Metro East Update

Covering the Levee Systems of Metropolitan East Sanitary District, Wood River, Chain of Rocks, Prairie du Pont/Fish Lake November 2013

EVENTS & ACTIVITY

RECENT ACTIVITIES

Wood River

- The design of two slurry trench cutoff walls, one located in Upper Wood River, the other in Lower Wood River, are nearing completion. The designs are currently going through reviews.
- Design work continues for the cutoff wall adjacent to Melvin Price Locks and Dam.

Chain of Rocks

- The last month brought the physical completion of a new pump station to combat underseepage. This pump station supplements the existing pump station.
- The last month has also brought the physical completion of the remaining 37 relief wells.

FUTURE EVENTS

The St. Louis District will host a Construction Industry Day event Dec. 3 for businesses interested in the Melvin Price/Wood River Seepage Cut-Off Wall Project. For info, check http://www.mvs.usace.army.mil/Missions/ProgramsProjectManagement/idmp.aspx or www.fbo.gov

From the St. Louis District Commander

Federal investment, partnerships benefit Metro East in FY14

Twenty-two pounds.

The president's Fiscal Year 2014 budget allocates more than $30 million dollars to federal projects in Metro East in the new fiscal year.

That amount of money weighs more than 22 lbs. Stacked in $100 bills, the height would be over 3.5 ft. high.

Visualizing the federal commitment in 100-dollar bills, though, does not accurately convey the benefits associated with the federal project.

These benefits include reducing risk to more than 280,000 individuals who live or work in the area, overcoming the underseepage issues and maintaining eligibility in the federal levee rehabilitation and inspection program. Short term, the 22 lbs. brings economic growth and jobs to the Metro East.

These benefits are not possible without the partnerships we have with the Southwestern Illinois Flood Prevention District Council and the levee sponsors in Metro East Sanitary District and Wood River Drainage and Levee District.

Looking back, these partnerships, through the federal projects, have already brought more than $134 million dollars to the Metro East to date.

Col. Chris Hall

In the upcoming fiscal year, we plan to complete all design deficiency project repairs for the Chain of Rocks Levee and continue combatting underseepage with cutoff walls in Wood River and Metro East Sanitary District.

The next fiscal year will also bring a flurry of activities including the completion of the final rehabilitation construction contract in the Metro East Sanitary District and continued development of operation and maintenance manuals; initiation of the design of the design deficiency project; construction observation for ongoing 408 construction projects.

I look forward to what we will accomplish together this fiscal year and the partnerships that continue to benefit those living and working in the Metro East.

Col. Chris Hall
St. Louis District Commander

U. S. Army Corps of Enigneers to host two open houses in Metro East

The U.S. Army Corps of Engineers St. Louis District will host two open houses in November to inform our stakeholders and the public on the progress and future plans for the federal levee projects in the Metro East.

The 75.8-mile system of levees in the Metro East includes Wood River Drainage and Levee District, Metro East Sanitary District, Chain of Rocks and Prairie Du Pont and Fish Lake Levee Districts. The levee system protects 111,700 acres valued at 4.8 billion of property, transportation, and industry infrastructure. More than 280,000 residents and workers are protected by these systems.

The Corps of Engineers, with our partners the Southwestern Illinois Flood Prevention District Council and the local levee districts, are currently working toward the reconstruction of and design deficiency corrections for this critical infrastructure.

The open houses will serve as a place to ask technical experts questions and gain information regarding the federal levee projects in East St. Louis and Wood River, Ill., the Corps' levee safety, permitting, contracting and regulatory programs. General information will also be provided on levee structure and stability, and the Corps' levee inspection and rehabilitation program.

The open houses will be held at the following dates and locations:

November 13, 2013
Granite City Township Hall
2060 Delmar Ave., Granite City, Ill.
4-6 p.m.

November 14, 2013
National Great Rivers Museum
#2 Lock and Dam Way, Alton, Ill.
4-6 p.m.

For more information, call Mary Markos at (314)753-4920 or email mary.markos@usace.army.mil.

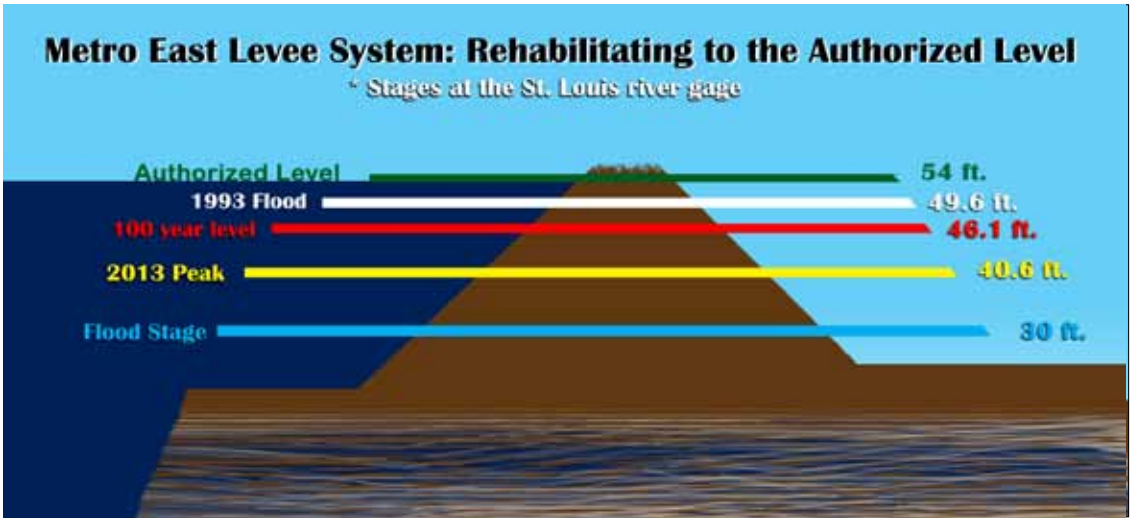
St. Louis District's Chief of Engineers answers questions about the Metro East levees

