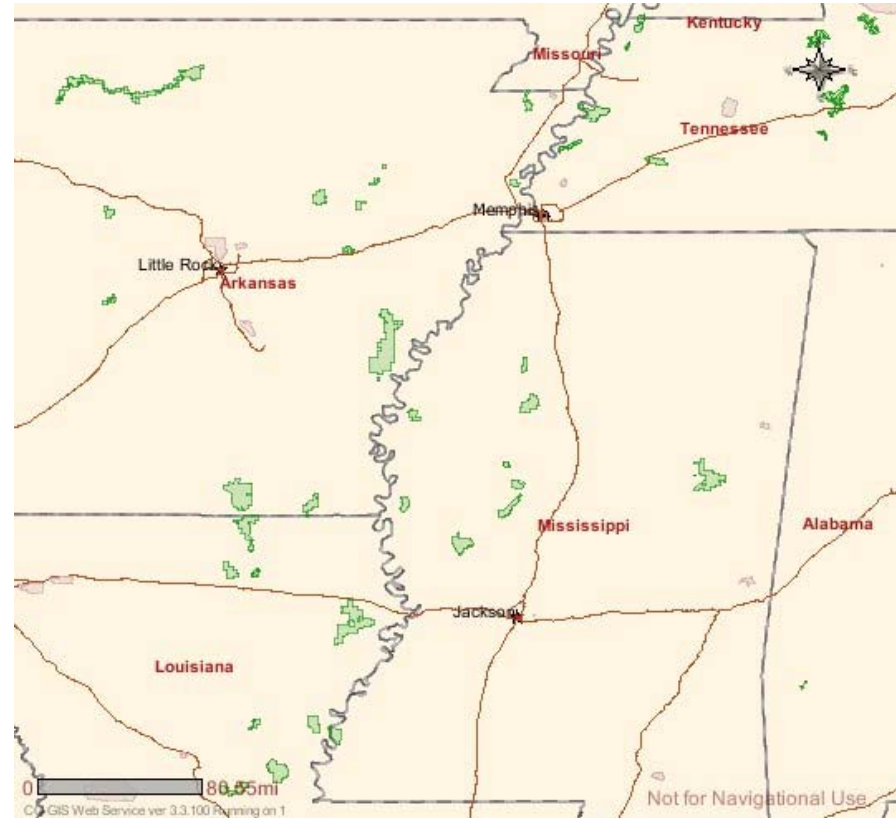


Section 1 – Geographic Description

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 740)
- Harahan Bridge/ Railroad
Memphis, TN (MM738)
- I-55 Memphis-Arkansas Memorial Bridge
Memphis, TN (MM738)
- US-49 Helena Bridge
Helena, AR (MM 661.8)
- New Greenville Bridge/US-82 Project
- Benjamin G. Humphreys/US-82
Greenville, MS(MM 531.3)
- Old Vicksburg Bridge/Railroad Crossing
Vicksburg, MS (MM 437.8)
- Vicksburg Bridge/I-20
Vicksburg, MS (MM 437.7)
- Natchez-Vidalia Bridge/US-65 & US-84
Natchez, MS (MM 363.3)



