (USACE), and River Industry representatives to meet and discuss river conditions and possible restrictions on the Lower Mississippi River, and to **annually** review the actions specified in the plan. The Lower Mississippi River is broken down into 3 zones. Each zone is delineated by river mile and is characterized by river stage, with three action phases (i.e.: *Watch, Action, and Recovery Phases*) described in the plan. A combination of reference gauges, historical data and known impact areas were used to derive these zones.

The Waterways Action Plan (WAP) is a living document that should be frequently updated. This plan establishes a framework for all parties to use when taking proactive or reactive steps to manage and respond to high water, high velocity, and low water conditions. The overall goal of this plan is to ensure safety of life and navigation, protection of infrastructure and property, and to prevent marine casualties. This Sector Lower Mississippi River WAP supports the Coast Guard District Eight WAP originally promulgated in 2007, which gives overall context, history, and intent for WAP's throughout the district.

The WAP also supports the Department of Transportation in its role in Emergency Support Function (ESF) #1 of the National Response Plan to coordinate the Emergency Management of the Transportation System (EMTS) in the prevention/mitigation, preparedness, recovery, infrastructure restoration, safety, and security of the nation and its transportation system. The purpose of the EMTS is to report damage to the transportation infrastructure as a result of an incident, coordinate alternate transportation services, coordinate the restoration and recovery of the transportation infrastructure, and coordinate and support prevention, preparedness, and mitigation among transportation stakeholders at the state and local levels.

Conference calls between USCG, USACE, Lower Mississippi River Committee (LOMRC) and industry stakeholders have proven critical throughout the years of response to river emergencies, and they remain useful tools to successfully manage river emergencies.

USACE, USCG, and Industry Leaders from Missouri, Oklahoma, Tennessee, Arkansas, Louisiana, Mississippi, and Texas worked jointly to update the 2020 Sector Lower Mississippi River Waterways Action Plan.

Geographic Description

HYDROLOGICAL AND IMPACT CONCERNS

The Mississippi River and its tributaries form a complex waterway system spread out over millions of square miles. In order to predict changes in conditions in this system, waterways managers must constantly monitor a number of hydrological and meteorological factors. These include water flow, soil moisture, snow cover, precipitation, temperature, weather patterns, and most importantly, geography. Effective waterways managers must constantly forecast river conditions in order to ensure they are adequately prepared to deal with a regional transportation emergency. The area most significantly affected by the factors mentioned above is the Lower Mississippi River (LMR). This portion of the river, from Caruthersville, MO to Natchez, MS, consists of free flow river with no lock and dams. The USACE is authorized to provide a channel depth of 9 feet deep and 300 feet wide for commercial navigation. Major tributaries to the LMR, including the White River, McClellan-Kerr Arkansas River Navigation System (MKARNS), Red River, and the Ouachita/Black River have impoundments that create reservoirs. Flows from these reservoirs impact the water levels of the LMR. Numerous variables affect how much water is in the system at any given time. Listed below are some of the key variables waterways managers must consider:

LOWER MISSISSIPPI RIVER LOW WATER

Waterways management concerns occur during low water on the LMR. Groundings during low water conditions delay commercial traffic, cause substantial damage to the navigation channel, and can necessitate dredging.

LOWER MISSISSIPPI RIVER HIGH WATER

Under flood conditions, controlling factors are gauge readings at specific locations. These are general elevations at which water levels may impact levee conditions, damage property, or create unsafe navigation conditions, as described in the “narrative” section of each zone. Well before water levels near or reach these levels, the Coast Guard, in conjunction with USACE and industry, shall implement the “Watch Phase” of the plan (which varies for each zone) and establish communications to discuss the current and forecasted conditions. These discussions should include an analysis of data, weather history and forecast, impact upon river environment, and commercial traffic requirements. Furthermore, general considerations such as levee conditions, wake damage, bridge clearances, and lock operating restrictions/closures shall be discussed.

Acronym List for Lower Mississippi River Annex

ATON = AIDS TO NAVIGATION
AWO = AMERICAN WATERWAYS OPERATORS ASSOCIATION
AWS = ALERT WARNING SYSTEM
BNM = BROADCAST NOTICE TO MARINERS
CFS = CUBIC FEET/SECOND
EMTS = EMERGENCY MANAGEMENT OF THE TRANSPORTATION SYSTEM
EOC = EMERGENCY OPERATION CENTER
ESF = EMERGENCY SUPPORT FUNCTION
HLSEM = HOMELAND SECURITY AND EMERGENCY MANAGEMENT
ICP = INCIDENT COMMAND POST
JIC = JOINT INFORMATION CENTER
L&D = LOCK AND DAM
LMR = LOWER MISSISSIPPI RIVER
LOMRC = LOWER MISSISSIPPI RIVER COMMITTEE
MM = MILE MARKER
MSIB = MARINE SAFETY INFORMATION BROADCAST
MSL = MEAN SEA LEVEL
NGVD = NATIONAL GEODETIC VERTICAL DATUM
NOAA = NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION
NWS = NATIONAL WEATHER SERVICE
RIAC = RIVER INDUSTRY ACTION COMMITTEE
RIBB = RIVER INFORMATION BULLETIN BOARD
RIETF = RIVER INDUSTRY EXECUTIVE TASK FORCE
RM = RIVER MILE
SEC = SECTOR
SEMA = STATE EMERGENCY MANAGEMENT
UMIB = URGENT MARINE INFORMATION BROADCAST
USACE = UNITED STATES ARMY CORPS OF ENGINEERS
USCG = UNITED STATES COAST GUARD
VIC = VICKSBURG INFORMATION CENTER
WAP = WATERWAYS ACTION PLAN

Parties and Roles

U.S. Coast Guard (USCG)

The USCG Sector Commander Lower Mississippi River, with its principal office in Memphis, Tennessee, is responsible for safe navigation, security, and law enforcement along the Lower Mississippi River and tributaries. The USCG Sector Lower Mississippi River (SLMR) Prevention Department, using the cutters KANKAKEE, KANAWHA, PATOKA, KICKAPOO, GREENBRIER, MUSKINGUM, and Aids to Navigation COLFAX, are responsible for maintaining and setting buoys and shore aids along the Lower Mississippi River and tributaries. The USCG SLMR Prevention Department focuses on licensed mariner issues, permits, casualty investigations, and security verifications. The USCG SLMR Response Department uses small boats, other law enforcement partnerships, and first responders to patrol and respond to emergencies or incidents on the Lower Mississippi River.

U.S. Army Corps of Engineers (USACE)

The USACE maintains Lock and Dam facilities on the Arkansas River, Red River, and along the Upper Mississippi River and Ohio Valley region, under the supervision of their local District Offices. Through management of these facilities, the USACE maintains pool levels that are sufficient to accommodate commercial traffic on the river. The USACE maintains a nine-foot navigation channel in open river conditions with river channel management supplemented by dredging, dike work, and river revetment operations. During high water conditions, Emergency Operations coordinate flood fight activities.

U.S. Coast Guard District Eight Bridge Branch (dwb)

The Bridge Administration Program has a mandated responsibility to protect the public's right of navigation. Activities include determining location of navigation channel piers and issuing bridge permits. They establish, revise, and monitor drawbridge regulations and prescribe bridge lighting. Also, Truman-Hobbs studies of unreasonable obstructive bridges are conducted nationwide.

Lower Mississippi River Committee (LOMRC)

The Lower Mississippi River Committee (LOMRC) is an association of companies and organizations who are stakeholders in the commercial industry on the inland rivers. They provide an industry perspective to the USCG and the USACE on matters such as high and low water, shoaling, marine accidents, etc.

Fleeting Facility Managers

Fleeting facility managers have a direct commercial interest in navigation conditions on the LMR and any actions taken by the USCG or USACE in response to hazardous conditions that develop on the river. They play a valuable role in providing feedback to other parties on both river conditions and potential impacts of proposed actions of the USCG and USACE.

Designated Waterfront Facilities

Like the fleeting facility managers, the commercial interests of the designated waterfront facilities are directly impacted by navigation conditions on the LMR and any actions taken by the Coast Guard or Corps of Engineers in response to hazardous conditions that develop on the river. They play a valuable role in providing feedback to other parties on both river conditions and potential impacts of proposed actions of the USCG and USACE.

State Emergency Managers

Hazardous conditions on the LMR frequently require state emergency managers to coordinate with federal, state, and local government officials, and to provide support during severe environmental emergencies. Extreme high water events and flooding conditions require local community response and a vigilant communication plan between federal/state/local partners.

