



SINGAPORE CIVIL DEFENCE FORCE FIRE, AMBULANCE AND ENFORCEMENT STATISTICS

TOPIC A

FIRE INCIDENT STATISTICS (JANUARY – DECEMBER 2014)

INCREASE IN TOTAL FIRE CALLS BY 14.2%

- Largely attributed to increase in vegetation fires

SCDF responded to a total of 4,724 fires between Jan and Dec 2014, an increase of 588 cases (14.2%) from the 4,136 cases in 2013. This increase comes after the lowest annual fire record in 2013 over the last two decades. This is largely attributed to a significant spike in vegetation fires during the extended dry spell between Jan and Mar 2014. The total number of fire calls over the last 15 years is shown in the table below. (Refer to **Chart A1**).

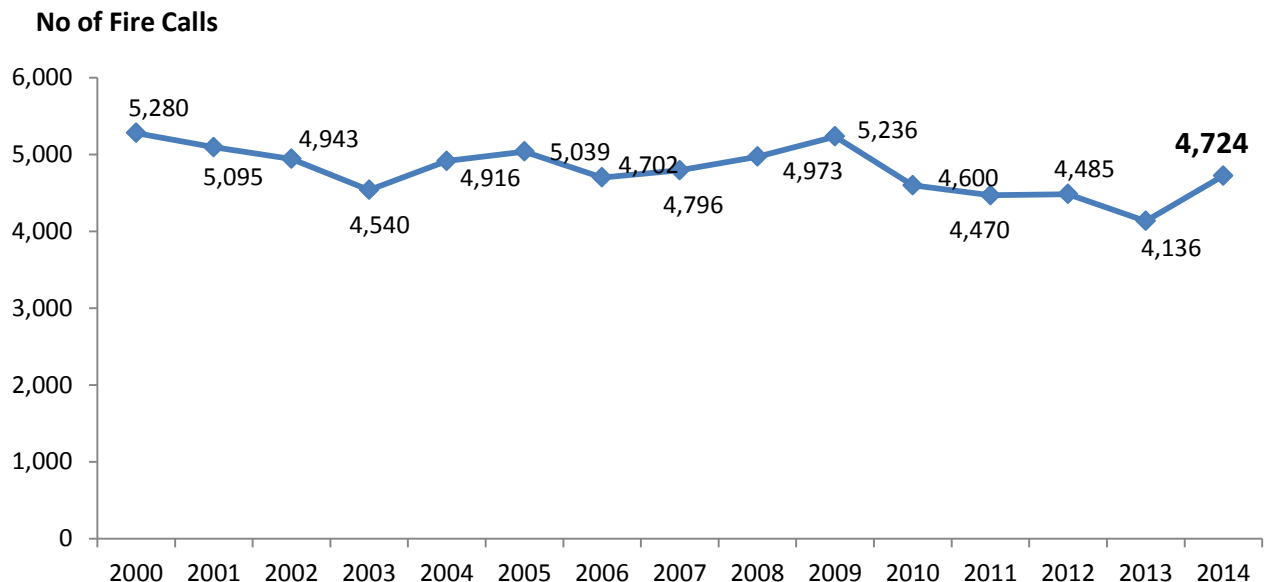


Chart A1: Total Number of Fire Calls (2000 - 2014)

FIRES IN RESIDENTIAL PREMISES

Drop in residential fires

2. The breakdown of fire calls by types of premises is shown in **Chart A2** below. Of the 4,724 fires from Jan to Dec 2014, 2,888 (61.1%) involved residential premises, 565 cases (12.0%) involved non-residential premises and 1,271 cases (26.9%) involved non-building places.

