

PROTECTING YOUR PROPERTY: AN UPDATE ON THE DALLAS LEVEES

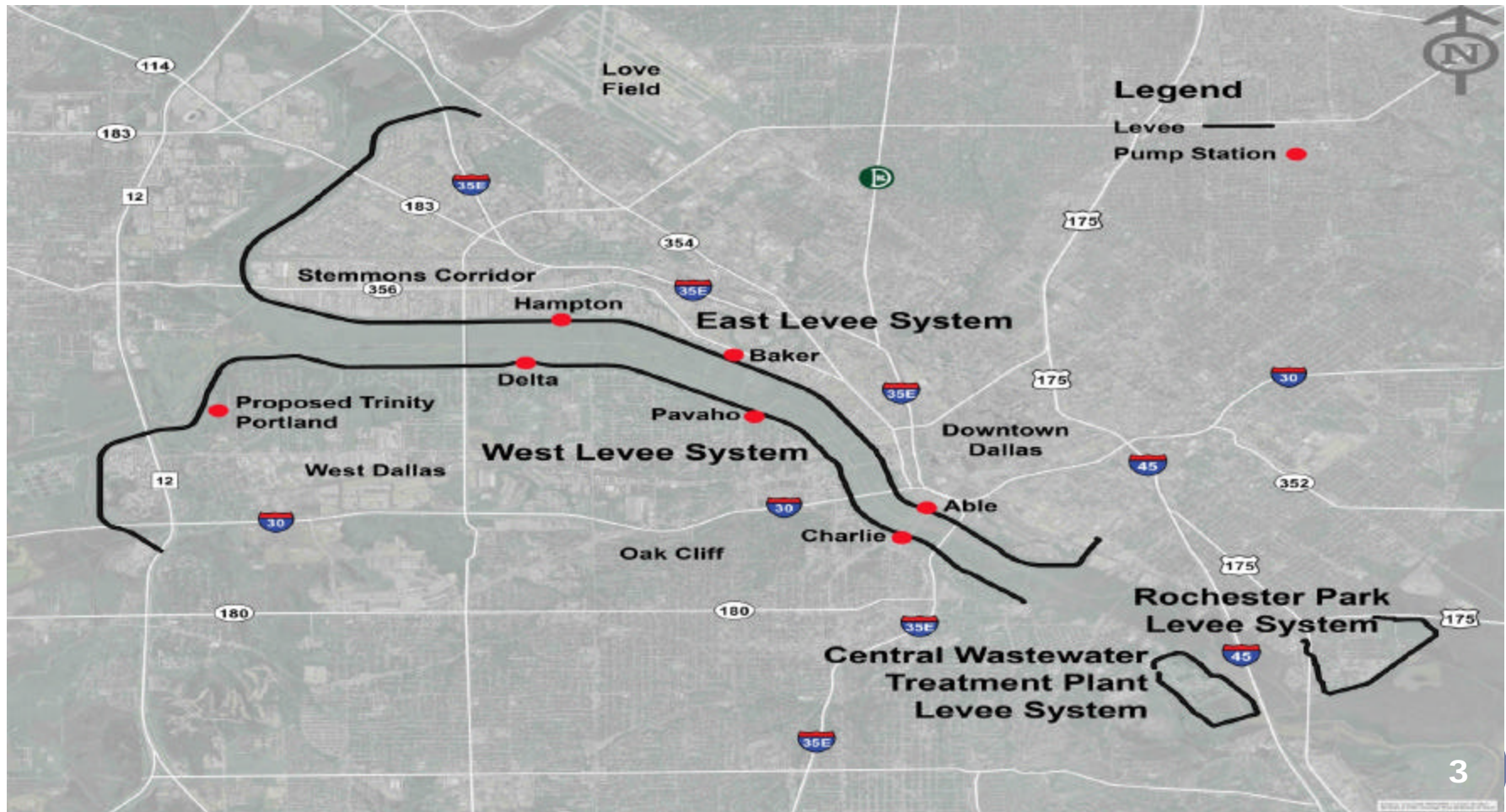
Fall 2010



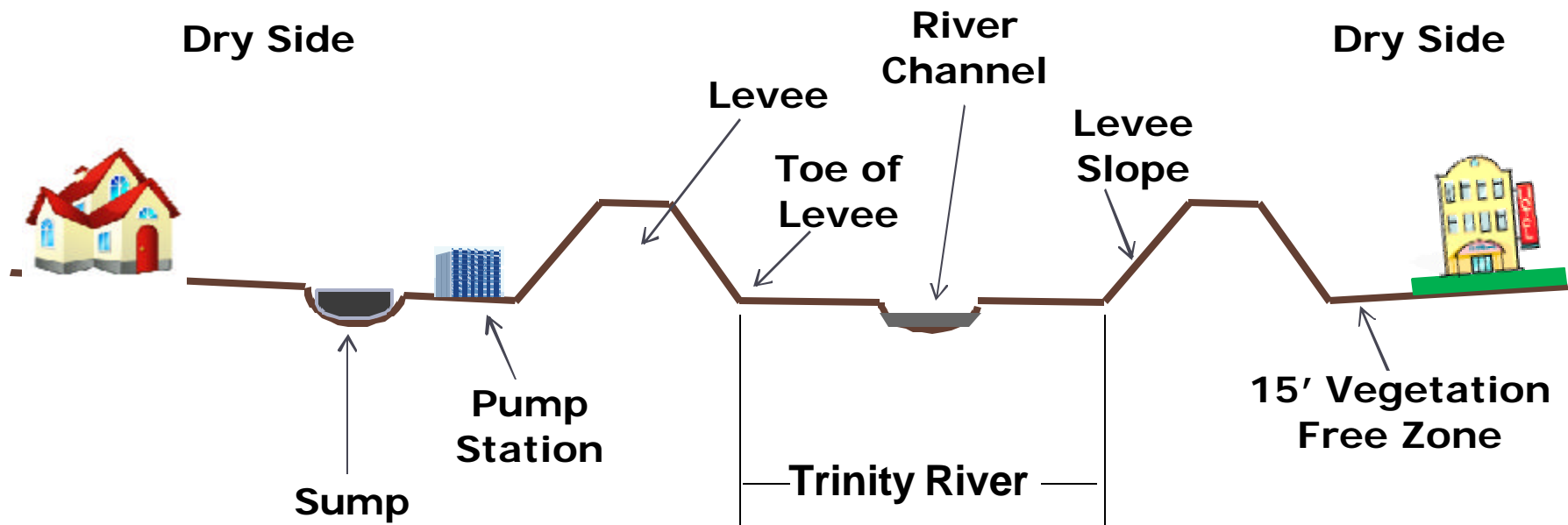
PURPOSE

- 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



