



Maj. Gen. John W. Peabody  
*President*



Hon. Sam E. Angel  
*Member*



Hon. R. D. James  
*Member*



Hon. Norma Jean Mattei, Ph.D.  
*Member*



Rear Adm. Gerd F. Glang  
*Member*



Brig. Gen. Margaret W. Burcham  
*Member*



Brig. Gen. Anthony C. Funkhouser  
*Member*



# Mississippi River Commission

## 2013 Executive Summary 389<sup>th</sup> and 390<sup>th</sup> Sessions

*Listening, Inspecting, Partnering & Engineering since 1879*



# Mississippi River Commission

[www.mvd.usace.army.mil/mrc/](http://www.mvd.usace.army.mil/mrc/)

The Mississippi River Commission has a proud heritage that dates back to June 28, 1879, when Congress established the seven-member presidential commission with the mission to transform the Mississippi River into a reliable commercial artery, while protecting adjacent towns and fertile agricultural lands from destructive floods.

In its current capacity, the Mississippi River Commission prosecutes the Mississippi River & Tributaries (MR&T) project authorized by the 1928 Flood Control Act. The MR&T project employs a variety of engineering techniques, including an extensive levee system to prevent disastrous overflows on developed alluvial lands; floodways and backwater areas that provide expansion room for the river so that the levee system will not be unduly stressed; channel improvements and stabilization features to protect the integrity of flood control measures and to ensure proper alignment and depth of the navigation channel; and tributary basin improvements, to include levees, headwater reservoirs and pumping stations, that maximize the benefits realized on the main stem by expanding flood protection coverage and improving drainage into adjacent areas within the alluvial valley.

Since its initiation, the MR&T program has brought an unprecedented degree of flood protection to the four million people living in the 35,000-square-mile project area within the lower Mississippi Valley. The nation has contributed \$14 billion toward the planning, construction, operation and maintenance of the project. To date the nation has received a 44 to 1 return on that investment, including \$612 billion in flood damages prevented.

The performance of the MR&T system during the Great Flood of 2011 validated this wise investment.

Despite record high flows and stages, not a single life was lost as a result of the flood. Water lapped at the top of floodwalls and levees the length of the river, exerting unprecedented pressure on the backbone of the protection system, but the levees withstood the record stages and pressure due in large part to the operation of three floodways and the storage capacity provided by non-MR&T reservoirs in the Ohio and Arkansas-White basins. All told, the MR&T project prevented in excess of \$234 billion in damages, not including potential losses from interrupted business activities and related impact. One year later, with much of the drainage basin under exceptional drought conditions and river stages plunging to near historic lows more than fifty feet lower than the 2012 highs on the major gages between Cairo and Red River Landing, the performance of the MR&T system is again validating the nation's wise investment, as the navigation channel remains viable.



The Mississippi River Commission continued its 133-year process of listening to the concerns of partners and stakeholders in the Mississippi valley, inspecting the challenges posed by the river, and partnering to find sustainable engineering solutions to those challenges through the 2013 high-water inspection (389<sup>th</sup> Session of the commission). The official record of the Proceedings of the Mississippi River Commission, complete with recorded hearings of public meetings, copies of signed formal statements provided by the public, executive summaries of the Proceedings, and other documents of significance, are kept on file in the Office of the President in Vicksburg, Miss.

# MTRC

## 389th Session of the Mississippi River Commission



BG Margaret Burcham , Hon. Norma Jean Mattei, Ph.D., Hon. Sam Angel, MG John Peabody,  
Hon. R.D. James, RDML Gerd Glang and BG Anthony Funkouser.



## High-Water Inspection Trip Report

The Mississippi River Commission conducted its 389<sup>th</sup> session from April 7 through April 12, 2013, onboard the motor vessel *MISSISSIPPI* en route from Cape Girardeau, Mo., to Baton Rouge, La., as part of the annual high-water inspection trip. The commission held public hearings at Cape Girardeau, Memphis, Tenn., Natchez, Miss., and Baton Rouge, La., and listened to testimony offered by 49 speakers. The purpose of the meetings is to maintain a dialogue with the public to allow local citizens and governments a greater voice in shaping federal water resource policy.

During the 389<sup>th</sup> session, approximately 250 members of the public attended the hearings and more than 450 people engaged in the commission's public process of listening, inspecting and partnering. The testimony given underscored the symbiotic relationship of flood control, navigation, commerce, agriculture, energy production and water supply. Over the course of the previous two years, the commission and the Mississippi River and Tributaries (MR&T) project have faced record flooding in 2011 and near-record low water in 2012. On the gages at Cairo, Memphis, Vicksburg and Red River Landing, the river fluctuated anywhere from 50 feet to 59 feet between the 2011 high stages and the 2012 low stages. Yet, despite the drought and the challenges it presented, the same MR&T system that accommodated record flows and stages in May of 2011 provided for a safe and reliable marine interstate system during severe low-water conditions in the summer and fall of 2012.

The members of the Mississippi River Commission present during the 389<sup>th</sup> session included:

- Maj. Gen. John W. Peabody, Commander of the Mississippi Valley Division and President of the Mississippi River Commission since July 6, 2011.
- Hon. Sam E. Angel, reappointed as a member on December 30, 2010.
- Hon. R.D. James, civil engineer, reappointed as a member on April 16, 2003.
- Hon. Norma Jean Mattei, civil engineer, appointed as a member on December 3, 2012.
- Rear Adm. Gerd Glang, National Oceanic and Atmospheric Administration, designated as a member since June 12, 2012.
- Brig. Gen. Margaret Burcham, Commander, Great Lakes and Ohio River Division, designated as a member on September 19, 2011.
- Brig. Gen. Anthony Funkhouser, Commander, Northwest Division, designated as a member on July 27, 2012.





## High-Water Inspection Trip Report

**Sunday, April 7**

The Mississippi River Commission convened the 389<sup>th</sup> session onboard the *MISSISSIPPI* in Cape Girardeau. Edward Belk, Programs Director, briefed the commission on current funding trends and potential impacts to the MR&T project under the President's proposed FY12 budget. Rex Ostrander, acting Technical Director, provided the commission with a 2013 dredging outlook. Ostrander informed the members that the efforts to alleviate the low water problem the preceding fall had drained available dredging funds and that a regional approach to sharing resources would be required through the remainder of the fiscal year. Ostrander also discussed the National Flood Insurance Program levee system evaluation report covering the MR&T levee system. Of the 59 levee systems evaluated, 38 received negative findings, including nine mainline Mississippi River levees and 29 tributary levees. Charles Shadie, Chief of Watershed Management, provided an overview of the spring flood outlook, complete with areas of concern at key locations throughout the Mississippi drainage basin.



Col. Vernie Reichling, Commander of the Memphis District, provided an overview discussion on strategic topics within his area of jurisdiction, which included the America's Great Outdoors initiative in the White/Cache basins, groundwater depletion in the Tennessee, Arkansas, Mississippi tri-state area, a reliable funding mechanism for small harbor maintenance and a funding decline in the St. Francis basin. Col. Reichling also provided a synopsis of the regional channel improvement program and the status of 2011 flood damage repairs. Col. Reichling then provided detailed information of key MR&T projects to include the St. Johns Bayou – New Madrid Floodway project, a draft operational plan and alternative operating mechanisms for the Birds Point-New Madrid floodway, the Bayou Meto basin and Grand Prairie region.

Following the briefing, the commissioners participated in a partnering engagement with the Little River Drainage District of Missouri, and other state and local officials.



## High-Water Inspection Trip Report

### **Monday, April 8**

The commission held a public hearing in Cape Girardeau. Approximately 75 members of the public attended the meeting to hear the concerns of 16 presenters. Issues discussed during the testimony included the formation of the Mississippi River Cities and Towns Initiative, a caucus of mayors from 10 states bordering the Mississippi River designed to speak with one voice on issues pertaining to the river; the need to prepare the inland waterway transportation system to accommodate the increased import/export demands created by the ongoing expansion of the Panama Canal; the need for additional investment to modernize national infrastructure; the importance of agriculture regional economies and the national economy; support for the St. Johns Bayou-New Madrid floodway project; and ideas related to the separation of the St. Johns Bayou pumping project from the closure of the New Madrid floodway gap, the abandonment of the New Madrid floodway gap closure, an alternative to explosive operation of the Birds Point-New Madrid floodway, and dissatisfaction with the levee inspection program.





## High-Water Inspection Trip Report



Charles Shadie briefed the members on the findings of an adequacy review of the MR&T project design flood. The commission and the U.S. Weather Bureau developed the current project design flood in 1955. The last review was accomplished in the aftermath of the 1973 flood.

The new analysis concluded that the rainfall events used to develop the project design flood produced conservatively high precipitation with respect to the 2011 flood. With this mind, Mr. Shadie recommended against revising the project design flood rainfall events.



Steve Barry, Chief of Emergency Management at the Memphis District, followed with a more detailed discussion of the modified 1986 operational plan for the Birds Point-New Madrid floodway to be used until the revised 2013 operations plan can be adopted. Dave Berretta, Memphis District Chief of Hydraulics, provided an overview of possible non-explosive alternatives to operating the floodway. Many of the possible alternatives – levee realignment, by-pass channels in the floodway, buyouts, cutoffs, total confinement, natural

overtopping, etc. – had been analyzed in the 1990 reconnaissance study and the 1991 engineering review took a more in-depth look at the natural overtopping alternative.