Section 1 – Geographic Description

This annex addresses Mile 303 to Mile 869 of the Lower Mississippi River and includes the Lower Old River and the Old River Control Complex. The following bridges are also contained within the geographic area for this annex:

- Caruthersville Bridge / I-155
Caruthersville, MO (MM 838.9)
- Hernando De Soto Bridge / I-40
Memphis, TN (MM 736.6)
- Harahan Bridge / Railroad
Memphis, TN (MM 734.7)
- I-55 Memphis-Arkansas Memorial Bridge
Memphis, TN (MM 734.7)
- US-49 Helena Bridge
Helena, AR (MM 661.8)
- New Greenville Bridge / US-82 Project
Greenville, MS (MM 530.8)
- Old Vicksburg Bridge / Railroad Crossing
Vicksburg, MS (MM 435.8)
- Vicksburg Bridge / I-20
Vicksburg, MS (MM 435.7)
- Natchez-Vidalia Bridge / US-65 & US-84
Natchez, MS (MM 363.3)



Section 2 – Parties and Roles

USCG SECTOR LOWER MISSISSIPPI RIVER (SEC LMR)					
POSITION	DUTIES & RESPONSIBILITIES	River Gage	High Water Trigger	Current Incumbent	Reports to:
Officer In Charge, USCGC GREENBRIER	Responsible for daily ATON services for LMR 363 to 155, Red River 0.0 to 43.5, and Atchafalaya River 0.0 to 40.6	Natchez	40 Ft and Falling	BMCM Matthew Draper	ATON OFFICER
Officer In Charge, USCGC KICKAPOO	Responsible for daily ATON services for LMR 480 to 363	Vicksburg	35 Ft and Falling	BMCM Christopher Stover	
Officer In Charge, USCGC PATOKA	Responsible for daily ATON services for LMR 598 to 480	Greenville	38 Ft and Falling	BMCM Derek Spivey	
Officer In Charge, USCGC KANAWHA	Responsible for daily ATON services for LMR 683 to 598, Arkansas River 10.3 to 71.2, White River 0.0 to 10.3	Helena MKARNS	25 Ft and Falling 110,000 CFS/Slowing	BMCM Robert Harlacher	
Commanding Officer, USCGC KANKAKEE	Responsible for daily ATON services for LMR 813.6 to 683, McKellar Lake 0.0 to 7.2	Memphis	20 Ft and Falling	CWO2 William McCloskey	
Officer In Charge, USCGC CHENA	Responsible for daily ATON services for LMR 953.8 to 813.6	Cairo	20 Ft and Falling	BMCM Derek Franklin*	*SECTOR OHIO VALLEY ASSET
SECTOR STAFF (MEMPHIS, TN)					
Aids to Navigation Officer	Coordinate the short/long term activity of Cutter Fleet, Manage ATON inventory			CWO2 Bryan Hoffman	WATERWAYS MGMT DIV CHIEF
Waterways Management Division Chief	Coordinate the short/long term activity of Cutter Fleet, Manage Safety/Security Zones and Marine Permits.			LT Adam Paz	PREVENTION DEPT. HEAD
Prevention Dept. Head	Coordinate Commercial Vessel Safety Program including Waterways Management, ATON, Marine Inspection and Investigation.			LCDR Byron Rios	DEPUTY SECTOR COMMANDER
Deputy Sector Commander	Second in Command Alternate Captain of the Port, Alternate Federal Maritime Security Coordinator, Alternate Federal On Scene Coordinator, Alternate Officer in Charge of Marine Inspections.			CDR Rebecca Walthour	SECTOR COMMANDER
Sector Commander	Sector Commander Captain of the Port, Federal Maritime Security Coordinator, SAR Mission Coordinator, Federal On Scene Coordinator, Officer in Charge of Marine Inspections			CAPT Roxanne Tamez	DISTRICT CHIEF OF STAFF
EIGHTH COAST GUARD DISTRICT STAFF (NEW ORLEANS, LA)					
Director, Western Rivers	Coordinates all CG Activity on Western Rivers			CAPT Blake Welborn	DISTRICT CHIEF OF STAFF
Chief of Staff	Second in Command			CAPT Shannon Gilreath	DISTRICT COMMANDER

Section 2 – Parties and Roles (continued)

US ARMY CORPS OF ENGINEERS – Memphis District			
POSITION	DUTIES & RESPONSIBILITIES	Current Incumbent	Reports to:
Master, GEORGE C. GRUETT	USACE channel condition patrols. Assist with ATON, per MOU with USCG. Contact pilot, primary liaison with USCG.	Mr. Harold Lawrence	Mr. Matthew Young
USACE MEMPHIS DISTRICT STAFF			
Chief of Navigation	Coordinate the short/long term activity of USACE assets. Primary liaison with USCG.	Mr. Matthew Young	Mr. Russell Davis III
Deputy Commander	Deputy District Engineer for Memphis District	LTC Nathan Molica	COL Zachary Miller
Commander	District Engineer for Memphis District responsible for flood risk management, navigation, environmental stewardship, emergency operations, other authorized civil works, and work for others along 610 miles of the Mississippi and White Rivers, encompassing a 25,000 square mile area in six states: Illinois, Missouri, Arkansas, Kentucky, Tennessee, and Mississippi.	COL Zachary Miller	MG Mark Toy
US ARMY CORPS OF ENGINEERS – Vicksburg District			
POSITION	DUTIES & RESPONSIBILITIES	Current Incumbent	Reports to:
Contact Pilot	Master for on water operations involving USACE assets. Primary liaison with USCG.	Mr. Michael Jensen	Mr. Andy Hall
USACE VICKSBURG DISTRICT STAFF			
Chief of Navigation	Navigation Engineer for Vicksburg District	Mr. Andy Hall	Mr. Joel Brown
Deputy Commander	Deputy District Engineer for Vicksburg District	LTC Frank Duverger	COL Robert Hilliard
Commander	District Engineer for Vicksburg District responsible for flood risk management, navigation, environmental stewardship, emergency operations, other authorized civil works for seven major river basins, including 278 miles of the Mississippi River's main stem, in Arkansas, Louisiana, and Mississippi and about 800 miles of commercially navigable streams and rivers including the Ouachita-Black system, the Pearl, the Red, and the Yazoo rivers.	COL Robert Hilliard	MG Mark Toy
US ARMY CORPS OF ENGINEERS – Mississippi Valley Division			
Commander	Commander USACE Activities within Mississippi Valley Division including St. Paul, Rock Island, St. Louis, Memphis, Vicksburg and New Orleans	MG Mark Toy	LTG Todd Semonite

Section 3 – Communications

Members will include representatives from the Coast Guard, USACE, and industry partners. All individuals within the communications matrix shall participate in the conference call or provide a replacement that has the decision-making authority to act on their behalf. Initial notification of a conference call to interested parties will be through the use of LOMRC Chairman's e-mail distribution list. Unless otherwise stated, the conference line phone number will be provided by the LOMRC Chairman. All members listed in the communications matrix will be added to SLMR's Alert Warning System (AWS) notification list for the Waterways Action Plan. To add or remove contact information from the LOMRC e-mail distribution list, AWS, or WAP system, contact SLMR's Waterways Management Division. This matrix will be updated/verified semi-annually by the Waterways Management Division.

The format of the Waterways Action Plan/Lower Mississippi River Conference is as follows, coordinated by the LOMRC Chairman:

Opening: LOMRC Chairman/Call to Order.

By Agency:

1. National Weather Service:
 - a. Current Rainfall predictions,
 - b. Short and Long term forecast.
2. USACE (by lead District Representative):
 - a. General Overview of River Conditions,
 - b. Current Situation,
 - c. River Forecasts.
3. CG (by Sector LMR):
 - a. Assessment,
 - b. Actions Taken (e.g., Broadcast Notice to Mariners (BNMs)) including current status of Buoy Tenders/Areas worked,
 - c. Anticipated Future Actions Based on River Forecasts.
4. Industry (by lead Committee Representative):
 - a. Assessment,
 - b. Actions Taken,
 - c. Future Actions Based on River Forecasts.
5. General Discussion/Future Plans and Recommendations for Implementation.

Closing: Next Meeting: Discussion of the Focus and Participants in Future Meetings (Based on Projected River Conditions).

Section 4 – Contact Information

LOMRC Representatives

COMPANY / ORGANIZATION	DESIGNATED CONTACT	PHONE NUMBER		E-MAIL ADDRESS	WHEN CONTACTED
LOMRC Chair	Mr. Randall Chamness	Office: 270-441-2968 Mobile: 618-614-3796	Fax: 270-744-9398	randy.chamness@bargeacbl.com	All Situations
LOMRC Vice-Chair	Mr. Jay McDaniel	Office: 225-201-3043 Mobile: 225-978-2984	Fax: 225-201-3090	jay.mcdaniel@kirbycorp.com	All Situations

National Weather Service

COMPANY / ORGANIZATION	DESIGNATED CONTACT	PHONE NUMBER		E-MAIL ADDRESS	WHEN CONTACTED
NWS Forecast Office Memphis, TN	Mr. Jim Belles Meteorologist-in-Charge	Office: 901-544-0401	Fax: 901-544-0414	jim.belles@noaa.gov	All Situations
NWS Forecast Office Little Rock, AR	Ms. Tabitha Clarke Service Hydrologist	Office: 501-834-0308	Fax: 501-834-0715	tabitha.clarke@noaa.gov	All Situations
NWS Forecast Office Jackson, MS	Mr. Marty Pope Service Hydrologist	Office: 601-965-4639, Ext. 228	Fax: 601-965-4028	marty.pope@noaa.gov	All Situations

Federal Contacts

POSITION	INDIVIDUAL	PHONE NUMBER	E-MAIL ADDRESS
Coast Guard Command Center	Duty Watch Stander	Office: 901-521-4822	STL-SMB-SECLMR-CC@uscg.mil
Coast Guard Waterways Manager	LT Adam Paz	Office: 907-521-4825 Mobile: 901-833-0290	adam.j.paz@uscg.mil STL-DG-SECLMR-Waterways@uscg.mil
USACE Chief of Navigation Branch Memphis, TN	Mr. Matthew Young	Office: 901-544-0988 Mobile: 901-481-4470	matt.p.young@usace.army.mil
USACE Chief of River Operations Branch Vicksburg, MS	Mr. Joel Brown	Office: 601-631-7549 Mobile: 601-618-7900	joel.t.brown@usace.army.mil
USACE Chief of Navigation Section Vicksburg, MS	Mr. Andy Hall	Office: 601-631-7691 Mobile: 601-618-8043	andy.s.hall@usace.army.mil
USACE Dredging Unit Chief Vicksburg, MS	Mr. John Mark Henderson	Office: 601-631-7222 Mobile: 601-415-3613	john.m.henderson@usace.army.mil