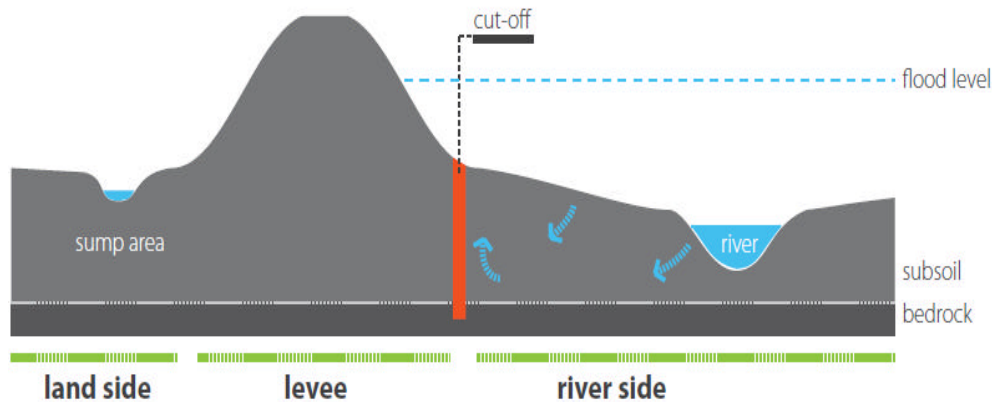
After



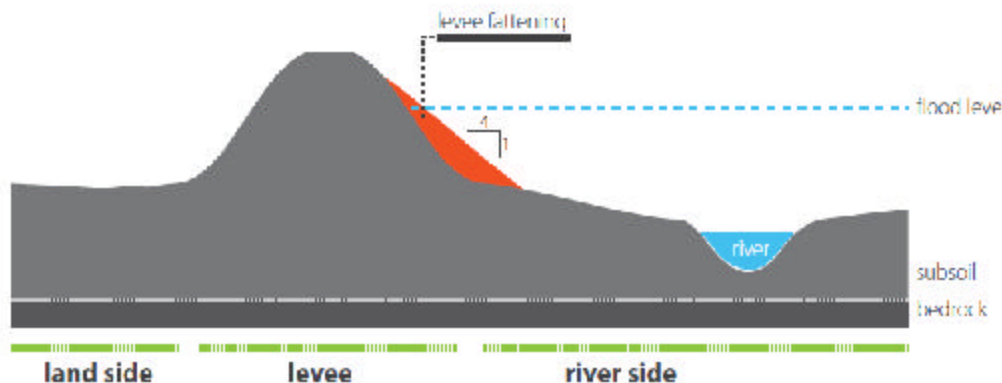
- Coombs Creek Pressure Diversion (West Levee) had a 3 inch separation with exposed rebar
 - Loose concrete around the separation removed, rebar sealed, and area patched