Following the briefings, Col. Reichling and members of the Memphis District staff provided the commission with an on-site inspection of construction progress in the Cairo, Ill., region, the Birds Point-New Madrid floodway and the repair efforts at the upper and middle intentional crevasse sites on the frontline levee.



## High-Water Inspection Trip Report

**Tuesday, April 9**

More than 90 members of the public attended the hearing at Memphis and witnessed the exchange of ideas between the commission and 13 presenters. While aquifer depletion, water conservation and groundwater contamination issues have often been a major source of concern at the Memphis public hearings, the topic dominated the dialogue on this day. Other concerns expressed by the presenters included the importance of small ports and harbors on local, regional and the national economies; the importance of inland water transportation and the need to update infrastructure; improvements to the White River and Upper Yazoo basins; and the flood problems and rainwater entrapment plaguing the St. Johns Bayou basin.

Brig. Gen. Funkhouser and Brig. Gen. Burcham briefed the commission on watershed issues from the perspective of the Missouri and Ohio river basins. Funkhouser informed the members that the Missouri basin continued to remain under drought conditions. Over the course of 2012, Northwestern Division (NWD) consumed more than 21 percent of the drought storage capacity of the Missouri River mainstem reservoir system. Funkhouser informed the commission that NWD intended to institute drought conservation measures at the reservoirs, which may necessitate reducing flows to provide an 8-foot by 200-foot channel instead of a 9-foot by 300-foot channel and shortening the navigation season next fall.

Funkhouser's briefing also focused on the spring flood outlook for the Missouri basin, the short-term budget outlook, ongoing construction efforts, and surplus water agreements and water allocation studies.



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## High-Water Inspection Trip Report

Lastly, Funkhouser sought to clarify how NWD water management policies impacted the Mississippi River. Funkhouser explained to the members that NWD can use all available flood storage for as long as possible without impacting rule curves during flood conditions. NWD water control managers, however, can only provide incidental benefits to the Mississippi River during droughts because they cannot deviate from the Master Manual to directly benefit the Mississippi River. All reviews to-date confirm this legal position.

Brig. Gen. Burcham followed with a briefing that detailed the total system flood storage availability of the 79 projects in the Ohio basin. Current system storage stood at less than five percent. That small percentage, coupled with the fact that the traditional or historic flood season on the Ohio River had passed, led Burcham to conclude that the potential for a spring flood emanating from the Ohio remained minimal. With that in mind,

Great Lakes and Ohio River Division water control managers expected to begin the process of filling the reservoirs to summer pool to assist with potential low water issues during the summer and fall. Burcham concluded her briefing with a discussion of the numerous challenges involving infrastructure on the Ohio River.



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## High-Water Inspection Trip Report

**Wednesday, April 10**

Col. Jeffrey Eckstein, Commander of the Vicksburg District, briefed the commission on a number of MR&T related issues and projects within his area of operations to include an update on the recovery efforts to the MR&T system for damages caused by the 2011 flood, a status of Mississippi River levee system, the channel improvement program, sediment reduction and water quality improvements, and the Big Sunflower Watershed Study. Eckstein also indicated that small ports and

harbors in the district remained open during the 2012 low water because of funding provided in the supplemental bill passed in response to the 2011 flood. Eckstein informed the commission that the district has notified port operators that there was no money for dredging in 2013 and that the ports may have to take care of their own needs this year.



Robert Fitzgerald, MVD Chief of Engineering,

provided the members with an update on the national levee safety program. Fitzgerald sought to clarify ambiguities surrounding the program, more clearly explain various program components and definitions, and describe program processes and classifications.

Dennis Norris, MVD Chief of Operations, provided a status update of the overall Mississippi River Levee system. Of the 1,610 miles of authorized Mississippi River levees in the MR&T project, 1,247 miles are considered to be completed to final grade and section. The remaining 363.1 miles of levees are considered deficient. Norris also provided a detailed, district by district, accounting of the recovery program for damages to the MR&T system sustained during 2011. The program is 59 percent complete and is expected to be fully completed by December 2014. Norris concluded his briefing by summarizing the overarching recommendations of the MR&T post-flood evaluation.

Dr. Barbara Kleiss provided the commission with an update on the Mississippi River Hydrodynamic and Delta Management Study. Tony Thomas followed with a detailed discussion of one-dimensional sediment model to be used to determine water and sediment in the channel below Tarbert Landing.



## High-Water Inspection Trip Report

**Thursday, April 11**



Approximately 40 members of the public braved severe weather and driving rain to attend the public hearing in Natchez. Thirteen speakers presented testimony to the commission. Areas of concern highlighted during the testimony included the need for a solution to flooding in the Yazoo backwater area in the aftermath of the EPA veto of the pumping station, the need for bank stabilization to prevent further erosion of areas below the bluff at Natchez, concerns about new principles and guidelines issued by the Administration's Council on Environmental Quality, the need to dredge small ports and harbors, improvements in the Ouachita-Black basin, truncated operating hours at locks and dams on the Red River and the Ouachita River and continued dissatisfaction with the Corps levee rating process.

Col. Edward Fleming, Commander of the New Orleans District, updated the commission on the status of repairs to the MR&T system made necessary by the 2011 flood. Fleming also presented a detailed briefing covering the condition of the Mississippi River levees in the district's area of operation, construction projects and studies in the Atchafalaya basin, proposals to reevaluate the operation of Old River Control and dredging for deep-draft navigation on the Mississippi River below Baton Rouge.

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## High-Water Inspection Trip Report

**Friday, April 12**

Approximately 40 members of the public, including seven speakers, attended the public meeting at Baton Rouge, La. Issues and concerns presented during the testimony included the importance of the inland transportation system to the regional and national economies, support for the Morganza to the Gulf project, concerns that the Morganza to the Gulf project has the potential to harm wetlands, the need to restore coastal Louisiana, aging infrastructure, insufficient financing of dredging, Algiers lock and the Houma Navigation Canal.



The commission held a second meeting in Baton Rouge to consider the New Orleans District's post authorization change report for the Morganza to the Gulf of Mexico hurricane protection project.

Col. Fleming provided an overview of the report findings and recommended the one percent solution, which carries a benefit to cost ratio of 1.3 at an estimated cost of \$10.3 billion. Greg Ruff, of the commission staff, provided an overview of the division- and headquarters-level policy reviews. The commission unanimously concurred with Col. Fleming's findings and recommended the implementation of the project.



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# Dialogue Session Summary

**Saturday, April 13**

## Key takeaways:

- Infrastructure on the lower Mississippi River is the envy of the world.
- The response to Hurricane Katrina is one example of how the Corps can execute when given adequate resources up front.
- The nation's water resources need more flexibility.
- Current civil works process is constrained and inefficient.
- We need to modernize our way of doing business.
- We must revitalize our infrastructure and investment programs.
- *Consequences of inaction will be dramatic.* It is on our watch!
- It is time to focus on the energy savings of water transportation.
- Beware of a sure catastrophic infrastructure failure.
- Three obstacles to a better tomorrow: 1) specific monetary / investment needs, 2) institutional constraints and 3) permitting processes and challenges.
- The Administration, Congress and Corps of Engineers will be complicit in a sure fiscal and economic catastrophe if we don't act.



Fluid  
Prejudice  
  
by John  
Briscoe



**Major General John Peabody**, Miss., president MRC; **Brigadier General (Ret.) Gene Witherspoon**, N.C., MRC past president; **Major General (Ret.) Tommy Sands**, La., MRC past president; **Lieutenant General Thomas Bostick**, Washington, D.C., Chief of Engineers; **Rear Admiral Gerd Glang**, Md., MRC member, Department of Commerce/NOAA; **Dr. Norma Jean Mattei**, La., MRC member, engineer; **Brigadier General Tony Funkhouser**, Ore., MRC member, Portland; **Mr. Paul Diederich**, N.D., Associated General Contractors of America, national president; **Dr. John Briscoe**, Mass., Harvard University and The Harvard Water Security Initiative; **Mr. Sean Duffy**, La., Navigation/Big River Works; **Mr. Rob Rash**, Ark./Tenn., Mississippi Valley Flood Control; **Mr. Jordy Jordhal**, Wisc., director, America's Watershed Initiative and The Nature Conservancy; **Drs. Dale and Linda Chapman, III.**, National Great Rivers Research and Education Center and the Lewis and Clark College; **Mr. Fred Caver**, Texas, retired senior civilian SES/USACE, past president (2010-2011) of National Waterways Conference, Inc., Caver & Associates; **Mr. Craig Philip**, Tenn., CEO, Ingram Barge Company; **Mr. Stephen Gambrell**, Miss., MRC, director, engineer; **Mr. Chuck Shadie**, Miss., MRC, chief Watershed Division, engineer; and **Mr. Eddie Belk**, Miss., MRC, SES, Programs director, engineer.

