

# Levee Certification

Trinity River Committee

February 20, 2007

# Purpose

- Provide status of Federal Emergency Management Agency (FEMA) map updates and status of documentation of levee protection (“Levee Certification”)
  - FEMA is responsible for administering the National Flood Insurance Program
  - The maps being updated are used and maintained for the flood insurance program

# Background

- Current flood maps are paper copies and were produced in 2001
- In 2004, FEMA began updating flood insurance maps for Dallas County to produce digital maps based on better information
  - Preliminary maps are expected to be released in late March/early April 2007
  - Final maps should be produced by late 2007

# Background (Cont'd)

- The current flood maps show our five levee systems as providing 100-year flood protection:
  - Dallas Floodway Levee System, last improved as a Corps of Engineers project in the 1950s, protects much of downtown and Stemmons Corridor and parts of Oak Cliff and West Dallas (O&M by Street Services)
  - Rochester Park Levee, completed in 1992, protects Southeast Service Center and nearby neighborhoods (O&M by Street Services)

# Background (Cont'd)

- Central Wastewater Treatment Plant Levee, reconstruction complete in 1996, protects plant only (O&M by DWU)
- Southside Wastewater Treatment Plant Levee, completed in 1997, protects plant and area north of Middlefield and Jordan Valley Roads (O&M by DWU)
- McCommas Bluff Landfill Levee, expanded in 2006, protects landfill only (O&M by Sanitation)

# What Does FEMA Require?

- Because of recent events, FEMA is requiring, nationwide, additional documentation on levees:
  1. FEMA-approved design and construction reports
  2. Officially adopted operation and maintenance plans and manuals
- Previously, design and construction reports were acceptable
- Now, adopted operation and maintenance (O&M) plans and manuals in addition to the design and construction reports are required

# In the Meantime

- Since the development or updating of O&M plans and manuals can be a lengthy process, FEMA has established a provisional program that would show the levees as providing protection
  - This means that FEMA will show the levees on the new maps as providing 100-year flood protection, even though FEMA has not received full documentation
- Communities have 24 months to provide engineering reports and O&M plans and manuals to FEMA

# The Provisional Program

- Preliminary flood maps will contain a warning statement that the levee protection is provisional, and that the community must submit documentation by a certain date
- This is not an indication of any deficiency, and flood insurance will not be required for protected areas
- According to FEMA's letter dated January 31, 2007 (Appendix A), documentation should be submitted by early March 2007 for the preliminary maps to be published without the provisional status noted

# Can We Meet the Deadline?

- The City is working toward submitting documentation early enough to avoid having “provisional” status on the preliminary flood maps
- If FEMA does not complete its review of our documentation before it releases the preliminary maps, we will still easily meet the 24-month deadline

# Current Status

<b>Levee System</b>	<b>Certification Status – Design &amp; Construction</b>	<b>Certification Status - O&amp;M</b>
Dallas Floodway	Corps of Engineers has approved design and construction	Updating Corps of Engineers Manual
Central WWTP	Verifying height to meet construction requirements	Reviewing manual to ensure required provisions included, complete end of February
Southside WWTP	Engineering report on design and construction is under review by FEMA	Reviewing manual to ensure required provisions included, complete end of February
Rochester Park	Corps of Engineers has approved design and construction	Reviewing manual to ensure required provisions included, complete end of February
McCommas Bluff Landfill	Engineering report on design and construction is being prepared	Recently constructed, O&M plan and manual being finalized

# Next Steps

- A resolution for Council adoption of O&M plans and manuals is being placed on the February 28, 2007, Council Agenda (see Appendix B)
- City will submit required O&M plans and manuals to FEMA for review in March 2007, and at the same time will submit the agreement to enter the provisional program

# APPENDICES

- Appendix A
  - FEMA Letter dated January 31, 2007
- Appendix B
  - Draft Resolution Adopting O&M Plans and Manuals

# Appendix A

FEMA Letter dated January 31, 2007



**FEMA**

January 31, 2007

The Honorable Laura Miller  
Mayor, City of Dallas  
Dallas City Hall  
1500 Marilla Street, Room 5EN  
Dallas, TX 75201-6390

RE: Request for Levee Certification Documentation – Scenario A

Dear Mayor Miller:

The U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) has initiated a study to update the Flood Insurance Rate Maps (FIRMs) for Dallas County, Texas. When the study is complete, Digital Flood Insurance Rate Maps (DFIRMs) will be available in a countywide format providing seamless coverage for the entire county.