Section 2 – Parties and Roles

USCG SECTOR LOWER MISSISSIPPI RIVER (SECLMR)			
POSITION	DUTIES & RESPONSIBILITIES	Current Incumbent	Reports to:
Officer In Charge, WLR 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	BMCM Stuart Slesh	ATON OFFICER SECTOR COMMANDER *SECTOR OHIO VALLEY ASSET
Officer In Charge, WLR USCGC KICKAPOO	Responsible for daily ATON services for LMR 480 to 363	BMCM Charles Carter	
Officer In Charge, WLR USCGC PATOKA	Responsible for daily ATON services for LMR 598 to 480	BMCM Andy Adams	
Officer In Charge, WLR 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	BMCM Randall Merrick	
Officer In Charge, WLR USCGC KANKAKEE	Responsible for daily ATON services for LMR 813.6 to 683 and McKellar Lake 0.0 to 7.2	BMCM Steve Hearn	
Officer In Charge, WLR USCGC CHENA*	Responsible for daily ATON services for LMR 953.8 to 813.6	BMCM Jeffrey Ingram	
SECTOR STAFF (MEMPHIS, TN)			
Aids to Navigation Officer	Coordinate the short/long term activity of WLR Fleet	CWO Ray Bartlett	Chief, Prevention Dept
Waterways Management Division	Manage Safety/Security Zones	BMC David Musgraves	Chief, Prevention Dept
Chief, Prevention Dept	Coordinate Commercial Vessel Safety Program including Waterways Mgt, ATON and Investigations	CDR Scott Anderson	DEPUTY SECTOR COMMANDER
Deputy Sector Commander	Second in Command Alternate Captain of the Port/Alt. Federal Maritime Security Coordinator Alt. Federal On Scene Coordinator/Acting Officer in Charge, Marine Inspection.	CDR Dan Norton	SECTOR COMMANDER
Sector Commander	Commanding Officer Captain of the Port/Federal Maritime Security Coordinator Federal On Scene Coordinator/ Officer in Charge, Marine Inspection.	CAPT Michael Gardiner	Director, Western Rivers
EIGHTH COAST GUARD DISTRICT STAFF (NEW ORLEANS, LA)			
Director, Western Rivers	Coordinates all CG Activity on Western Rivers	CAPT Thomas Hooper	DISTRICT COMMANDER

US ARMY CORPS OF ENGINEERS-Memphis District			
POSITION	DUTIES & RESPONSIBILITIES	Current Incumbent	Reports to:
Master M/V STRONG	Master for on water operations involving USACE assets. Primary liaison with USCG.	Captain Tony Johnston	
USACE MEMPHIS DISTRICT STAFF			
Chief of Navigation		Mr. Richard Sullivan	
Deputy Commander	Deputy District Engineer for Memphis District	LTC Timothy J. Marshall	COL Thomas P. Smith
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 Thomas P. Smith	BG Walsh
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.	Brigadier General Michael J. Walsh	

US ARMY CORPS OF ENGINEERS-Vicksburg District			
POSITION	DUTIES & RESPONSIBILITIES	Current Incumbent	Reports to:
Master M/V ERGONOT	Master for on water operations involving USACE assets. Primary liaison with USCG.	Captain Michael Jensen	
USACE VICKSBURG DISTRICT STAFF			
Chief of Navigation		Jerry Stewart	
Deputy Commander	Deputy District Engineer for Vicksburg District	LTC William L. Burruss	COL Wehr
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 Michael C. Wehr	BG Walsh
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	Brigadier General Michael J. Walsh	

Section 3 – Communications

Members will include representatives from: the Coast Guard (CG), Army Corps of Engineers (USACE), and Industry. 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 for conference call to interested parties will be through the use of the Coast Guard's Alert Warning System and email. Unless otherwise stated, the Conference 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 notification tree for the Waterways Action Plan. To add or remove contact information from the 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 Rep): General Overview of River Conditions.
 - a. Current Situation.
 - b. River Forecasts.
3. CG (by Sector LMR):
 - a. Assessment,
 - b. Actions Taken (e.g., BNMs) including current status of WLR Tenders/Areas worked
 - c. Anticipated Future Actions Based on River Forecasts.
4. Industry (by lead Committee Rep):
 - a. Assessment,
 - b. Actions Taken
 - c. Future Actions Based on River Forecasts.
5. General Discussion/Future Plans and Recommendations for Implementation