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**MISSISSIPPI RIVER COMMISSION**  
VICKSBURG, MISSISSIPPI

April 12, 2013

MISSISSIPPI RIVER COMMISSION  
P.O. BOX 80  
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*Commander, Mississippi  
Valley Division*  
Vicksburg, Mississippi

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*Sr. Civilian*  
Lake Village, Arkansas

\*Honorable R. D. James  
*Civilian/Civil Engineer*  
New Madrid, Missouri

Honorable Norma Jean Mattel  
*Civilian/Civil Engineer*  
Metairie, Louisiana

\*Brig. Gen. Margaret W. Burcham  
*Commander, Great Lakes &  
Ohio River Division*  
Cincinnati, Ohio

\*Rear Adm. Gerd F. Glang  
*National Oceanic and  
Atmospheric Administration*  
Silver Spring, Maryland

\*Brig. Gen. Anthony C. Funkhouser  
*Commander, North-western  
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\*\* nominee

\* designee

## Mississippi River Commission Recommendation

### Morganza to the Gulf of Mexico, Louisiana Post Authorization Change (PAC) Report

The Mississippi River Commission concurs in the general engineering plan of improvements for the Morganza to the Gulf of Mexico, Louisiana, PAC report, as recommended by the District Engineer. The Commission agrees that the proposed improvements for hurricane risk reduction and the provisions for environmental features in the proposed project are technically sound, justified based on economic benefits and environmental analyses, and environmentally and socially acceptable. The Commission recognizes the federal interest in the proposed plan. Defenses against devastating storm surges are needed to protect lives, property, state and federal infrastructure, and the environment in the proposed critical project area, which suffers extremely high exposure to damage while serving the energy and other high value production needs of the nation.

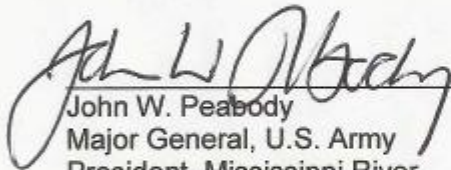
**Enclosures:**

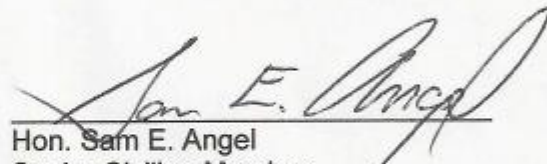
- 1-MRC Report
- 2-District presentation
- 3-MRC Staff presentation
- 4-District Summary Recommendation
- 5-MRC Hearing Question and Answer clarifications,  
12 April 2013
- 6-District Report


Since 1879, the seven-member Presidentially appointed Mississippi River Commission has developed and matured plans for the general improvement of the Mississippi River from the Head of Passes to the Headwaters. The Mississippi River Commission brings critical engineering representation to the drainage basin, which impacts 41% of the United States and includes 1.25 million square miles, over 250 tributaries, 31 states, and 2 Canadian provinces.

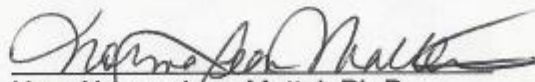
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Recommendation of the Mississippi River Commission  
Morganza to the Gulf Project, Louisiana

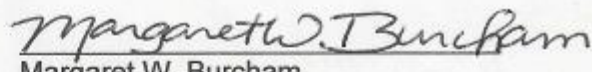
  
John W. Peabody  
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Lake Village, AR

  
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Civilian Member, Engineer  
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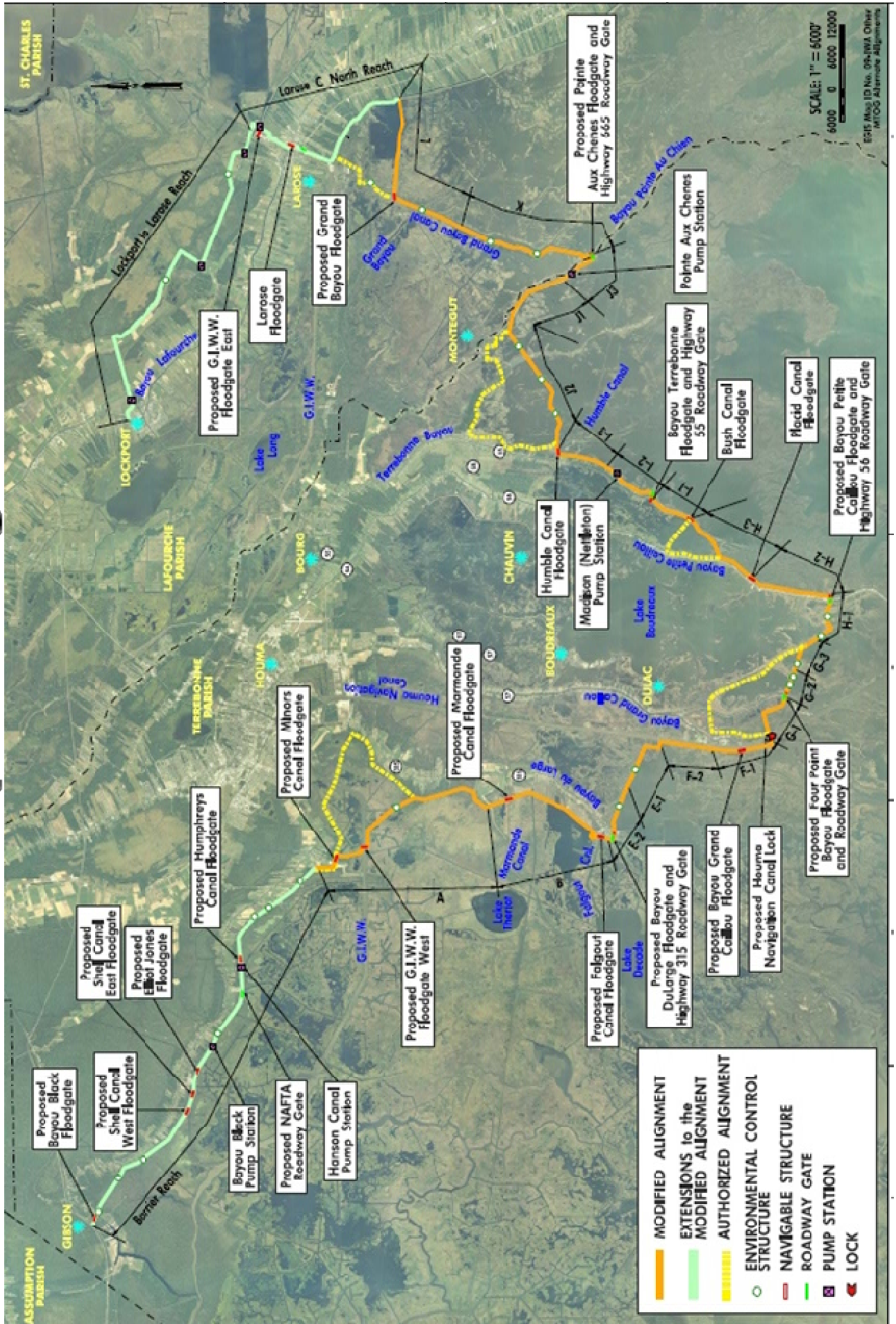
  
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Portland, OR



# PAC Report Alignment





# MRC

## 390th Session of the Mississippi River Commission



Maj. Gen. John W. Peabody  
MRC President



Hon. Sam Angel  
MRC Member



Hon. R.D. James  
MRC Member



Hon. Norma Jean Mattei, Ph.D.  
MRC Member



RDML Gerd Glang  
MRC Member



Brig. Gen. Margaret Burcham  
MRC Member



## Low-Water Inspection Trip Report

The Mississippi River Commission held formal public hearings at La Crosse, WI, Dubuque, IA, and Alton, IL, in the upper Mississippi River basin; New Madrid, MO, Memphis, TN, and Vicksburg, MS, in the lower Mississippi River basin; and Morgan City, LA, in the Atchafalaya basin. Approximately 500 members of the public attended the seven public meetings and listened to the concerns presented by 88 individual speakers. A total of 2,600 people partnered with the commission through various engagements or visited the motor vessel MISSISSIPPI as the commission inspected approximately 650 miles of the upper Mississippi River, 540 miles of the lower Mississippi River and 120 miles of the Atchafalaya River.

The purpose of the hearings and engagements is to maintain a dialogue—an exchange of viewpoints and ideas among the public, the Corps of Engineers and the Mississippi River Commission. This process allows the public and the people who live in the region a greater voice in shaping federal management and policy on the river.

The 390<sup>th</sup> session of the commission commenced on August 11 in St. Paul, MN. The members of the commission present during the 390<sup>th</sup> session were:

- Maj. Gen. John W. Peabody, President, confirmed August 2, 2012
- Hon. Sam E. Angel, reappointed as member December 30, 2010
- Hon. R. D. James, civil engineer, reappointed as member April 6, 2003
- Hon. Norma Jean Mattei, civil engineer, confirmed as member December 3, 2012
- Brig. Gen. Margaret Burcham, confirmed as member May 28, 2013
- Rear Adm. Gerd Glang, designated as member June 12, 2012
- Col. John Dvoracek served as Secretary of the Commission, which is a non-voting position.
- Col. (P) John Kem, designated as a member July 27, 2013, was unable to attend.

