

Memorandum



DATE: January 9, 2015

TO: Honorable Members of the Public Safety Committee:
Sheffie Kadane (Chair), Adam Medrano (Vice Chair), Dwaine Caraway, Jennifer S. Gates,
Sandy Greyson, Scott Griggs

SUBJECT: **Earthquake Preparedness**

On Monday, January 12, 2015, you will be briefed on Earthquake Preparedness. The briefing materials are attached for your review.



Eric D. Campbell
Assistant City Manager

Attachment

c: Honorable Mayor and Members of the City Council
A.C. Gonzalez, City Manager
Warren M.S. Ernst, City Attorney
Craig D. Kinton, City Auditor
Rosa A. Rios, City Secretary
Daniel F. Solis, Administrative Judge
Ryan S. Evans, First Assistant City Manager

Jill A. Jordan, P.E., Assistant City Manager
Mark McDaniel, Assistant City Manager
Joey Zapata, Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Sana Syed, Public Information Officer
Elsa Cantu, Assistant to the City Manager – Mayor & Council



City of Dallas

Earthquake Preparedness

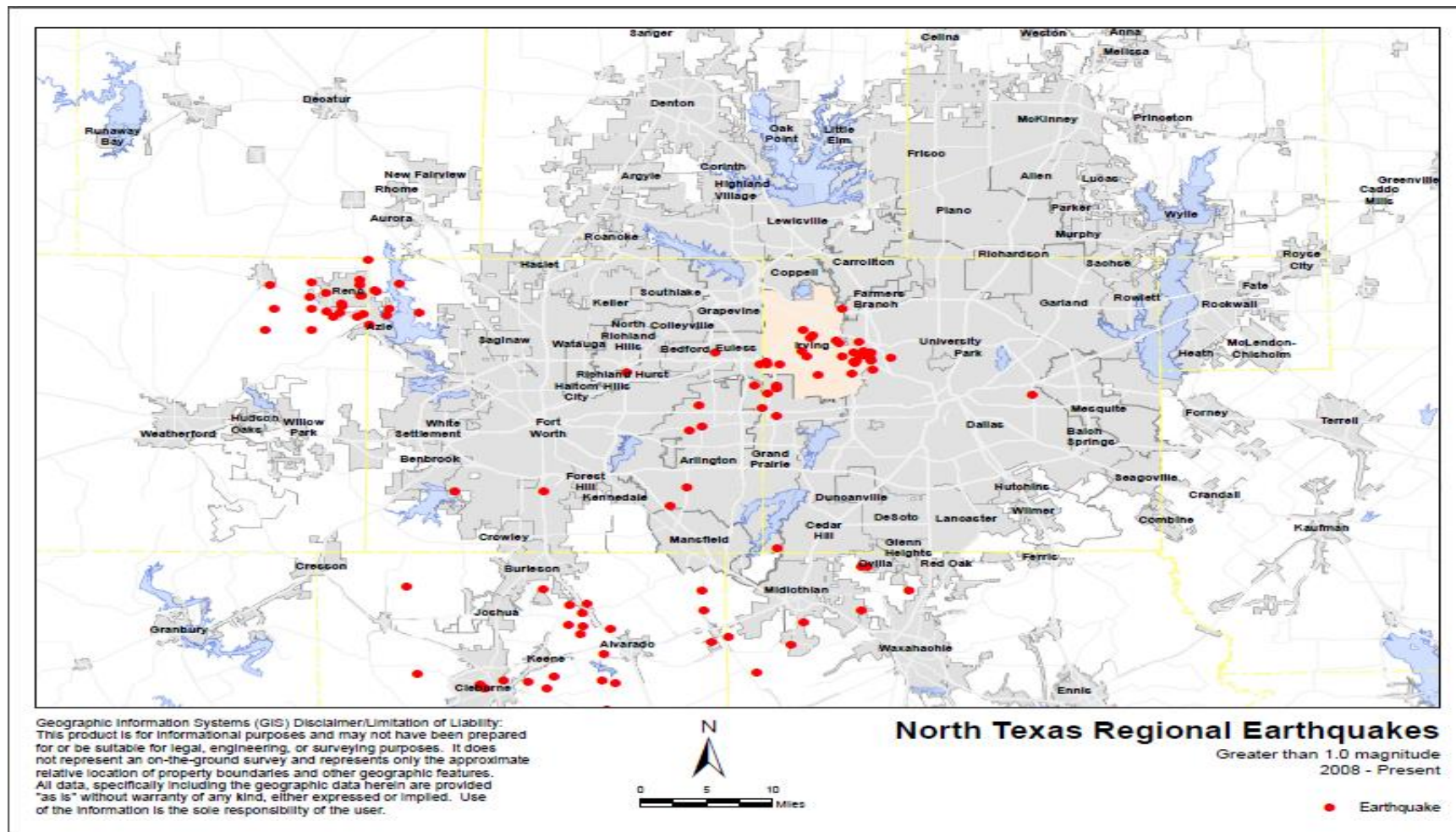
Office of Emergency Management

Public Safety Committee

January 12th, 2015



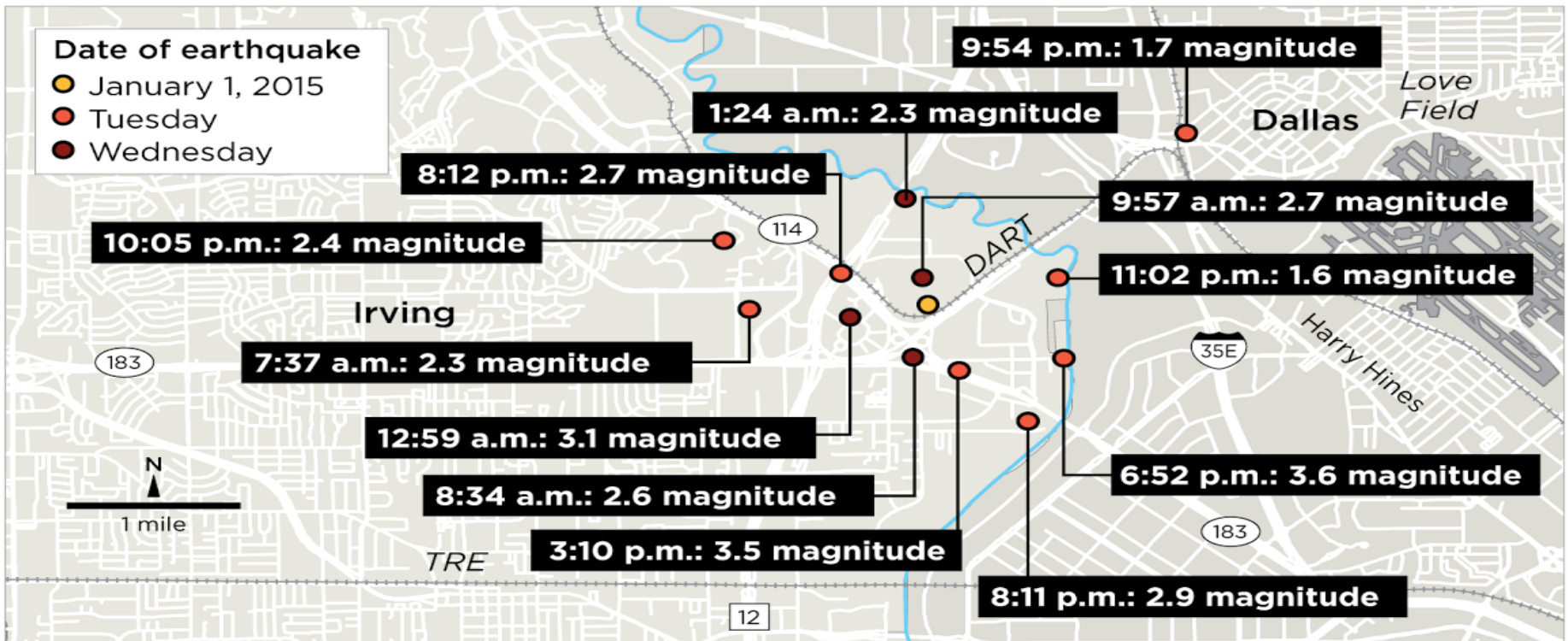
Regional Earthquakes Map



2015 Earthquakes

Irving-area earthquakes

Thirteen earthquakes have been recorded near State Highways 114 and 183 in Irving since the beginning of 2015.