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

COMPANY / ORGANIZATION	DESIGNATED CONTACT	PHONE NUMBER		E-MAIL ADDRESS	WHEN CONTACTED
Ingram Barge Company	Frank Johnson General Manager Vessel Operations				All Situations
	John Operle VP Operations				All Situations
	Tom Haley Manager Vessel Operations				All Situations
AEP River Operations	Jeff Stover Port Captain				All Situations
	Jimmy Brown Port Captain				All Situations
	Terry Reavis Port Captain				All Situations
	Bruce Darst Port Captain				All Situations
United Barge Line	Ronald Griffin Manager Vessel Operations				All Situations
	Larry Barnes Manager Vessel Operations				All Situations
	David Oneill Prsident				All Situations
Jantran	John Janoush Vice President				All Situations
Alter Barge Line	Bruce Cary Vice President				All Situations
	Randy Kirschbaum Marine Manager				All Situations
Canal Barge Company, Inc.	Paul Barnes Port Captain				All Situations
	J. Pat Riley Assistant Port Captain				All Situations

Marquette Transportation	Steve Crowley V.P. of Operations				All Situations
	David Goin Port Captain				All Situations
	David Griggs Safety Coordinator				All Situations
Luhr Bros.,Inc.	Steven Glenn Port Captain				All Situations
	Tony Mullins Assistant Port Captain				All Situations
American Commercial Barge Line	Tom More Marine Superintendent				All Situations
	Bryan Christy Director of Gulf Coast Operations				All Situations
	Randall Hotard Marine Superintendent-Gulf Ops				All Situations
	Hank Ivey Marine Superintendent-Baton Rouge				All Situations
	David Greer Port Captain				All Situations
Kirby Inland Marine	Dave Shaw Vice President Vessel Operations				All Situations
	Gene Moore Manager-River Operations				All Situations
	Jay McDaniel Navigation Port Captain-River Operations				All Situations
	Chris Robin Port Captain				All Situations
	Shannon Hughes Port Captain				All Situations
Western KY Navigation, Inc.	Dave Dewey President				All Situations
	Cecil Duncan Port Captain				All Situations
Missouri Barge Line	Mike Burdick Port Captain				All Situations
American River Transportation Company (ARTCO)	C. Bruce Hussell Port Captain				All Situations
	Raymond Hopkins Port Captain				All Situations
Florida Marine, Transporters	Jerry Wiltz Senior Compliance Manager				All Situations

	Troy Hotard Port Captain				All Situations
	Dallas Theriot Training Manager				All Situations
	Timmy Billiot Port Captain				All Situations
	Terry Wiltz Port Captain				All Situations
	Michael Ebey Port Captain				All Situations
	Timmy Callais Senior Port Captain				All Situations
	Billy Burkett Senior Port Captain				All Situations
Magnolia Marine Transport Company	Roger Harris VP of Operations				All Situations
	Lester Cruse Port Captain				All Situations
Ergon Marine	Danny Koestler Vice President-EMIS				All Situations
	Albert Smith Fleeting Supervisor				All Situations
	Johnny Gerache Marine Operation Manager				All Situations
	Butch Cummings Marine Operation Manager				All Situations
McNational, Inc	Charlie Ritchie Vessel Operations Manager				All Situations
Lawson & Lawson Towing Company, Inc.	Vance Lawson President				All Situations
	Dale Conner Engineering				All Situations
Missouri Barge Line	Mike Burdick Port Captain				All Situations
Marathon Oil Company	Larry Madden Port Captain				All Situations

