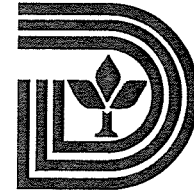


# Memorandum



CITY OF DALLAS

DATE November 11, 2010

TO Trinity River Corridor Project Committee Members:

David A. Neumann (Chairman)

Vonciel Jones Hill

Steve Salazar (Vice-Chair)

Delia D. Jasso

Mayor Pro Tem Dwaine Caraway

Linda Koop

Deputy Mayor Pro Tem Pauline Medrano

Ann Margolin

Carolyn R. Davis

SUBJECT **Protecting Your Property: An Update on the Dallas Levees (Briefing for Information Only)**

Attached you will find the presentation that is being provided to property owners to inform them of FEMA's remapping efforts of areas behind the levees. In total, ten meetings will be held, five in November along the West Levee and five in January along the East Levee and Rochester. The attached briefing is being presented to property owners along the West Levee; it will be updated for the January presentations. A Spanish version of this briefing is also shown at the meetings.

Please contact me if you have questions.

Jill A. Jordan, P.E.  
Assistant City Manager



THE TRINITY  
DALLAS

Attachment

Cc: Honorable Mayor and Members of the City Council  
Mary K. Suhm, City Manager  
Ryan S. Evans, First Assistant City Manager  
A.C. Gonzalez, Assistant City Manager  
Forest E. Turner, Assistant City Manager  
Jeanne Chipperfield, Chief Financial Officer  
Deborah A. Watkins, City Secretary  
Thomas P. Perkins, Jr., City Attorney  
Craig D. Kinton, City Auditor  
Judge C. Victor Lander  
Helena Stevens-Thompson, Asst. to the City Manager  
Frank Libro, Director, Public Information Office  
Kelly High, Director, Trinity Watershed Management  
Rebecca Rasor, P.E., Managing Director, Trinity River Corridor Project

