

PART I. EXECUTIVE SUMMARY

The City of Geneva is located in southeast Alabama in Geneva County at the confluence of the Pea River and the Choctawhatchee River approximately 92 miles above its mouth. The main part of the city is located between the watercourses of Double Bridges Creek and the Pea River.

A levee project was originally constructed in 1938 by the Works Progress Administration for the City of Geneva. The levee project is a federally authorized, non-federally operated and maintained urban flood protection project. The Water Resources Development Act of 1999 (WRDA-99) authorized \$16.6 million for a major rehabilitation of the Geneva Project. Cost sharing was set at a 65 to 35 percent ratio for federal and non-federal costs respectively. The Energy and Water Development Appropriations Act of 2001 appropriated \$10.8 million for the estimated federal share to construct the Geneva Levee Rehabilitation Project. The City of Geneva, with the financial support of the Choctawhatchee, Pea and Yellow Rivers Watershed Management Authority and the State of Alabama, committed the \$5.8 million non-federal share. The rehabilitation project was completed in 2006.

This periodic levee inspection was performed on 14 April 2010 including the pump station inspection. The local sponsor showed an active response to operation and maintenance of the project. No major deficiencies were found but some remedial actions are anticipated and required for the minor deficiencies before the next periodic inspection to insure more efficient operation of the levee system.



The following were some of the project deficiencies with recommendations:

1. Encroachments were a minimal consisting mainly of an abandoned sewer lift station and a power pole. Recommend that Sponsor moves power pole to clear the 25 foot requirement from toe and to investigate abandoned sewer lift station line to see if it had been properly vacated during construction and remediate as necessary.
2. There were several areas, including the levee embankments, with sparse vegetation growth within the 15 foot buffer zone that need to be addressed. Recommend sponsor to remove vegetation growth.
3. Areas where frequent vehicular traffic was present had caused rutting along the toe and crown of the levee. Recommend that Sponsor repairs all rutting and consider restricting access if possible.

4. Vegetation and sediment were present at the feeder pipe for the retention pond that supplies flow from the south. Recommend that Sponsor removes all vegetation and sediment.
5. City Officials indicated that the internal drainage system was not able to deliver the flow to the pump station enough to allow both pumps to work. Concern has been raised to the Mobile District regarding the function and efficiency of the interior drainage system and they will respond to this.
6. The outlet end of the transfer pipe from the retention pond at Culvert #6 was approximately one-third filled with sediment. Recommend that Sponsor removes all sediment.
7. Some of the culverts displayed minor erosion problems, sink holes and obstructions with vegetation. Recommend that Sponsor repairs all sink holes and removes vegetation.
8. O&M Manual does not address the upgrade to pump station. Recommend that Sponsor revises O&M Manual to reflect all improvements and alterations to levee system.
9. Culverts have not been visually inspected by means of using video cameras. Recommend that Sponsor performs a visual inspection using a video camera and maintain a video record of the inspection.

Overall engineering determination concludes that the deficiencies would not prevent the system from performing as intended under the current established level of flood protection of 500-year (0.2%/year). Repairs should be made and investigations completed as recommended within two years from the time of the inspection. The next periodic inspection is scheduled for FY 2015.