SOURCE: U.S. Geological Survey

Note: As of 5 p.m. Wednesday

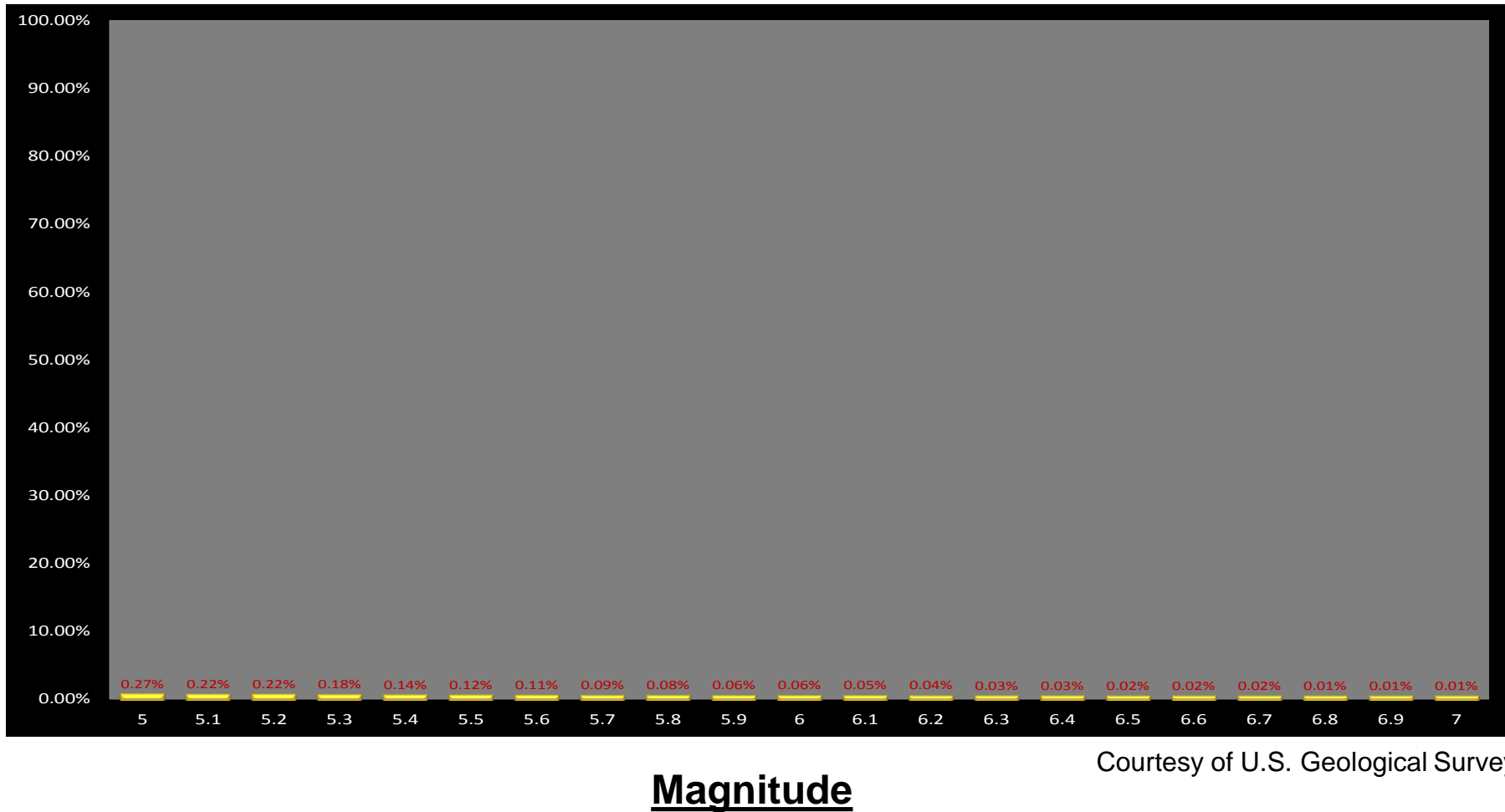
Staff Graphic

Courtesy of Dallas Morning News

Richter Magnitudes

Magnitude	Description	Average earthquake effects	Average frequency of occurrence (estimated)
Less than 2.0	Micro	Microearthquakes, not felt, or felt rarely by sensitive people. Recorded by seismographs.	Continual/several million per year
2.0–2.9	Minor	Felt slightly by some people. No damage to buildings.	Over one million per year
3.0–3.9		Often felt by people, but very rarely causes damage. Shaking of indoor objects can be noticeable.	Over 100,000 per year
4.0–4.9	Light	Noticeable shaking of indoor objects and rattling noises. Felt by most people in the affected area. Slightly felt outside. Generally causes none to minimal damage. Moderate to significant damage very unlikely. Some objects may fall off shelves or be knocked over.	10,000 to 15,000 per year
5.0–5.9	Moderate	Can cause damage of varying severity to poorly constructed buildings. At most, none to slight damage to all other buildings. Felt by everyone. Casualties range from none to a few.	1,000 to 1,500 per year
6.0–6.9	Strong	Damage to a moderate number of well-built structures in populated areas. Earthquake-resistant structures survive with slight to moderate damage. Poorly designed structures receive moderate to severe damage. Felt in wider areas; up to hundreds of miles/kilometers from the epicenter. Strong to violent shaking in epicentral area. Death toll ranges from none to 25,000.	100 to 150 per year
7.0–7.9	Major	Causes damage to most buildings, some to partially or completely collapse or receive severe damage. Well-designed structures are likely to receive damage. Felt across great distances with major damage mostly limited to 250 km from epicenter. Significant death toll.	10 to 20 per year