# PROTECTING YOUR PROPERTY: AN UPDATE ON THE DALLAS LEVEES

**Fall 2010**



City of Dallas

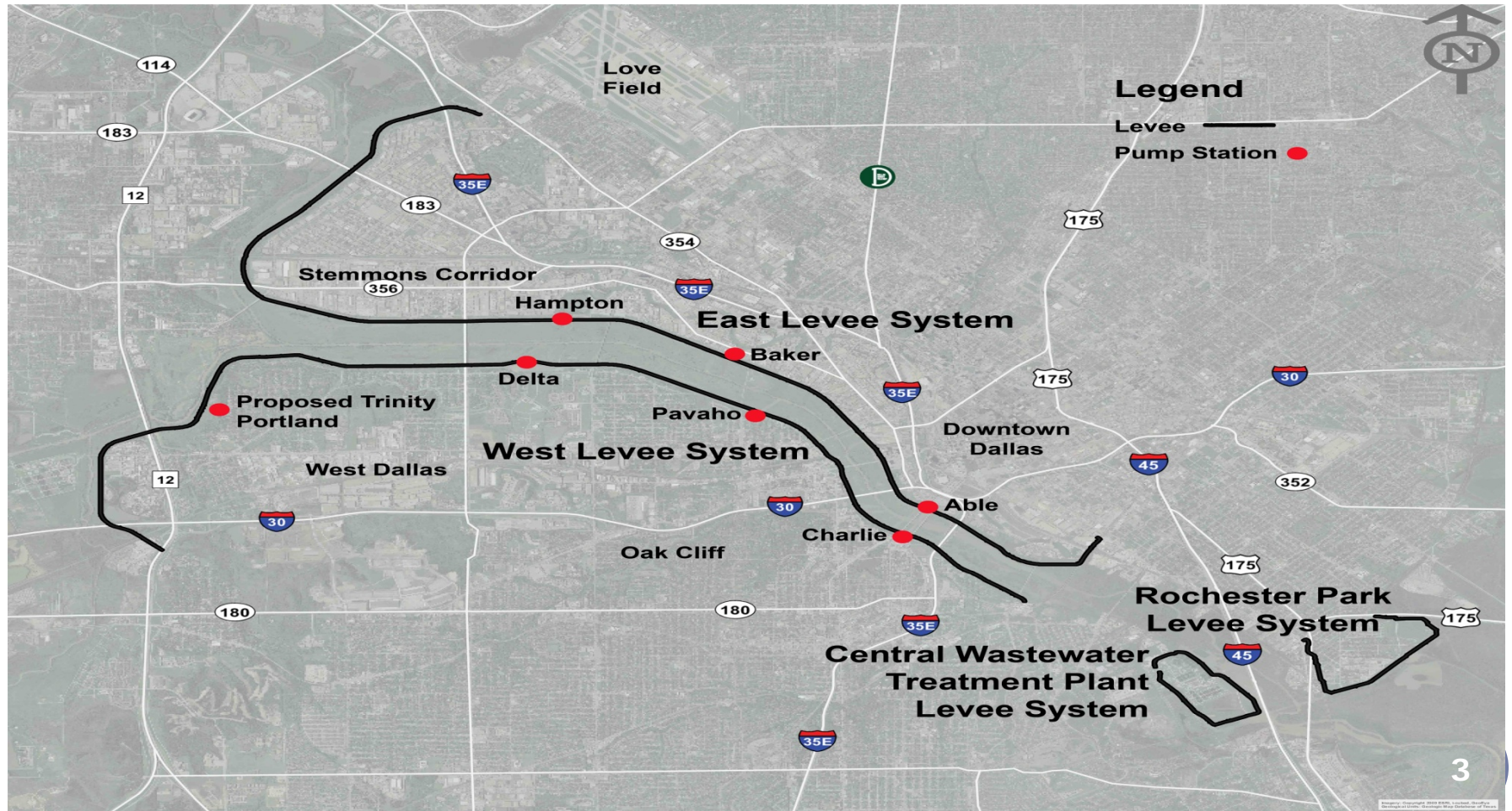


THE TRINITY  
DALLAS

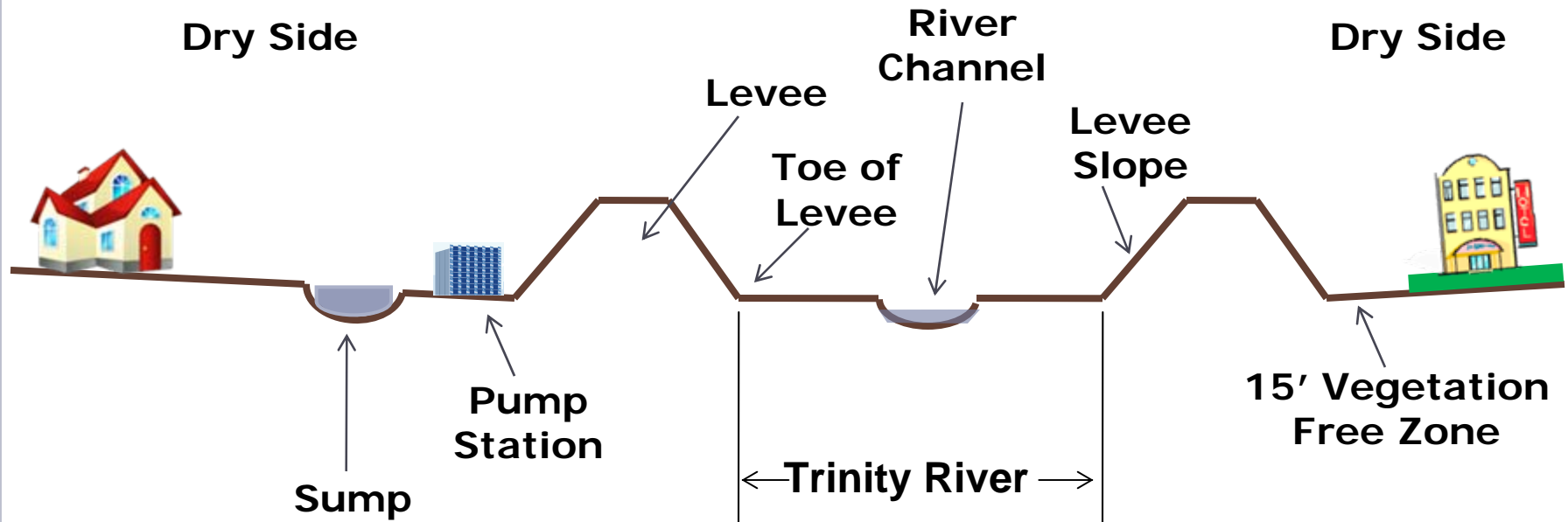
# PURPOSE

- In February 2011, FEMA plans to release new Preliminary Flood Insurance Rate Maps showing properties behind the levees as being within a floodplain
- The City of Dallas has scheduled this series of meetings to:
  - make sure you are aware of FEMA's remapping efforts
  - discuss why they are remapping
  - understand the City's efforts to fix the levees before Final maps are released
  - inform you of what remapping would mean for you/your property

# DALLAS FLOODWAY SYSTEM MAP



# DALLAS FLOODWAY SYSTEM COMPONENTS



Interior Drainage  
refers to the system of sump & pump  
stations – note that both dry sides of  
levees have interior drainage and  
vegetation free zones