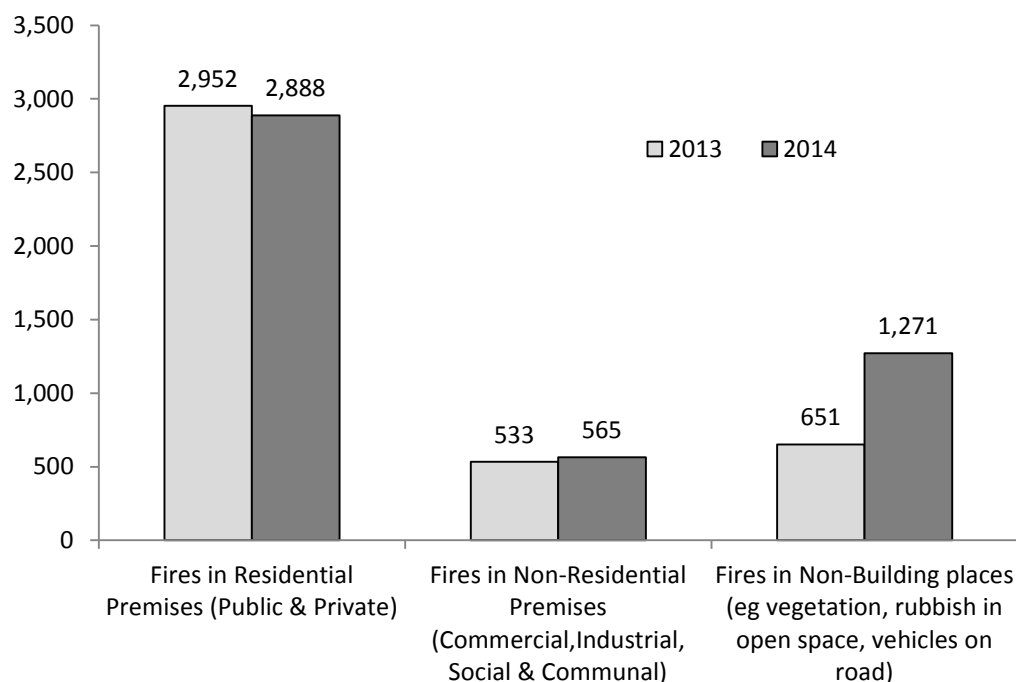


Chart A2: Breakdown of fires by types of premises

3. It is encouraging to note a 2.2% decline in the number of fires in residential premises, from 2,952 cases in 2013 to 2,888 cases in 2014, as shown in **Chart A2** above. Fires in non-residential premises (commercial, industrial, social and communal premises) increased by 6.0% while the number of fires that involved non-building places increased by almost two-fold, from 651 cases in 2013 to 1,271 cases in 2014. This increase is largely due to the rise in vegetation fires.

More than half of the residential fires involved rubbish chutes and bins

4. Of the 2,888 fires in residential premises, rubbish fires (involving rubbish chutes and rubbish bins) form the bulk at 52.4% or 1,514 cases. The top five types of fires in residential premises are shown in **Chart A3** below.

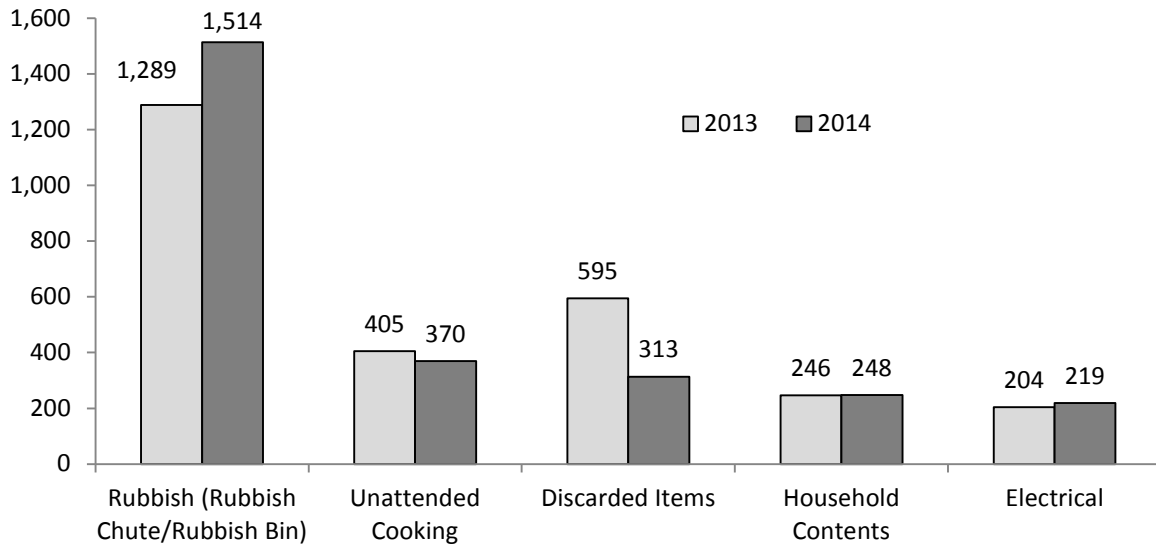


Chart A3: Fires in residential premises (top 5 types)

