

Inferno @ Lac Megantic

Stephan M. Bunker
Maine E911 Advisory Council
&
Farmington (Maine) Fire Rescue Department

Def. “Newfie”

A slang term for a Newfoundlander, who are people from the providence of Newfoundland.

Or

A derogatory term or slur used for someone from Newfoundland.

What is Newfoundland “screech” ??

Why Lac Megantic and Why a Rail Fire ?

Lac Megantic, Quebec, Canada &
Farmington, Maine, USA are Sister Cities

On the date of the derailment & fire, July 6, 2013, five fire departments from Franklin County responded as mutual aid. My hometown department, Farmington Fire & Rescue was among those responders.

This Sept. 16th, 2019 Farmington suffered a tragic propane explosion, with one firefighter perishing and six seriously injured. The city council of Lac Megantic returned condolences for the losses we have both suffered.



1969 Seoul, S. Korea, Sp4 Bunker & Partner - Sultan

APCO Canada 2019 Conference Halifax, Nova
Scotia Nov. 4-7, 2019

After an explosion at the Life Enrichment Advancing People building, in Ferrisburgh, Maine killed one firefighter and injured multiple other people, on September 16, 2019.



deadly propane explosion on Sept. 16, 2019, which leveled new construction in Farmington, Maine. The explosion leveled a new building, which housed a nonprofit.



Learning Objectives

- Increase Awareness of Rail Shipments of Haz-Mat & Flammable Liquids
- Review the elements of Safe Rail Operation & Government Regulations
- Identify the failures of rail company, staff & regulatory agencies.
- List the losses to life , property and environment to Lac Megantic
- Discuss the response to the incident
- Consider the lessons learned and elements to preparedness.

Talk About.....