# FLOODWAY SYSTEM OVERVIEW

- Dallas' levees protect billions in property value
- The US Army Corps of Engineers (Corps) inspects the Dallas levees
- Dallas Floodway System historically received very good ratings on these inspections

# FLOODWAY SYSTEM INSPECTION

- The Corps recently imposed more rigorous and nationally uniform criteria for inspecting levee systems
- Under this new criteria, the Corps rated the Dallas Levee System “unacceptable”
- Our levees are the same levees that have always protected – they still meet the standards to which they were built
- The City responded immediately by:
  - Allocating \$25 million for engineering study which included design fixes
  - Fixed 181 of 198 maintenance deficiencies found in Corps’ report, as of October 2010
  - Set aside \$150 million for levee improvements



# OPERATION AND MAINTENANCE REPAIRS

Before



After



Examples of deficiencies found: erosion, siltation, vegetation, channel instability, and damaged flood control structures

Above: Continental Avenue Bridge (West Levee) had erosion under bridge on levee slope

- Repaired slope and added riprap slope protection



# OPERATION AND MAINTENANCE REPAIRS

**Before**



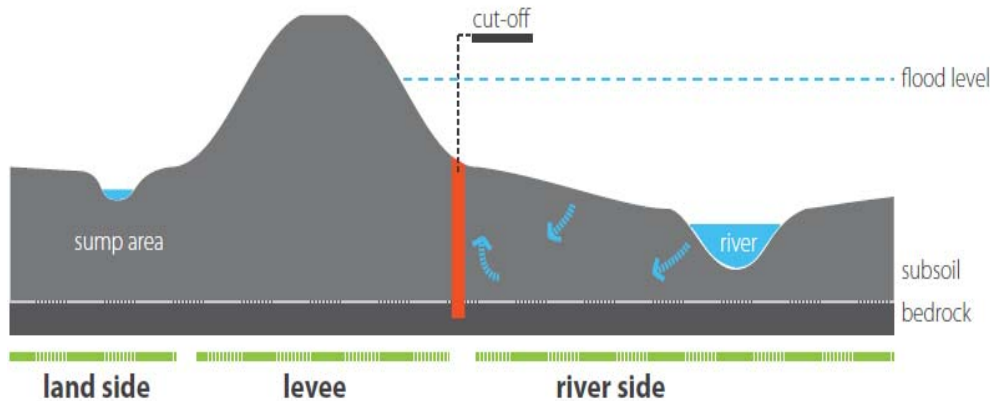
**After**



- Coombs Creek Pressure Diversion (West Levee) had a 3 inch separation with exposed rebar
  - Loose concrete around the separation removed, rebar sealed, and area patched

# LEVEE IMPROVEMENTS

- To address system-wide issues identified by the Corps, City set aside \$150 million to repair the levees:



Cut-Off walls are proposed to address seepage concerns, where water could move through sand layers from river side to dry side of land - No seepage has ever occurred along the Trinity River



Levee fattening to address slope stability – shallow slides have been experienced along the Trinity River – fixes have always been part of Trinity River Corridor Project

