



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

September 25, 2014

Engineering and Construction Division

Ms. Elizabeth Fernandez, P.E.
Trinity Watershed Management Office Director
1500 Marilla Street, Room 6BS
Dallas, Texas 75201

Dear Ms. Fernandez:

The Fort Worth District of the U.S. Army Corps of Engineers (USACE) completed the field activities for a Periodic Inspection of the Dallas Floodway in April 2014. As a result of outstanding work by the City of Dallas, the Dallas Floodway Levees have been upgraded from the prior Periodic Inspection ratings of "Unacceptable" to "Minimally Acceptable". Your staff has corrected all the deficiencies noted in the Maintenance Deficiency Correction Plan that was formulated after the 2009 Periodic Inspection report. The USACE appreciates the help and assistance of the City of Dallas in the inspection efforts and the City's diligence in maintaining the levees, pumps, interior drainage structures, and channels.

Based on the new ratings, the levees no longer are considered in a temporary eligibility status for post-flood repair (Rehabilitation) under the USACE Public Law (PL) 84-99 authority as granted by the CECWS-HS memorandum dated June 24, 2014, Subject: City of Dallas Temporary Extension of Public Law 84-99 Rehabilitation Eligibility for Non Federal Sponsors Implementing System Wide Improvement Frameworks (SWIF). The Dallas Floodway levees now have continuing eligibility and remain "active" in our PL 84-99 program unless determined otherwise in a future inspection.

The attached Periodic Inspection Report summarizes findings of the field inspection. The overall purpose of a Periodic Inspection is to verify proper operation and maintenance, evaluate operational adequacy and structural stability, identify features to monitor over time, and to improve the ability to communicate the overall condition of the system. An in-depth discussion of our inspection process and results is included in the Executive Summary of the attached report.

The Fort Worth District looks forward to continued coordination with your staff on issues related to the Dallas Floodway. Thank you for your renewed investment in this valuable flood risk management project.

Please contact Mr. Brian Giacomozzi, Levee Safety Officer/Dam Safety Officer, Fort Worth District, (817)-886 -1943 or brian.giacomozzi@usace.army.mil if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Brian Giacomozzi". The signature is written in a cursive style with a large, prominent initial "B".

Brian T. Giacomozzi, P.E., PMP, CEM
Chief, Engineering & Construction Division
Levee Safety Officer/Dam Safety Officer

Executive Summary
Dallas Floodway
Periodic Inspection No.10 Results

Public safety is the top priority of the U.S. Army Corps of Engineers' (USACE) Levee Safety Program. Nationally, the USACE conduct periodic and annual/routine inspections for 2,000 levee systems comprised of 14,000 miles. The purpose of these inspections is to verify proper operation and maintenance, evaluate operational adequacy and structural stability, identify features to monitor over time, and to communicate the overall condition of the Flood Risk Management (FRM) systems to all project stakeholders.

On April 14-18, 2014, the USACE Fort Worth District conducted the tenth Dallas Floodway Periodic Inspection. Dallas Floodway Periodic Inspections occur on a 5-year basis and are more comprehensive than annual/routine inspections. A team of multi-disciplinary engineers assessed 25 miles of levees and adjacent Trinity River FRM channels. The primary floodway system components that are inspected are: levee earthen embankments, FRM channels, and interior drainage system components which include culverts, sumps, and pump stations. The inspection was conducted in accordance with the national USACE Levee Safety Program.

The Dallas Floodway levees were originally constructed by local community interests in response to flooding events in the early 1900s. This system was modified in the 1950s and incorporated as a congressionally authorized project. The Dallas Floodway project consists of 6 primary systems: 3 Flood Risk Management (FRM) channels (Elm Fork, West Fork, and main stem of the Trinity River) and 3 levees (East Levee, West Levee, and the Central Wastewater Treatment Plant [CWWTP] Levee) that provide FRM for the City of Dallas.

The inspection team rated each individual system component on the following criteria: unwanted vegetation growth, sod cover, encroachments, slope stability, erosion/bank caving, levee settling, ponding, cracking, animal burrowing, condition of culverts/pipes, and seepage. Individual component ratings were assigned as either Acceptable, Minimally Acceptable, or Unacceptable in accordance to USACE Levee Safety Program rating guidelines. Based on the field inspection data and engineering assessments, the multi-disciplinary team determined how component ratings would affect overall system performance.

The USACE Levee Inspection System is comprised of three possible overall system ratings that provide a basis for determining the direction for possible future evaluation, studies, and potential corrective actions. These overall ratings for the Dallas Floodway levees, pump stations, and channel are based on the ratings to components within each system as follows:

- (A) ACCEPTABLE - All system components are rated Acceptable. (*No components were identified contrary to the national policy.*) Nationwide, only 1 percent of federally inspected levees have met the inspection criteria for an Acceptable rating.
- (M) MINIMALLY ACCEPTABLE - One or more system components are rated as Minimally Acceptable, or one or more system components are rated as Unacceptable and an engineering determination concludes that the Unacceptable component(s) would not likely prevent the system from performing as intended during a flood event to the full height of the levee. (*Minimally Acceptable recognizes that certain system components are non-compliant with the national policy, however, integrity is not compromised.*) Approximately 65 percent of federally inspected levees are rated Minimally Acceptable.

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- (U) UNACCEPTABLE - One or more system components are rated as Unacceptable and an engineering determination concludes that the component would likely prevent the system from performing as intended during a flood event to the full height of the levee. (*Unacceptable recognizes that there are one or more system components that are nonconforming to the national guidelines which may require site specific engineering studies to determine whether or not risks are present that may require remediation using a Corrective Action Plan.*). Approximately 34 percent of federally inspected levees are rated Unacceptable.

The Public Sponsor, the City of Dallas, has proactively performed the following actions: comprehensive geotechnical investigations, engineering analysis, levee embankment restoration, and significant pump station upgrades. The Sponsor and their Trinity Watershed Management (TWM) staff including operations and maintenance personnel are commended for all the vast Dallas Floodway system improvements. During the inspection it was noted that the condition of the Dallas Floodway, with respect to operations and maintenance, has improved immensely since the last Periodic Inspection. The TWM's staff has done an exceptional job addressing and resolving Dallas Floodway system deficiencies.

The results from the periodic inspection process are as follows:

- The overall composite system rating for the East Levee, including the interior drainage system and pump stations, is “Minimally Acceptable.” All pump stations located behind the East Levee are well maintained and were rated “Acceptable.”
- The overall composite system rating for the West Levee, including the interior drainage system and pump stations, is “Minimally Acceptable.” All pump stations located behind the West Levee are well maintained and were rated “Acceptable.”
- The overall composite CWWTP Levee is rated “Minimally Acceptable.”
- The FRM drainage channels were all rated “Minimally Acceptable.”

In summary, the Dallas Floodway system is well maintained with the East Levee, West Levee, CWWTP Levee, and FRM channels all earning an overall “Minimally Acceptable” rating. These levees meet the criteria for PL 84-99 eligibility. It is recommended that the Sponsor continues with their operation and maintenance program and address report findings and recommendations. The next Periodic Inspection is tentatively scheduled for 2019.