

Maydays by the Numbers

Surveys conducted on 293 maydays reveal specific info on where & when these incidents occur.

BY DON ABBOTT

Welcome to the second installment of the Firefighter Mayday Project. To view the first article in this series, [click here](#). The information contained in this article was voluntarily supplied in the form of written reports, incident-history transcripts, actual radio communications and firsthand accounts from the firefighters who experienced the maydays, the crews who worked the mayday and the incidents' ICs. This report includes 293 firefighter maydays, experienced by 264 different fire departments from 43 states. The information was collected between November 2014 and April 2015. Some figures in some categories have been rounded up or down.

Total Number of Maydays

293 maydays experienced by 264 departments. Ten percent of the departments (29) had multiple maydays.

Department Profiles

Paid—243

Volunteer—21

We did not designate "combination" departments. If the department had more volunteer members, we categorized them as volunteer. If they had more paid members, we categorized them as paid.

Size of Departments

1–100:	50
101–500:	64
501–1,500:	47
1,500–3,000+:	103



Shift Schedule When Maydays Occurred

24/48: 50 percent—136 maydays

48/96: 39 percent—106 maydays

On overtime: 11 percent—30 maydays.

Volunteers were not included in the tally as they do not work a set schedule.

Less than 9 percent of participating departments work a 48/96 shift schedule, but this shift accounts for 39 percent of maydays.

Overtime figures only include departments working a 24/48 shift schedule.



Mayday Firefighter Personal Stats

Ages of Mayday Firefighters*

18 – 27:	60 (22 percent)
28 – 37:	108 (39 percent)
38 – 48:	63 (23 percent)
49 – 59:	38 (14 percent)
60 – 65:	3 (1 percent)

Years of Service

1–5:	52 (19 percent)
6–10:	71 (26 percent)
11–15:	60 (22 percent)
16–20:	41 (15 percent)
21–25:	42 (13 percent)
26+:	14 (5 percent)

**Ages of the volunteer firefighters were not included in the tally.*



Mayday Incident Details

Times Maydays Occurred*

0600–0900: 21 (7 percent)	1801–2100: 35 (12 percent)
0901–1200: 18 (6 percent)	2101–2400: 50 (17 percent)
1201–1500: 16 (5 percent)	0001–0300: 76 (26 percent)
1501–1800: 26 (9 percent)	0301–0600: 53 (18 percent)

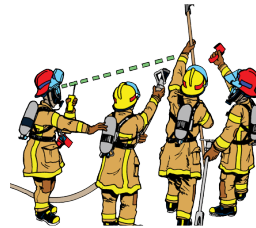
*214 maydays (73 percent) occurred during the evening hours.



Tasks Companies Were Performing

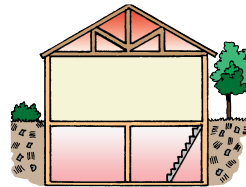
Search, Rescue & Fire Control	146 (50 percent)
Ventilation	70 (24 percent)
Search & Rescue*	46 (16 percent)
Overhaul	26 (9 percent)
Outside Support	3 (1 percent)

*Search & rescue was performed **without** an attack line.



Location/Nature of Maydays

Fall/Trapped in Basement	67 (23 percent)
Fall through Roof	64 (22 percent)
Air Problem	53 (18 percent)
Trapped/Entangled	41 (14 percent)
Lost, Separated from Line	42 (14 percent)
No Communications	18 (6 percent)
Medical	9 (3 percent)

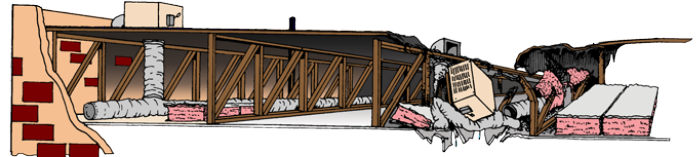


Operating above the fire accounted for 45 percent of maydays.

Occupancy Types Where Maydays Occurred*

Residential	161 (57 percent)
Apartment	79 (28 percent)
Commercial	43 (15 percent)

Becoming lost, separated from the line and running out of air occur more often in commercial buildings. Mobile homes and hotels were not included in data.