Section 4 – Contact Information (continued)

Port Directors

COMPANY / ORGANIZATION	MILE MARKER	DESIGNATED CONTACT	PHONE NUMBER		E-MAIL ADDRESS	WHEN CONTACTED
Pemiscot County Port Authority (Caruthersville, MO)	MM 849	Mr. John Ferguson II, Director	Office: 573-333-4125	Fax: 573-333-4216	john@pemiscotport.com	High/Low Water
Port of Blytheville (Blytheville, AR)	MM 810.5	Mr. Wayne Reynolds, Mississippi Co. OEM	Office: 870-563-1309	Fax: 870-763-0150	oem@mississippicountyar.org	High/Low Water
Osceola Riverport Authority (Osceola, AR)	MM 787	Ms. Sally Wilson, Chair	Office: 870-563-5245	Fax: 870-563-5195	sallylongowilson@yahoo.com	High/Low Water
West Memphis Port Authority (West Memphis, AR)	MM 730	Mr. Phillip Sorrell, Director of Economic Development	Office: 870-732-7507	Fax: 870-732-7504	psorrell@citywm.com	High/Low Water
International Port of Memphis (Memphis, TN)	MM 725.5	Mr. Randy Richardson, Executive Director	Office: 901-948-4422	Fax: 901-775-9818	randy@portofmemphis.com	High/Low Water
Helena-West Helena Phillips County Port Authority (Helena, AR)	MM 652	Mr. John Edwards, Economic Development Manager	Office: 870-338-6444 Mobile: 501-680-5248	Fax: 870-338-6445	jedwards@helenaharbor.com johndwardsoffice@gmail.com	High/Low Water
Rosedale-Bolivar County Port Commission (Rosedale, AR)	MM 585	Mr. Robert Maxwell, Port Director	Office: 662-759-6212	Fax: 662-759-6213	info@portofrosedale.com	High/Low Water
Yellow Bend Port (Arkansas City, AR)	MM 552.5	Mr. Rick Hales, Mayor, Arkansas City	Office: 870-877-2306	Fax: 870-877-2306	rickhales1@gmail.com officearcity@gmail.com	High/Low Water
Port of Greenville (Greenville, MS)	MM 537	Mr. Tommy Hart, Port Director	Mobile: 662-820-8309	Fax: 662-335-0804	thart@tecinfo.com	High/Low Water
Port of Lake Providence (Lake Providence, LA)	MM 484.3	Mr. Wyly Gilfoil, Port Commissioner	Office: 318-559-2365 Mobile: 318-282-0620	N/A	wly_gilfoil@msn.com info@lakeprovidenceport.com	High/Low Water
Madison Parish Port (Tallulah, LA)	MM 457	Mr. Terry Murphy, Executive Director	Office: 318-574-2181 Mobile: 318-348-7582	Fax: 318-574-2677	tmurphy@bayou.com madisonport@bayou.com	High/Low Water
Warren County Port Commission (Vicksburg, MS)	MM 437	Mr. Pablo Diaz, Executive Director	Office: 601-631-0555	Fax: 601-636-4422	pablo@vicksburgchamber.org	High/Low Water
Port of Claiborne County (Port Gibson, MS)	MM 404.8	Mr. Clovis Reed, Port Director	Office: 601-437-5216	Fax: 601-437-4430	clovisreed@ccmsgov.us	High/Low Water
Tensas Parish Port Commission (St. Joseph, LA)	MM 387	Ms. Pauline Doyle, Secretary/Treasurer, Tensas Parish Police Jury	Office: 318-766-3542, Ext. 3411	Fax: 318-766-4580	paulinedoyle@tpji.org	High/Low Water

Natchez-Adams County Port Commission (Natchez, MS)	MM 362	Mr. Anthony Hauer, Port Director	Office: 601-442-2561 Toll-Free: 877-870-8954	Fax: 601-445-2041	anthonyhauer@bellsouth.net	High/Low Water
Port of Vidalia (Vidalia, LA)	MM 359	Mr. Wyly Gilfoil, Port Director	Mobile: 318-282-0620	N/A	wly_gilfoil@msn.com	High/Low Water

Section 5 – Internet References

INTERNET SITE PURPOSE	ADDRESS
USACE Mississippi Valley Division- Navigation Connection	http://www2.mvr.usace.army.mil/nic2/default.cfm
USACE Memphis District	http://www.mvm.usace.army.mil/
USACE Vicksburg District	http://www.mvk.usace.army.mil/
CG Sector Lower Mississippi River Homeport	http://homeport.uscg.mil/SLMR Select Port Directory and Sector Lower Mississippi River http://www.uscg.mil/d8/sector/lwrmsrvr
River Gages.com	http://www.rivergages.com
River Industry Bulletin Board	http://www.ribb.com/index.php

Section 6a – Action Plan (Grounding / Casualty)

CRITICAL AREA DESCRIPTION	TIMING	PHASE	ACTION
Grounding inside navigable channel resulting in impact to safe navigation (Sunken barges Unreported shoaling, I=time incident occurred	I	Initial Actions	<ul style="list-style-type: none"> ▪ Responsible Party completes mandatory notifications to USCG. ▪ Sector Lower Mississippi River (SLMR) Command Center notifies principals. ▪ Issue advisory for hazard to navigation. All vessels within 2 hours of casualty site required to report position and Estimated Time of Arrival to site to SLMR Command Center for additional traffic information. ▪ SLMR Response Team deployed.
	I + 4 hours	Action	<ul style="list-style-type: none"> ▪ SLMR Chief, Waterways Management initiates principal conference call to assess status of hazard to navigation, impediments to safe passage by all vessels, need for traffic control, etc. ▪ Assess need to activate communications plan. ▪ Notification to USACE. ▪ Responsible Party (RP) arrange for site survey.
	I + 12 hours	Action	<ul style="list-style-type: none"> ▪ Establish battle rhythm for teleconferences / information sharing. ▪ RP to provide Salvage Plan in writing.
		Recovery	<ul style="list-style-type: none"> ▪ Test tow verification to confirm channel integrity.
		Normal Ops	<ul style="list-style-type: none"> ▪ Cancel Safety Zone and resume normal traffic patterns and tow sizes. ▪ Hot wash actions and update annex as appropriate w/in 48 hrs.

Section 6b – Action Plan (HIGH WATER)

CRITICAL AREA DESCRIPTION	TRIGGER READING	TREND	DESCRIPTION	PHASE	ACTION												
<p>Caruthersville to Memphis</p> <p>LOWER MISSISSIPPI RIVER</p> <p>MM 869.0 – 725.5 (143.5 River Miles)</p> <p>Reference Gauges: Cairo, IL Caruthersville, MO Memphis, TN</p> <p>Trigger Reading Memphis, TN</p> <p>* See Operating Notes for Z drive HP rating and notched tow reference.</p> <p>Bridges: Name MM</p> <p>I-155 838.9 I-40 736.6 Harahan RR 734.7 I-55 734.7</p>	20 feet	Rising	Normal Operations	Watch	<ul style="list-style-type: none"> Initiate communications plan. Issue advisory; indicate high water, exercise extreme caution; discuss voluntary horsepower and tow size restrictions. 												
	25 feet	Rising	High Water	Action	<ul style="list-style-type: none"> Assess need for daylight / visibility / one way traffic restrictions. Assess need to activate Up-Bound transit limits to: <ul style="list-style-type: none"> Maintain an average of 3.0 mph (over ground) prior to bridge transits. Assess need to activate Down-Bound transit limits to: <table border="1"> <thead> <tr> <th>Vessel Horsepower</th> <th>HP / Barge</th> <th>Max Tow Limit</th> </tr> </thead> <tbody> <tr> <td>Less than 6000 HP</td> <td rowspan="4">240 HP / loaded barge (ALL)</td> <td>25</td> </tr> <tr> <td>6001-7200 HP</td> <td>30</td> </tr> <tr> <td>7201-8400 HP</td> <td>35</td> </tr> <tr> <td>Greater than 8401 HP</td> <td>36</td> </tr> </tbody> </table>	Vessel Horsepower	HP / Barge	Max Tow Limit	Less than 6000 HP	240 HP / loaded barge (ALL)	25	6001-7200 HP	30	7201-8400 HP	35	Greater than 8401 HP	36
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	7201-8400 HP		35														
	Greater than 8401 HP		36														
	30 feet	Rising	Extreme High Water	Action	<ul style="list-style-type: none"> Assess need for companies to use wheelman with experience handling current conditions. Assess Down-Bound restrictions to: <ul style="list-style-type: none"> Night time restriction to tows over 110 ft wide at Memphis Bridge. Loaded Red Flag barges in a mix tow shall be placed inboard and protected when possible. Reduce tow sizes based on following constraints, not to exceed 36 total: <table border="1"> <thead> <tr> <th>Vessel Horsepower</th> <th>HP / Barge</th> <th>Max Tow Limit</th> </tr> </thead> <tbody> <tr> <td>Less than 6000 HP</td> <td>280 HP / barge</td> <td>20</td> </tr> <tr> <td rowspan="2">Less than 6000 HP with mixed tow</td> <td>280 HP per load</td> <td rowspan="2">15 loads, 25 total barges</td> </tr> <tr> <td>140 HP per empty</td> </tr> </tbody> </table>	Vessel Horsepower	HP / Barge	Max Tow Limit	Less than 6000 HP	280 HP / barge	20	Less than 6000 HP with mixed tow	280 HP per load	15 loads, 25 total barges	140 HP per empty		
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	Less than 6000 HP with mixed tow	280 HP per load	15 loads, 25 total barges														
		140 HP per empty															
	35 feet	Rising	Extreme High Water	Action	<ul style="list-style-type: none"> Assess further tow restrictions/river closure options. 												
	40 feet	Rising	Extreme High Water	Action	<ul style="list-style-type: none"> Discuss / assess Caruthersville Floodwall precautions (48 ft Caruthersville Gauge) Assess need for 300 HP / barge; 150 HP / empty 												
37 feet	Falling	Extreme High Water	Recovery	<ul style="list-style-type: none"> Assess decreasing HP / tow size restrictions to 30 ft and rising criteria. 													
35 feet	Falling	Extreme High Water	Recovery	<ul style="list-style-type: none"> Implement HP / tow size restrictions for 30 ft and rising criteria. 													
32 feet	Falling	High Water	Recovery	<ul style="list-style-type: none"> Assess decreasing HP / tow size restrictions to 25 ft and rising criteria. 													
30 feet	Falling	High Water	Recovery	<ul style="list-style-type: none"> Implement HP / tow size restrictions for 25 ft and rising criteria. 													
27 feet	Falling	High Water	Recovery	<ul style="list-style-type: none"> Assess removing all restrictions. 													
25 feet	Falling	Normal Operations	Recovery	<ul style="list-style-type: none"> Remove restrictions and resume normal traffic patterns and tow sizes. 													
20 feet	Falling	Normal Operations	Normal Ops	<ul style="list-style-type: none"> Hot wash actions and update annex as appropriate 													

