

## Muscatine Levee Improvement Project

The key economic development need being addressed with the Muscatine Levee Improvement Project is protecting major businesses and industries in Muscatine County from disastrous flooding to allow them to remain in operation and employees to work during Mississippi River flood events. The Muscatine Island Levee System is located along the right bank of the Mississippi River between river miles 455.1 and 442.28 and its purpose is to protect approximately 30,000 acres of commercial, industrial, and residential land uses within the Muscatine Island. A 14.2-mile-long levee along the Mississippi River protects the Island interior. The northernmost 3.2 miles is constructed to the 500-year level of protection plus three foot of freeboard. The remaining 11 miles is constructed to the 100-year level of protection plus three foot of freeboard. As flooding has become more frequent and severe, there is increased concern of inundation of major critical infrastructure, businesses, and industries in the Muscatine Island area. According to the National Climatic Data Center, 80% of historic floods in Muscatine have occurred since 2000 with 60% of the occurring since 2010. In 2019, three of the top 10 crests in history occurred.

The levee is constructed of sand material, which is more vulnerable to breaching if the levee begins to overtop. A 2013 Corps of Engineers levee breach study demonstrated Highway 61, a main evacuation route, would be inaccessible within 2-4 hours of a breach in the northern portion of the levee. The study also indicated a breach could create catastrophic environmental damage plus severely disrupt regional and national economic networks. A simulation analysis showed that flood water would backfill into the entire industrial commercial area even when a breach occurs south of the industrial area. It could also disrupt the regional power grid as it would isolate MidAmerican Power Generating Plant located within the Island interior. Additional critical infrastructure in the project area includes but is not limited to: the Muscatine Water Pollution Control Plant; the Grandview Well Field which supplies potable water to the project area; the Muscatine Power & Water power plant; an Army National Guard Center; and the Muscatine Municipal Airport. The proposed project involves partial raising of portions of the Muscatine Island Levee System by several inches.

A project area structure inventory was developed by the Army Corps of Engineers from the 2010 National Structure Inventory. The structure and inventory values were updated to 2018 values using the Civil Works Construction Cost Index System and are based on assessed values. A total of 2,707 structures were found to exist in the project area with 11% commercial and industrial structures making up 37% of total structure value. Two different proprietary sources of economic modeling indicate the significant economic impact of the Muscatine Island area. According to an ESRI Business Locator and InfoGroup analysis for 2020, 221 businesses/organizations are impacted by the project with 3,966 employees and estimated total annual sales of \$614 million dollars. Also, through IMPLAN modeling it is shown that there are 2,231 direct jobs in major industries (grain farming, trucking, lighting fixtures, concrete and warehousing) on Muscatine Island and the region is responsible for 3,565 total jobs (direct, indirect and induced), \$199 million in total labor income, \$337 million in value added output, and \$881 million in total economic output for the region. Muscatine Island's firms also contribute \$2,281,357 in taxes to Muscatine County, \$11,175,164 in taxes to Iowa, and \$35,740,636 in taxes to the federal government. Therefore, assuming a breach would severely impact business access to sewer and water for a minimum of four months, there would be an impact of nearly \$294 million. Additional months of impact would have a far greater impact.

Part of the Muscatine Island area is an Opportunity Zone, Census Tract 5.10. The most recent data on Census Tract 5.10 is the 2018 5-Year ACS estimates which show the per capita income was \$17,186 with 25.20% persons in poverty while the per capita income for the County during the same period was \$28,137 and the percent of persons in poverty in Muscatine County is 11.8%.