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

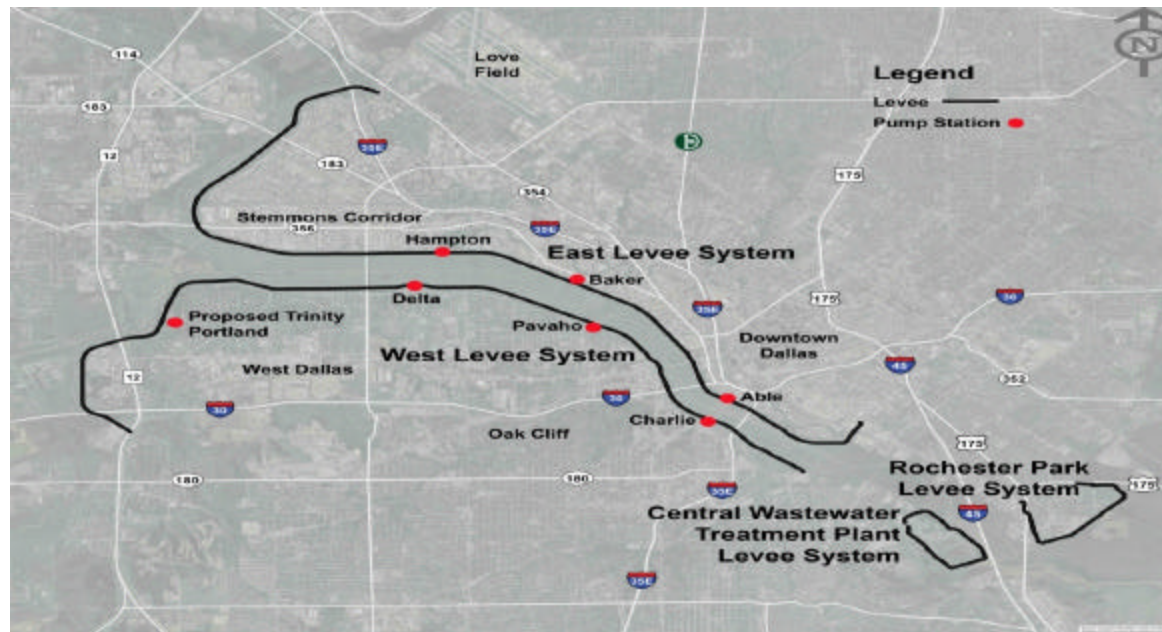
PAVAHO PUMP STATION IMPROVEMENTS



- 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