Section 6b – Action Plan (HIGH WATER continued)

CRITICAL AREA DESCRIPTION	TRIGGER READING	TREND	DESCRIPTION	PHASE	ACTION												
<p>Memphis to Vicksburg</p> <p>LOWER MISSISSIPPI RIVER</p> <p>MM 725.5 – 439.0 (286.5 River Miles)</p> <p>Reference Gauges: Memphis, TN Helena, AR Arkansas City, AR Greenville, MS</p> <p>Trigger Reading: Greenville, MS</p> <p>* See Operating Notes for Z drive HP rating and notched tow reference.</p> <p>Bridges: Name MM US-49 661.8 US-82 530.8</p>	40 feet	Rising	Normal Operations	Watch	<ul style="list-style-type: none"> Initiate communications plan. Issue advisory; indicate high water, exercise extreme caution; discuss voluntary horsepower and tow size restrictions. 												
	45 feet	Rising	High Water	Action	<ul style="list-style-type: none"> Assess need for daylight / visibility / one way traffic restrictions. Assess need to activate Up-Bound transit limits to: <ul style="list-style-type: none"> Maintain an average of 3.0 mph (over ground) prior to bridge transits. Assess need to activate Down-Bound transit limits to: <ul style="list-style-type: none"> Reduce tow sizes based on following constraints: <table border="1"> <thead> <tr> <th>Vessel Horsepower</th> <th>HP / Barge</th> <th>Max Tow Limit</th> </tr> </thead> <tbody> <tr> <td>Less than 6000 HP</td> <td rowspan="4">240 HP / loaded barge (ALL)</td> <td>25</td> </tr> <tr> <td>6001-7200 HP</td> <td>30</td> </tr> <tr> <td>7201-8400 HP</td> <td>35</td> </tr> <tr> <td>Greater than 8401 HP</td> <td>36</td> </tr> </tbody> </table>	Vessel Horsepower	HP / Barge	Max Tow Limit	Less than 6000 HP	240 HP / loaded barge (ALL)	25	6001-7200 HP	30	7201-8400 HP	35	Greater than 8401 HP	36
	Vessel Horsepower	HP / Barge	Max Tow Limit														
	Less than 6000 HP	240 HP / loaded barge (ALL)	25														
	6001-7200 HP		30														
	7201-8400 HP		35														
	Greater than 8401 HP		36														
	50 feet	Rising	Extreme High Water	Action	<ul style="list-style-type: none"> Assess need for companies to use wheelman with experience handling current conditions. Assess Down-Bound restrictions to: <ul style="list-style-type: none"> Loaded Red Flag barges in a mix tow shall be placed inboard and protected when possible. Reduce tow sizes based on following constraints, not to exceed 36 total: <table border="1"> <thead> <tr> <th>Vessel Horsepower</th> <th>HP / Barge</th> <th>Max Tow Limit</th> </tr> </thead> <tbody> <tr> <td>Less than 6000 HP</td> <td>280 HP / barge</td> <td>20</td> </tr> <tr> <td rowspan="2">Less than 6000 HP with mixed tow</td> <td>280 HP per load</td> <td rowspan="2">15 loads, 25 total barges</td> </tr> <tr> <td>140 HP per empty</td> </tr> </tbody> </table>	Vessel Horsepower	HP / Barge	Max Tow Limit	Less than 6000 HP	280 HP / barge	20	Less than 6000 HP with mixed tow	280 HP per load	15 loads, 25 total barges	140 HP per empty		
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	Less than 6000 HP	280 HP / barge	20														
	Less than 6000 HP with mixed tow	280 HP per load	15 loads, 25 total barges														
		140 HP per empty															
	55 feet	Rising	Extreme High Water	Action	<ul style="list-style-type: none"> Assess further tow restrictions / river closure options Assess need for 300 HP / barge; 150 HP / empty 												
	57 feet	Falling	Extreme High Water	Recovery	Assess decreasing HP / tow size restrictions to 50 ft and rising criteria.												
55 feet	Falling	Extreme High Water	Recovery	Implement HP / tow size restrictions for 50 ft and rising criteria.													
52 feet	Falling	Extreme High Water	Recovery	Assess decreasing HP / tow size restrictions to 45 ft and rising criteria.													
50 feet	Falling	Extreme High Water	Recovery	Implement HP / tow size restrictions for 45 ft and rising criteria.													
47 feet	Falling	High Water	Recovery	Assess removing all restrictions.													
45 feet	Falling	High Water	Recovery	Remove restrictions and resume normal traffic patterns and tow sizes.													
40 feet	Falling	Normal Operations	Normal Ops	Hot wash actions and update annex as appropriate.													

Section 6b – Action Plan (HIGH WATER continued)

CRITICAL AREA DESCRIPTION	TRIGGER READING	TREND	DESCRIPTION	PHASE	ACTION												
<p>Vicksburg to Natchez</p> <p>LOWER MISSISSIPPI RIVER</p> <p>MM 439.0 – 303.0 (136.0 River Miles)</p> <p>Reference Gauges: Greenville, MS Vicksburg, MS Natchez, LA</p> <p>Trigger Reading: Vicksburg, MS</p> <p>* See Operating Notes for Z drive HP rating and notched tow reference.</p> <p>Bridges: Name MM Old US-80 435.8 I-20 435.7 US-84 363.3</p>	30 feet	Rising	Normal Operations	Watch	<ul style="list-style-type: none"> Initiate communications plan. Issue advisory; indicate high water, exercise extreme caution; discuss voluntary horsepower and tow size restrictions. 												
	36 feet	Rising	High Water	Action	<ul style="list-style-type: none"> Assess need for daylight / visibility / one way traffic restrictions. Assess need to stand up Vicksburg Information Center. Assess need to activate Up-Bound transit limits to: <ul style="list-style-type: none"> Maintain an average of 3.0 mph (over ground) prior to bridge transits. Assess need to activate Down-Bound transit limits to: <ul style="list-style-type: none"> Reduce tow sizes based on following constraints: <table border="1"> <thead> <tr> <th>Vessel Horsepower</th> <th>HP / Barge</th> <th>Max Tow Limit</th> </tr> </thead> <tbody> <tr> <td>Less than 6000 HP</td> <td rowspan="4">240 HP / loaded barge (ALL)</td> <td>25</td> </tr> <tr> <td>6001-7200 HP</td> <td>30</td> </tr> <tr> <td>7201-8400 HP</td> <td>35</td> </tr> <tr> <td>Greater than 8401 HP</td> <td>36</td> </tr> </tbody> </table>	Vessel Horsepower	HP / Barge	Max Tow Limit	Less than 6000 HP	240 HP / loaded barge (ALL)	25	6001-7200 HP	30	7201-8400 HP	35	Greater than 8401 HP	36
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	Less than 6000 HP	240 HP / loaded barge (ALL)	25														
	6001-7200 HP		30														
	7201-8400 HP		35														
	Greater than 8401 HP		36														
	40 feet	Rising	Extreme High Water	Action	<ul style="list-style-type: none"> Assess need for companies to use wheelman with experience handling current conditions. Establish Vicksburg Information Center (If rise is predicted to continue beyond 42 ft) Assess Down-Bound restrictions to: <ul style="list-style-type: none"> Night time restriction to tows over 110 ft wide at Vicksburg Bridge. Loaded Red Flag barges in a mix tow shall be placed inboard and protected when possible. Reduce tow sizes based on following constraints, not to exceed 36 total: <table border="1"> <thead> <tr> <th>Vessel Horsepower</th> <th>HP / Barge</th> <th>Max Tow Limit</th> </tr> </thead> <tbody> <tr> <td>Less than 6000 HP</td> <td>280 HP / barge</td> <td>20</td> </tr> <tr> <td rowspan="2">Less than 6000 HP with mixed tow</td> <td>280 HP per load</td> <td rowspan="2">15 loads, 25 total barges</td> </tr> <tr> <td>140 HP per empty</td> </tr> </tbody> </table>	Vessel Horsepower	HP / Barge	Max Tow Limit	Less than 6000 HP	280 HP / barge	20	Less than 6000 HP with mixed tow	280 HP per load	15 loads, 25 total barges	140 HP per empty		
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	Less than 6000 HP	280 HP / barge	20														
	Less than 6000 HP with mixed tow	280 HP per load	15 loads, 25 total barges														
		140 HP per empty															
	45 feet	Rising	Extreme High Water	Action	<ul style="list-style-type: none"> Assess further tow restrictions/river closure options Assess need to reduce tow sizes to 30 barges max depending on conditions. Assess need for MSIB Down-Bound restrictions at Vicksburg Bridge as per MSIB Vicksburg Enclosure 7 (example). Assess need for Natchez Safety Zone, levee protection (55 ft Natchez Gauge). 												
50 feet	Rising	Extreme High Water	Action	<ul style="list-style-type: none"> Assess need for 300 HP / barge, max 30 barges. 													
47 feet	Falling	Extreme High Water	Recovery	<ul style="list-style-type: none"> Assess decreasing HP / tow size restrictions to 40 ft and rising criteria. 													
45 feet	Falling	Extreme High Water	Recovery	<ul style="list-style-type: none"> Implement HP / tow size restrictions for 40 ft and rising criteria. 													
42 feet	Falling	Extreme High Water	Recovery	<ul style="list-style-type: none"> Assess decreasing HP / tow size restrictions to 36 ft and rising criteria. 													
40 feet	Falling	Extreme High Water	Recovery	<ul style="list-style-type: none"> Implement HP / tow size restrictions for 36 ft and rising criteria. 													
38 feet	Falling	High Water	Recovery	<ul style="list-style-type: none"> Assess removing restrictions. 													
36 feet	Falling	High Water	Recovery	<ul style="list-style-type: none"> Remove restrictions and resume normal traffic patterns and tow sizes. 													
30 feet	Falling	Normal Operations	Normal Ops	<ul style="list-style-type: none"> Hot wash actions and update annex as appropriate w/in 48 hrs. 													