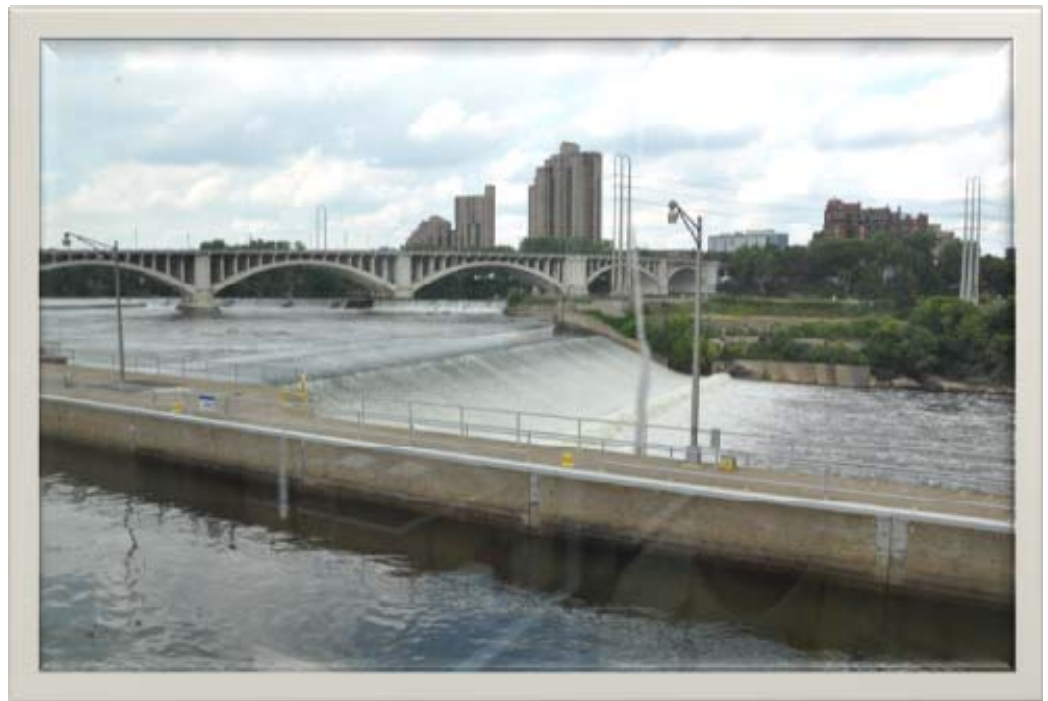




## Low-Water Inspection Trip Report

### Upper Mississippi River Basin

The management of water resources in the major sub-basins comprising the greater Mississippi drainage basin has a profound impact on the operations and practices of the Mississippi River Commission and its prosecution of the MR&T project. Since 1997 the commission has traversed the greater basin and met face-to-face with partners and stakeholders, federal agencies, non-governmental organizations and local U.S. Army Corps of Engineers offices in order to gain an improved understanding of the complexities of water resource management practices in other regions and to build sustainable partnerships to address those complexities. The commission inspected the upper Mississippi River basin ten times between 1997 and 2008, the Ohio River basin in 2005 and 2011, the Missouri River basin in 2007 and 2012, the Illinois River basin in 2009 and the Arkansas-White basin in 2010. During the 390<sup>th</sup> session, the commission returned to the upper Mississippi River basin. The commission plans to return to the Arkansas-White basin in August 2014



The commission and the upper Mississippi River share a common heritage that dates back to 1879. Congress established the commission and charged it with the mission to

improve navigation, prevent destructive floods and facilitate commerce the entire length of the Mississippi River. The commission quickly recommended plans of improvement for the upper river and established its headquarters in St. Louis. Among the many authorities granted to the commission was a survey of the river to its headwaters at Lake Itasca. Through this survey, the commission obtained sufficient and reliable data to develop an accurate map to study the physical characteristics of the river and to make plans for its general improvement. The initial survey results served as the basis for future surveys to ascertain changes in the bed and banks of the river to further study causes and effects of the dynamics of the river. The Mississippi River Commission



## Low-Water Inspection Trip Report

completed survey work on the river between Cairo and the headwaters in 1904. After the 1917 Flood Control Act authorized levees on the river as far north Rock Island, the commission established the Northern Mississippi River Commission District to administer levee operations between Cape Girardeau and Rock Island. The footprint of many existing levees in the upper basin began as commission levees. Even after the 1927 flood and the establishment of the MR&T project necessitated the relocation of the headquarters from St. Louis to Vicksburg, the commission continued its supervision of levee work on the upper Mississippi River using MR&T funds under the authority of Section 6 of the 1928 Flood Control Act through 1961.



The return of the Mississippi River Commission to the upper basin during the 390<sup>th</sup> session ended a five-year hiatus. During its last visit to the upper Mississippi River as part of the 379<sup>th</sup> session in August 2008, the commission made an historic vote to forward a favorable recommendation on Plan H of the Upper Mississippi River Comprehensive Plan to the Chief of

Engineers and the Assistant Secretary of the Army for Civil Works. In lending its support for the pursuit of a comprehensive approach to flood damage reduction, the Mississippi River Commission hoped that the Upper Mississippi River Comprehensive Plan, along with the authorization of the Navigation and Ecosystem Sustainability Program in WRDA 2007, would put the upper Mississippi basin on the path to achieving a holistic basin-wide plan to improve the quality of life for our neighbors to the north, while sustaining the ecosystem upon which that quality depends. Yet, five years later the commission finds that much of the impetus gained in early years of the 21<sup>st</sup> century, has stalled for a variety reasons. The commission can only continue to lend its support and to offer lessons learned through its own history. Since 1928, the Mississippi River Commission, the Corps of Engineers and hundreds of state, local and private entities have learned to give-and-take in a cooperative manner in order to manage the entire lower Mississippi for the betterment of millions of



## Low-Water Inspection Trip Report

Americans living south of Cape Girardeau through the implementation and modification of the comprehensive MR&T project.

Despite the loss of momentum experienced since 2008, the commission was heartened by what it witnessed and heard during its inspection of the upper Mississippi River basin – a general realization of the symbiotic relationship of the many

uses of the river. Recreation, navigation, flood control and environmental interests seem to be gaining a better understanding that they are truly dependent on one another. As one speaker presenting testimony to the commission remarked, *“If you drink water, then you are a stakeholder.”* In the upper reaches of the slack-water system, where recreation seemingly reigns supreme, the commission discovered a growing, though not all-pervasive, recognition that many river-based recreational opportunities only exist because of adequate water levels and reliability provided by

navigation infrastructure. In the middle reaches of the basin, where inconsistent state laws in Iowa, Illinois and Missouri have resulted in inequality in levee heights, there were several calls for federal help in establishing uniform standards. In the controlled sections of the river, environmental groups publicly conceded that they recognized that waterborne commerce and navigation infrastructure are here to stay, while members of the navigation industry touted the necessity of habitat and ecosystem restoration to mitigate past construction efforts.





## Low-Water Inspection Trip Report

**August 11-12**  
**St. Paul, Minnesota – Genoa, Wisconsin**



Col. Daniel Koprowski, Commander of the St. Paul District, briefed the commission on the status of studies, construction, and operations and maintenance activities within his area of jurisdiction. Members of Koprowski's staff also delivered a detailed briefing on the Asian Carp and Silver Carp threat perception in the states of Minnesota and Wisconsin. The fear that the invasive species will spread to the navigation pools and threaten river recreational activities in those two states has led to several proposals and initiatives ranging from closing the locks and dams to prevent fish passage to constructing electrical fish barriers.

The commission also conducted site visits at the Upper St. Anthony Falls Lock and Dam, Lock and Dam No. 1 and Lock and Dam No. 2. While at the Upper St. Anthony Falls facility, the commission met with representatives of U.S. Senator Amy Klobuchar, U.S. Representative Michele Bachmann and the Minnesota Department of Natural Resources to discuss the invasive species threat and the navigation authorities of the Corps of Engineers. The commission also toured the U.S. Geological Survey's Upper Midwest Environmental Sciences Center and received a number of briefings on the monitoring and research programs conducted at the facility.

Approximately fifty people ignored the unseasonably cool temperatures on a gorgeous and breezy summer afternoon to attend the public meeting in La Crosse and hear the testimony provided by 12 speakers. Nearly all of the testimony emphasized widespread appreciation of the upper Mississippi River as a significant national treasure.



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## Low-Water Inspection Trip Report

While the testimony reflected a great affinity for the improvements made to the health and aesthetics of the riverine ecosystem under the Upper Mississippi River Restoration Program, formerly known as the Environmental Management Program, it also carried a strong call for further investment, further ecosystem improvements and expansion of recreational development initiatives. Many of those same presenters also emphasized the need for navigation infrastructure improvements. As one presenter

remarked, “the health of an economy is tied to its transportation systems.” Despite the intermittent recognition of the national significance of the river transportation system, most of the emphasis of the testimony related to the importance of recreation on the river pools and fear that invasive species such as the Asian Carp might wreck recreational opportunities in the future.



Brig. Gen. Burcham provided the commission with an update of activities within the Great Lakes and Ohio River Division, to include a discussion of the Olmsted Lock and Dam project and the status of flood control storage in the Tennessee and Cumberland basins.



## Low-Water Inspection Trip Report

**August 12-15**  
**Genoa, Wisconsin – Saverton, Missouri**

Col. Mark Deschenes, Commander of the Rock Island District, updated the commission on the projects and programs within his area of responsibility. The spring of 2013 provided several tests for the Rock Island District with the Illinois River experiencing a flood of record in the spring and the Mississippi River being hit with two major flood pulses. During the Illinois River flood, a barge incident severely damaged the Marseilles Dam and left two gates inoperable. The permanent repair costs are currently estimated at \$50 million. The Rock Island District, which operates twenty locks and dams on the Mississippi and Illinois rivers, is known as the “operations and maintenance” district. The total prioritized list of maintenance projects in the district, including major rehabilitation work, is roughly \$1 billion. Deschenes outlined the district’s priority projects in operations and maintenance and major rehabilitation work.

