Raleigh's Open Data Portal / Parsing Last Year's Fire Data

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The call has been issued for run numbers. Will have data soon from Raleigh and Cary and maybe a couple other local departments. Meanwhile, let's do some data play.

We've blogged before about Raleigh's Open Data Portal before. They surface quite a bit of police and fire department data, including all incidents from 2007 to present. That is, fire calls and requests for service only. No rescue, no EMS. See explanation at the bottom of this posting.

Let's parse the data from last year and see what we can find. One data disclaimer, though. For properties damaged by fire, any second building that receives damage as an exposure is listed as a second record. Ergo, some single fires had two or three records. (For those who examine the data, that will make sense.)

Top Call Types (From NFIRS Categories)

What were most frequent types of fire and service calls?

1. 3576 - Dispatched & cancelled en route
2. 1004 - Smoke detector activation no fire - unintentional
3. 1000 - Alarm system activation no fire - unintentional
4. 890 - False alarm or false call Other
5. 714 - Service call other
6. 512 - No Incident found on arrival at dispatch address

What's the count of building fires? 209.

Busiest Platoon For Fires?

Which shift had the most building fires?

1. 73 – B
2. 71 – A
3. 65 – C

When Do Building Fires Occur?

For those 209 building fires, the most common hours of the day:

1. 19 - 17:00 to 17:59
2. 16 - 18:00 to 18:59
3. 15 - 14:00 to 14:59
4. 14 - 12:00 to 12:59
5. 12 - 16:00 to 16:59
6. 11 - 11:00 to 11:59
7. 11 - 19:00 to 19:59
8. 10 - 22:00 to 22:59

Where Do Most Calls Occur?

For all fire and service calls, which engine is busiest within their first-due territory. Here's the call volume categorized by first-due territory. Meaning, frequency of incidents based on their address as corresponding to first-due engine. Note that Engine 1 and Engine 13 are combined as Station 1 territory.

1. 1268 - Station 1 (E1/E13)

2. 937 - Station 11
3. 817 - Station 3
4. 808 - Station 12
5. 759 - Station 19
6. 737 - Station 15
7. 692 - Station 8
8. 565 - Station 22
9. 556 - Station 20
10. 532 - Station 6
11. 532 - Station 5
12. 508 - Station 9
13. 502 - Station 7
14. 492 - Station 2
15. 475 - Station 21
16. 470 - Station 10
17. 459 - Station 16
18. 442 - Station 24
19. 408 - Station 14
20. 407 - Station 17
21. 378 - Station 4
22. 366 - Station 18
23. 357 - Station 26
24. 331 - Station 23
25. 311 - Station 25
26. 183 - Station 28
27. 175 - Station 27

That's great, but how about building fires only? Will look again.

Popular Places

Top incident addresses, where street numbers were recorded:

1. 177 - 509 GLENWOOD AVE
2. 67 - 3000 NEW BERN AVE
3. 64 - 116 ST MARYS ST
4. 37 - 1209 PLAINVIEW DR
5. 35 - 4420 LAKE BOONE TRL
6. 33 - 1420 S WILMINGTON ST
7. 33 - 4325 GLENWOOD AVE
8. 33 - 500 E HARGETT ST
9. 32 - 3019 FALSTAFF RD
10. 32 - 4812 SIX FORKS RD
11. 31 - 1315 OAKWOOD AVE
12. 31 - 5412 FIELDCROSS CT
13. 30 - 15 E PEACE ST
14. 28 - 2910 CAPITAL BLVD
15. 28 - 5 E EDENTON ST
16. 28 - 513 E WHITAKER MILL RD
17. 27 - 501 N WILMINGTON ST
18. 27 - 911 N BLOUNT ST
19. 26 - 500 FAYETTEVILLE ST

Top incident addresses, with no street numbers:

1. 78 - CAPITAL BLVD

2. 51 - I 40 WB
3. 46 - I 440 EB
4. 46 - NEW BERN AVE
5. 44 - I 40 EB
6. 31 - FALLS OF NEUSE RD
7. 31 - I 540 EB
8. 30 - GLENWOOD AVE
9. 30 - WESTERN BLVD
10. 28 - I 440 WB
11. 22 - S WILMINGTON ST
12. 20 - POOLE RD

About That Data

As noted above, that Open Raleigh fire incident data consists exclusively of fire calls and requests for service. Nothing with an EMS aspect, ergo nothing that violates HIPAA.

