

## U. S. Army Corps of Engineers Digs in to Help Carencro

**CARENCRO, LA:** Lush, green Lafayette Parish in Louisiana is surrounded by an abundance of water from lakes, swamps, marsh basins, bayous, and other streams that require constant management.

Carencro, a small suburb of Lafayette, sits on the northern tip of the Parish within the Carencro Bayou. Its excess water is drained primarily through the Coulee Beau Bassin, Lantier Coulee, the Coulee Mine (covering more than 30,000 acres) and smaller coulees through the bayou into the Vermilion River. Coulee is a French term for 'flowing' or 'running' in reference to drainage of waterways or streams.

While the community is enhanced by the beauty of its natural environment, all that water plagued the more than 8,000 residents of Carencro for many years with major flooding.

In 1999, Carencro began working with the U.S. Army Corps of Engineers (USACE) to solve the problem of water taking too long to drain from the area. With USACE providing half the funding and Carencro providing the rest, USACE began the study that came to be known as the Coulee Cleaning Project. The study's intent was to determine how best to channel water away from Carencro. With so many streams and waterways to consider, the study was sure to be complex.

By 2010, Carencro had spent \$200,000 but was still short by \$145,000. The Lafayette Parish Council authorized funding to close that gap. By 2011, with the total cost now in excess of \$495,000, Carencro's new City Manager, Jay Castille, worked with the city council and Mayor Glenn Brasseaux to finish the study.

While the study's final report had found that cleaning the coulees was an absolute necessity, it would not be sufficient to alleviate the problem adequately. Ultimately it was decided that, in addition to clearing the coulees of refuse and blockage that had built up over the years, a detention pond should be constructed to hold excess water that would slowly disperse into the coulees and on to the bayou.

This combination of measures offered the best chance to deliver on the promise Castille had made to his fellow residents, "We will give you the relief you've been looking for." However, there was no money to implement the plan.



**Carencro pond showing its detention capacity**



**The detention pond waiting for rain in Carencro**

On March 12, 2012, the need for an effective project grew more critical. With soil already rain-saturated, Carencro received 18 inches of rain over a 12-hour period — too much water to just gradually drain away through the clogged coulees. Carencro officials reported 485 homes were damaged from rising water.

In 2013, U.S. Rep. Charles Boustany Jr. (LA-03) helped set up a meeting in New Orleans for Mayor Brasseaux to complete agreement on a \$5 million project with USACE providing a 65/35 financial split with Carencro. U.S. Sen. David Vitter was also helpful in setting up meetings with the Federal Emergency Management Agency (FEMA) for discussions on what Carencro expected the project to achieve and how it would proceed.

To meet its nearly \$1.8 million share of the project, Carencro sold a bond for \$600,000, while the remaining \$1.2 million was funded by the Statewide Flood Control Program of the Louisiana Department of Transportation and Development.

By October 2013, cleaning of the coulees began by stabilizing erosion and providing concrete slopes and other reinforcement while removing accumulated trash. Numerous trees that had sprouted and clogged the coulee system were also removed.

The six-acre detention pond was constructed on a floodplain already owned by the city. It was designed to serve as a dry basin until heavy rains would fill it with floodwater — water that had historically flowed into local streets and residents' homes.

Once the pond filled with floodwater, some of the water would absorb into the floodplain while the rest would drain into coulees and on to the Vermilion River where the river meets with the Intracoastal Canal before flowing into the Gulf of Mexico.

After the project was completed in 2015, several large rains occurred. Castille said few homes were damaged. While these were smaller floods compared to the 18-inch deluge of 2012, the difference of three to four damaged homes compared to 485 damaged homes demonstrated that something had indeed changed. From the results, the mitigation of clearing the coulee system and building the six-acre detention pond was working as intended.

Following the heavy rains of March 2016, Castille commented that with the Coulee Project completed, Carencro has a reduced flood hazard. He also noted that the northeast portion of the unincorporated area of Lafayette Parish was spared flooding because of this project.