Oil

Gov't Oversight

Railroads

Response

Tank Cars

Product
Testing

Train Staffing

Braking

Engines

Aftermath

Track Maintenance

Response Planning

Train Routing

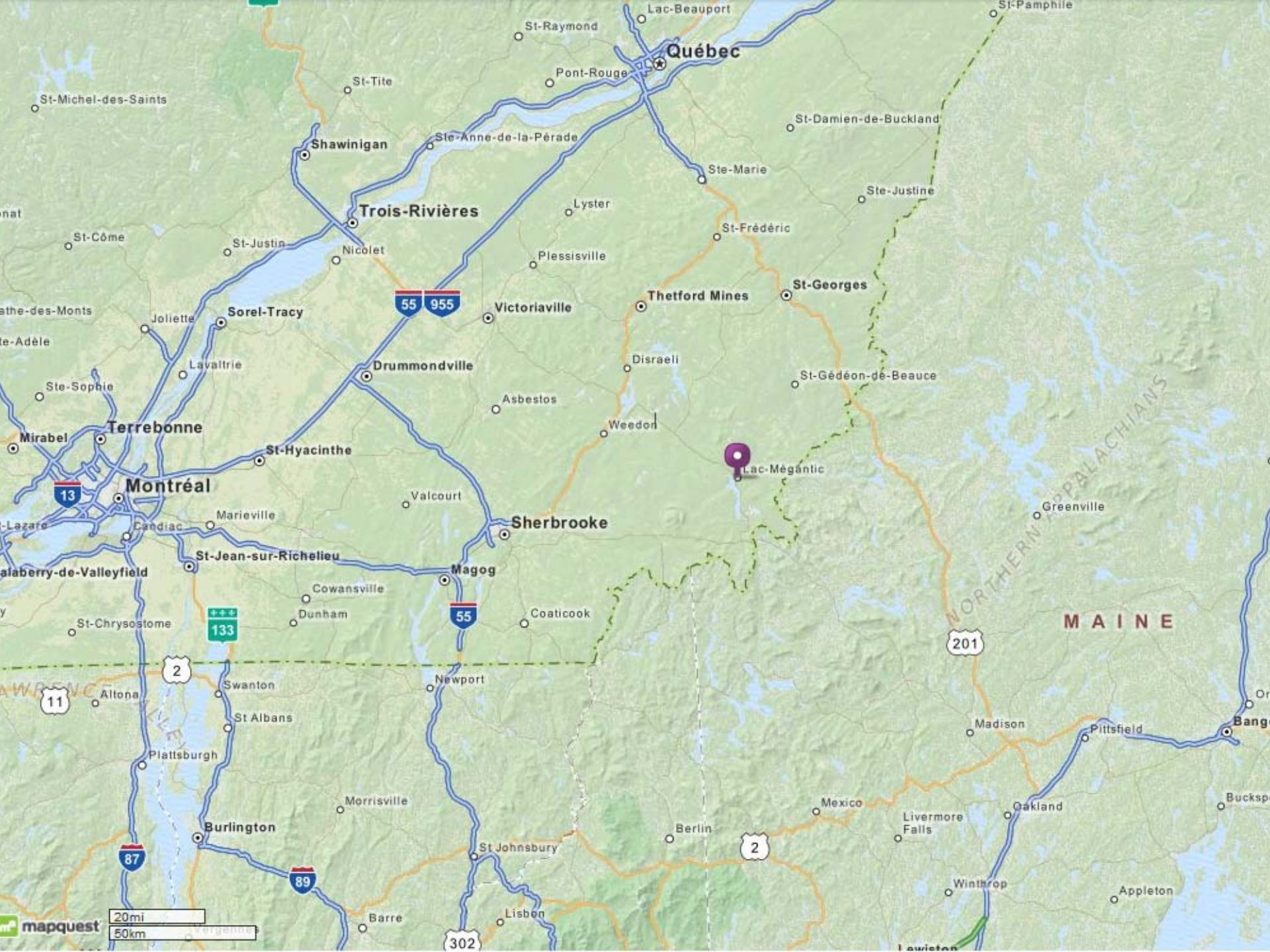
Lessons Learned

Lac Megantic – 6 Years Later





APCO Canada 2019 Conference Halifax, Nova Scotia Nov. 4-7, 2019



Québec

Trois-Rivières

Montréal

Sherbrooke

MAINE

201

2

2

302

mapquest

20mi

50km

Oil Train Disaster – Basic Facts

- July 7, 2013, 10:50 PM Montreal, Maine & Atlantic Railway (MMA) train arrives at Nantes, Quebec, carrying 7.7 million litres of crude oil in a 73 car shipment.
- Train parked on main line, descending grade, leaves lead engine running, applies brakes. Engineer leaves for hotel for rest period.
- During evening, 911 call to Nantes Fire department, fire on train. They arrive, extinguish fire, shut train down. Meeting with a track foreman & FD, decide to leave as is.
- Just before 1 AM, pressure drops in air brakes, rolls downhill, seven miles to Lac Megantic, w/o crew member.
- Train picks up speed, black box measures 65 mph, reaches center of town at 1:15 AM. (25 mph zone)
- Almost all of 63 derailed tank cars damaged, approx. 6 million litres crude spilled, ignites.
- 47 lives lost, 40 blds burned, 37 later demolished, 2000 evacuated



APCO Canada 2019 Conference Halifax, Nova Scotia Nov. 4-7, 2019



- MONTREAL, MAINE & ATLANTIC RAILWAY
- MMA TRACKAGE Via CP
- MMA HAULAGE VIA IRVING-OWNED RAILWAYS
- REST OF THE RAILWAY NETWORK