The commission visited the Mississippi River Project Office and received an overview of the various capabilities. The site visit afforded the commission the opportunity to get an up-close look at Lock 5A miter gate repairs.

Members of the Rock Island District team provided a series



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## Low-Water Inspection Trip Report

of briefings to the commission. Briefing topics included the capabilities of the newly established Inland Navigation Design Center, an update on the status of navigation infrastructure on the upper Mississippi and Illinois rivers and an overview of the Navigation and Ecosystem Sustainability Program. Michael Klingner of UMIMRA gave an update on recent developments with the Upper Mississippi River Comprehensive Plan. Gretchen Benjamin of The Nature Conservancy gave an update on the Upper Mississippi River Restoration program, formerly known as the Environmental Management Program.



More than forty people attended the public meeting at Dubuque, IA, home of the National Mississippi River Museum and Hall of Fame. Nine speakers presented testimony that, again, had a heavy focus on recreation, furthering recreational development opportunities, and expansion of ecosystem restoration activities and eco-tourism opportunities. The testimony, however, was balanced in its support of infrastructure investment and flood control, although the latter certainly reflected a strong desire for non-structural methods of flood control. The key take-away from this public hearing

involved the common recognition of the potential for coexistence of navigation/flood control improvements and environmental restoration.





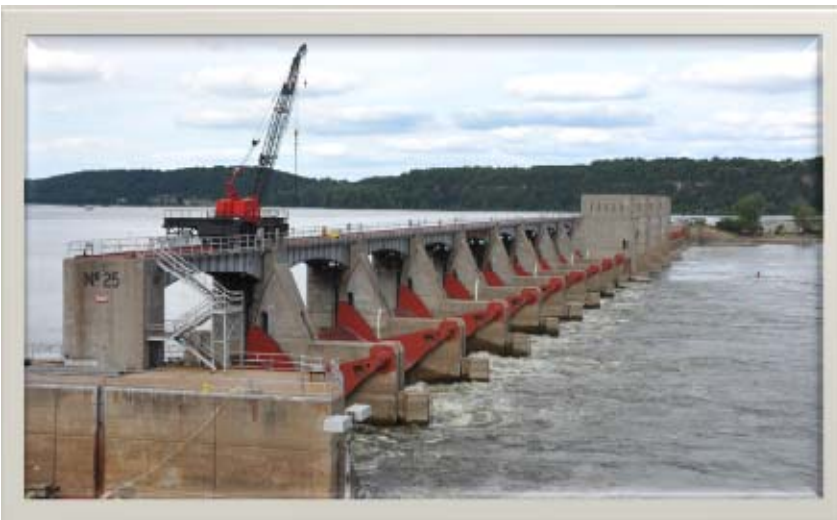
## Low-Water Inspection Trip Report

**August 15-16**  
**Saverton, Missouri – Alton, Illinois**

Col. Christopher Hall, Commander of the St. Louis District, provided the commission with an update on the investigation, construction activities operations and maintenance issues within his area of responsibility. Hall conveyed the complexity of managing the middle Mississippi River, which is strategically positioned between the slack-water system created by the upper Mississippi locks and dams and the upper limits of the MR&T project. On January 1, 2013, the St. Louis gage read minus 4.6 feet and the middle Mississippi River gained national attention as low water levels prompted emergency rock removal to keep the channel open for navigation. By late Spring the middle Mississippi River again achieved national notoriety as the St. Louis gage, established in 1861, reached the fourth highest level in its history at 40.5 feet, a swing of more than 45 feet since the January low water mark.



Col. Hall also briefed the commission regulating works project on the middle Mississippi River.



Navigation on the middle Mississippi is provided through a combination of river training structures, bank protection, dredging and rock removal. The St. Louis District completed an environmental impact statement for dikes, dredging and revetment in 1976. The refinement of relevant information pertaining to environmental concerns has prompted the district to execute a supplemental environmental impact statement. Hall acknowledged that the new study introduces new risks and issues that may impact the MR&T project.



## Low-Water Inspection Trip Report

Mayor Jo Anne Smiley of Clarksville, MO, led a roundtable discussion with the commission and various stakeholders on the motor vessel. Ken Erickson, Illinois Soybean/Illinois Corn Growers Association, briefed the commission on the impacts of the 2012-2013 drought and low water conditions on agriculture and barge operations.



The commission also signed a Memorandum of Understanding with the National Great Rivers Research and Education Center (NGRREC) to help support science-based decision making for water resources. The commission and NGRREC will continue to advance initiatives that help build peer reviewed products that bolster cross sector confidence in data, science and vetted policy recommendations. After the signing, members of the commission staff, NGRREC and Lewis and Clark Community College provided briefings covering a number of topics.

More than 75 members of the public attended the public hearing at the new Alton marina facilities along the downtown riverfront. The majority of the testimony given by the 14 speakers centered on the inconsistency of state laws and the evolution of unequal levels of flood protection, support for



comprehensive flood control plans that develop uniform levee heights and equal protection, the need for reliable navigation as a compliment to road and rail transportation, the need to reinvest in aging navigation infrastructure, the desire to end subsidies for the navigation industry, the call for more ecosystem and habitat restoration projects and funding.



## Low-Water Inspection Trip Report

### **Lower Mississippi River Basin August 18-20 New Madrid, Missouri – Tunica, Mississippi**

Dennis Norris, MRC Chief of Operations, briefed the commission on MR&T 10-year funding trends and the proposed FY 2014 President's budget. Norris informed the commission that the annual MR&T capability is \$500 million and that the President's budget contained roughly \$279 million for FY 2014. While this number falls well short of the annual capability, Norris reminded the commission that the number was higher than in recent years. In all, MVD accounts for approximately 20 percent of the Corps of Engineers civil works budget for FY 2014.

Norris also provided a detailed update on flood damage repairs throughout the MR&T project. All levee, structural, dredging and channel improvements repairs have been initiated and are on track for completion. All dredging activities have been completed and 85 percent of channel improvement repairs are complete. The completion percentage of levee repair projects and major structure repair projects are much smaller – 45 percent and 35 percent, respectively – as expected, but Norris expressed strong confidence that the projects would be completed on schedule.





## Low-Water Inspection Trip Report



Col. Jeffrey Anderson, Memphis District Commander, provided the commission with an update on major MR&T project features within his area of operation: St. Johns Bayou, Lower Cache River Restoration, the MR&T Levee System evaluation and the Lower Mississippi River Resource Assessment. Col. Anderson also updated the commission on the status of 2011 flood damage repairs and addressed groundwater depletion and the severe decline in the Sparta Aquifer and Memphis Sands, the need to develop a reliable funding mechanism for small harbor dredging, maintenance funding decline for the Huxtable Pumping Station in the St. Francis basin and regionalization of the MR&T channel improvement program.



The commission held two public hearings while in the Memphis District. More than 90 members of the public attended the New Madrid meeting. While some presenters touched on persistent issues, such as the need for the Corps of Engineers to re-examine dredging policies for small ports/harbors and assistance with local projects, most of the testimony presented by the fifteen speakers, including U.S. Representative Jason Smith (MO-8), centered on three major issues in the region that recently reached important milestones: the completion of the Draft Environmental Impact Statement (DEIS) for the St. Johns Bayou – New Madrid Floodway project, the development of a new operation plan for the Birds Point-New Madrid floodway and an analysis of non-explosive option alternatives for the Birds Point – New Madrid floodway. With regard to the St. John's Bayou – New Madrid Floodway project, all of the testimony offered support for the completion of the project; however, the tone of the speakers carried an underlying sense of apprehension. Most presenters expressed concern that the DEIS appeared to be turning the project from a flood control project to an environmental project.



## Low-Water Inspection Trip Report

The public meeting at Memphis drew more than one-hundred members of the public. Ten speakers presented testimony on a wide range of topics to include local flood and erosion problem areas and updates on 2011 flood repairs, the Lower Mississippi River Resource Assessment and native prairie grass initiatives. The most compelling testimony, though, centered on two issues that have long-plagued the region: the need for federal dredging of small ports and harbors and the impacts of groundwater depletion on municipalities, industries and agriculture. With regard to the former, the state of Arkansas passed legislation to collect taxes to fund dredging of small ports and harbors in the state. The tax will address a long-standing issue with the lack of federal dredging dollars to keep the ports open, but it will take years to develop the necessary. As to the latter issue, the commission heard multiple calls for the Corps of Engineers to take on the issue of water supply and groundwater depletion as a formal mission component.

Following the Memphis public meeting, more than 200 partners and stakeholders boarded the motor vessel MISSISSIPPI to attend a christening ceremony for the newest member of the fleet named in



honor and recognition of George C. Grugett, the long-time champion of the MR&T project. Mr. Grugett devoted more than sixty-five years of his life in service of others as a bomber pilot during the Second World War, a Memphis District employee and Executive Vice President of the Mississippi Valley Flood Control Association.

The commission also conducted a site visit of the Cherokee revetment – a component of the MR&T channel improvement program.

During the 2011 flood of record on the lower Mississippi, the river attempted to make a natural cutoff at Little Cypress Bend in Lake County, TN. A cutoff across the neck of land would have shortened the river by approximately nine miles and permanently altered the regimen of the river and rendered



## Low-Water Inspection Trip Report

useless many of the channel training works and flood control structures in the reach. The articulated concrete mattress (ACM) comprising the Cherokee and Meriwether revetment armored the bank in this location and prevented the river from creating a natural cutoff which would have halted navigation on the Mississippi River until safe passage through the new channel could be achieved. The event reinforced the value that ACM represents in being the MR&T project's first line of defense against floods and ensuring the river does not create uncontrolled meanders that would threaten the integrity of the existing levee system and disrupt waterborne commerce.