Injuries from Maydays

Minor with ER visit	47 (16 percent)
Minor with follow-up medical care	91 (31 percent)
Serious—Hospitalization of 48 hours+	85 (29 percent)
Critical—Hospitalization w/ permanent disability	62 (21 percent)
Fatal	8 (3 percent)

More than 90 percent of the time, the mayday occurred to one of the first three companies to arrive on scene.



Crews Rescuing the Mayday Firefighter

Self Rescue	62 (21 percent)
Mayday Crew	91 (31 percent)
Working Crew	108 (37 percent)
RIC/RIT	32 (11 percent)

A 360 was performed less than 21 percent of the time during the first 5 minutes of the incident.



Time to Resolve/Clear the Mayday

Less than 10 minutes	6 (2 percent)
11–15 minutes	26 (9 percent)
15–20 minutes	97 (33 percent)
20–25 minutes	76 (26 percent)
25–30 minutes	53 (18 percent)
30–35 minutes	21 (7 percent)
36+ minutes	12 (4 percent)

Crews assigned and working prior to the mayday performed the mayday rescue 89 percent of the time.

**Personal Interviews**

This section includes information from the questionnaire's personal interview. A total of 181 mayday firefighters completed the survey as of this reporting. A total of 159 incident commanders have completed the personal survey along with 189 officers that had a primary role in the physical mayday rescue operation.

The personal interview portion of the survey asked all three groups—mayday firefighters, incident commanders and officers—the following questions. Some respondents did not answer.

- 1) Was water applied to the fire prior to the mayday?
Yes—205 (70 percent) No—90 (30 percent)
- 2) Was ventilation performed prior to the mayday?
Yes—204 (70 percent) No—89 (30 percent)
Vertical—126 (62 percent)
Horizontal—78 (38 percent)

Mayday Firefighters Q & A

- 1) Were you in a rescue mode prior to the mayday occurring?
 - 9 respondents (5 percent) had confirmed reports of victims (via dispatch or occupants on arrival).
 - 72 (40 percent) had unconfirmed (via bystanders) reports of victims.
 - 100 (55 percent) had no reports of victims.
36 percent of these maydays occurred in vacant or abandoned buildings.
- 2) Did your crew perform a size up?
Yes—119 (66 percent) No—62 (34 percent)
- 3) Did anyone perform a 360 prior to your making entry?
Yes—74 (41 percent) No—107 (59 percent)
- 4) Did your crew enter standing up?
Yes—119 (66 percent) No—62 (34 percent)
- 5) If yes, estimate the time you moved to your knees and why.
Estimated average time—4 minutes
85 (47 percent)—due to smoke
96 (53 percent)—due to heat
- 6) Did your crew report these changing conditions to the IC?
Yes—60 (33 percent) No—121 (67 percent)
- 7) Did you consider calling the mayday before you did?
Yes—74 (41 percent) No—107 (59 percent)

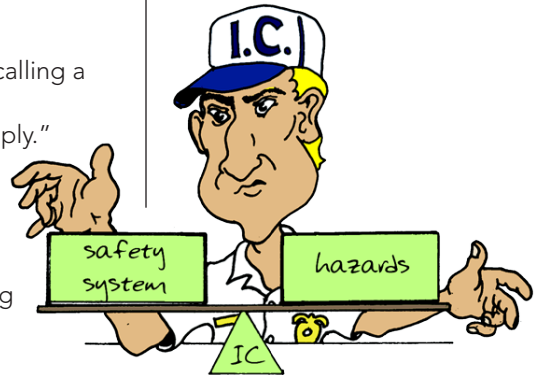
Mayday Firefighters General Observations

After declaring the mayday, 74 (41 percent) of the mayday firefighters could not get radio airtime because too many people talking.