Lac Megantic – Years Later



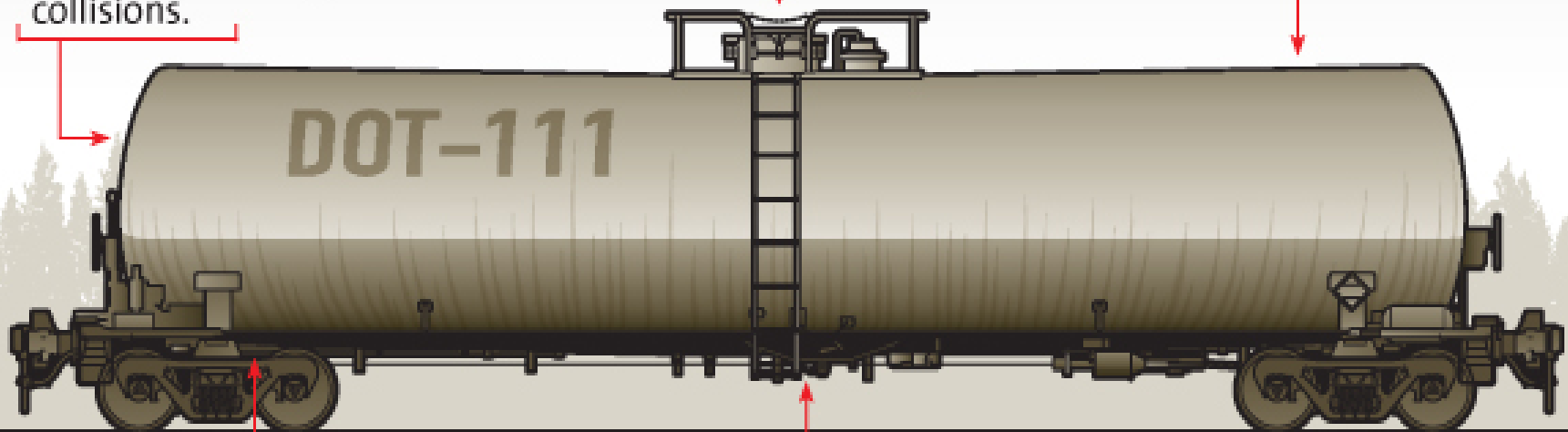
APCO Canada 2019 Conference Halifax, Nova
Scotia Nov. 4-7, 2019

The head shields are prone to puncture by couplers in collisions.

A typical DOT-111 holds as much as 30,000 gallons.

Valves and fittings atop the cars are poorly shielded and may open in a derailment or rollover.

The steel shell of a dot-111 is less than a half-inch thick and easily ruptured in a derailment.



