

2018 Arson Incident Report (AIR)



UNITED STATES BOMB DATA CENTER (USBDC) ARSON INCIDENT REPORT

2018

The Annual Arson Incident Report (AIR) reviews arson-related incidents from data reported to the United States Bomb Data Center (USBDC) through the Bomb Arson Tracking System (BATS).

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EXECUTIVE SUMMARY

OPERATING HIGHLIGHTS

The 2018 *Arson Incident Report (AIR)* is an informational product prepared by the United States Bomb Data Center (USBDC), using incident data reported in the Bomb Arson Tracking System (BATS) by its nearly 2,764 interagency partners and 13,059 registered users. This report examines the total number of fire-related incidents reported in BATS for calendar year 2018 and includes *Incendiary (Arson)*, *Undetermined*, *Accidental* and *Natural* fire-related incidents. It is important to note that BATS is a real-time dynamic incident management system that is strictly user dependent; therefore, it is possible that the data represented in this report may differ slightly from previously reported data due to updates or changes made by the owner of individual records. The reader should also be aware that when compared to the data reflected in the Uniform Crime Report and/or National Fire Incident Reporting System, the number of incidents reflected in BATS captures approximately 20 percent of the annual incendiary (arson) fires reported. Due to this limited dataset, the USBDC cautions the use of this report for analytical purposes.

STRATEGIC HIGHLIGHTS

From January 1, 2018, through December 31, 2018, BATS captured a total of 22,723 *fire-related incidents*. Of these, there were 6,532 incidents reported as “Incendiary or Arson,” which accounted for 29 percent of all the fires reported. The total amount of damages for all fire types was estimated at more than \$882 million, with 1,225 injuries and 643 fatalities associated with the 22,723 reported fires. “Available Combustibles” was identified as the most widely utilized incendiary fire subtype, while “Residential” was identified as the most targeted property type.

LOOKING AHEAD

In 2018, the United States Bomb Data Center’s two sections, Bomb Arson Tracking System Section (BATSS) and Arson and Explosives Information and Analysis Section (AEIAS), worked to collect, analyze and disseminate information regarding arson and suspected criminal misuse of explosives to increase situational awareness to detect, deter and prevent criminal acts. Specifically, BATSS provided training to 2,574 registered and potential BATS users, in 1,346 law enforcement and fire agencies. AEIAS produced 172 arson and explosives intelligence products.

James M. Watson
Director, USBDC

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FIRE TYPES – 2018

From January 1, 2018, through December 31, 2018, BATS captured a total of 22,723* fire-related incidents. Of those 22,723 fires, 6,532 were listed in BATS as “Incendiary or Arson,” along with 8,089 listed as “Accidental,” 2,003 listed as “Under Investigation” and 98 as “Natural.” There were also 6,001 fires listed as “Undetermined,” which included the final determination/classification of the fire investigation, along with fires pending further investigative activities and/or laboratory examination.