Note the Corps must approved design of levee fixes

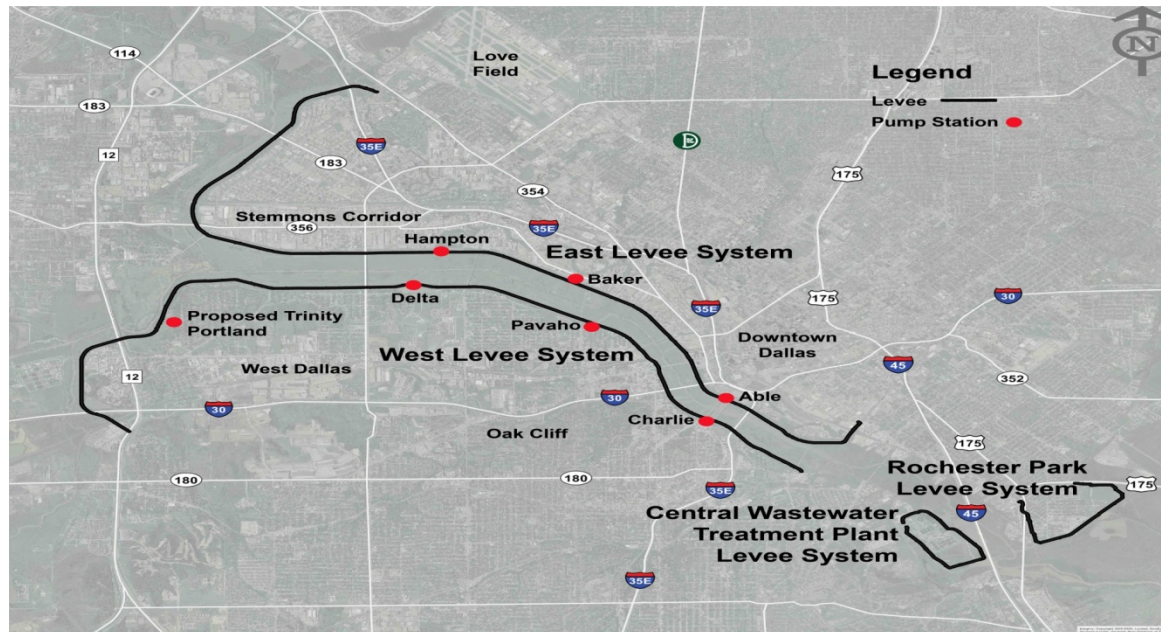
# PAVAHO PUMP STATION IMPROVEMENTS



- Anticipated Completion August 2012
- Will provide 100 year flood protection level upon completion

# CORRECTIONS TO FLOODWAY SYSTEM - INTERIOR DRAINAGE

- 35% design is complete for the 3 other west levee pump stations - Charlie, Delta and proposed Trinity Portland
- Each will require additional future bond funding





# FLOODWAY SYSTEM

- Our levees are the same levees that have always protected – they still meet the standards to which they were built
- The levees were built to an approximately 800-year flood level of protection
- The highest water level to date was approximately half way up



# FEMA REMAPPING UPDATE – FLOOD INSURANCE

- Flood insurance is available for properties that may be at risk for flooding
- The National Flood Insurance Program (NFIP) is a federal program that offers flood insurance
- FEMA produces Flood Insurance Rate Maps (FIRMs) that describe an areas' risk of flooding
- The maps are used by FEMA to set flood insurance rates – areas in floodplains are considered higher risk areas and therefore carry higher insurance costs
- The City uses these maps to ensure that appropriate building standards are met for improvements/new buildings in a floodplain