High Water Notes

- The entrance to McKellar Lake (MM 725.5) is the dividing line between the Caruthersville to Memphis and the Memphis to Vicksburg Waterways Action Plan (WAP) areas. This allows vessels to drop off or pick up tows, depending on the direction they are headed.
- Caruthersville riverfront floodwall is at an elevation of 50 ft on the Caruthersville Gauge. U.S. Army Corps of Engineers (USACE) requests no traffic after **48 ft on the Caruthersville Gauge**.
- Natchez/Vidalia riverfront levees are at an elevation of **57 ft on the Natchez Gauge**. USACE and local government request vessels transit in the center of the channel at the slowest safe speed with one-way traffic (i.e.: No meeting, passing, or overtaking) and one mile spacing between tows from MM 361 to MM 365 for river levels **55 ft and rising on the Natchez Gauge**.
- Factors that should be considered in making the decision to stand up the Vicksburg Information Center (VIC) include the Mississippi River current, the rate of rise on the Mississippi River, and the flow rate of the Yazoo River. The VIC should be operated by industry representatives and the Coast Guard should provide oversight and assistance as needed.
- The Lower Mississippi River Committee (LOMRC) chairman or vice chairman will normally keep the Regional Advocate for the American Waterways Operators Association (AWO) and the River Industry Executive Task Force (RIETF) apprised of current levels and associated restrictions to allow for better flow of commerce throughout the entire river system and its suppliers/customers.

Operating Notes

- All tow operators and towing companies should use a ratio of 240 HP per standard barge or 480 HP per oversize barge for southbound transits during high water, and a ratio of 280 HP per standard barge or 560 HP per oversize barge for southbound transits during extreme high water. For the purpose of this calculation, barges with dimensions 290 ft x 50 ft or larger are considered “oversize”, while barges with dimensions less than 290 ft x 50 ft are considered “standard”. If one of the barge dimensions (length or width) meets or exceeds the 290 ft x 50 ft, then the barge is considered “oversize.” Empty barges may be calculated at one-half the horsepower requirements to that of a loaded barge when computing the overall horsepower requirement.
- While it is not considered necessary to square off down-bound tows in the SLMR area during high water periods, tow operators may add up to two additional barges to square off their tows and avoid a “notch” or “spike” in the tow. Requests for vessels to push more than two additional barges, in excess of established horsepower requirements to fill in a “notch” in the tow, will be handled on a case-by-case basis.
- Vessels with azimuth propulsion (“Z-Drives”) or cycloidal propellers may generally be considered to have 20 percent more than their actual horsepower rating for DOWN-BOUND TOWS.

Historic Safety Zones for High Water Events:

- Entergy Nuclear Power Company “Grand Gulf Nuclear Facility” LMR MM 405.0 to MM 408.0 at **47 ft Vicksburg Gauge**.
- Vidalia/Natchez Levees LMR MM 361.0 to MM 365.0 at **55 ft Natchez Gauge**.
- Caruthersville Floodwall LMR MM 845.0 to MM 847.0 at **48 ft Caruthersville Gauge**.
- Old River Control Structure LMR MM 311 to MM 317, IAW 33 CFR 165.802, at **60 ft Knox Landing Gauge**.

HIGH WATER BROADCAST NOTICE TO MARINERS (BNM) Enclosure 1 (example)

THE COTP LOWER MISSISSIPPI RIVER IS ISSUING A SAFETY ADVISORY DUE TO THE EXPECTED RAPID INCREASE IN RIVER LEVELS ON THE LOWER MISSISSIPPI RIVER OVER THE NEXT SEVERAL DAYS. MARINERS ARE ADVISED TO TRANSIT THE AREA WITH CAUTION DUE TO THE HAZARDOUS CONDITIONS ASSOCIATED WITH STRONG CURRENTS, SEVERE OUT DRAFTS, MISSING/OFF STATION ATON, AND DIVING BUOYS. FLEET OPERATORS SHOULD REGULARLY CHECK THEIR FLEETS AND IMMEDIATELY REPORT BARGE BREAKAWAYS TO THE USCG.

HIGH WATER BNM 240 HP RESTRICTION Enclosure 2 (example)

1. THE COTP LOWER MISSISSIPPI RIVER IS ISSUING A HIGH WATER SAFETY ADVISORY FOR THE LOWER MISSISSIPPI RIVER FROM MM **XXX** TO MM **XXX**.
2. MARINERS ARE ADVISED TO TRANSIT THE LMR WITH CAUTION DUE TO THE HAZARDOUS CONDITIONS ASSOCIATED WITH STRONG CURRENTS, SEVERE OUTDRAFTS, MISSING/OFF STATION ATON, AND DIVING BUOYS.
3. THE COTP, WITH THE CONCURRENCE OF THE LOWER MISSISSIPPI RIVER COMMITTEE, RECOMMENDS THE FOLLOWING LIMITS FOR TOWS TRANSITING THE LMR FROM MM **XXX** TO MM **XXX** WHEN THE **MEMPHIS GAUGE REACHES 25 FT AND/OR GREENVILLE GAUGE REACHES 45 FT AND/OR VICKSBURG GAUGE REACHES 36 FT**.
4. ALL DOWN-BOUND TOWS:
 - A. TOWING VESSELS MUST HAVE AT LEAST 240 HP PER BARGE WITH A MAXIMUM TOW SIZE OF 36 BARGES.
 - B. TOWING VESSELS WITH LESS THAN 6000 HP A MAXIMUM TOW SIZE OF 25 LOADED BARGES.
 - C. TOWING VESSELS WITH 6001 HP TO 7200 HP A MAXIMUM TOW SIZE OF 30 BARGES.
 - D. TOWING VESSELS WITH 7201 HP TO 8400 HP A MAXIMUM TOW SIZE OF 35 BARGES.
 - E. TOWING VESSELS WITH GREATER THAN 8401 HP A MAXIMUM TOW SIZE OF 36 BARGES.
 - F. REFER TO WATERWAYS ACTION PLAN FOR FURTHER DETAILS.
5. ALL UP-BOUND TOWS:
 - A. MUST MAINTAIN AN AVERAGE SPEED OF 3.0 MPH OVER THE GROUND FOR TWO MILES LEADING UP TO THE **MEMPHIS AND/OR VICKSBURG** BRIDGES. IF A TOW IS UNABLE TO AVERAGE A MINIMUM SPEED OF 3 MPH, IT MUST ARRANGE FOR AN ASSIST TUG OR REDUCE TOW SIZE THROUGH THE **MEMPHIS AND/OR VICKSBURG** BRIDGES.
6. FLEET OPERATORS SHOULD REGULARLY CHECK THEIR FLEETS AND IMMEDIATELY REPORT BARGE BREAKAWAYS TO THE U.S. COAST GUARD.
7. MARINERS ARE REQUESTED TO CONTACT SECTOR LMR ON CH-16 VHF-FM OR VIA TELEPHONE AT 866-777-2784 FOR FURTHER INFORMATION OR TO REPORT AREAS OF CONCERN.