GOVERNMENT AGENCY	DESIGNATED CONTACT	PHONE NUMBER	E-MAIL ADDRESS	WHEN CONTACTED
Coast Guard Sector Lower Mississippi River	Sector Commander CAPT Michael Gardiner	Command Center (901) 521-4824 or 4822		All Situations
	Deputy Sector Commander CDR Scott E. Anderson	Command Center (901) 521-4824 or 4822		All Situations
	Chief, Prevention Dept LCDR Ian G. Bird			All Situations
	Waterways Management CWO4 David M. Bear			All Situations
	Asst Waterways BMC James C. Reynolds			All Situations
Army Corps of Engineers Vicksburg District	Jerry Stewart Chief, River Operations			All Situations
	Captain Ray Wilson Revetment Section M/V WILLIAM JAMES			All Situations
	Captain Michael Jensen M/V ERGONOT			All Situations
	Captain Randy Young			All Situations
Army Corps of Engineers Memphis District	Captain Tony Johnston M/V STRONG			All Situations
	Mr. Richard Sullivan Chief, River Operations			All Situations
	Mr. James Bodron Chief of Operations			
	LTC Timothy Marshall Deputy Commander Memphis District			
	COL Thomas P. Smith Commander, Memphis Dist			

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/
Dredge Status	http://www.mvm.usace.army.mil/Fleetlocale/FleetLocation.asp
USACE Vicksburg District	http://www.mvk.usace.army.mil/
CG Sector Lower Mississippi River Homeport	http://homeport.uscg.mil/ Select Port Directory and Sector Lower Mississippi River. http://www.uscg.mil/d8/sector/lwrmsrvr
CG MSU Baton Rouge Homeport	
River Gages.com	http://www.rivergages.com
River Industry Bulletin Board	http://www.ribb.com/index.php

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. • SLMR Command Center notifies principals <ol style="list-style-type: none"> 1. SLMR Chief Prevention 2. LOMRC Chairman 3. USACE Chief River Ops (appropriate District) • Issue advisory for hazard to navigation. All vessels within 2 hours of casualty site required to report position and ETA to site to SLMR CC for additional traffic information • SLMR Response Team deployed
	I+4hours	Action	<ul style="list-style-type: none"> • SLMR Chief Prevention 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.
	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 4a – 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 869-730</p> <p>Reference Gages:Cairo, IL</p> <p>Trigger Reading Memphis, TN</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. Activate pre-established Safety Zone limiting upbound transits to minimum of 3.0 mph; downbound transit to <table border="1" data-bbox="1129 488 1950 672"> <thead> <tr> <th data-bbox="1129 488 1398 529">UTV Horsepower</th> <th data-bbox="1398 488 1677 529">HP/Barge</th> <th data-bbox="1677 488 1950 529">Max Tow Limit</th> </tr> </thead> <tbody> <tr> <td data-bbox="1129 529 1398 570">Less than 6000hp</td> <td data-bbox="1398 529 1677 672" rowspan="4">240hp/loaded barge (ALL)</td> <td data-bbox="1677 529 1950 570">25</td> </tr> <tr> <td data-bbox="1129 570 1398 610">6001-7200 hp</td> <td data-bbox="1677 570 1950 610">30</td> </tr> <tr> <td data-bbox="1129 610 1398 651">7201-8400 hp</td> <td data-bbox="1677 610 1950 651">35</td> </tr> <tr> <td data-bbox="1129 651 1398 672">Greater than 8401 hp</td> <td data-bbox="1677 651 1950 672">36</td> </tr> </tbody> </table> 	UTV Horsepower	HP/Barge	Max Tow Limit	Less than 6000hp	240hp/loaded barge (ALL)	25	6001-7200 hp	30	7201-8400 hp	35	Greater than 8401 hp	36
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	6001-7200 hp		30														
	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 recent experience handling current conditions. Reduce tow sizes based on following constraints, not to exceed 36 total: <table border="1" data-bbox="1129 773 1950 948"> <thead> <tr> <th data-bbox="1129 773 1398 813">UTV Horsepower</th> <th data-bbox="1398 773 1677 813">HP/Barge</th> <th data-bbox="1677 773 1950 813">Max Tow Limit</th> </tr> </thead> <tbody> <tr> <td data-bbox="1129 813 1398 854">Less than 6000 hp</td> <td data-bbox="1398 813 1677 854">280hp/barge</td> <td data-bbox="1677 813 1950 854">20</td> </tr> <tr> <td data-bbox="1129 854 1398 948" rowspan="2">Less than 6,000 hp with mixed tow</td> <td data-bbox="1398 854 1677 894">280 hp per load</td> <td data-bbox="1677 854 1950 948" rowspan="2">15 loads, 25 total barges</td> </tr> <tr> <td data-bbox="1398 894 1677 948">140 hp per empty</td> </tr> </tbody> </table> 	UTV Horsepower	HP/Barge	Max Tow Limit	Less than 6000 hp	280hp/barge	20	Less than 6,000 hp with mixed tow	280 hp per load	15 loads, 25 total barges	140 hp per empty		
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		140 hp per empty															
	35 feet	Rising	Extreme High Water	Action	<ul style="list-style-type: none"> Assess further tow restrictions/river closure options 												
35 feet	Falling	Extreme High Water	Action	<ul style="list-style-type: none"> Test tow verification to confirm channel integrity. 													
30 feet	Falling	Extreme High Water	Recovery	<p>Relax HP/loaded barge restriction</p> <table border="1" data-bbox="1129 1118 1950 1281"> <thead> <tr> <th data-bbox="1129 1118 1398 1159">UTV Horsepower</th> <th data-bbox="1398 1118 1677 1159">HP/Barge</th> <th data-bbox="1677 1118 1950 1159">Max Tow Limits</th> </tr> </thead> <tbody> <tr> <td data-bbox="1129 1159 1398 1200">Less than 6000 hp</td> <td data-bbox="1398 1159 1677 1281" rowspan="4">240hp/loaded barge (ALL)</td> <td data-bbox="1677 1159 1950 1200">25</td> </tr> <tr> <td data-bbox="1129 1200 1398 1240">6001-7200 hp</td> <td data-bbox="1677 1200 1950 1240">30</td> </tr> <tr> <td data-bbox="1129 1240 1398 1281">7201-8400 hp</td> <td data-bbox="1677 1240 1950 1281">35</td> </tr> <tr> <td data-bbox="1129 1281 1398 1321">Greater than 8401 hp</td> <td data-bbox="1677 1281 1950 1321">36</td> </tr> </tbody> </table>	UTV Horsepower	HP/Barge	Max Tow Limits	Less than 6000 hp	240hp/loaded barge (ALL)	25	6001-7200 hp	30	7201-8400 hp	35	Greater than 8401 hp	36	
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25 feet	Falling	High Water	Recovery	<ul style="list-style-type: none"> Test tow verification to confirm channel integrity. 													
20 feet	Falling	Normal Operations	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 													