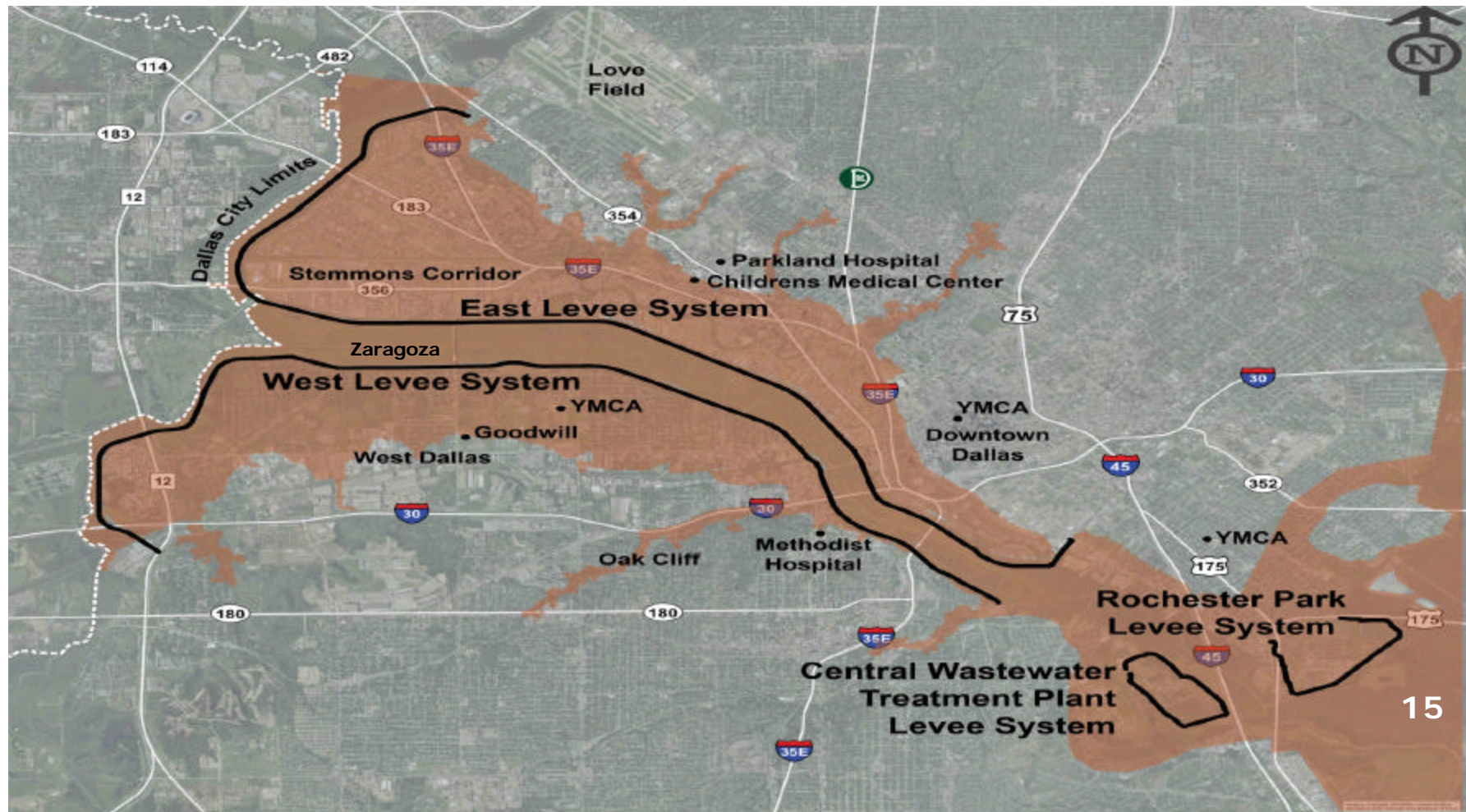
FEMA REMAPPING UPDATE

- 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

FLOODWAY SYSTEM UPDATE: FEMA REMAPPING

WORST CASE SCENARIO - ASSUMING NO LEVEE PROTECTION