**Lead Pilot: Yellow Airplane**  
**Morris Ray, Memphis, TN**

**Pilot, Left Wing: Yellow Airplane**  
**Frank Kimmel, Greenwood, MS**

**Pilot, Right Wing: Blue Airplane**  
**Jimmy Fordham, Monroe, LA**

**Ground Conductor:**  
**Dan Fordice III, Vicksburg, MS**



## Low-Water Inspection Trip Report

### **August 20-21** **Tunica, Mississippi – Natchez, Mississippi**

Col. John Cross, Commander Vicksburg District, briefed the commission on MR&T-related activities within his area of operations to include an update on 2011 flood levee repairs, an overview of the channel improvement program and funding trends for dredging Mississippi River ports.

Chuck Shadie, Chief of Watershed Division, briefed the commission on the MR&T project flood flowline study - a three-year effort scheduled for completion in 2016. The MR&T 2011 Post-Flood Report recommended an updated flowline study. The last major revision to the flowline occurred in 1976 following the 1973 flood. The Corps of Engineers conducted analyses after the floods of 1997 and 2008, but neither resulted in changes to the flowline. The 2011 flood exposed aggradations of the flowline in the rating curve at Red River Landing. The new study will also examine capacity, scour issues and design height of the Morganza floodway structure and the Old River control structures; the design flow of the Birds Point-New Madrid floodway; and adequacy of operation triggers of the backwater areas.

Dennis Norris provided an overview of the conservation plan for the Interior Least Tern, Pallid Sturgeon and Fat Pocketbook Mussel on the lower Mississippi River. Norris described the results of three decades of research, 10 of which were conducted through informal consultation with the U.S. Fish and Wildlife Service. The conservation plan is the offspring of Mississippi River Commission efforts stemming from the establishment of the Lower Mississippi River Environmental Program, established in 1981 to establish baseline environmental resource data on the river and formulate environmental design considerations for channel training works. Norris also addressed potential mission







## Low-Water Inspection Trip Report

impacts and the next steps as the Corps of Engineers moves into formal consultation. The resultant conservation plan does not change channel improvement construction and operation activities, but merely formalizes compliance with the Endangered Species Act and moves the three species toward possible delisting.

More than 65 people attended the public hearing at Vicksburg. Twelve speakers addressed a variety of topics to include status of Mississippi River levee repairs and improvements, concerns over groundwater depletion and the Sparta aquifer, the importance of small ports/harbors to the larger navigation system, main stem navigation concerns, the lack of dredging funds for the main stem and small ports/harbors, aging infrastructure, erosion at Natchez “Under the Hill” allegedly created by the Giles cutoff, scour on the 465 bridge in the Yazoo delta resulting from the operation of the Steele Bayou control structure, recreational and habitat restoration opportunities on the lower Mississippi, Ouachita-Black navigation project, Ouachita River levees, extension of navigation on the J. Bennett Johnson Waterway into Arkansas, the Southeast Arkansas project in the Boeuf and Tensas basins and the need for hydropower on the Mississippi River.





## Low-Water Inspection Trip Report

### **Atchafalaya River Basin August 22-23 Old River Control to Morgan City, Louisiana**

Col. Rick Hansen, Commander of the New Orleans District briefed the commission on MR&T-related activities within his area of operation to include 2011 flood repairs, progress with addressing freeboard deficiencies and seepage on Mississippi River levees, the impact of diversions proposed by the state of Louisiana on the MR&T project and studies to address

backwater protection in the Atchafalaya basin. Col. Hansen also indicated that the state sent a request for the Corps of Engineers to dredge the channel from Baton Rouge to the Gulf of Mexico to a depth of 50-55 feet to accommodate deep-draft vessels suitable for Panama Canal expansion. The New Orleans District currently

maintains the channel under the Operations and Maintenance program to a depth of 45 feet, but is authorized (though not funded) under WRDA 1986 to maintain to a depth of 55 feet.



Col. Hansen also requested permission from the commission to open the overbank structure at the Old River Control Complex during the next flood event as a test operation to determine if the structure can increase the capacity passed through Old River Control to address the stage-discharge issue that developed at the Morganza spillway structure during the 2011 flood. The overbank structure has not been operated since the 1983 flood. During that operation, significant scour damaged the gabion field and threatened a guide levee. Since 1983, the added capacity of the auxiliary structure completed in 1986 alleviated the need to open the structure during the floods of 1997 and 2008.



## Low-Water Inspection Trip Report

Brig. Gen. Thomas Kula, Commander of Southwest Division, provided the commission with an overview of the operational strategies and priorities along the McClellan-Kerr Arkansas River Navigation System (MKARNS). The MKARNS annually carries 11 million tons of cargo valued at \$3.1 billion, to include fertilizer, wheat and farm products, iron and steel, and petroleum, to domestic and overseas markets via the MR&T navigation system. The commission visited the Arkansas-White basin in August 2010. Kula indicated that stakeholders in the region desired to maintain the impetus toward greater cooperation created during the 383<sup>rd</sup> session and invited the commission to consider another visit to the Arkansas River basin in the near future.



Rear Adm. Glang briefed the commission on NOAA's responsibility under the RESTORE Act passed in response to the Deepwater Horizon gulf oil spill. NOAA will organize the science program under the act to monitor and support the long-term sustainability of the ecosystem along the Gulf Coast.

Erik Blechinger, Missouri River Programs, Northwest Division, provided an overview of flood control, navigation and environmental restoration activities in the Missouri River basin.

Dr. Barb Kleiss, Mississippi River Science & Technology Director, provided the commission with an update on the status of the Mississippi River Hydrodynamic project, concentrating on





## Low-Water Inspection Trip Report



geomorphic assessment reporting recently completed by Dr. David Biedenharn and Mr. Charles Little. Report topics of particular interest included assessment of channel aggradations and degradation and a timeline of major events on the lower Mississippi River. Kleiss distributed DRAFT copies of the report to the commissioners. Kleiss also provided an overview of the current understanding of diversion science including the difficulties of assessing the cause of wetland loss in Louisiana, a sediment budget of the lower Mississippi River, the potential impacts of diversions on the

Mississippi River channel, assessing the land-building potential of diversions, potential ecological effects of diversions on estuaries, nutrient effects on wetlands and questions about the ability of wetlands to protect communities from hurricane storm surge. The presentation concluded with a summary of issues that are currently being addressed by the Mississippi River Hydrodynamic Study, and issues that are currently not being adequately addressed by any ongoing projects or studies. Mr. Jerome Zeringue was present and helped address consistencies or conflicts with the state Master Plan.

The commission concluded its 390<sup>th</sup> session with a public meeting in Morgan City, LA. Approximately 50 members of the public listened to 15 speakers present testimony on a number of topics, to include impacts of the Panama Canal expansion on the Mississippi and Atchafalaya rivers, the need to maintain a minimum 50-foot depth on the Mississippi River below Baton Rouge and 20-foot around Morgan City, dredging in the Houma Navigation Canal, coastal land loss and the immediate and emergency need for coastal restoration, Mississippi River diversions to combat coastal land loss, replacement of Bayou Sorrel lock, improved mooring facilities at Bayou Sorrel lock and environmental restoration in the Atchafalaya basin.





## Low-Water Inspection Trip Report

### **Mississippi River Cities and Towns Initiative**

The Mississippi River Cities and Towns Initiative (MRCTI) is a local government-lead effort empowering the ten states and more than one-hundred cities that border the Mississippi River to act for its continued prosperity, sustainability and economic growth. Through MRCTI mayors and other leaders cooperate to give new urgency to issues facing the Mississippi River, and new strength to effectively resolve them. Many of the mayors comprising the MRCTI recognize the critical economic, ecological and cultural importance of the Mississippi River and understand the critical role the Corps of Engineers plays in sustaining their communities and economies. With this in mind, the Mississippi River Commission engaged with 21 of the 59 mayors who have signed onto the MRCTI initiative. At every public meeting, the commission afforded various mayors the opportunity to explain the vision of the MRCTI and conducted ceremonial signings of the "Memorandum of Common Purpose" signed by the MRCTI co-chairs and Maj. Gen. Peabody during the summer. This is a superb opportunity to collaborate with the local political leaders to advance solutions to the river's many issues, and to ally with those who both understand and value the river to jointly deliver the message on needed actions to address the most pressing issues.