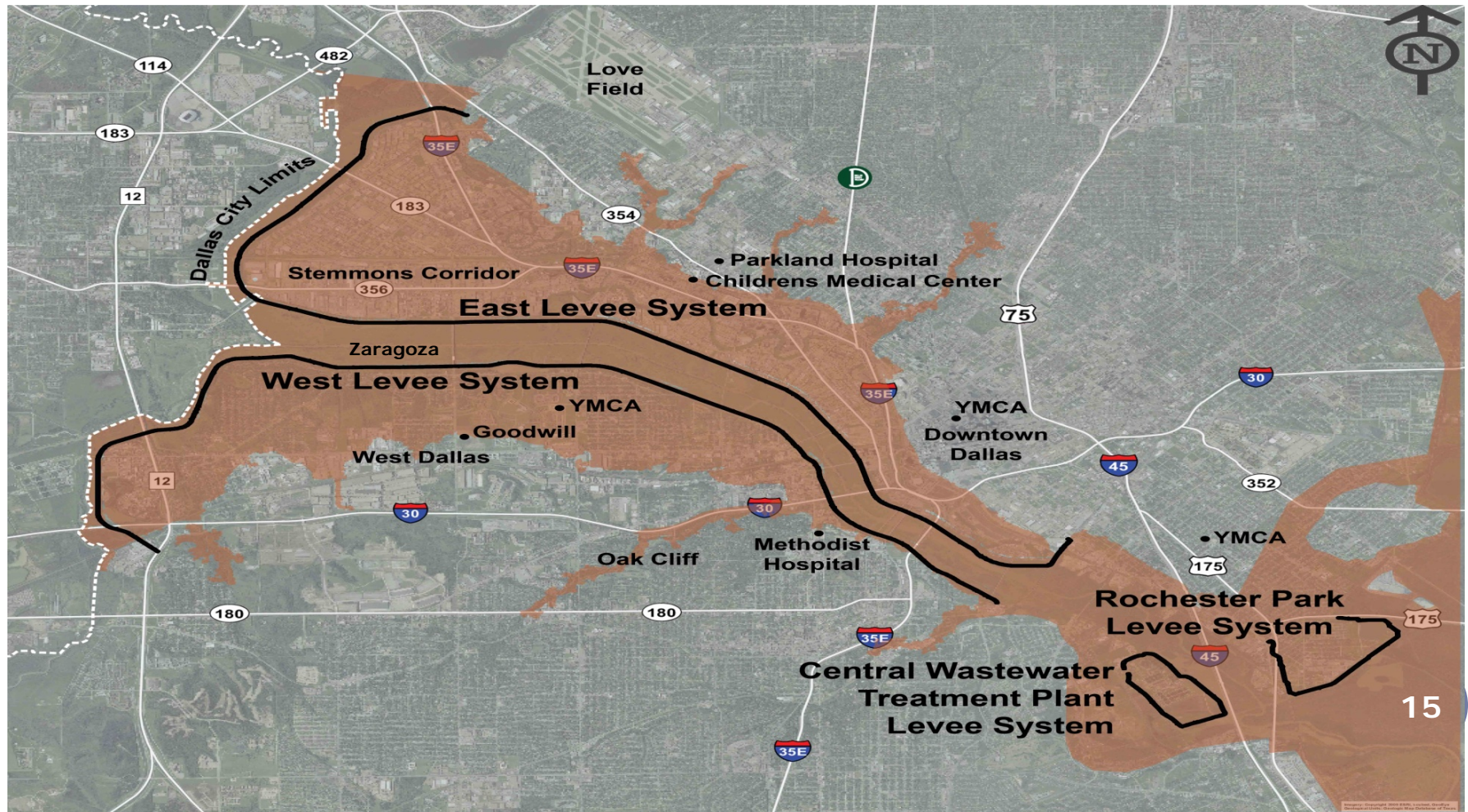


# FEMA REMAPPING UPDATE

- Existing FIRM shows very little property as floodplain – floodplain is mainly confined to the Trinity River and creeks
- Due to questions raised during the Corps' inspection, FEMA is remapping the areas behind the levees as if the levees are not there
  - FEMA is responsible for updating Flood Insurance Rate Maps (FIRMs) to show existing risk along levee systems

# FEMA REMAPPING

WORST CASE SCENARIO - ASSUMING NO LEVEE  
PROTECTION ESTIMATED AREA THAT FEMA MAY  
INCLUDE IN REVISED MAPS



# FEMA PRELIMINARY MAP SCHEDULE

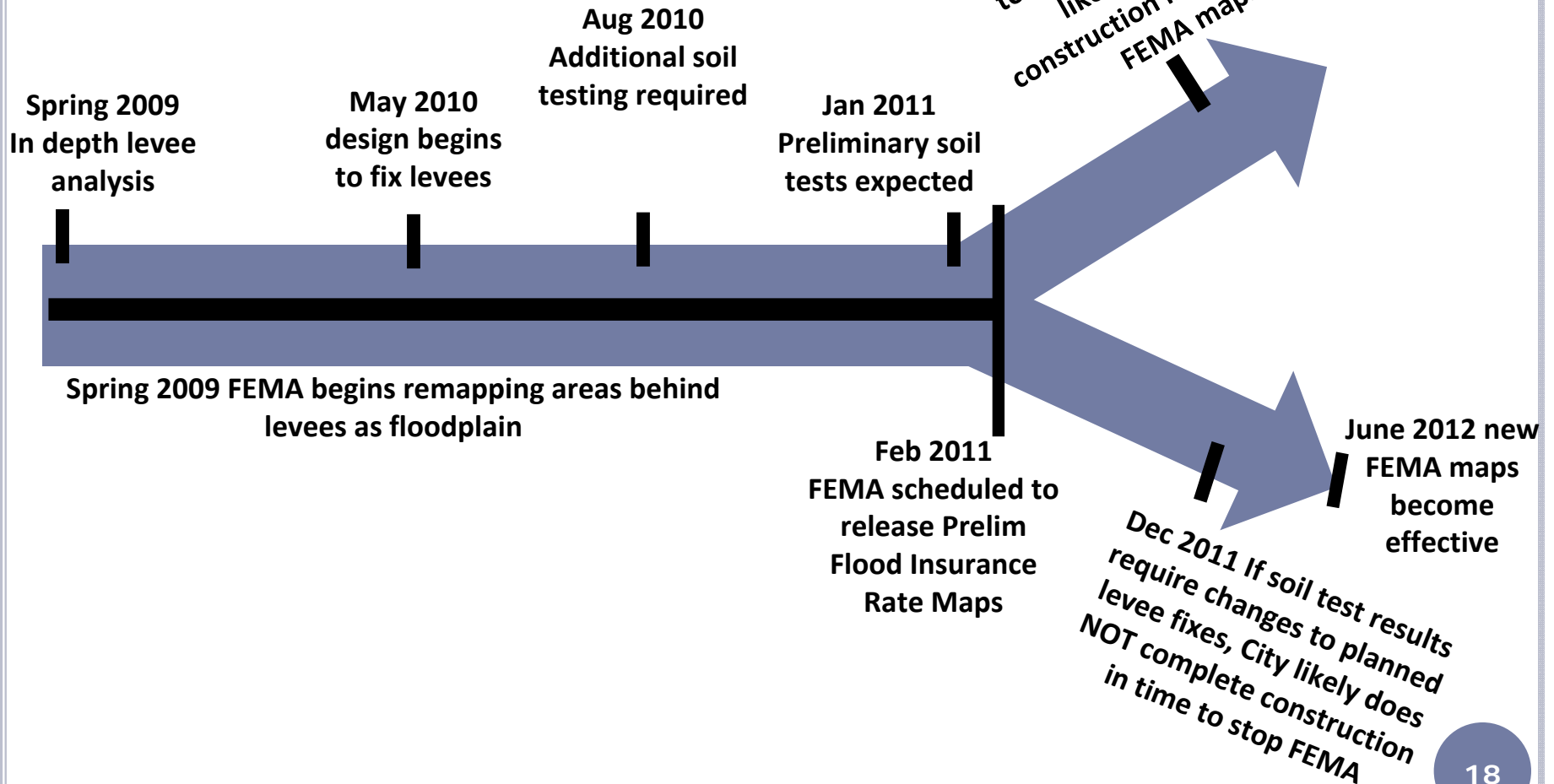
- FEMA plans to release its Preliminary Flood Insurance Rate Maps (FIRMs) in February 2011
- It is important that you attend meetings co-hosted with FEMA once the maps are released
  - Upon issuance of Preliminary Flood Insurance Rate Maps, there is a federally mandated 90-Day Appeal Period for public review of the data
  - Objections made through the Appeal Process - scientific or technical challenge to Base Flood Elevation
  - Objections made through the Protest Process - challenge based on items such as floodway boundaries, road names, and road locations