ESTIMATED AREA THAT FEMA MAY INCLUDE IN REVISED MAPS



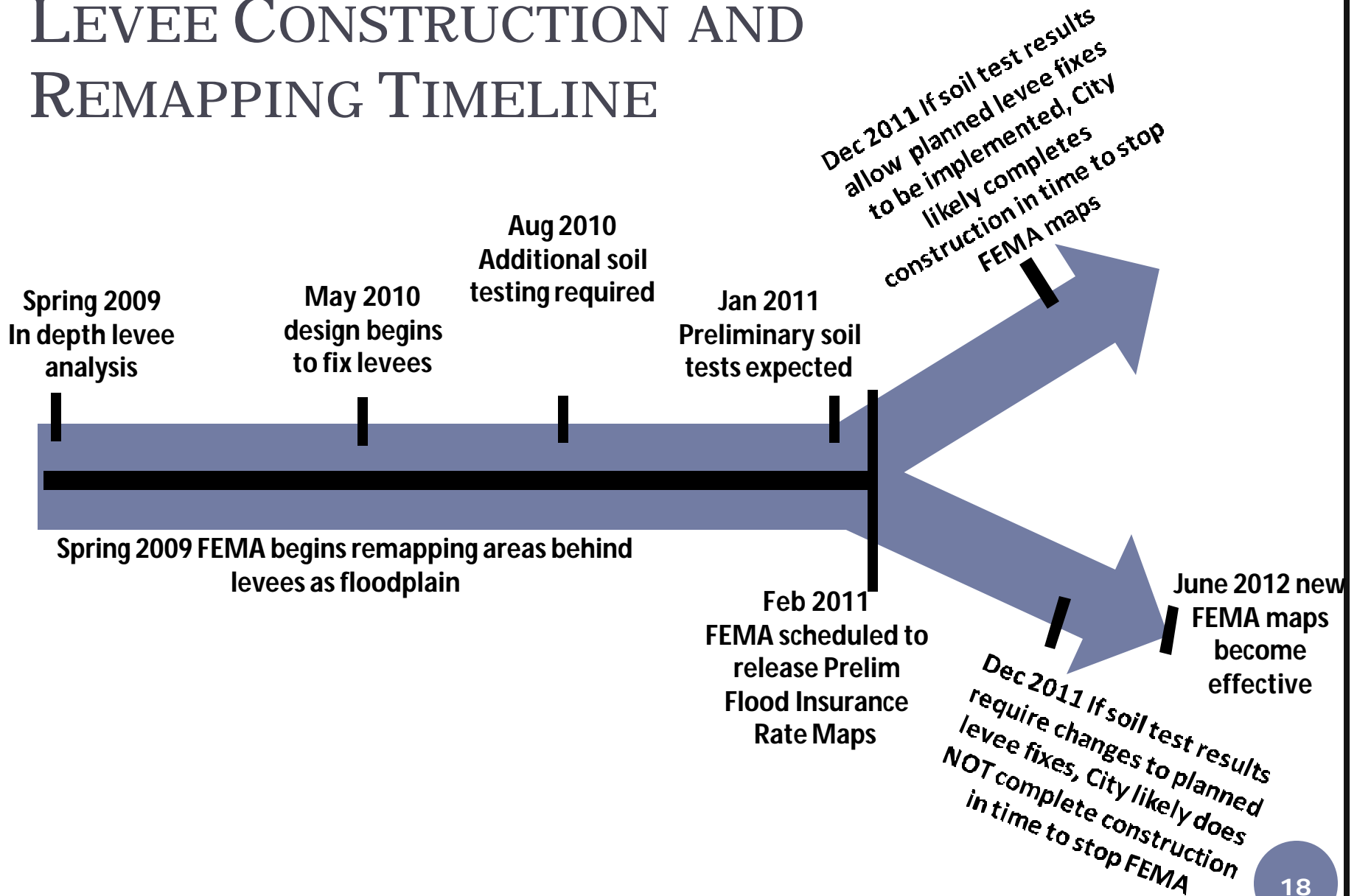
FEMA PRELIMINARY MAP SCHEDULE

- 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 and www.trinityrivercorridor.org