8.0–8.9	Great	Major damage to buildings, structures likely to be destroyed. Will cause moderate to heavy damage to sturdy or earthquake-resistant buildings. Damaging in large areas. Felt in extremely large regions. Death toll in the thousands.	One per year
9.0 and greater		Near or at total destruction - severe damage or collapse to all buildings. Heavy damage and shaking extends to distant locations. Permanent changes in ground topography. Death toll can surpass 10,000.	One per 10 to 50 years

Probability of Earthquakes – Next 50 Years



City Preparedness Actions

- **Planning Activities:**
 - City Master Emergency Operations Plan
 - OEM SOP – Earthquake Response
 - Social Media Awareness Campaign
 - Participation in Great Shakeout Drills



- **Operational Activities:**
 - 2012 Tabletop Exercise – Earthquake response
 - Development of multidiscipline Task Force
 - Continued adherence to Intl. Building Codes Standards



Community Preparedness

- Have an emergency kit that includes items such as bottled water, several days' worth of food, a flashlight, a first aid kit, pet food, and a battery powered radio
- Fasten shelves securely to walls
- Place large or heavy objects on lower shelves
- Locate safe spots in each room under a sturdy table or against an inside wall
- Hold earthquake drills with your family members: **Drop, cover and hold on!**
 - **DROP** to your hands and knees
 - **COVER** your head and neck with your arms and only move if you need to get away from the danger of falling objects
 - **HOLD ON** to any sturdy shelter until the shaking stops



Resources

Websites:

www.Ready.gov (Spanish language site www.Listo.gov)

<http://www.redcross.org/prepare/disaster/earthquake>

<http://www.fema.gov/>

<http://www.shakeout.org>

Contact OEM:

24-Hour Main Line: 214-670-4275

Website: www.dallasemergencymanagement.com

Twitter: @DallasOEM

Facebook: City of Dallas- Office of Emergency Management

Questions?

Thank You!

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