EXTREME HIGH WATER BNM 280 HP RESTRICTION Enclosure 3 (example)

1. THE COTP LOWER MISSISSIPPI RIVER IS ISSUING AN EXTREME HIGH WATER SAFETY ADVISORY FOR THE LOWER MISSISSIPPI RIVER FROM MM XXX TO MM XXX.
2. MARINERS ARE ADVISED TO TRANSIT THE LMR WITH CAUTION DUE TO THE HAZARDOUS CONDITIONS ASSOCIATED WITH STRONG CURRENTS, SEVERE OUTDRAFTS, MISSING/OFF STATION ATON, AND DIVING BUOYS.
3. THE COTP, WITH THE CONCURRENCE OF THE LOWER MISSISSIPPI RIVER COMMITTEE, RECOMMENDS THE FOLLOWING LIMITS FOR TOWS TRANSITING THE LMR FROM MM XXX TO MM XXX WHEN THE MEMPHIS GAUGE REACHES 35 FT AND/OR GREENVILLE GAUGE REACHES 50 FT AND/OR VICKSBURG GAUGE REACHES 40 FT.
4. ALL DOWN-BOUND TOWS:
 - A. WHEELMEN ARE TO HAVE EXPERIENCE HANDLING CURRENT CONDITIONS.
 - B. TOWING VESSELS MUST HAVE AT LEAST 280 HP PER LOADED BARGE OR 140 HP PER EMPTY WITH A MAXIMUM OF 36 BARGES.
 - C. TOWING VESSELS WITH LESS THAN 6000 HP A MAXIMUM TOW SIZE OF 20 LOADED BARGES.
 - D. TOWING VESSELS WITH LESS THAN 6000 HP, WITH A MIXED TOW, CAN PUSH A MAXIMUM TOW SIZE OF 15 LOADS AND 10 EMPTIES FOR A TOTAL MIXED TOW SIZE OF 25 BARGES.
 - E. NO NIGHT TIME TRANSIT OF THE VICKSBURG AND/OR MEMPHIS BRIDGES FOR TOWS WIDER THAN 110 FT.
 - F. ALL LOADED RED FLAG BARGES IN MIXED TOWS SHALL BE PLACED IN INBOARD STRINGS, SHALL NOT BE A LEAD LOAD IN ANY STRING, AND SHALL BE COVERED/PROTECTED BY A DRY-CARGO OR EMPTY RED FLAG BARGE, IF POSSIBLE.
 - G. REFER TO THE WATERWAYS ACTION PLAN FOR FURTHER DETAILS.
5. ALL UP-BOUND TOWS:
 - A. MUST MAINTAIN AN AVERAGE SPEED OF 3.0 MPH OVER THE GROUND FOR TWO MILES LEADING UP TO THE MEMPHIS AND/OR VICKSBURG BRIDGES. IF A TOW IS UNABLE TO AVERAGE A MINIMUM SPEED OF 3 MPH, IT MUST ARRANGE FOR AN ASSIST TUG OR REDUCE TOW SIZE THROUGH THE MEMPHIS AND/OR VICKSBURG BRIDGES.
6. FLEET OPERATORS SHOULD REGULARLY CHECK THEIR FLEETS AND IMMEDIATELY REPORT BARGE BREAK-AWAYS TO THE U.S. COAST GUARD.
7. MARINERS ARE REQUESTED TO CONTACT SECTOR LMR ON CH-16 VHF-FM OR VIA TELEPHONE AT 866-777-2784 FOR FURTHER INFORMATION OR TO REPORT AREAS OF CONCERN.

EXTREME HIGH WATER BNM 300 HP RESTRICTION Enclosure 4 (example)

1. THE COTP LOWER MISSISSIPPI RIVER IS ISSUING AN EXTREME HIGH WATER SAFETY ADVISORY FOR THE LOWER MISSISSIPPI RIVER FROM MM XXX TO MM XXX. THE FOLLOWING RESTRICTIONS ARE NOW IN EFFECT.
2. MARINERS ARE ADVISED TO TRANSIT THE LMR WITH CAUTION DUE TO THE HAZARDOUS CONDITIONS ASSOCIATED WITH STRONG CURRENTS, SEVERE OUTDRAFTS, MISSING/OFF STATION ATON, AND DIVING BUOYS.
3. THE COTP, WITH THE CONCURRENCE OF THE LOWER MISSISSIPPI RIVER COMMITTEE, RECOMMENDS THE FOLLOWING LIMITS FOR TOWS TRANSITING THE LMR FROM MM XXX TO MM XXX WHEN THE MEMPHIS GAUGE REACHES 40 FT AND/OR GREENVILLE GAUGE REACHES 55 FT AND/OR VICKSBURG GAUGE REACHES 50 FT.
4. ALL DOWN-BOUND TOWS:
 - A. WHEELMEN ARE TO HAVE EXPERIENCE HANDLING CURRENT CONDITIONS.
 - B. TOWING VESSELS MUST HAVE AT LEAST 300 HP PER LOADED BARGE WITH A MAXIMUM OF 30 (Vicksburg Gauge) BARGES.
 - C. TOWING VESSELS MUST HAVE AT LEAST 150 HP PER EMPTY BARGE WITH A MAXIMUM OF 25 OR 20 (Vicksburg Gauge) BARGES.
 - D. NO NIGHT TIME TRANSIT OF THE MEMPHIS AND VICKSBURG BRIDGES FOR TOWS WIDER THAN 110 FT.
 - E. ALL LOADED RED FLAG BARGES IN MIXED TOWS SHALL BE PLACED IN INBOARD STRINGS, SHALL NOT BE A LEAD LOAD IN ANY STRING, AND SHALL BE COVERED/PROTECTED BY A DRY-CARGO OR EMPTY RED FLAG BARGE, IF POSSIBLE.
 - F. REFER TO THE WATERWAYS ACTION PLAN FOR FURTHER DETAILS.
5. ALL UP-BOUND TOWS:
 - A. MUST MAINTAIN AN AVERAGE SPEED OF 3.0 MPH OVER THE GROUND FOR TWO MILES LEADING UP TO THE MEMPHIS AND/OR VICKSBURG BRIDGES. IF A TOW IS UNABLE TO AVERAGE A MINIMUM SPEED OF 3 MPH, IT MUST ARRANGE FOR AN ASSIST TUG OR REDUCE TOW SIZE THROUGH THE MEMPHIS AND/OR VICKSBURG BRIDGES.
6. FLEET OPERATORS SHOULD REGULARLY CHECK THEIR FLEETS AND IMMEDIATELY REPORT BARGE BREAK-AWAYS TO THE U.S. COAST GUARD.
7. MARINERS ARE REQUESTED TO CONTACT SECTOR LMR ON CH-16 VHF-FM OR VIA TELEPHONE AT 866-777-2784 FOR FURTHER INFORMATION OR TO REPORT AREAS OF CONCERN.

HIGH WATER VICKSBURG INFORMATION CENTER (VIC) BNM Enclosure 5 (example)

1. AS THE VICKSBURG GAUGE HAS REACHED 40 FT, THE LOWER MISSISSIPPI RIVER COMMITTEE (LOMRC) HAS NOW ESTABLISHED THE VICKSBURG INFORMATION CENTER (VIC) TO PROVIDE MARINERS WITH THE MOST CURRENT INFORMATION RELATED TO RIVER CONDITIONS EFFECTING TRANSIT THROUGH THE VICKSBURG BRIDGES AND APPROACH.
2. THE FOLLOWING GUIDELINES ARE IN PLACE TO AID IN THE SAFE TRANSIT OF THE VICKSBURG BRIDGES AND APPROACH.
 - A. DOWN-BOUND TOWS GREATER THAN 110 FT SHALL ONLY TRANSIT THROUGH THE VICKSBURG BRIDGES FROM SUNRISE TO SUNSET WHILE THE VIC IS IN OPERATION.
 - B. DOWN-BOUND TOWS WILL CHECK IN WITH THE VIC DURING DAYLIGHT HOURS AT THE FOLLOWING LOCATIONS: MM 455 – MILLIKEN BEND AND MM 445 – BROWNS POINT
 - C. UP-BOUND TOWS WILL NORMALLY BE CLEARED DURING THE NIGHT, BUT CAN BE PASSED DURING THE DAY IF DOWN-BOUND TRAFFIC IS LIGHT, OR IF THE VIC COORDINATOR DEEMS IT SAFE.
 - D. VESSEL QUEUES WILL BE MAINTAINED BY THE VIC DURING THIS HIGH WATER EVENT.
3. THE VIC CAN BE REACHED VIA TELEPHONE (PRIMARY CONTACT) AT 601-631-3428 OR ON CH-13 VHF-FM.

HIGH WATER MARINE SAFETY INFORMATION BROADCAST (MSIB) Enclosure 7 (example)

Down Bound Measures at Vicksburg R/R Bridge MM 435.6

Due to the Vicksburg Gauge progressing above 40 feet, the Lower Mississippi River Committee (LOMRC) established the Vicksburg Information Center (VIC) to provide mariners with the most current information related to river conditions effecting transit through the Vicksburg Bridges and approach. Below are guidelines for the VIC to follow when this MSIB is issued after river levels have risen above 45 feet on the Vicksburg Gauge.