Thus the data includes only these call classifications, again from NIRFS:

- Accident potential accident Other
- Aircraft standby
- Alarm system activation no fire - unintentional
- Alarm system sounded due to malfunction
- Animal problem
- Animal problem Other
- Animal rescue
- Arcing shorted electrical equipment
- Assist invalid
- Assist police or other governmental agency
- Attempt to burn
- Attempted burning illegal action Other
- Authorized controlled burning
- Biological hazard confirmed or suspected
- Blasting agent explosion (no fire)
- Bomb scare - no bomb
- Breakdown of light ballast
- Brush or brush-and-grass mixture fire
- Building fire
- Building or structure weakened or collapsed
- CO detector activation due to malfunction
- Carbon monoxide detector activation no CO
- Carbon monoxide incident
- Central station malicious false alarm
- Chemical hazard (no spill or leak)
- Chemical spill or leak
- Chimney or flue fire confined to chimney or flue
- Citizen complaint
- Combustible/flammable gas/liquid condition other
- Construction or demolition landfill fire
- Cooking fire confined to container
- Cover assignment standby moveup
- Cultivated vegetation crop fire Other
- Defective elevator no occupants
- Detector activation no fire - unintentional
- Dispatched & cancelled en route

- Dumpster or other outside trash receptacle fire
- Electrical wiring/equipment problem Other
- Excessive heat scorch burns with no ignition
- Extinguishing system activation
- Extinguishing system activation due to malfunction
- False alarm or false call Other
- Fire Other
- Fire in mobile home used as fixed residence
- Fire in mobile prop used as a fixed struc Other
- Fires in structure other than in a building
- Flood assessment
- Forest woods or wildland fire
- Fuel burner/boiler malfunction fire confined
- Garbage dump or sanitary landfill fire
- Gas leak (natural gas or LPG)
- Gasoline or other flammable liquid spill
- Good intent call Other
- Grass fire
- HazMat release investigation w/no HazMat
- Hazardous condition Other
- Heat detector activation due to malfunction
- Heat from short circuit (wiring) defective/worn
- Incident Type Description
- Incinerator overload or malfunction fire confined
- Lightning strike (no fire)
- Local alarm system malicious false alarm
- Lock-out
- Malicious mischievous false call Other
- Mobile property (vehicle) fire Other
- Municipal alarm system malicious false alarm
- Natural vegetation fire Other
- No Incident found on arrival at dispatch address
- Off-road vehicle or heavy equipment fire
- Oil or other combustible liquid spill
- Outside equipment fire
- Outside rubbish fire Other
- Outside rubbish trash or waste fire
- Outside stationary compactor/compacted trash fire
- Outside storage fire
- Overheated motor
- Overpressure rupture explosion overheat other
- Overpressure rupture from air or gas Other
- Overpressure rupture from steam Other
- Overpressure rupture of air or gas pipe/pipeline
- Overpressure rupture of steam pipe or pipeline
- Passenger vehicle fire
- Person in distress Other
- Police matter
- Power line down
- Prescribed fire
- Public service
- Public service assistance Other
- Refrigeration leak
- Ring or jewelry removal

- Road freight or transport vehicle fire
- Service Call other
- Severe weather or natural disaster Other
- Smoke detector activation due to malfunction
- Smoke detector activation no fire - unintentional
- Smoke from barbecue tar kettle
- Smoke or odor removal
- Smoke scare odor of smoke
- Special outside fire Other
- Special type of incident Other
- Sprinkler activation due to malfunction
- Sprinkler activation no fire - unintentional
- Steam Other gas mistaken for smoke Other
- Steam vapor fog or dust thought to be smoke
- System malfunction Other
- Telephone malicious false alarm
- Toxic condition Other
- Trash or rubbish fire contained
- Unauthorized burning
- Unintentional transmission of alarm Other
- Vehicle accident general cleanup
- Vicinity alarm (incident in other location)
- Water evacuation
- Water or steam leak
- Water problem Other
- Water vehicle fire
- Wind storm tornado/hurricane assessment
- Wrong location

It has been a while,
I would note that items 2,3,& 4 are company officer discretion in NFIRS reporting, and possibly #6. A "false alarm" category is more appropriate, considering the CO has multiple attributes to select in NFIRS coding. Ergo false/smoke detector from bug/popcorn/floor cleaning to me, is unintentional alarm activation due to cooking/incense/improperly-maintained detector to you. Roll dice roll! From a larger statistical perspective…(translation) false alarms have multiple meanings. The house/company numbers rarely are misrepresented in statistics (rubber + pavement) and this is a great piece to reflect upon for planning!
jboggs ([Email](#)) - 02/11/15 - 23:53

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To prevent spam we require you to answer this silly question

What are the FIRST TWO LETTERS of the word 'fire'?

(Register your username / Log in)

Notify:	Yes, send me email when someone replies.
Hide email:	Yes, hide my email address.

Small print: All html tags except <b> and <i> will be removed from your comment. You can make links by just typing the url or mail-address.