"Authorized level," "100-year level," "deficiency corrections," the verbiage commonly used to explain the complexities of the Metro East Levee System rehabilitation often leaves those who live behind the levees, those who are most affected, scratching their head.

The U.S. Army Corps of Engineers St. Louis District's Chief of Engineers Dave Busse answers common questions about the Metro East Levee System that reduces risk to more than 288,000 residents and employees.

How high are our levees?

The levees were authorized by Congress to be built to protect against a flood level of 54-feet on the St Louis gage.



Levee safety and risk is more than just levee height. Many factors go into the safety of a levee to include the levee's design, slope stability, seepage and how the levee settles following construction.

Is 54 feet more or less than 100-year?

A 54-foot flood is considerably higher than a 100-year flood. As shown in the graphic (above right), the authorized level is almost 8-feet higher than the 100-year level.

Has the water ever risen above the 100-year level in St. Louis?

Yes. In 1993, the water was approximately 3-feet above what is considered to be the 100-year event.

If we had a 100-year level flood or greater in 1993, will we have another one in the next 100 years?

The term "100-year flood" describes a flood that statistically has a 1 percent chance of occurring in any given year. It does not mean that once you've had a "100-year flood" you won't see another over the course of the next 99 years. There's a one-in-a-hundred chance you'll see that level of flooding or greater again soon.

In fact, over a 30-year mortgage, a person living in a 1 percent floodplain has a 25% chance of having a 100-year flood event or greater event.

If our levees are already higher than 100-year level, why do they need to be fixed?

Levee safety and risk is more than just levee height. Many factors go into the safety of a levee to include the subsurface, the levee's design, slope stability, seepage and how the levee settles following construction.

In the Metro East, we are particularly concerned with underseepage and sandboils.

What is underseepage and sandboils?

The Metro East levees were built on floodplain soils that consist of clays and silts. These clays and silts are typically 10-feet deep. Below the clays and silts there is about 70 to 100-feet of sand. That layer of sand in the levee's foundation allows ground water to flow underneath the levee.

The higher the river level, the more pressure is exerted on the groundwater in the sand. As the pressure builds, it will push water through weaknesses in the clay up to the surface (underseepage). When the silts and clays travel to the surface in the water, a sandboils forms. As it carries materials to the surface, sandboils make the levee's foundation unstable.

How do we know if we have a safe levee?

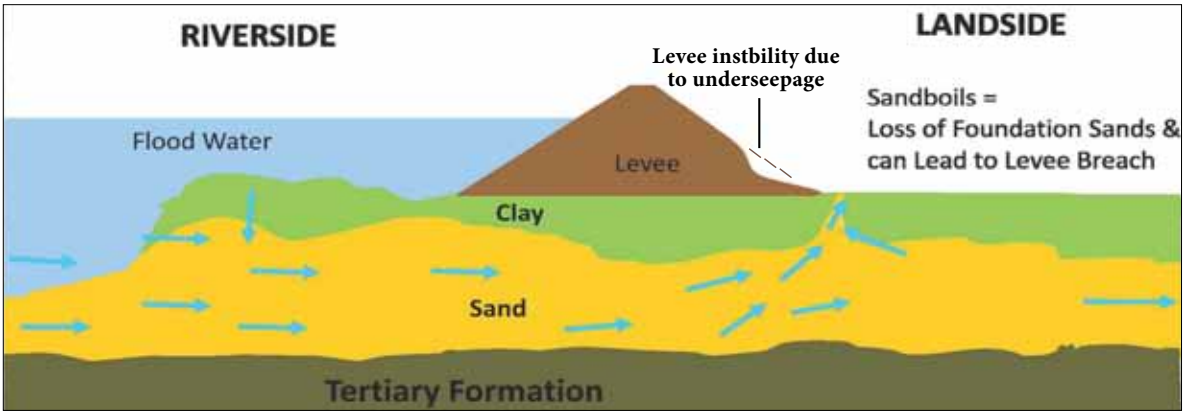
It is important to understand that there are no 100-percent safe levees. There is always risk. Through the U.S. Army Corps of Engineers Levee Rehabilitation and Inspection Program, our engineers go out every year and inspect the levees to look at general conditions.

Approximately every five years, we do a more in-depth or rigid inspection to assess the risks associated with the levees.

We share this information with the levee districts and sponsors.

What if I have more questions?

My staff and I will be at Metro East Open Houses on Nov. 13 and 14 to answer any further questions.



Underseepage occurs when the water pressure pushes water through the layer of sand beneath the levee and up to the surface. Sandboils form when materials are carried in the water.

To receive the Metro East Update monthly newsletter electronically, or for more information, email mary.markos@usace.army.mil.