CRITICAL AREA DESCRIPTION	TRIGGER READING	TREND	DESCRIPTION	PHASE	ACTION												
Memphis to Greenville LOWER MISSISSIPPI RIVER MM 730- 520 Reference Gages: Arkansas City, AR Trigger Reading: Greenville, MS	36 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 												
	40 feet	Rising	High Water	Action	<ul style="list-style-type: none"> Assess need for daylight/visibility/one way traffic restrictions. Activate pre-established Safety Zone limiting upbound transits to minimum of 3.0 mph; downbound transit to 												
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	45 feet	Rising	Extreme High Water	Action	<ul style="list-style-type: none"> Assess need for companies to use wheelman with recent experience handling current conditions. Reduce tow sizes based on following constraints, not to exceed 36 total: 												
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50 feet	Rising	Extreme High Water	Action	<ul style="list-style-type: none"> Assess further tow restrictions/river closure options 													
50 feet	Falling	Extreme High Water	Action	<ul style="list-style-type: none"> Test tow verification to confirm channel integrity. 													
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CRITICAL AREA DESCRIPTION	TRIGGER READING	TREND	DESCRIPTION	PHASE	ACTION												
Greenville to Natchez LOWER MISSISSIPPI RIVER MM 520-303 Reference Gages: Greenville, MS Vicksburg, MS Trigger Reading: Vicksburg, MS	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* Activate pre-established Safety Zone limiting upbound transits to minimum of 3.0 mph; downbound transit to 												
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45 feet	Falling	Extreme High Water	Action	<ul style="list-style-type: none"> Test tow verification to confirm channel integrity. 													
40 feet	Falling	Extreme High Water	Recovery	Relax HP/loaded barge restriction													
				<table border="1"> <thead> <tr> <th>UTV Horsepower</th> <th>HP/Barge</th> <th>Max Tow Limits</th> </tr> </thead> <tbody> <tr> <td>Less than 6000 hp</td> <td rowspan="4">240hp/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>	UTV Horsepower	HP/Barge	Max Tow Limits	Less than 6000 hp	240hp/loaded barge (ALL)	25	6001-7200 hp	30	7201-8400 hp	35	Greater than 8401 hp	36	
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36 feet	Falling	High Water	Recovery	<ul style="list-style-type: none"> Test tow verification to confirm channel integrity. 													
30 feet	Falling	Normal Operations	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 													