The COTP LMR and LOMRC require all vessels to follow actions before and during transit through this area.

- A. Each vessel shall have a briefing with their Port Captain prior to transiting to Kings Point, MM 439.8 LMR.

This briefing shall include but is not limited to the following:

- a. Confirm tow size and horsepower of vessel meet COTP requirement.
 - b. Review river stage and conditions at Vicksburg, MS.
 - c. Review all information reported from the VIC and other vessels.
 - d. Evaluate wheelhouse experience level of both Captain and Pilot.
 - e. Identify which wheelhouse person has the most recent experience with current conditions.
 - f. Determine who will be operating the vessel through the area based on discussion.
 - g. Confirm everyone involved has a clear understanding of the circumstances.
- B. Once discussion and plan is complete with Port Captain, the wheelhouse is required to receive an update from the VIC prior to proceeding below Kings Point, MM 439.8 LMR.
- C. The VIC is required to confirm wheelhouse personnel have answered “YES” to the following questions prior to vessel being cleared to proceed Down-Bound and transit the area. If they answer “NO” to any of these questions, the tow must stop until all criteria are corrected.
- a. Are you comfortable given this tow configuration and at this river stage to transit the bridge?
 - b. Is the tow configured correctly?
- D. Down-Bound tows greater than 110 feet and Red Flag vessels shall only transit though the Vicksburg Bridges from sunrise to sunset while the VIC is in operation.
- E. Down-Bound tows will check in with the VIC during daylight hours at the following locations:
- a. MM 455 – Milliken Bend
 - b. MM 445 – Browns Point
- F. Down-Bound dry-cargo, mix tow, and Red Flag tows:
- a. All loaded Red Flag barges in mixed tows shall be placed in inboard strings, shall not be a lead load in any string, and shall be covered/protected by a dry-cargo barge or empty Red Flag barge, when possible.
- G. Up-Bound tows will normally be cleared during the night, but can be passed during the day if Down-Bound traffic is light, or if the VIC Coordinator deems it safe.
- H. The VIC is required to confirm wheelhouse personnel have answered “YES” to the following questions prior to vessel being cleared to precede Up-Bound and transit the area. If they answer “NO”, the tow must make use of an assist boat to transit the Vicksburg Bridge.
- a. Are you capable of maintaining a minimum of 3 mph over the ground for the two miles leading up to the bridges?
- I. Vessel queues will be maintained by the Vicksburg Information Center during this high water event.

- J. The Vicksburg Information Center (VIC) can be reached on CH-13 VHF-FM or via telephone at 601-631-3428, which is the primary method of contact.
- K. All tow vessels shall have a paper or electronic copy of this MSIB in the wheelhouse.

For additional information, contact the following:

Waterways Management: (901) 521-4825

Email address: STL-DG-SECLMR-WATERWAYS@uscg.mil

Sector LMR Command Center (24 hour): (901) 521-4822 or Channel 16 VHF-FM

Section 6c – Action Plan (LOW WATER)

CRITICAL AREA DESCRIPTION	TRIGGER READING	TREND	DESCRIPTION	PHASE	ACTION
Caruthersville to Memphis LOWER MISSISSIPPI RIVER MM 869.0 – 725.5 (143.5 River Miles) Reference Gauges: Cairo, IL Caruthersville, MO Memphis, TN Trigger Reading Memphis, TN	Above 5 feet		Normal Operations		<ul style="list-style-type: none"> ▪ Normal Operations. ▪ No restrictions on traffic.
	5 feet	Falling	Low Water	Watch	<ul style="list-style-type: none"> ▪ Initiate Communications Plan. ▪ Issue Low Water Advisory. ▪ Discuss voluntary draft and tow size restrictions.
	0 feet	Falling	Low Water	Action	<p>Consider:</p> <ul style="list-style-type: none"> ▪ Where channel is less than 600 feet in bends: <ul style="list-style-type: none"> - Assess need for transit restrictions. Where “bump-and-go” reported: <ul style="list-style-type: none"> ▪ Redirect USACE dredge/survey services. ▪ Redirect USCG ATON services.
	-8 feet and lower	Falling	Extreme Low Water	Action	<ul style="list-style-type: none"> ▪ Implement restrictions prohibiting traffic if needed. ▪ Implement twice daily conference calls to assess situation. ▪ Continue monitoring mitigation strategies for additional preventative measure for implementation.
	-8 feet and lower	Rising	Extreme Low Water	Recovery	<ul style="list-style-type: none"> ▪ Continue restrictions. ▪ Employ test tow(s) pushing non-regulated cargo loaded to gain sense of channel’s ability to support limited navigation restrictions are in place. ▪ Assess ATON status. ▪ USACE surveys of channel following dredging to identify build-ups.
	-5 feet	Rising	Extreme Low Water	Recovery	<ul style="list-style-type: none"> ▪ Send test tow through area. ▪ Maintain transit restrictions as needed.
	0 feet	Rising	Low Water	Recovery	<ul style="list-style-type: none"> ▪ Lift transit restrictions
	Greater than 5 feet	Rising	Normal Operations	Recovery	<ul style="list-style-type: none"> ▪ Issue final advisory, indicate return to normal operations. ▪ Report hazardous conditions to Coast Guard. ▪ Schedule hot wash of activity to refine actions.

Section 6c – Action Plan (LOW WATER continued)

CRITICAL AREA DESCRIPTION	TRIGGER READING	TREND	DESCRIPTION	PHASE	ACTION
<p>Memphis to Greenville</p> <p>LOWER MISSISSIPPI RIVER</p> <p>MM 725.5 – 520.0 (205.5 River Miles)</p> <p>Reference Gauges: Memphis, TN Helena, AR Arkansas City, AR Greenville, MS</p> <p>Trigger Reading: Greenville, MS</p>	Above 20 feet		Normal Operations		<ul style="list-style-type: none"> ▪ Normal Operations. ▪ No restrictions on traffic.
	20 feet	Falling	Low Water	Watch	<ul style="list-style-type: none"> ▪ Initiate Communications Plan. ▪ Issue Low Water Advisory. ▪ Discuss voluntary draft and tow size restrictions.
	15 feet	Falling	Low Water	Action	<p>Consider:</p> <ul style="list-style-type: none"> ▪ Where channel is less than 600 feet in bends: <ul style="list-style-type: none"> - Assess need for transit restrictions. <p>Where “bump-and-go” reported:</p> <ul style="list-style-type: none"> ▪ Redirect USACE dredge/survey services. ▪ Redirect USCG ATON services.
	10 feet	Falling	Extreme Low Water	Action	<ul style="list-style-type: none"> ▪ Implement restrictions prohibiting traffic if needed. ▪ Implement twice daily conference calls to assess situation. ▪ Continue monitoring mitigation strategies for additional preventative measure for implementation.
	10 feet	Rising	Extreme Low Water	Recovery	<ul style="list-style-type: none"> ▪ Continue restrictions. ▪ Employ test tow(s) pushing non-regulated cargo loaded to gain sense of channel’s ability to support limited navigation restrictions are in place. ▪ Assess ATON status. ▪ USACE surveys of channel following dredging to identify build-ups.
	15 feet	Rising	Extreme Low Water	Recovery	<ul style="list-style-type: none"> ▪ Send test tow through area. ▪ Maintain transit restrictions as needed.
	20 feet	Rising	Low Water	Recovery	<ul style="list-style-type: none"> ▪ Lift restrictions.
	Above 20 feet	Rising	Normal Operations	Recovery	<ul style="list-style-type: none"> ▪ Issue final advisory, indicate return to normal operations. ▪ Report hazardous conditions to Coast Guard. ▪ Schedule hot wash of activity to refine actions.

Section 6c – Action Plan (LOW WATER continued)

CRITICAL AREA DESCRIPTION	TRIGGER READING	TREND	DESCRIPTION	PHASE	ACTION
<p>Greenville to Natchez</p> <p>LOWER MISSISSIPPI RIVER</p> <p>MM 520.0 – 303.0 (217.0 River Miles)</p> <p>Reference Gauges: Greenville, MS Vicksburg, MS Natchez, LA</p> <p>Trigger Reading: Vicksburg, MS</p>	Above 10 feet		Normal Operations		<ul style="list-style-type: none"> ▪ Normal Operations. ▪ No restrictions on traffic.
	10 feet	Falling	Low Water	Watch	<ul style="list-style-type: none"> ▪ Initiate Communications Plan. ▪ Issue Low Water Advisory. ▪ Discuss voluntary draft and tow size restrictions. ▪ Initiate USACE Communication for Miller Materials Operations barge loading constraints.
	7 feet	Falling	Low Water	Action	<p>Consider:</p> <ul style="list-style-type: none"> ▪ Where channel is less than 600 feet in bends: <ul style="list-style-type: none"> - Assess need for transit restrictions. Where “bump-and-go” reported: <ul style="list-style-type: none"> ▪ Redirect USACE dredge/survey services. ▪ Redirect USCG ATON services.
	5 feet	Falling	Extreme Low Water	Action	<ul style="list-style-type: none"> ▪ Implement restrictions prohibiting traffic if needed. ▪ Implement twice daily conference calls to assess situation. ▪ Continue monitoring mitigation strategies for additional preventative measure for implementation.
	5 feet	Rising	Extreme Low Water	Recovery	<ul style="list-style-type: none"> ▪ Continue restrictions. ▪ Employ test tow(s) pushing non-regulated cargo loaded to gain sense of channel’s ability to support limited navigation restrictions are in place. ▪ Assess ATON status. ▪ USACE surveys of channel following dredging to identify build-ups.
	7 feet	Rising	Extreme Low Water	Recovery	<ul style="list-style-type: none"> ▪ Send test tow through area. ▪ Maintain transit restrictions as needed.
	10 feet	Rising	Low Water	Recovery	<ul style="list-style-type: none"> ▪ Lift transit restrictions.
	Above 10 feet	Rising	Normal Operations	Recovery	<ul style="list-style-type: none"> ▪ Issue final advisory, indicate return to normal operations. ▪ Report hazardous conditions to Coast Guard. ▪ Schedule hot wash of activity within 48 hrs to refine actions.