Timer-based Water Release System trial to reduce rubbish chute fires

5. Rubbish chute and rubbish bin fires saw an increase of 17.5% from 1,289 cases in 2013 to 1,514 cases in 2014. To address this problem, the National Fire and Civil Emergency Preparedness Council (NFEC) and SCDF, in consultation with HDB, are embarking on a Timer-based Water Release System (TWRS) trial. The TWRS is a pre-emptive measure to reduce rubbish chute fires by discharging spurts of water into the chutes at pre-determined timings each day to dampen the surface of the refuse. This serves to prevent the refuse from being easily ignited by a heat source, such as charcoal embers, lighted cigarette butts, sparklers or incense materials that are indiscriminately disposed into the rubbish chutes. The amount of water released will be kept to the minimum. SCDF is also working closely with NEA to ensure that the water discharged from the TWRS is properly drained and do not pose any environmental public health and waste disposal concerns.

6. Apart from exploring pre-emptive measures such as the TWRS to reduce fire occurrences, the SCDF will also continue to work with its community partners on its outreach programmes to reduce rubbish fires.

Significant decrease in fires involving discarded items

7. The number of fires involving discarded items fell by a substantial 47.4%, from 595 cases in 2013 to 313 cases in 2014. The drop can be attributed to greater public awareness and the concerted efforts by SCDF and its community partners, including the Town Councils, in stepping up efforts to educate residents on the dangers of cluttered common areas. These include posters to urge residents to keep their common corridor clear of fire hazards and regular radio broadcasts on fire safety tips.

2015 edition of CD Emergency Handbook

8. The 2015 edition of the CD Emergency Handbook will be available for download on the SCDF website as well as on mobile app stores under the SCDF mobile app- *mySCDF* by mid-2015. The Handbook contains useful information on fire safety tips and CPR procedure guidelines. The new edition will have new content such as what to do during a fire in high-rise buildings and tips to prevent vehicle fires.

FIRES IN NON-RESIDENTIAL PREMISES

Drop in fires at eating establishments

9. The number of fires in commercial premises (e.g. eating establishments, shopping complexes, offices, hotels, places of public recreation/entertainment) fell by 2.5%, from 284 cases in 2013 to 277 cases in 2014. **Chart A4** below shows the top three types of fires in commercial premises.

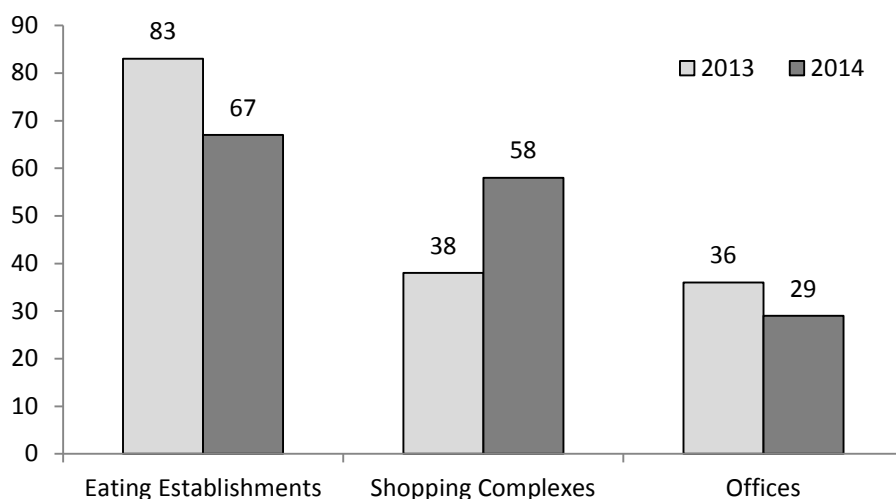


Chart A4: Fires in commercial premises (top 3 types)

10. Fires in eating establishments (such as restaurants, coffee shops, canteens and hawker centres) fell by 16 cases (19.3%) and accounted for 67 cases (24.2%) of the total fires in commercial premises in 2014. These fires mainly involved ventilation unit, kitchen exhaust ducting and electrical cooking appliances.