* See the Vicksburg Information Center note on the next page.

High Water Notes

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 from 06:00 to 18:00 and operated by Coast Guard personnel at all other times. The Coast Guard should provide oversight and assistance as needed during daytime operations.

While it is not considered necessary to square-off downbound tows in the SLMR area during high water periods, vessels may push one or two additional barges to fill in a 'notch' in the tow, even if this means that the tow would exceed an established horsepower per barge ratio.

Section 4b – Action Plan (LOW WATER)

CRITICAL AREA DESCRIPTION	TRIGGER READING	TREND	DESCRIPTION	PHASE	ACTION
<p>Caruthersville to Memphis</p> <p>LOWER MISSISSIPPI RIVER</p> <p>MM 869-730</p> <p>Reference Gages:Cairo, IL</p> <p>Trigger Reading Memphis, TN</p>	Above 5 feet		Normal Operations		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	Consider Where channel is less than 600 feet in bends: <ul style="list-style-type: none"> ▪Activate pre-established safety zone restricting transits to daylight only or one way traffic. Where ‘bump-n-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 Safety Zone prohibiting traffic ▪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 Safety Zone. ▪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"> ▪If favorable results from test tow(s), cancel safety zone. ▪Maintain safety zone restricting transits to day-light only
	0 feet	Rising	Low Water	Recovery	<ul style="list-style-type: none"> ▪Resume day/night transits.
	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 within 48 hrs to refine actions.

CRITICAL AREA DESCRIPTION	TRIGGER READING	TREND	DESCRIPTION	PHASE	ACTION
Memphis to Greenville LOWER MISSISSIPPI RIVER MM 730- 520 Reference Gages: Arkansas City, AR Trigger Reading: Greenville, MS	Above 20 feet		Normal Operations		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	Consider Where channel is less than 600 feet in bends: <ul style="list-style-type: none"> ▪ Activate pre-established safety zone restricting transits to daylight only or one way traffic. Where 'bump-n-go' reported <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 Safety Zone prohibiting traffic ▪ 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 Safety Zone. ▪ 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"> ▪ If favorable results from test tow(s), cancel safety zone. ▪ Maintain safety zone restricting transits to day-light only
	20 feet	Rising	Low Water	Recovery	<ul style="list-style-type: none"> ▪ Resume day/night transits.
	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 within 48 hrs to refine actions.