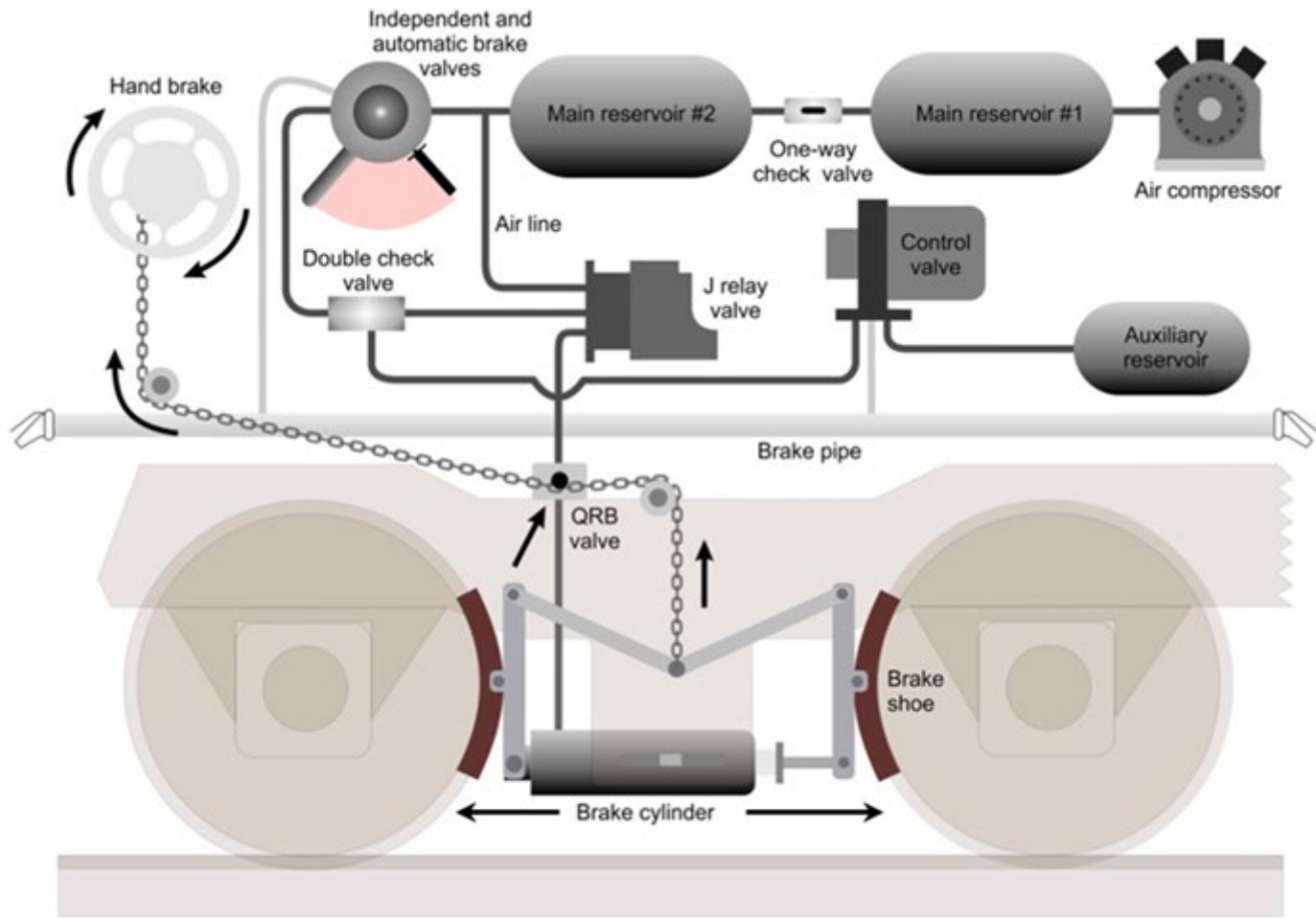
The draft sill, which connects the tank to the wheels, may fail in derailments, causing the tank to tear.

The valves on the bottom of the car may burst during an accident.

Mother Jones



APCO Canada 2019 Conference Halifax, Nova Scotia Nov. 4-7, 2019



Not to scale

Rail Train Staffing



APCO Canada 2019 Conference Halifax, Nova
Scotia Nov. 4-7, 2019

Rail Maintenance



APCO Canada 2019 Conference Halifax, Nova Scotia Nov. 4-7, 2019

Product Testing



APCO Canada 2019 Conference Halifax, Nova Scotia Nov. 4-7, 2019

E.R.A.C. Emergency Response Assistance
Canada
“info@erac.org

E.R.A.P. Emergency Response Assistance Plan

A document that describes what the industry will do to support first responders in an accident involving dangerous good.

Describes the level and type of expertise and specialized equipment needed, location and response time.

5 Recommendations of the Canadian Transportation Safety Board (TSB)

(US version NTSB Nat. Transportation Safety Board)

1. Legacy Class 111 tank cars no longer permitted, phased out by 2025
2. All railroad companies must have improved ERAPs in place,
3. Improve route planning away from metro areas, improve risk assessment
4. Improve physical defenses against run-away trains
5. Increase, improve government oversight at national and regional levels.

Product Testing



APCO Canada 2019 Conference Halifax, Nova
Scotia Nov. 4-7, 2019

The “Perfect Storm”

No single person, action or organization singly responsible for the incident.
Need for combined efforts from regulators, railroads, shippers, tank car manufacturers, and refiners in Canada & US.

Need for increased oversight by national & provincial transport officers, flag recurring problems, follow up to ensure compliance.
Ensure that rail companies instill safety culture over that of profit, employee training, equipment & rail testing improved handling and security of trains.

