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STATEMENT OF PETER NIMROD HIGH WATER INSPECTION TRIP MISSISSIPPI RIVER COMMISSION APRIL 13, 2016, AT A HEARING AT LAKE PROVIDENCE, LA

GENERAL WEHR AND MEMBERS OF THE MISSISSIPPI RIVER COMMISSION:

I am Peter Nimrod, Chief Engineer for the Board of Mississippi Levee Commissioners, and I have the privilege of presenting this statement on their behalf. The Board of Mississippi Levee Commissioners was established in 1865 and is comprised of 7 elected commissioners representing the counties of Washington, Bolivar, Sharkey, Issaquena, and parts of Humphreys and Warren counties. The Mississippi Levee Board is responsible for 212 miles of levees and 350 miles of interior streams.

MAINLINE LEVEE - CONSTRUCTION

Construction on the Levee Enlargement & Berm Project along our levee system continues to slowly proceed due to a lack of serious congressional funding. Of the original 69 miles of deficient levee in the Mississippi Levee District, we have now completed 35.4 miles and currently have another 17.4 miles under contract. Item 468L, a 4.7 mile levee enlargement project is currently 98% complete. Item 463L, a 2.7 mile levee enlargement project, was awarded to Circle Construction, LLC and is currently 88% complete. Item 509L, a 3.9 mile levee enlargement project, was awarded to Affolter and is currently 81% complete. Item 511L, a 3.4 mile levee enlargement project, was awarded to My Company, Inc. in November, 2014 and is currently 22% complete. Item 465L, a 2.7 mile levee enlargement and berm project, was awarded to Carter's Contracting Services, Inc., back in September, 2015 but nothing has been done on this project to date.

The Levee Enlargement & Berms Project needs to move towards completion because at this point our Mainline Mississippi River Levee will overtop during a Project Design Flood (PDF).

STEELE BAYOU SEDIMENTATION REDUCTION PROJECT

The Steele Bayou Sedimentation Reduction Project installs drop pipe structures at medium to large headcut locations throughout the length of Steele Bayou. Phases I through VI included 65 sites and are complete. Of the original 100+ headcut sites on Steele Bayou, the Corps has installed structures at 54 sites and Delta FARM has installed structures at 37 small headcut sites. The Corps awarded Phase VII to Quinn Contracting, LLC back in October, 2015 which includes 12 more sites on Steele

Bayou. Phase VII is currently 7% complete. The Mississippi Levee Board is very pleased with this project because it will not only help flood control by keeping the sediment out of the channel, but it will enhance water quality as well. The Vicksburg District is beginning to survey 30 headcut sites up in the northern part of the Mississippi Delta for the Big Sunflower River Sedimentation Reduction Project.

LEVEE SLIDES

There are currently 38 levee slides within the Mississippi Levee District. The Board appreciates the Vicksburg District and the Hired Labor Crew for performing these slide repair activities.

MAINLINE LEVEE - MAINTENANCE GRAVEL

We have been informed that there is money available for a 2016 Gravel Job which will provide limestone road surfacing material. These annual contracts provide great benefits to the Mississippi Levee Board for upkeep of the maintenance roadway that can be relied upon during highwater. On behalf of the Board, we would like to express our appreciation to the District for pushing our needs so that we continue to receive maintenance gravel.

THE GREAT 2011 FLOOD

The Epic 2011 Flood was a record flood on the Mississippi River. We had (11) major problem areas discovered during the 2011 Flood that needed our attention and remedial work: Buck Chute, the predicted overtopping of the Yazoo Backwater Levee, Francis, the Albemarle levee slide, Winterville, Above Greenville, Greenville, Avon, Leota, Lake Jackson, Ben Lomand, and Tara Wildlife.

To date the Vicksburg District has contracted and completed resetting the Yazoo Backwater Levee, Buck Chute and Albemarle. Items 616L/543L - Francis/Above Greenville - Relief Well Project was officially accepted by the Vicksburg District last Fall. Item 456L - Tara Seepage Control Project was awarded to Harding Enterprises. All 32 relief wells have been installed and they are working on the 11,500' long landside seepage berm. This project is currently 84% complete. East Bank Seepage Control includes 5 Reset Items - Greenville, Avon, Leota, Lake Jackson and Ben Lomand. Magruder Construction was awarded the contract in late 2013 and the project is currently 86% complete. All 186 relief wells that were designed as part of correcting the 11 problem areas have been installed by December, 2015. All of our problem areas now have a permanent solution in place.

The 2011 Flood is the new benchmark highwater event that will be used from this point forward. The safe passage of this multi-hundred year event is a testament to the daily maintenance activities of the Levee Boards, Congress's yearly wise appropriations for construction and maintenance for the MR&T Project, and the Corps of Engineers vision, foresight, engineering and construction.

RECORD JANUARY HIGHWATER EVENT

On Christmas Day we got word that the heavy rains in Arkansas and up into the Mississippi River Valley had resulted in the Long Range Forecast for Greenville predicted to crest at 56' on January 13th. The Levee Board held an Emergency Board Meeting on December 29th to declare a State of Emergency. A Flood Fight Organizational Meeting was held on January 4th to organize teams of Corps employees and Yazoo-Mississippi Delta Joint Water Management District employees to inspect the levee and look for problem areas. Inspections began on that day.