# FEMA REMAPPING UPDATE

- It is the City's goal to complete 100-year fixes to the levees before FEMA finalizes new maps
  - The Corps must approve the design before construction begins
- If the City is unable to complete levee fixes before FEMA finalizes maps (anticipated June 2012), then you will be able to continue owning your property but:
  - flood insurance will be required if you have a federally backed mortgage
  - remodeling of your structure will be limited to no more than 50% of the existing structure value
  - new construction will be prohibited unless the property is filled or elevated



# LEVEE CONSTRUCTION AND REMAPPING TIMELINE



# FEMA REMAPPING UPDATE – FLOOD INSURANCE

- In case the goal of completing the levee fixes is not met, flood insurance would be required on properties with federally backed mortgage
- In June 2010, FEMA released a revision in its insurance rules to reduce the cost of purchasing flood insurance within a high risk zone
  - The policy revision allows property owners to maintain lower flood insurance rates for the first two years after new maps become effective



# FEMA REMAPPING UPDATE – FLOOD INSURANCE

- Flood insurance can be purchased through property and casualty insurance agents and rates are set so that they do not differ from company to company or agent to agent
- Rates depend on many factors including date and type of construction of your home, along with your building's level of risk
- Flood Insurance can cover a Building and/or Contents
- Although FEMA suggests anyone with property behind a levee carry flood insurance, it is not *required* unless/until new FINAL flood insurance maps are produced (June 2012)

# FEMA REMAPPING UPDATE – FLOOD INSURANCE

- FEMA insurance rate examples for the first two years of flood insurance after a new FEMA map is finalized, based on June 2010 revision:

Property Type	Building Coverage	Content Coverage	Annual Policy Cost
Residential	\$50,000	\$20,000	\$201
Residential	\$100,000	\$40,000	\$264
Commercial*	\$500,000	\$500,000	\$2,537

\*Note that this is the maximum NFIP coverage amount - any additional coverage would come from private insurer

If maps become effective in 2012, the above rates would be good until 2014

# FEMA REMAPPING UPDATE

- The City of Dallas will continue to update property owners on its progress to fix the levees as well as FEMA's mapping schedule as it evolves
- It is important to us that you remain up to date on these issues
- Property Owners resources: [www.floodsmart.gov](http://www.floodsmart.gov) and [www.trinityrivercorridor.org](http://www.trinityrivercorridor.org)