Efforts to reduce fires at eating establishments

11. SCDF has been working closely with relevant agencies to reduce the number of fires in eating establishments. For example, in 2013, SCDF collaborated with the Workplace Safety and Health Council to distribute posters and leaflets on fire safety advisories to the service and hospitality industries. In 2014, SCDF together with the NFEC and the Singapore Foochow Coffee Restaurant and Bar Merchants Association organized a fire safety awareness workshop for coffee shop owners.

12. In relation to fires involving kitchen exhaust ducts, SCDF held a focus group discussion in August 2014 with merchant associations, coffee shop associations and coffee shop owners to share with them case studies and guidelines on maintenance of exhaust systems. SCDF also issued a circular which require eating establishments to adhere to a series of fire safety requirements for the installation and maintenance of kitchen exhaust ducts from 1 Dec 2014.

Majority of fires in shopping complexes were of electrical origin

13. The number of fires in shopping complexes went up from 38 cases in 2013 to 58 cases in 2014. Majority of the incidents (17 cases or 29.3%) were minor incidents of electrical origin involving electrical appliances/ equipment, lightings, wirings and cables, circuit breakers and switch boxes. Some of the common causes of electrical fires include short circuits, overloading of electrical outlets and improper/loose connections.

Majority of fires in industrial premises were of electrical origin

14. The number of fires in industrial premises increased by 22.7%, from 141 to 173 cases. Of the 173 industrial fires, majority (51 cases or 29.4%) involved electrical appliances/ equipment, lightings, wirings and cables, circuit breakers and switch boxes. Fires at commercial and industrial premises have a high potential to escalate and cause injuries and even loss of lives. The fire incident on 17 August 2014 at No 14 Sungei Kadut involved electrical origin and resulted in one fatality.

Efforts to reduce fires in workplaces

15. SCDF will continue to work with NFEC, building owners and Fire Safety Managers (FSMs) to keep their buildings safe from the threat posed by fires. Arising from the rise in electrical fires in 2014, the SCDF worked together with the NFEC to conduct two workshops on the prevention of electrical fires in workplaces. These workshops were attended by some 800 participants. Earlier this month, a workshop on preventing electrical fires was also conducted for the FSMs of shopping complexes.

16. The SCDF also worked with NFEC to conduct regular dialogue sessions with FSMs to update them on the latest fire trends and developments in the realm of fire safety. The most recent session was conducted on 29 January 2015 and involved about 40 FSMs and safety officers from the industrial premises.

FIRES IN NON-BUILDING PLACES

Significant increase in vegetation fires due to dry spell

17. There was a significant increase of 620 cases in the number of non-building fires, from 651 fires in 2013 to 1,271 fires in 2014. The marked increase can be attributed to vegetation fires which rose by more than four times, from 185 cases in 2013 to 852 cases in 2014, as shown in **Chart A5** below. The spike in the number of

vegetation fires was largely contributed by the extended dry spell experienced from mid Jan to Mar 2014.