The highest stage during January on the Mississippi River at Greenville was 50.8' back in 2005. The Greenville Gage crested at 56.2' on January 13th. This was 5.4' higher than the previous record for January.

The good news was that all 11 problem areas fought during the 2011 Epic Flood all had permanent solutions in place. No sandbagging or barreling were required at any of these locations. We did have a few issues that required temporary measures to be put in place. An earthen weir had to be once again built in Black Bayou Cut-off just north of Greenville in the vicinity of Sta. 3675. The Levee Board had to block off several culverts because many large sandboils were discovered in the bottom of Valewood Ditch in the vicinity of Sta. 6193-6350. Sandbagging and barrels were again needed down in the ATCO Woods just north of the Ben Lomand Relief Wells in the vicinity of Sta. 7092-7124. The Ben Lomand Relief Wells were completely submerged underwater. Once again heavy seepage near the banks of Eagle Lake at Buck Chute were discovered as well as some sandboils in Eagle Lake in the vicinity of Sta. 142-150 BEL. And access to our new relief wells became an issue. Gravel access roads need to be built to each of these relief well locations.

The Mississippi Levee Board requests that the Vicksburg District inspect these problem areas and look to implement a permanent solution at each location. The Mississippi Valley Flood Control Association went to Washington DC on March 1st and requested not only an annual \$500M appropriation for the MR&T Project, but also a \$2B supplemental appropriation to reset the MR&T Project following this record January highwater event. If we don't fix these deficiencies and damages throughout the MR&T system we will be facing a future catastrophe.

The January, 2016 Highwater proved to be the 6th highest crest since the 1927 Flood. This flood was 8.2' above flood stage but 8' below the Epic 2011 Crest. However the problems were very limited and were not jeopardizing the Mainline Mississippi River Levee. The Levee Board applauds the Vicksburg District Corps of Engineers for designing and building permanent solutions to all 11 problem areas. The Board also appreciates Congress for providing \$802M in supplemental money to reset the MR&T Project following the 2011 Flood.

The Mississippi Levee Board appreciates the Vicksburg District, the Greenwood Area Office and the Yazoo-Mississippi Delta Joint Water Management District for their help with inspections during this record January highwater event.

MISSISSIPPI DELTA FLASH FLOOD

On March 8-13, 2016 the Mississippi Delta was hit with a major rainfall event. Officially 16.0" fell in Greenville, MS during a 4 day period matching the 1,000 year rainfall event. In Monroe, LA 21.29" of rain fell over a 7 day period indicating an event larger that a 1,000 year rainfall event! Needless to say, the deluge overwhelmed our drainage system and hundreds of thousands of acres were flooded as well as homes and businesses. New records were set on the Big Sunflower River at Clarksdale and Lombardy; the Coldwater River at Marks and Darling; and the Bogue Phalia at Leland.

500 homes were flooded in Washington County, 338 homes were flooded in Bolivar County, 223 homes were flooded in Coahoma County, and 100 homes were flooded in Quitman County.

Thankfully the Upper Steele Bayou Project was built back in the late 1990's and completed in 2001. This project reduces stages in Greenville by 2' to 3'. This saved 1,000's of homes in the Greenville, MS Area from being flooded.

From 1947 to 1965 the Corps of Engineers enlarged 633 miles of interior streams within the Mississippi Delta. 25 years ago, back in 1991, the Corps discovered that 3-5' of sediment had built up in the bottom of 133 miles of the Big Sunflower, Bogue Phalia and the Little Sunflower Rivers below Hwy 82. The Big Sunflower River Maintenance Project will reduce stages 3' when it is built. Now that 25 more years have passed and the original project is now 50 to 70 years old - we can imagine that the situation has only gotten worse. We request that the Vicksburg District check our interior streams to see if the maintenance project needs to be expanded above Hwy 82.

The Yazoo Backwater Area crested at 92'. The Yazoo Backwater Pump needs to be built to protect the South Delta. These pumps will lower the 100-year flood by 4.5' in the South Delta. The Yazoo Backwater Project is a model project that will not only provide flood protection, but will vastly increase benefits on every environmental resource category such as wetlands, terrestrial, aquatic and duck habitat through the reforestation of the floodplain. The residents of the Mississippi South Delta just want what was promised to them 75 years ago. It is time to complete the last phase of flood protection for the Mississippi Delta.

FAREWELL COL. JOHN CROSS

The Board has enjoyed getting to know and work with Col. John Cross over the past 3 years at the Vicksburg District. We want to thank him for his service to our country and congratulate him and wish him luck in his upcoming retirement.

CLOSING

Again, on behalf of the Board, we continue to value our association with the Mississippi River Commission and the Vicksburg District and appreciate the opportunity to meet with you on these inspections.

Peter Nimrod, P.E., P.L.S. Chief Engineer - MS Levee Board April 13, 2016

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