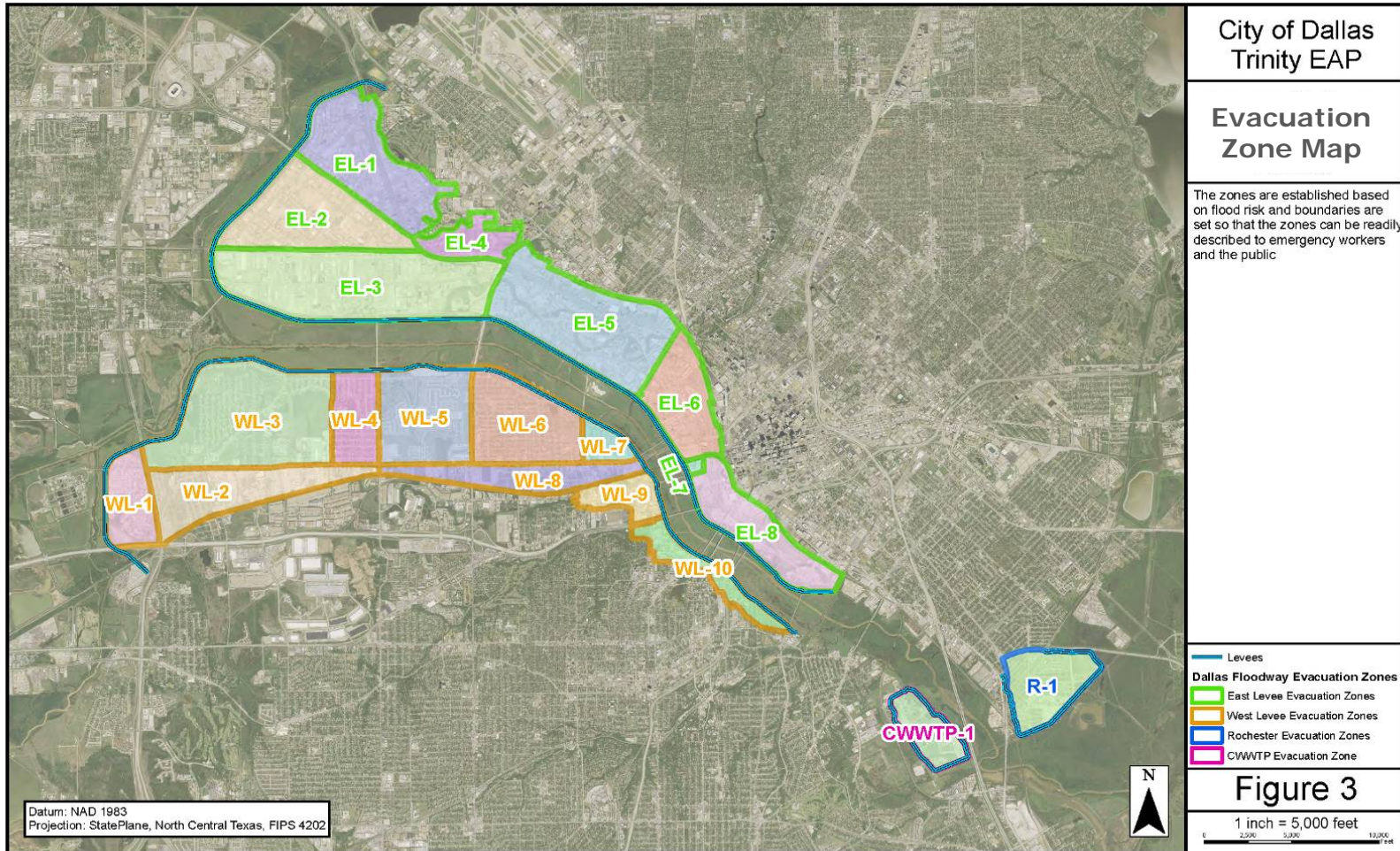
# EMERGENCY ACTION AND EVACUATION PLAN

- An **Emergency Action Plan (EAP)** is a standard practice and the City of Dallas has an EAP for all areas behind the levees
- An EAP identifies potential emergency conditions and specifies actions to be followed to minimize property damage and loss of life
- Evacuation procedures are part of the EAP – evacuation protects the public by moving people away from a hazard

# EMERGENCY ACTION AND EVACUATION PLAN

- An EAP identifies:
  - Critical areas where emergency response personnel will be needed to evacuate the population if needed
  - Public communication details
  - Evacuation Routes/Zones
  - Transportation and traffic control
- 20 evacuation zones have been identified around the levees:
  - East Levee (8 zones)
  - West Levee (10 zones)
  - Rochester (1 zone)
  - Central Wastewater Treatment Plant (CWWTP) (1 zone)