## MISSISSIPPI RIVER COMMISSION

VICKSBURG, MISSISSIPPI

August 23, 2013

### Statement of the Mississippi River Commission *Call to Action*

MISSISSIPPI RIVER COMMISSION  
P.O. BOX 60  
VICKSBURG, MISSISSIPPI 39181-0060

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*Commander, Mississippi  
Valley Division*  
Vicksburg, Mississippi

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*Sr. Civilian*  
Lake Village, Arkansas

Honorable R. D. James  
*Civilian/Civil Engineer*  
New Madrid, Missouri

Honorable Norma Jean Mattei  
*Civilian/Civil Engineer*  
Metairie, Louisiana

Brig. Gen. Margaret W. Burcham  
*Commander, Great Lakes &  
Ohio River Division*  
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*The American Geography is an impressive one. The Greater Mississippi Basin together with the Intracoastal Waterway has more kilometers of navigable internal waterways than the rest of the world combined. The American Midwest is both overlaid by this waterway and is the world's largest contiguous piece of farmland... The United States has capital, food surpluses and physical insulation in excess of every country in the world by an exceedingly large margin. So... the Americans are not important because of who they are, but because of where they live.*

*"The Geopolitics of the United States: The Inevitable Empire,"  
Stratfor Global Intelligence, May 2012<sup>1</sup>*

The above assessment by Stratfor Global Intelligence clearly captures the strategic importance of the natural, God-given assets that served as the foundation for the greatness of the United States of America. Yet our transformation from a fledgling agrarian nation into the world's preeminent economic power – “the inevitable empire” – necessarily depended on a strong vision, persistent determination to overcome all obstacles, massive private and federal investment that ultimately overcame frequent initial failures, and an intergenerational commitment to develop the full potential of the Greater Mississippi Basin. The determined commitment to make this vision a reality enabled the United States to fully leverage its unique geopolitical advantages and develop a unified national system of rivers, canals, roads and railways connecting the riches of the American interior to its coastal ports and overseas markets.

By the mid to late 20th century, our nation's long-term investment efforts delivered an inland transportation system that was the envy of the world. The abundant natural waterways of the American interior remain the envy of the world, but the same can no longer be said for our infrastructure. Our nation's infrastructure – its ports and navigation locks, levees and dams, highways and bridges, railroads and tunnels – all suffer from prolonged under-investment, deferred maintenance and a failure to upgrade and modernize capacity to keep pace with global trends. Having built out the greatest transportation infrastructure in the world, and then benefiting from its consequences for decades, we became accustomed to its enormous benefits and allowed ourselves to be lulled into assuming this advantage would always endure. So while the rest of the world has forged ahead in building modern marvels of infrastructure capable of efficiently moving vast quantities of waterborne cargo in recent years, the United States has fallen increasingly behind due to its failure to continue its pattern of investment.

Since 1879, the seven member Presidentialy appointed Mississippi River Commission has developed and matured plans for the general improvement of the Mississippi River from the Head of Passes to the Headwaters. The Mississippi River Commission brings critical engineering representation to the drainage basin, which impacts 41% of the United States and includes 1.25 million square miles, over 250 tributaries, 31 states, and 2 Canadian provinces.

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The resultant neglect is resulting in such a degree of deteriorated infrastructure, that it is actively undermining our economic competitiveness.

At no time has the fragility of the Greater Mississippi Basin's waterborne transportation infrastructure been so tested by the extremes of nature as in the past few years. Floods of record occurred on the lower Mississippi, the Souris, the Red River of the North, the Missouri and the Illinois Rivers, all in the last two years. To punctuate the vicissitudes of nature, the record or major flooding that occurred across America's heartland in 2011 and 2013 was interspersed by a devastating drought that destroyed crops and threatened to impede or halt commerce along the middle Mississippi River in the winter of 2012-13. While nature challenges our infrastructures ability to cope with these extremes, lock outages across the system are trending upward, growing by nearly six times from 1991 to 2011.

As a result of our own neglect and the reality that much of the world has surpassed or is surpassing our previous advantages in reliable transportation infrastructure, America now stands at an important crossroads. Today, multiple game-changing realities challenge our prior pre-eminent economic position, compelling this Commission to issue a decisive Call to Action. These inter-related challenges include:

- Pending explosion in the global population by more than two billion people by mid-century – accompanied by a substantial improvement in global standards of living, and consequently expectations – will increase demands for food, water and energy dramatically;
- Across the globe infrastructure investment is increasing exponentially. In contrast, the United States spends a fraction on infrastructure investment and recapitalization. The opening of expanded locks at the Panama Canal in 2015 will dramatically affect United States and global trading patterns, for which our nation has only recently begun to prepare;
- Inefficient and sometimes ineffective and even conflicting federal processes driven by a dizzying array of laws, policies and regulations. The overly complex requirements must be streamlined to exemplify the processes employed in the construction of the I-35 W bridge in Minnesota or the Hurricane Storm Damage and Risk Reduction System in southeast Louisiana.<sup>2</sup>

Through our public engagement process spanning many decades, the Mississippi River Commission has received testimony from those who live, work, produce and play along the "father of waters" – the Mississippi River and its tributaries. We share their viewpoint that the time for action is now:

- ✓ The Commission advocates a strong national vision for investment in infrastructure that compels the United States to unify behind systems-based, watershed-level projects that assure the long-term vitality of the economy, national security and the environment. That vision must necessarily prioritize high-value projects and must be supported by policies that integrate waterborne and overland transportation needs in order to maximize the nation's natural geographic advantages and bolster our global competitiveness.

- ✓ The Commission recommends exploring new avenues for funding and executing water resources missions through more aggressive priorities and investment strategies along the lines identified in the recently published report by McKinsey Global Institute on infrastructure productivity.<sup>3</sup>
- ✓ The Commission supports streamlining water resource development processes, to include all laws, regulations and executive orders, in a manner that serves progressive economic and environmental betterment of the nation as a whole. The streamlined processes should enable state, federal agencies and other key stakeholders to deliver valuable solutions based on clear understanding of risks, within clearly defined schedules.

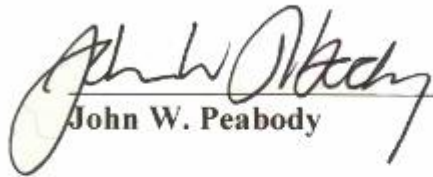
Roughly 90 percent of all global trade is conveyed by sea, and America uniquely encompasses large coasts on both the Atlantic and Pacific Oceans, making us a global maritime nation. America's economic competitiveness and its ability to feed and supply the world, therefore, depend on fully leveraging and maintaining the reliability, efficiency and effectiveness of moving goods via all transportation systems on which our economic greatness rests. As we cautioned in our April 15, 2011, *Statement on Inland Waterway Navigation System*, the level of commitment to the nation's transportation infrastructure has been waning for decades. A continued failure to invest in sustaining an effective and reliable national transportation network for the 21<sup>st</sup> century, and a failure to modernize our infrastructure project delivery processes, will negatively affect America's economic and global competitiveness.<sup>4</sup>

This call to action comes at a pivotal moment in history when increasingly globalized trade provides fantastic opportunities for America to deliver on its promise of economic potential to fulfill the world's demands, while advancing the economic security of our nation and its people for generations. Thomas Jefferson and other founders first envisioned the potential of the abundant natural waterways that the "Greater Mississippi Basin" held out, and acted on that vision.<sup>5</sup> It is already past time to re-energize that vision to guide our future, by acting now to invest in the required infrastructure that will match or exceed the transportation capacity that much of the world is building. Inaction would result in an increase in transportation link failures, an unacceptably negative consequence that would doom America's potential and global needs would remain unfulfilled.

Our current generation must not be complicit in allowing, through inaction, the inevitable catastrophic failure in some vital component of the nation's critical infrastructure, or the inexorable competitive decline while our infrastructure slowly crumbles. Our nation must re-commit to leverage the fortune of its enormous geographic advantages, with its inherent ability to produce and export, by investing in our infrastructure. Such an effort will be the work of a generation or two, yet while we wait the rest of the world is continuing to pass us by. The voices of our diverse partners from every sub-basin in the greater watershed are clear: The time for action is now, and the moment to start is immediately.



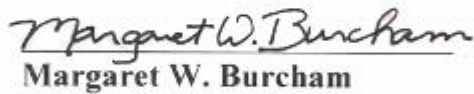
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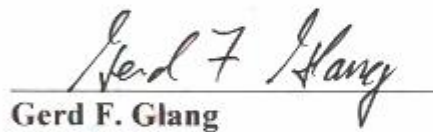
  
John W. Peabody

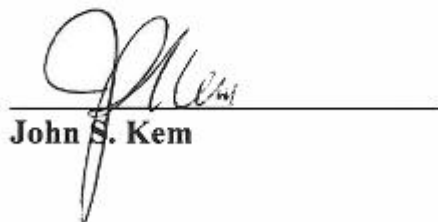
  
Hon. Sam E. Angel

  
Hon. R.D. James

  
Hon. Norma Jean Mattei, Ph.D.

  
Margaret W. Burcham

  
Gerd F. Glang

  
John S. Kem

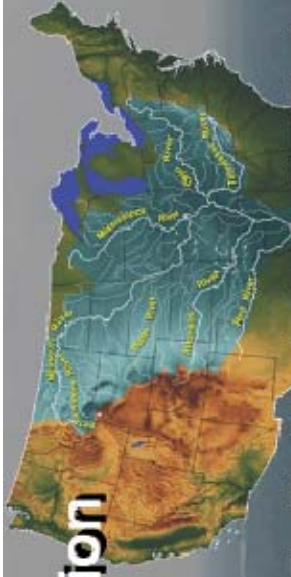


Since 1879, the seven-member Presidentially appointed Mississippi River Commission has developed and matured plans for the general improvement of the Mississippi River from the Head of Passes to the Headwaters. The Mississippi River Commission brings critical engineering representation to the drainage basin, which impacts 41% of the United States and includes 1.25 million square miles, over 250 tributaries, 31 states, and 2 Canadian provinces.