Fire Types as reported in BATS

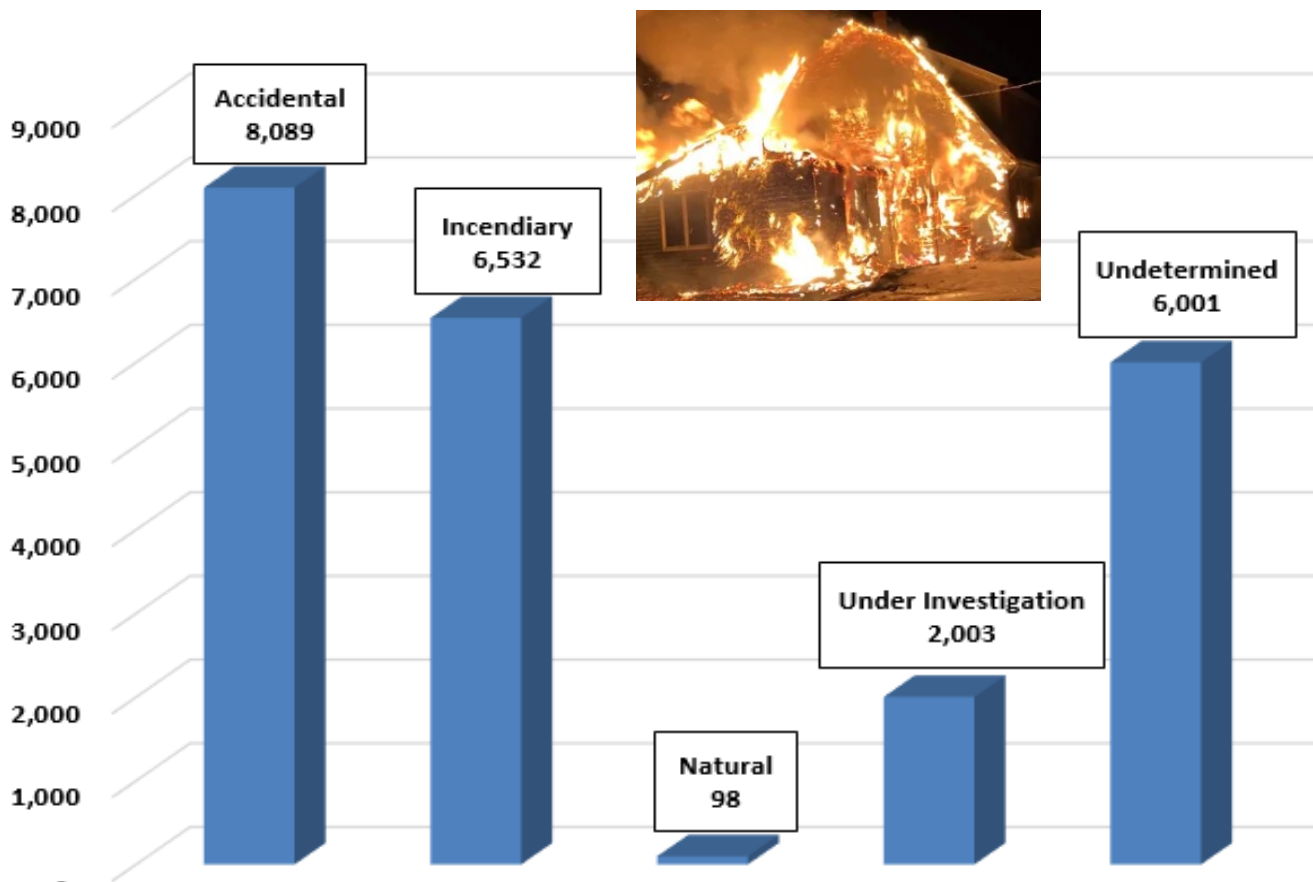


Figure 1. Fire Incident Types



* The number of incidents listed above only accounts for the number of fire/arson incidents reported in BATS, and not the total number of fire/arson related incidents reported in the United States during calendar year (CY) 2018.

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FIRE INJURIES & FATALITIES – 2018

Injuries					
	Fire Service	Law Enforcement	Suspects	Victims	Total
Accidental	94	25	0	441	560
Incendiary	43	2	32	112	189
Natural	4	0	0	0	4
Under Investigation	35	6	1	82	124
Undetermined	113	7	2	226	348
Total	289	40	35	861	1,225

Figure 2. Fire Injuries



Victim injuries accounted for 70 percent of all injuries reported in 2018 and were the highest population reported for “Accidental” fires.

Of the 189 injuries associated with an “Incendiary” fire incident; “Victims” was reported as the highest population with 59 percent.

Fatalities					
	Fire Service	Law Enforcement	Suspects	Victims	Total
Accidental	1	0	0	197	198
Incendiary	1	0	11	78	90
Natural	0	0	0	1	1
Under Investigation	6	0	1	80	87
Undetermined	0	0	3	264	267
Total	8	0	15	620	643

Figure 3. Fire Fatalities

Victim fatalities accounted for 96 percent of all injuries reported in 2018 and were the highest population reported for “Accidental” fires.

Of the 90 fatalities associated with an “Incendiary” fire incident; “Victims” was reported as the highest population with 87 percent.