LOW WATER BROADCAST NOTICE TO MARINERS (BNM) Enclosure 1 (example)

1. LOW WATER CONDITIONS ARE FORECASTED IN THE (MEMPHIS / GREENVILLE / VICKSBURG) COTP ZONE. US ARMY CORPS OF ENGINEERS MAINTAINED DEPTH AND WIDTH MAY NOT BE OBTAINABLE ON ALL BUOY LINES. IT IS ADVISED THAT ALL MARINERS MONITOR ALL GAUGE READINGS FOR SAFE NAVIGATION.

LOW WATER BNM Enclosure 2 (example)

1. THE U.S. COAST GUARD CAPTAIN OF THE PORT LOWER MISSISSIPPI RIVER IS ISSUING A LOW WATER SAFETY ADVISORY FOR THE LOWER MISSISSIPPI RIVER FROM MM XXX TO MM XXX.
2. MARINERS SHOULD TRANSIT WITH CAUTION, AND ARE ADVISED THAT USACE MAINTAINED DEPTH AND WIDTH MAY NOT BE AVAILABLE ON ALL BUOY LINES.
3. MARINERS ARE REQUESTED TO TRANSIT FLEETING AREAS AND FLEETS WITH AS WIDE OF BERTH AS IS SAFE.
4. THE COTP, WITH THE CONCURRENCE OF THE LOWER MISSISSIPPI RIVER COMMITTEE, RECOMMENDS THE FOLLOWING LIMITS FOR TOWS TRANSITING THE LOWER MISSISSIPPI RIVER FROM MM XXX TO MM XXX.
5. FOR ALL UP BOUND TOWS:
 - A. MAXIMUM XX BARGES.
 - B. DRAFTS NO GREATER THAN XX FT XX IN.
 - C. LOADED BARGES TO BE CONFIGURED XX WIDE AND XX LONG, TO BE PLACED IN THE CENTER OF THE TOW. OVERALL TOW CONFIGURATION NOT TO EXCEED XX WIDE AND XX LONG OR XX WIDE AND XX LONG.
6. FOR ALL DOWN BOUND TOWS:
 - A. MAXIMUM XX BARGES.
 - B. DRAFTS NO GREATER THAN XX FT XX IN.
 - C. LOADED BARGES TO BE CONFIGURED XX WIDE AND XX LONG, TO BE PLACED IN THE CENTER OF THE TOW. OVERALL TOW CONFIGURATION NOT TO EXCEED XX WIDE AND XX LONG OR XX WIDE AND XX LONG.
7. ALL BARGES THAT ARE CURRENTLY IN THE SYSTEM WITH DRAFTS GREATER THAN XX FT XX IN SHALL BE PLACED AS NEAR TO THE CENTER OF THE TOW AS POSSIBLE.
8. MARINERS ARE REQUESTED TO CONTACT SECTOR LMR VIA VHF-FM CH-16 OR VIA TELEPHONE AT 866-777-2784 TO REPORT SHOALING, HAZARDOUS CONDITIONS, OR MISSING ATON.

LOW WATER EMERGENCY DREDGING BNM Enclosure 3 (example)

1. STARTING DATE AND CONTINUING THROUGH DATE, THE DREDGE VESSEL AND ATTENDING PLANT WILL BE OPERATING AT LOCATION, MM XXX, RIGHT/LEFT DESCENDING BANK. MARINERS ARE ADVISED TO TRANSIT THE AREA WITH EXTREME CAUTION AND AT SLOWEST SAFE SPEED. CONTACT THE DREDGE VESSEL ON VHF-FM CH-13 OR CH-16 FOR PASSING ARRANGEMENTS.

EXAMPLE OF 2012 LOW WATER RESTRICTIONS Enclosure 4 (example)

(For reference only. Current event may require different actions based on river conditions and groundings)

Gauge	Mile Marker	Gauge Reading	Draft Restriction	Example of Tow Restrictions
Memphis	869 – 725.5	0.0 ft	10.5 ft	No Restriction
Memphis	869 – 725.5	-4.0 ft	10.0 ft	<p>1. Up Bound Tows: Maximum 20 loaded barges with a total of 40 barges overall. Loaded barges to be configured 4 wide and 5 long to be placed in the center of the tow. Overall tow configuration not to exceed 6 wide and 7 long.</p> <p>1. Down Bound Tows: Maximum 36 barges.</p> <p>2. All barges that are currently in the system with 10 ft 6 inches drafts shall be placed nearest to the center of the tow as possible.</p>
Memphis	869 – 725.5	-5.5 ft	9.5 ft	<p>1. Up Bound Tows: Maximum 20 loaded barges with a total of 36 barges overall. Loaded barges to be configured 4 wide and 5 long to be placed in the center of the tow. Overall tow configuration not to exceed 5 wide and 7 long or 6 wide and 6 long.</p> <p>2. Down Bound Tows: Maximum 30 barges.</p> <p>3. All barges that are currently in the system with drafts greater than 9 ft 6 inches shall be placed nearest to the center of the tow as possible.</p>
Memphis	869 – 725.5	-7.0 ft	9.0 ft	<p>1. Up Bound Tows: Maximum 20 loaded barges with a total of 36 barges overall. Loaded barges to be configured 4 wide and 5 long to be placed in the center of the tow. Overall tow configuration not to exceed 5 wide and 7 long or 6 wide and 6 long.</p> <p>2. Down Bound Tows: Maximum 30 barges.</p> <p>3. All Barges that are currently in the system with drafts greater than 9 ft shall be placed nearest to the center of the tow as possible.</p>
Greenville	725.5 – 437	15.0 ft	10.5 ft	No Restriction
Greenville	725.5 – 437	11.0 ft	10.0 ft	<p>1. Up Bound Tows: Maximum 20 loaded barges with a total of 40 barges overall. Loaded barges to be configured 4 wide and 5 long to be placed in the center of the tow. Overall tow configuration not to exceed 6 wide and 7 long.</p> <p>1. Down Bound Tows: Maximum 36 barges.</p> <p>2. All barges that are currently in the system with 10 ft 6 inches drafts shall be placed nearest to the center of the tow as possible.</p>
Gauge	Mile Marker	Gauge Reading	Draft Restriction	Example of Tow Restrictions
				<p>1. Up Bound Tows: Maximum 20 loaded barges with a total of 36 barges overall. Loaded barges to be configured 4 wide and 5 long to be</p>

Greenville	725.5 – 437	9.5 ft	9.5 ft	placed in the center of the tow. Overall tow configuration not to exceed 5 wide and 7 long or 6 wide and 6 long. 2. Down Bound Tows: Maximum 30 barges. 3. All barges that are currently in the system with drafts greater than 9 ft 6 inches shall be placed nearest to the center of the tow as possible.
Greenville	725.5 – 437	8.0 ft	9.0 ft	1. Up Bound Tows: Maximum 20 loaded barges with a total of 36 barges overall. Loaded barges to be configured 4 wide and 5 long to be placed in the center of the tow. Overall tow configuration not to exceed 5 wide and 7 long or 6 wide and 6 long. 2. Down Bound Tows: Maximum 30 barges. 3. All Barges that are currently in the system with drafts greater than 9 ft shall be placed nearest to the center of the tow as possible.
Vicksburg	437 – 303	7.0 ft	10.5 ft	No Restriction
Vicksburg	437 – 303	3.0 ft	10.0 ft	1. Up Bound Tows: Maximum 20 loaded barges with a total of 40 barges overall. Loaded barges to be configured 4 wide and 5 long to be placed in the center of the tow. Overall tow configuration not to exceed 6 wide and 7 long. 2. Down Bound Tows: Maximum 36 barges. 3. All barges that are currently in the system with 10 ft 6 inches drafts shall be placed nearest to the center of the tow as possible.
Vicksburg	437 – 303	1.5 ft	9.5 ft	1. Up Bound Tows: Maximum 20 loaded barges with a total of 36 barges overall. Loaded barges to be configured 4 wide and 5 long to be placed in the center of the tow. Overall tow configuration not to exceed 5 wide and 7 long or 6 wide and 6 long. 2. Down Bound Tows: Maximum 30 barges. 3. All barges that are currently in the system with drafts greater than 9 ft 6 inches shall be placed nearest to the center of the tow as possible.
Vicksburg	437 – 303	0.0 ft	9.0 ft	1. Up Bound Tows: Maximum 20 loaded barges with a total of 36 barges overall. Loaded barges to be configured 4 wide and 5 long to be placed in the center of the tow. Overall tow configuration not to exceed 5 wide and 7 long or 6 wide and 6 long. 2. Down Bound Tows: Maximum 30 barges. 3. All Barges that are currently in the system with drafts greater than 9 ft shall be placed nearest to the center of the tow as possible.