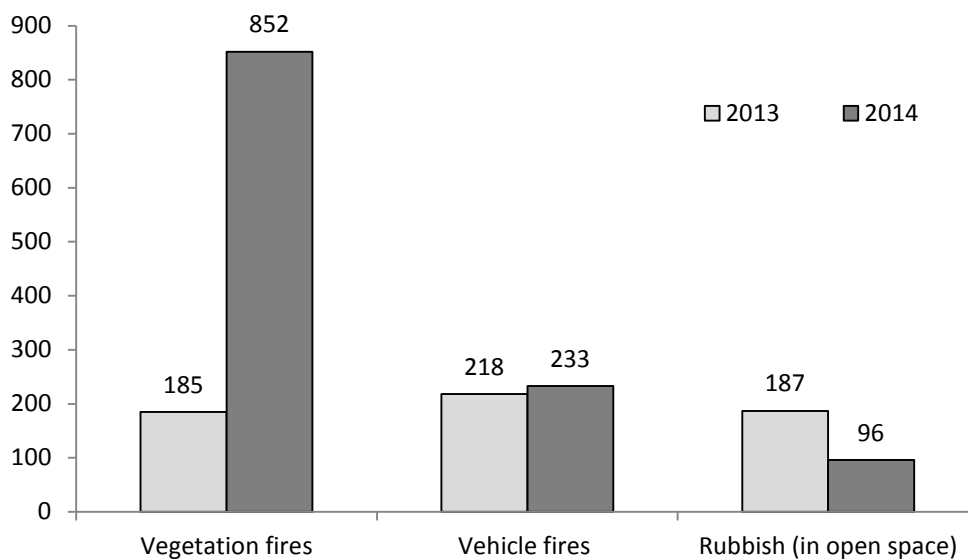


Chart A5: Fires in non-building places (top 3 types)

Efforts to reduce vegetation fires

18. SCDF chairs the Wildfire Task Force Committee and works closely with the task force members such as HDB, SLA, NEA and NParks to minimize vegetation fires. During last year's dry spell, SCDF issued an advisory note to the members to adopt preventive measures at the respective lands under their jurisdiction. SCDF also stepped up patrols at fire hot spot areas during the dry spell so as to detect fire risks and swiftly mitigate any fire occurrences.

19. SCDF will continue to work with the relevant agencies to take measures to prevent and better mitigate such fires. The task force had a meeting earlier this month in anticipation of the dry spell.

Vehicle fires continue to increase

20. The number of vehicle fires increased by 6.9%, from 218 to 233 cases. Of the 233 cases, 131 cases (56.2%) involved motor cars (including taxis). Most of the fires occurred while the vehicles were travelling on the road and were caused by ignition sources such as electrical faults and overheating within the engine compartment. Most vehicle fires start small but can develop rapidly due to presence of flammables such as petrol, diesel and lubricants. It is advisable for every vehicle to be equipped with a fire extinguisher to enable the driver to promptly extinguish an incipient vehicle fire before it spreads.

Efforts to reduce vehicle fires

21. Since 2013, SCDF has been working with petroleum companies (Shell, ExxonMobil, Singapore Petroleum Company) to distribute brochures on vehicle fire safety tips at petrol kiosks. Last year, some 200,000 brochures were distributed to

petrol kiosks islandwide. SCDF will continue to work with members of the media to incorporate fire safety advisory in media reports on vehicle fires and use social media platforms to increase awareness.

22. SCDF also engaged the National Taxi Association in May 2014 and shared our research findings on taxi fires and explore ways to minimise fires involving taxis. SCDF is currently working with taxi companies to enhance their vehicle fire safety standards, including working with them to install fire extinguishers in their taxis.

MORE THAN HALF OF ALL FIRES CAUSED BY THE INDISCRIMINATE DISPOSAL OF LIGHTED MATERIALS

23. 'Dropped Light' remains the biggest cause of fires, contributing to 52.1% (2,461) of all fires between Jan and Dec 2014. 'Dropped Light' refers to lighted cigarette butts that were not completely extinguished, embers from charcoal, and lighted incense sticks.

FIRE INJURIES/FATALITIES

24. Of the 4,724 fires in 2014, 81 incidents resulted in casualties, with 47 smoke inhalation¹ cases and 64 fire injuries². There was a substantial decrease of 31 cases (32.6%) in the number of fire injuries, while the number of smoke inhalation cases fell by 20 cases (29.9%). Majority of the fire injuries were first degree or superficial burns. Please see **Chart A6** for the breakdown on the number of smoke inhalation cases and injuries resulting from fire incidents.

¹ Smoke inhalation refers to injury due to inhalation of smoke or gaseous product of combustion into the respiratory system

² Fire injuries refer to burns (including 1st degree, 2nd degree and 3rd degree) sustained from fire incidents.