Transport Canada to reconsider single vs double crews

New, improved track standards & maintenance oversight

Better route planning to avoid urban centers and high risk areas

Better product testing & classification

Train securement SOPs, runaway trains, secured engines, auto braking systems

Proper Emergency Response Action Plans in effect, ample assistance available

Pre-staged fire suppression trailers for petroleum & LPG equipment caches

Challenges Faced During Fire Department Response

- **Small, volunteer fire department**
- **Distant mutual aid responses, 1 hr. plus**
- **Huge, fast moving fire, burning liquid flowing down street, storm drains, flames & explosions blocks away, manhole covers**
- **Large diameter hose lines, different sizes between departments**
- **Different thread types in hose lines between departments**
- **Limited municipal water supply, by drafting from lake**
- **Feeding, shelter and care for firefighters**
- **Refueling of fire apparatus**
- **Limited foam on-site, required a P.O. from city to acquire from nearby industry before responding to scene !**
- **River pollution, downstream towns, water supplies.**
- **Language barrier, English-only responders from Maine !**
- **PTSD support and counseling.**
- **Radios, operating frequencies different**

Questions for Public Safety to Ponder

1. Who are the rail transport companies operating in your jurisdiction? Briefed?
2. What are the 24/7 contact phone#s for their rail operations centers?
3. What do they have for emergency response teams ? Capabilities ?Response times, from where?
4. Where are the typical locals for loading, offloading, sidings, repair facilities?
5. Have the train companies trained local firefighters in handling rail equipment?

Questions (cont)

6. Contact #s for environmental response agencies(local, industrial, provincial, federal, military)
7. Radio compatibility among mutual aide agencies, common frequencies, ops channels
8. Capability of comm center to monitor fireground ops channels, recordings ?
9. Availability of mobile communications vehicles?
“tactical dispatchers” trained in its use and on-scene?
10. What are conditions of local rail sections ? Reduced speeds in certain areas? High risk zones?
11. Where are pre-positioned haz-mat equipment, how to acquire? Sources for foam, cost, response time ?

Questions (cont)

12. Does your community have an emergency response plan ? When last reviewed and updated?
13. When was last time you exercised your plan, table-top or hands-on ?
14. Was the communications center included in the exercise?
15. How up to date is the resource list of people, phone#, emails, apparatus, specialized equipment and teams ?
16. Is your EMS providers, ambulances, helos, emergency room included in response plan ? Part of exercise?
17. Do you have a critical incident response team, does it also support the comm center staff w/PTSD?
18. All trained in ICS, Unified Command structure?

Lac Megantic – 7 Years Later

Cleanup completed, \$150 million including the removal of 294,000 tons of rubble and contaminated soil.

The Music Café' has been rebuilt in same location. Few other businesses have returned to historic downtown.

Railroads were the first things to be rebuilt.

Fed. Gov't & Quebec providence approved \$100 million to build rail bypass to town, but years away.

Mayor says until bypass completed, business investors will hesitate to reenter the business district.

Three rail employees charged with criminal negligence, acquitted.

MAA railroad liquidated.



**CANADIAN ASSOCIATION
OF PETROLEUM PRODUCERS**
Canada's Oil and Natural Gas Producers

Canadian Emergency Response to Flammable Liquid Incidents in Transport Level 1

[ENGLISH](#)

[FRANCAIS](#)

Intervention d'urgence canadienne lors d'incidents impliquant des liquides inflammable en transp

Course Content Updated - November 27, 2018

Supported Browsers: Google Chrome, Mozilla Firefox, Microsoft Edge

NFPA Report Lac Megantic & Fire Chief's Report

HEALTH HAZARDS



Thanks for Attending !

To get a copy of my PowerPoint slides....

Give me your Business Card, write "*Lac Megantic*" on back OR

Take my business card and e-mail your request !

Please complete your session evaluation on-line, its how I get a return visit in 2020.

Did you scan your badge on entry ? It's the way to get your CEU credits.

Stephan M. Bunker

Maine 911 LLC

Farmington Fire Rescue

Stephan.bunker@gmail.com

207-592-1247