As part of FEMA's effort to produce the DFIRM, we have determined that the flood hazard information presented on the effective FIRM and in the Flood Insurance Study (FIS) is based, in some areas, on flood protection provided by the levees known as Southside WWTP and McCommas Bluff Landfill Levees. The locations of the levees are shown on the enclosed Levee Location Map. Based on the information available and the mapping standards of the National Flood Insurance Program (NFIP), at the time that the FIS was prepared for those areas, FEMA credited the levees with providing protection from a flood that has a 1-percent-chance of being equaled or exceeded in any given year.

PM 34 Certification – 30 Day Time Limit Submittal

In August 2005, FEMA issued Procedure Memorandum No. 34 (PM 34) *Interim Guidance for Studies Including Levees* requiring verification that all federal and non-federal levees currently recognized by FEMA as providing protection from the 1-percent-annual-chance flood (base flood) meet specific certification requirements as outlined in Title 44 of the Code of Federal Regulations, Section 65.10 (44 CFR 65.10). A copy of 44 CFR 65.10, PM 34 and the Levee Certification Checklist are enclosed for your review and use.

For FEMA to continue showing the referenced levees as providing protection, your community or other party seeking recognition should contact the levee owners and request they provide data and documentation for meeting certification requirements outlined in 44 CFR 65.10.

This federal law requires that the levee design and construction be certified. This may be provided by the federal agency who designed and constructed the levee or by a registered professional engineer. The law also requires verification that levee systems have been maintained in accordance with an officially adopted operation and maintenance plan and any known deficiencies have been corrected. This verification must be provided by the entity assuming ultimate responsibility for maintenance. Please fill out the enclosed Levee Certification Checklist when evaluating levee certification and send a completed copy of the checklist for each levee with your response.

In summary, FEMA requests that the following documentation be provided by your community or other party seeking recognition of any levee system currently shown as providing protection from the base flood:

- Data to support that each levee system complies with the structural requirements set forth in 44 CFR 65.10 (b)(1) through (7), certified by a registered professional engineer. In lieu of these structural requirements, certification may be obtained from a responsible federal agency as outlined in 44 CFR 65.10 (e);
- A copy of levee as-built plans certified by a registered professional engineer that the design provides a reasonable assurance that protection from the base flood exists;
- A copy of the operation and maintenance plans and associated criteria as identified in 44 CFR 65.10 (c) and (d), respectively;
- Documentation supporting the formal adoption of the maintenance plans by the NFIP participating community or the agency created by federal or state law, whichever is applicable;
- Verification that each levee system has been maintained in accordance with an officially adopted maintenance plan and any deficiencies that were noted have been corrected.

#### PAL Certification – 24 Month Time Limit Submittal

If it is not possible to provide the above information within 30 days of the date of this letter, an alternative approach has been developed by FEMA. On September 25, 2006, FEMA issued Procedure Memorandum No. 43 (PM 43) - *Guidelines for Identifying Provisionally Accredited Levees* (PAL) to address the issue of studies being delayed while certification documentation is compiled by the levee owner. The PM 43 approach is only available to levee owners where the levee has no known deficiencies. Scenarios A and B, as defined in PM 43, allow the mapping to move forward without the full documentation requirements of 44 CFR Section 65.10 being immediately available providing the levee owner agrees to submit the full documentation within 24 months.

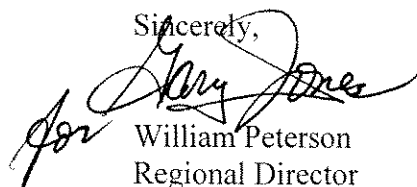
FEMA, along with the U.S. Army Corps of Engineers, has reviewed the levees and determined that they fall under Scenario A. You have the option to respond in writing with all required certification documents within 30 days to meet PM 34 requirements or to respond in writing to FEMA Region VI within 30 days committing to follow Scenario A requirements. For Scenario A, a record of levee maintenance and operation, as well as tests of the mechanized interior drainage systems, if applicable, is also required at this time. In addition to the response, the PAL Certification Agreement must be completed and returned to FEMA Region VI within 90 days of the date on the levee response letter. The PAL Certification Agreement for Scenario A is included as an enclosure to this letter.

By committing to follow the Scenario A requirements, you agree to provide all of the necessary documentation to comply with 44 CFR 65.10 within or before May 2009. If you are unable to submit all of the documentation necessary to meet the requirements of 44 CFR 65.10 before that date, FEMA will initiate a map revision to redesignate certain areas on the landward side of the levees as floodprone.

If certified as meeting Scenario A requirements, the levees will be labeled as a PAL during the 24-month period to convey to map users that levee certification verification is underway. FEMA recommends that you, the levee owner and the impacted communities, implement outreach efforts to inform affected property owners that an assessment of the levees is underway. We also encourage the purchase of flood insurance, even though coverage is not federally required.