1st degree burn is superficial burn that affects only the epidermis or superficial skin

2nd degree burn is partial thickness burn where the damage penetrates into some of the underlying layers of the skin and the skin is mottled, white to red and often blistered

3rd degree burn involves injury to all layers of the skin, the skin is dry, leathery and often white or charred

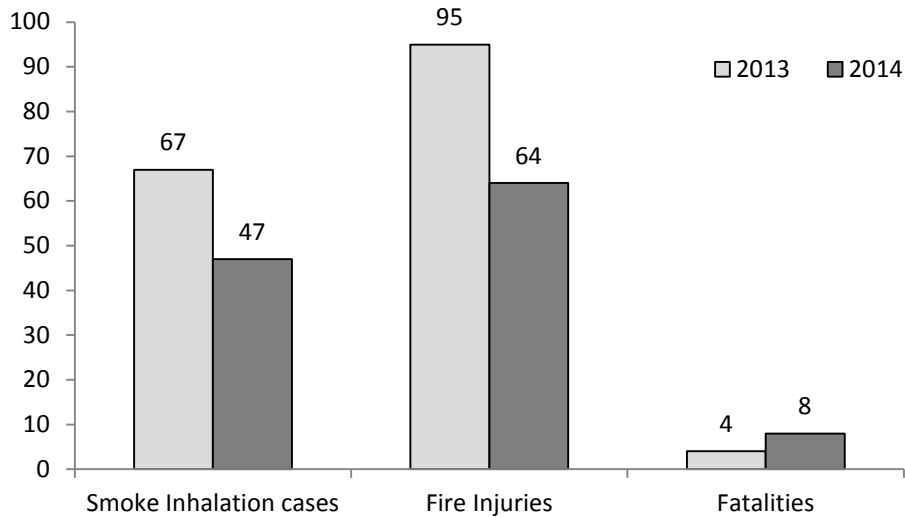


Chart A6: Smoke inhalation cases, fire injuries and fire fatalities

25. There were eight fire fatalities in 2014 arising from the following fire incidents :
- a. Residential fire at Marina Bay Suites on 13 January (2 fatalities)
- Fire involved contents of renovation materials located at service lift lobby.
 - b. Residential fire at Woodlands Crescent on 10 June (1 fatality)
- Fire involved contents of a study room of the flat.
 - c. Factory fire at Sungei Kadut Street 6 on 17 August (1 fatality)
- Fire involved contents of a single-storey factory.
 - d. Shophouse fire at Lor 4 Geylang on 6 December (4 fatalities)
- Fire involved contents of a shop house.

FESTIVE SEASON - FIRE SAFETY ALERT

26. With Chinese New Year around the corner, SCDF would like to remind all members of public to minimise fire hazards and help prevent the outbreak of fire. Some useful fire safety tips are listed in the Fire Safety Advisory at **Annex A**.

FIRE SAFETY ADVISORY

1. Rubbish Chute/Bin fires

- Completely extinguish lighted materials such as lighted cigarettes and sparklers before disposal
- Douse charcoal embers with water before disposal
- Avoid throwing flammable substances like paint, oil or kerosene into rubbish chutes/bins

2. Discarded items fires

- Do not leave discarded items at common areas such as corridors, lift lobbies, void decks and staircases
- Arrange with Town Councils for the removal of unwanted bulky items such as cupboards, sofas
- Anyone who observes items being discarded at common areas should report them to the Town Council

3. Fires involving household contents

- Keep lighted materials (lighters, matches, candles, sparklers) out of children's reach
- Store flammable substances in a safe place
- Extinguish cigarette butts and matches completely
- Do not place window curtains or any combustible materials near praying altars, stoves or lighted materials
- Keep lighted candles away from paper or cardboard decorations, foliage, curtains and furnishings. they should be placed in stable holders on heat-resistant surface so that they will not fall over

4. Unattended Cooking Fires

- Do not leave cooking unattended
- Keep including the stove-top, cooker hoods and ovens clean and free of grease
- Turn off all the cooking appliances and unplug them when not in use
- Avoid wearing clothes with long loose sleeves when working near heat sources
- Keep flammable liquids (e.g. cooking oil and wine) and combustible materials away from heat sources such as the stove
- Charcoal should be doused with water when cooking is done
- Keep LPG cylinders in a well-ventilated area

- Ensure that your LPG dealer conducts a 5-point safety check (includes the hose, regulator, hose clips, cylinder and joints/connection) on your LPG system at least once a year; a LPG safety tag must be attached to the LPG cylinder to inform households of the checks performed by the LPG dealers.

5. **Electrical Fires**

- Never overload electrical outlets with electrical appliances
- Always switch off appliances when they are not in use
- Check the condition of wires regularly; frayed wires or cracked cords should be replaced or repaired immediately
- Do not run wires under carpets or mats and keep wires away from hot Surfaces
- Use electrical plugs which carry the SAFETY Mark