CRITICAL AREA DESCRIPTION	TRIGGER READING	TREND	DESCRIPTION	PHASE	ACTION
Greenville to Natchez LOWER MISSISSIPPI RIVER MM 520-303 Reference Gages: Greenville, MS Vicksburg, MS Trigger Reading: Vicksburg, MS	Above 10 feet		Normal Operations		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 Comms for Miller Materials Operations barge loading constraints.
	7 feet	Falling	Low Water	Action	Consider Where channel is less than 600 feet in bends: <ul style="list-style-type: none"> ▪Activate pre-established safety zone restricting transits to daylight only or one way traffic. Where 'bump-n-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 Safety Zone prohibiting traffic ▪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 Safety Zone. ▪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"> ▪If favorable results from test tow(s), cancel safety zone. ▪Maintain safety zone restricting transits to day-light only
	10 feet	Rising	Low Water	Recovery	<ul style="list-style-type: none"> ▪Resume day/night transits.
	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.

Section 5 – Risk Assessment

High Water Hazard Analysis: LMR MM507-MM882.7

<div style="background-color: orange; padding: 5px; display: inline-block;">Calculate Risk Score</div>	Factors to Increase Likelihood of Casualty				Casualty History	Risk Score
	Obs to Nav	Channel Width	Bend Radius	Congestion		
Location						
MM834-840 (1155 Bridge)	High	High	High	High	High	600
MM530-535 (Greenville Bridge) RNA	High	High	High	High	High	600
MM730-735 (Vice Presidents Island bend)	High	High	High	Medium	High	510
MM595-600 (Victoria Bend)	Low	High	High	High	High	501
MM800-805 (Forked Deer Bend)	Low	High	High	Medium	High	411
MM765-770 (Reverie Lt Bend)	Low	High	Medium	High	High	411
MM735-740 (Memphis Bridges)	High	Medium	High	High	Medium	330
MM775-780 (Driver Cutoff bend)	Medium	High	Medium	Medium	High	330
MM590-595 (South of Victoria Bend)	Low	High	High	High	Medium	321
MM725-730 (Mouth of Lake McKeller)	Low	Low	Low	High	High	303
MM640-645 (Old Town Bend)	Medium	High	High	Medium	Medium	240
MM535-540 (Walker Bend)	Medium	High	High	Medium	Medium	240
MM715-720 (Cow Isl Bend)	Low	High	High	Medium	Medium	231
MM630-635 (Fair Landing)	Low	High	High	Medium	Medium	231
MM745 (North of Memphis)	Medium	Medium	Low	Medium	High	231
MM600-605 (Smith Point)	Low	High	High	Low	Medium	222
MM780-785 (Osceola, AR bend)	Medium	Medium	Low	High	Medium	141
MM665-670 (Flower Lake)	Low	High	Medium	Low	Medium	132
MM675-680 (Harbert Point)	Low	Medium	Medium	Medium	Medium	51
MM690-695 (Basket Bar/Rabbit Island)	Low	Medium	Medium	Low	Medium	42
MM685-690 (Mhoon Bend)	Low	Medium	Medium	Low	Medium	42
MM605-610 (Laconia Light/Crossing)	Low	Medium	Low	Low	Low	15

Casualty History (1998-2005)/LMR MM505-MM882.7

MM	Description	Casualties
595-600:	Victoria Bend	15
740-745:	Immediately UB of Memphis (crossi	14
800-805:	Bend of Island 25 (Forked Deer)	14
765-770:	Reverie Lt (bend)	12
835-840:	I-155 Hwy Bridge	12
725-730:	Mouth of Lake McKeller	11
730-735:	Vice Presidents Island (bend)	10
775-780:	Driver Cutoff (bend)	10
530-535:	Greenville Bridge	9
590-595:	Immediately DB of Victoria Bend	9
640-645:	Old Town Bend	9
675-680:	Harbert Point	9
780-785:	Osceola, AR (bend)	9
630-635:	Robson Towhead	8
715-720:	Cow Island Bend	8
535-540:	Walker Bend	7
665-670:	Prairie Point Towhead	7
685-690:	Mhoon Bend	7
735-740:	Memphis Bridges	7
600-605:	Scrubgrass Bend	6
690-695:	Rabbit Island (bend)	6
605-610:	Laconia Light (crossing)	5