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# America's Watershed: A 200-year working vision

## An Intergenerational Commitment



The Mississippi watershed is 41% of the United States, encompassing 31 states, 1.25 million square miles, more than 250 tributaries

- **Our people enjoy a quality of life unmatched in the world. We ...**
- **Lead secure lives along the river or tributary.**
- **Enjoy fresh air and the surrounding fauna, flora, and forests while hunting, fishing and recreating.**
- **Travel easily, safely and affordably.**
- **Drink from and use the abundant waters of any river, stream or aquifer.**
- **Choose from an abundance of affordable basic goods and essential supplies that are grown, manufactured and transported along the river to local and world markets.**

### Balancing Nation's needs for:

- ❖ National security & flood damage reduction
- ❖ Environmental sustainability & recreation
- ❖ Infrastructure & energy
- ❖ Water supply & water quality
- ❖ Movement of goods: agriculture & manufacturing

Join the dialogue ...  
visit [www.mvd.usace.army.mil/mrc](http://www.mvd.usace.army.mil/mrc)  
or email [cemvd-ex@usace.army.mil](mailto:cemvd-ex@usace.army.mil)

*Leveraging local citizen and partner input, international dialogue, science, engineering, technology, and public policy*

# Mississippi River Commission

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## We Value....

### *Listening - Access*

... providing an equal opportunity for all citizens to share their insight and wisdom in a free and open forum – a forum that offers greater access for citizens to actively engage in and shape Federal water resource management policy.



### *Inspecting - Professionalism*

... setting the highest professional, engineering, and process standards that are emulated nationally and internationally, and offer an intergenerational vision for the world's 3<sup>rd</sup> largest watershed.



### *Partnering – Relationships*

... establishing and nurturing long-term collaborative relationships with diverse interests, elected representatives, State and Federal agencies, and the Corps of Engineers to develop sustainable solutions for current and future watershed challenges.



### *Engineering - Action*

... protecting lives, property, economic prosperity, and the nation's natural resources by advancing balanced and sound water resource engineering solutions reached through collaboration and long-term relationships.



# Mississippi River Commission

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## Priorities....

- **Navigation – available and improving delivery**
  - » Consider, discuss, and address container on barge for 2014-15 with opening of the Panama Canal new set of locks
  - » Dredging of small ports and harbors
  - » Navigation and Ecosystem Sustainability Program (NESP)
- **Infrastructure**
  - » Use MRC process of listening, inspecting, partnering, and engineering to increase awareness of the deteriorating infrastructure in the watershed
  - » Through established relationships, develop plans to address infrastructure in the watershed; lead federal efforts
  - » Use MRC process to increase and improve infrastructure investment
- **Comprehensive Flood Control**
  - » MR&T (Mississippi River Levees, Morganza to Gulf)
  - » Upper Miss Comprehensive Plan
  - » Communicate MRC/MR&T process as a comprehensive balanced watershed approach to follow in the six major sub-basins comprising the world's 3<sup>rd</sup> largest watershed – the Mississippi, Missouri, Ohio, Red, Arkansas, Illinois River basins and tributaries.
- **Environmental Sustainability**
  - » Integrate science based, sustainable, and resilient work into all projects (life-cycle costs)
  - » LCA: Explore innovative approaches and solutions such as water and sediment diversions
- **Water Supply**
  - » Prolonged drought concerns/storage of runoff
  - » Multi-state aquifer depletion
- **200-year Working Vision for America's Watershed**
  - » MRC signed a working vision August 20, 2009 (revised August 2010). It serves as:
    - \* A system-wide balanced approach, requires an intergenerational commitment, and compliments a national vision
    - \* A platform for broad participation, international recognition, and a long-term balanced vision for the entire watershed.



# Mississippi River & Tributaries Project

The Mississippi River and Tributaries project was authorized by the 1928 Flood Control Act. In the wake of the 1927 flood, it was deemed necessary to put into place a comprehensive, unified system of public works within the lower Mississippi Valley that would provide unprecedented protection from floods and an equally efficient navigation channel.

The MR&T project has four major features:

1. Levees/floodwalls
2. Floodways
3. Channel improvement and stabilization
4. Tributary basin improvements

These features work together to provide flood protection and navigation, and foster environmental protection and enhancement.

## PROJECT BENEFITS

### Flood Control

- \$14 billion invested for planning, construction, operation and maintenance since 1928
- \$612 billion in flood damages prevented, since 1928
- Approximately 4 million people protected
- \$234 billion damages prevented in 2011
- 44 to 1 return on each dollar invested
- 1927 Flood = 16.8 million acres flooded
- 2011 Flood = 6.4 million acres flooded
- 86.6 % physically complete
- \$3 billion annual transportation rate savings
- Untold economic productivity enables farms, towns & factories

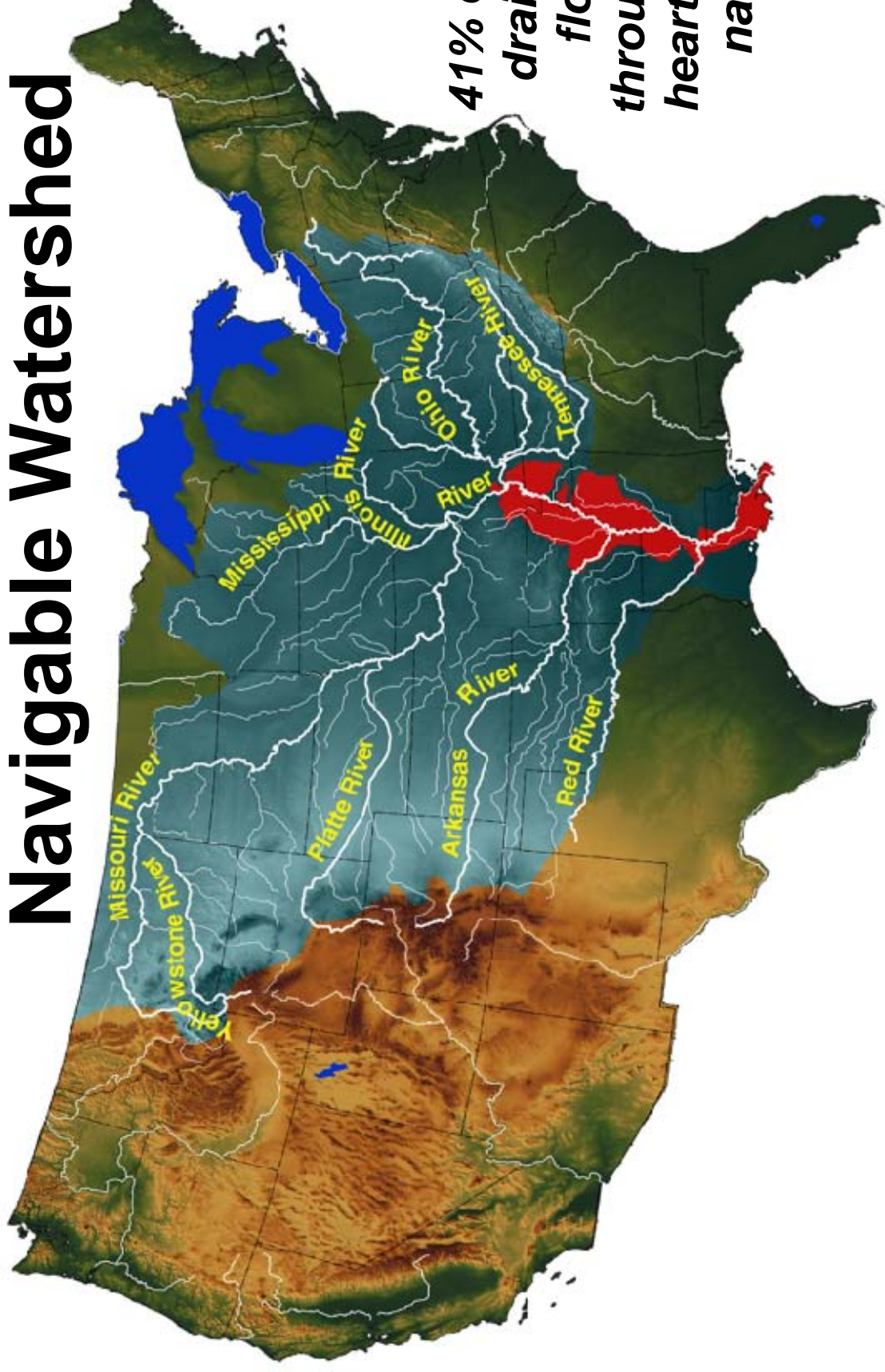
### Navigation

- More than 500 million tons of cargo move on the Mississippi River system each year.
- \$2.9 billion saved annually in transportation benefits.
- The Mississippi River remained opened during the 1988, 1999 and 2012 droughts, as well as the 2011 record flood. The ability to keep the river open offered unequivocal evidence of the benefit of the MR&T project to the nation. Keeping it open and reliable is a pillar of economic stability and national security.





# World's Largest "Naturally" Navigable Watershed



**41% of U.S.  
drainage  
flows  
through the  
heart of the  
nation**

Since 1879, the seven-member Presidentially appointed Mississippi River Commission has developed and matred plans for the general improvement of the Mississippi River from the Head of Passes to the Headwaters. The Mississippi River Commission brings critical engineering representation to the drainage basin, which impacts 41% of the United States and includes 1.25 million square miles, over 250 tributaries, 31 states, and 2 Canadian provinces.

*Listening, Inspecting, Partnering and Engineering since 1879*