# EMERGENCY ACTION AND EVACUATION PLAN: EVACUATION ZONE MAP





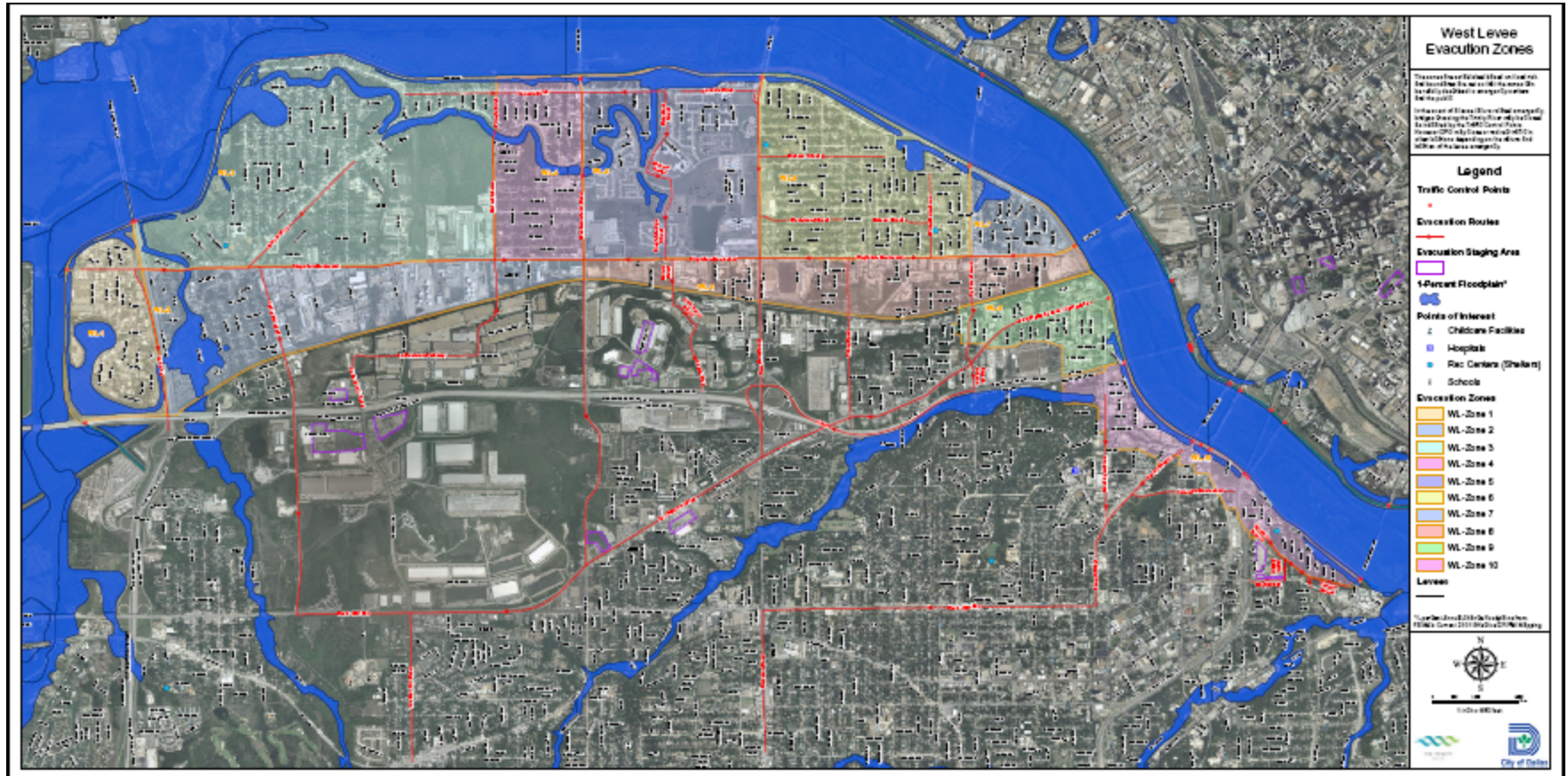
# EMERGENCY ACTION AND EVACUATION PLAN

- Chosen evacuation routes are large roads with surfaces elevated higher than local streets
- Recreation Centers will be used as primary shelter facilities – identified outside the evacuation zones
- Residents needing evacuation assistance should call 911

# EMERGENCY ACTION AND EVACUATION PLAN

- In case of emergency situation, you will be notified by:
  - News broadcasts (radio and television)
  - Cable override
  - Emergency Alert System (EAS)
  - City Website Notification and Information
  - Reverse 911
    - Forms are available to register your cell or work phone numbers for reverse 911

# EMERGENCY ACTION AND EVACUATION PLAN: WEST LEVEE EXAMPLE



# NEXT STEPS

## For You:

- 1) Attend Open-house forum meetings once preliminary maps are released (February 2011) to know if your property will be affected, learn about appeal and protest process, and get facts about flood insurance
- 2) Register your phone for Reverse 911
- 3) Visit [www.floodsmart.gov](http://www.floodsmart.gov) and [www.trinityrivercorridor.org](http://www.trinityrivercorridor.org) for further resources

## For City:

- 1) Continue designing and construct 100-year levee fixes with goal of completing work prior to FEMA's final maps
- 2) Continue outreach to all potentially affected neighborhoods regarding FEMA remapping efforts and Emergency Action Plan