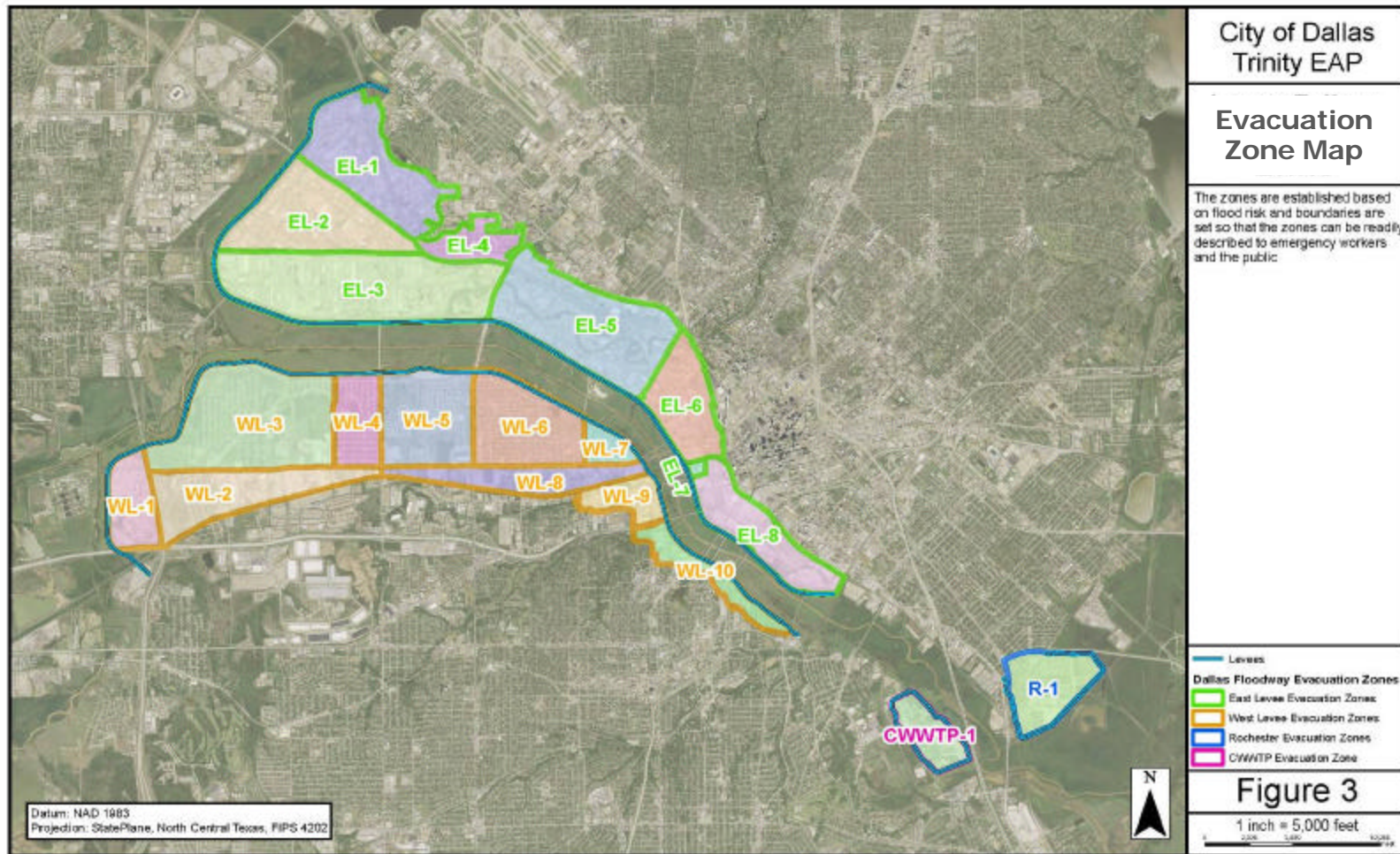
EMERGENCY ACTION AND EVACUATION PLAN

- 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



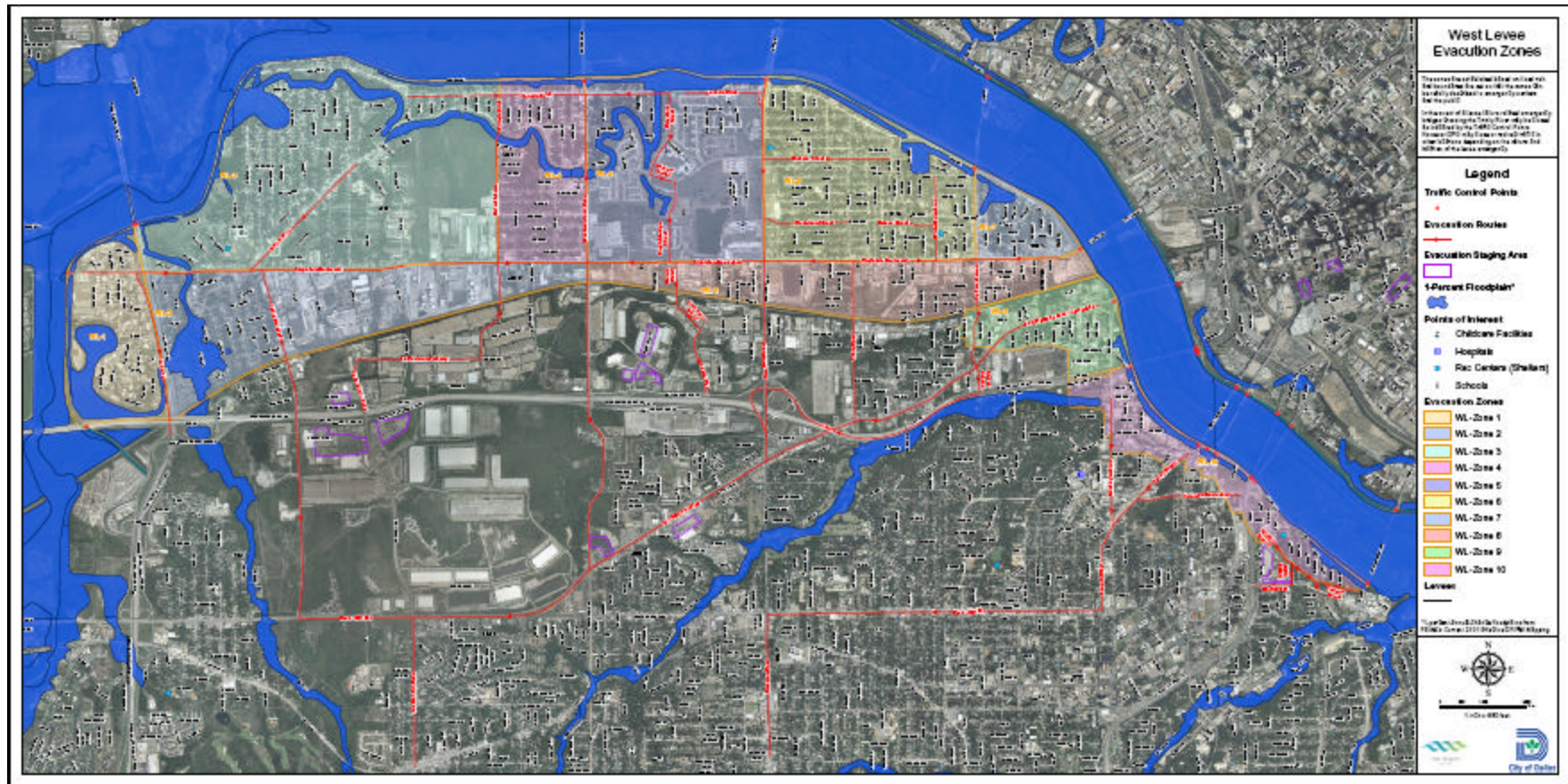
EMERGENCY ACTION AND EVACUATION PLAN

- 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 and 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