FEMA will work with you in your efforts to obtain the necessary certification of the levee system. **Again, you have the option to respond in writing to FEMA Region VI with all required documentation within 30 days to meet PM 34 requirements or to respond in writing to FEMA Region VI within 30 days committing to follow Scenario A of PM 43 requirements. If FEMA does not receive one of these responses within 30 days, the new countywide Flood Insurance Rate Maps for Dallas County will no longer show the levees as providing protection from the base flood and subsequently the area impacted will be classified as a special flood hazard area causing mandatory flood insurance purchase requirements on insurable structures.**

The FEMA lead for this project is Jack Quarles, P.E. Mr. Quarles may be contacted at 940-898-5156. Please do not hesitate to contact us if you have any questions regarding this request.

Sincerely,  
  
William Peterson  
Regional Director

# Appendix B

Draft Council Resolution for  
Adoption of O&M Plans and  
Manuals

Mayor Miller  
January 31, 2007  
Page 4

Enclosures:

- Levee Location Map
- Procedure Memorandum No. 34
- Procedure Memorandum No. 43
- 44 CFR 65.10
- Levee Certification Checklist
- PAL Certification Agreement

cc: Steve Parker, P.E., Floodplain Administrator  
Donna Long, Dallas Water Utilities  
Mike Howard, NFIP State Coordinator  
Larry O. Rogers, P.E., Ft Worth District, USACE  
Honorable Kay Bailey Hutchinson  
Honorable John Cornyn  
Honorable Jeb Hensarling  
Honorable Eddie Bernice Johnson  
Honorable Sam Johnson  
Honorable Kenny Marchant  
Honorable Pete Sessions  
Honorable Florence Shapiro  
Honorable Chris Harris  
Honorable John Carona  
Honorable Royce West  
Honorable Bob Devell  
Honorable Terri Hodge  
Honorable Tony Goolsby  
Honorable Rafael Anchia  
Honorable Roberto R. Alonzo  
Honorable Linda Harper-Brown  
Honorable Kirk Thompson England  
Honorable William Keffer  
Honorable Dan Branch  
Honorable Helen Giddings  
Honorable Yvonne Davis  
Honorable Fred Hill  
Honorable Joe Driver  
Honorable Will Hartnett  
Honorable Jim L. Jackson  
Honorable Thomas Latham  
Honorable Barbara Mallory Caraway  
Honorable Allen Vaught  
Honorable Michael Burgess  
Walter Skipwith, P.E., Halff Associates  
David Patterson, P.E., FEMA Region VI Regional Management Center

February 28, 2007

**WHEREAS**, Flood Insurance Rate Maps provide a graphical representation of areas subject to flooding from the 100-year flood and areas protected from flooding by levees; and

**WHEREAS**, the Federal Emergency Management Agency, which produces Flood Insurance Rate maps, is in the process of issuing preliminary maps for review; and

**WHEREAS**, in past issuances of Flood Insurance Rate Maps, the areas protected by the Dallas Floodway Levee System, the Rochester Park Levee System, the Central Wastewater Treatment Plant Levee System, the Southside Wastewater Treatment Plan Levee System, and the McCommas Bluff Landfill Levee System from the 100-year flood, were delineated on the maps as providing protection; and

**WHEREAS**, as a result of flood losses due to recent levee failures, the Federal Emergency Management Agency has mandated the Flood Insurance Rate Maps shall show the areas protected by levees as 100-year floodplain unless the levees are certified in accordance with Title 44 of the Code of Federal Regulations, Section 65.10 (44 CFR 65.10); and

**WHEREAS**, 44 CFR 65.10 requires, in part, that levee systems must be maintained in accordance with an officially adopted operation and maintenance plans and manuals.

**Now, Therefore,**

**BE IT RESOLVED THAT THE CITY COUNCIL OF THE CITY OF DALLAS;**

**Section 1.** That the operation and maintenance plans and manuals for the Dallas Floodway Levee System, the Rochester Park Levee System, the Central Wastewater Treatment Plant Levee System, the Southside Wastewater Treatment Plan Levee System, and the McCommas Bluff Landfill Levee System are adopted and shall govern operation and maintenance of each respective levee system including levee embankments, sumps, pump stations, gravity sluices, floodgates, closures, flood warning systems, and all other facilities related to the respective levee system.

**Section 2.** That a copy of the operation and maintenance plan and manual for each levee system shall be provided to the Federal Emergency Management Agency in accordance with levee certification requirements outlined in 44 CFR 65.10.

**Section 3.** That this resolution shall take effect immediately from and after its passage in accordance of the Charter of the City of Dallas and it is accordingly so resolved.

Distribution: Public Works and Transportation, Cheryl Nichols, OCMC, Room 101  
Public Works and Transportation, Modesta Pena, OCMC, Room 307  
Street Services  
Dallas Water Utilities  
Sanitation Services