- 121 (67 percent) had confidence in their company officer.
- 80 (44 percent) had confidence in the IC.
- 13 (7 percent) became more worried when hearing who the RIC was.
- 67 (37 percent) report receiving no instructions.
- 56 (31 percent) report confusion due to “yelling and screaming” over the radio.
- 92 (51 percent) report the rescuers didn’t have a plan.

Mayday Firefighters Quotes/Comments

- “I took too long in attempting to fix the problem than [sic] calling a mayday.”
- “Should not have entered without an established water supply.”
- “I overcompensated because I figured I was going to die.”
- “Hose was pulled out of my hands from the outside. No hose,
no water equals burns.”
- “Should have used a fire department ladder instead of using makeshift ladder.”
- “I denied this was happening to me.”



Incident Commander Overview

- 148 (93 percent) of the mayday operations were managed by a BC or higher-ranking officer.
- The average on-scene time for the BC was 11 minutes.
- The BC had a partner/FIT in 52 instances (33 percent).
107 (67 percent) responded solo.
- After the mayday was declared, the IC assigned the mayday to another officer 41 percent of the time (65 instances).
- For 88 percent of the incidents (140) the IC reported too much radio traffic due to companies asking for too many reports, poor reporting information and having to repeat radio transmissions.
- 47 percent of departments (75) report they switch radio channels when a mayday is declared.

Incident Commander Quotes/Comments

“The simple truth is nothing in the collective set of experiences

in commanding fires translates into commanding a mayday event.”

“Get a second RIC formed as soon as possible.”

“Speak calmly and offer reassurance.”

“Expect mutinies, react to them, control them.”

“There may be ‘phantom’ radio problems.”

“Assign a Support Officer to work and monitor RIT.”

“The overwhelming majority of ICs believe they’re prepared for a mayday event. They are not...”

“More simulation-based, command-level training for maydays.”

“Nobody wanted to listen. Company officers were just as bad as the firefighters. Putting everyone together to regroup was a bad idea. Pick an officer who will do their job, stand their ground and not let anyone go back in!”

Rescue Team/Tactical Boss Overview

- This was the first real mayday operation for 187 (99 percent) of the officers.
- 64 (34 percent) had been the tactical boss of a mayday operation in a training exercise. 62 (97 percent) reported the training experience did not prepare them for the real thing.
- The average weight of a RIC bag is 53 pounds, and the one tool fire fighters wish they had in the bag was a bigger and brighter flashlight.
- 112 (59 percent) of the rescue crews knew the actual location of the mayday firefighter prior to entering the structure. Only 81 (43 percent) of the RICs had a plan prior to entering.

General Comments Pertaining to the Actual Rescue

- Too many hands
- No plan
- Did not have the correct equipment
- Difficult to communicate
- Too many questions over the radio
- Too many people giving instruction
- Interior crews made rescue

"Measure your crew's physical condition and experience."

"Have an escape plan."

"Have enough RIT bags."

"Don't expect much help from an unconscious or disoriented firefighter."

"Too many questions, too much radio traffic."

"Everybody rushed us as we were coming out of the building, making it difficult.."

"We had no regard for our own safety."

"Personally, perhaps the most important issue brought to light through this incident is the realization that my expectations and assumptions concerning the deployment of RIT were both inaccurate and unrealistic. While my previous assumptions were totally borne out of a commonly held perspective from training, they were nonetheless ineffective and tragic."



Our third installment will appear in Volume 6, Issue 1. If you have any questions regarding the Mayday Project, please contact Don Abbott at donaldeabbott@yahoo.com. **BS**



Donald Abbott retired from the fire service after spending 20 years working in the Indianapolis area. He then spent 10 years traveling the country presenting an interactive fire-service training diorama called Abbottville. Don spent eight years helping to develop and coordinate the Phoenix Fire Department's Command Training Center. Currently, Don is president of CERT (Command Emergency Response Training) and is working on a mayday data-collection project called the Mayday Project. In 2002, he received the ISFSI's Innovator of the Year award, and in 2006, he was named Fire Engineering's Instructor of the Year award. In 2014, the IAFC's Hazardous Materials Committee gave Don the John Eversole Lifetime Achievement Award.