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FIRE DAMAGES – 2018

Damage Amount (\$) for Fire Types

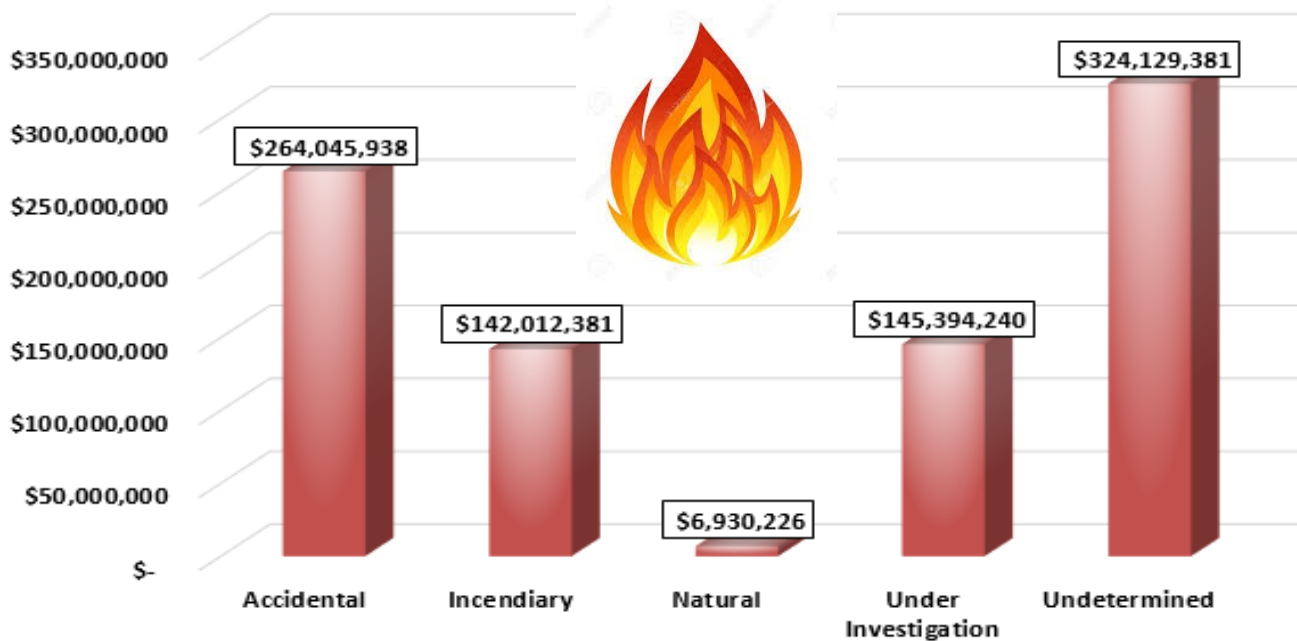


Figure 4. Damage Amount for Fire Types

Damages associated with the 22,723 fire incidents reported in BATS totaled more than \$882,512,166 for CY 2018. Fires listed as “Undetermined” led the fire type category with \$324,129,381 in damages, while “Residential” properties was the leading category of property types associated with Incendiary (Arson) fires, with damages at \$69,279,268.

Damage Amount (\$) of Incendiary Fire Targets

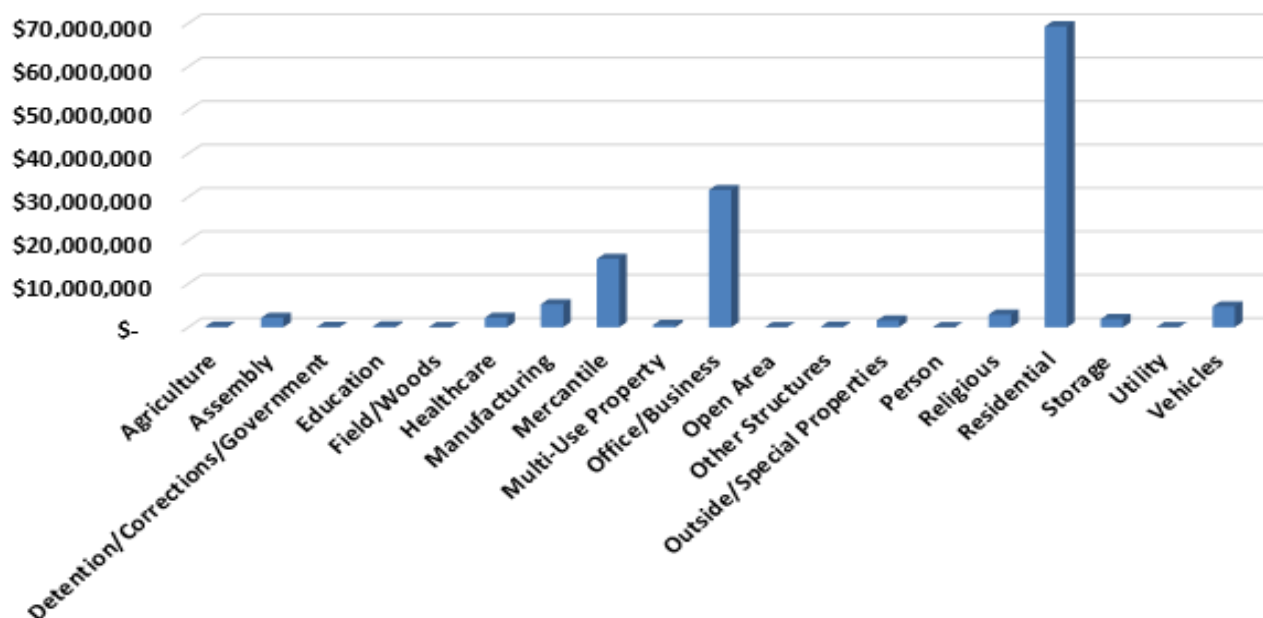


Figure 5. Damage Amount of Incendiary Fire Targets

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INCENDIARY FIRE SUBTYPES – 2018

Of the 6,532* Incendiary (Arson) fire-related incidents reflected in BATS, there were 1,471 Incendiary fires listed as involving an “Accelerant,” along with 3,058 fires involving “Available Combustibles” and 237 fires involving an “Incendiary Device.” There were also 991 Incendiary fires listed as “Unknown” and 775 Incendiary fires with no information reported or left “Blank.”

Incendiary Fire Subtypes

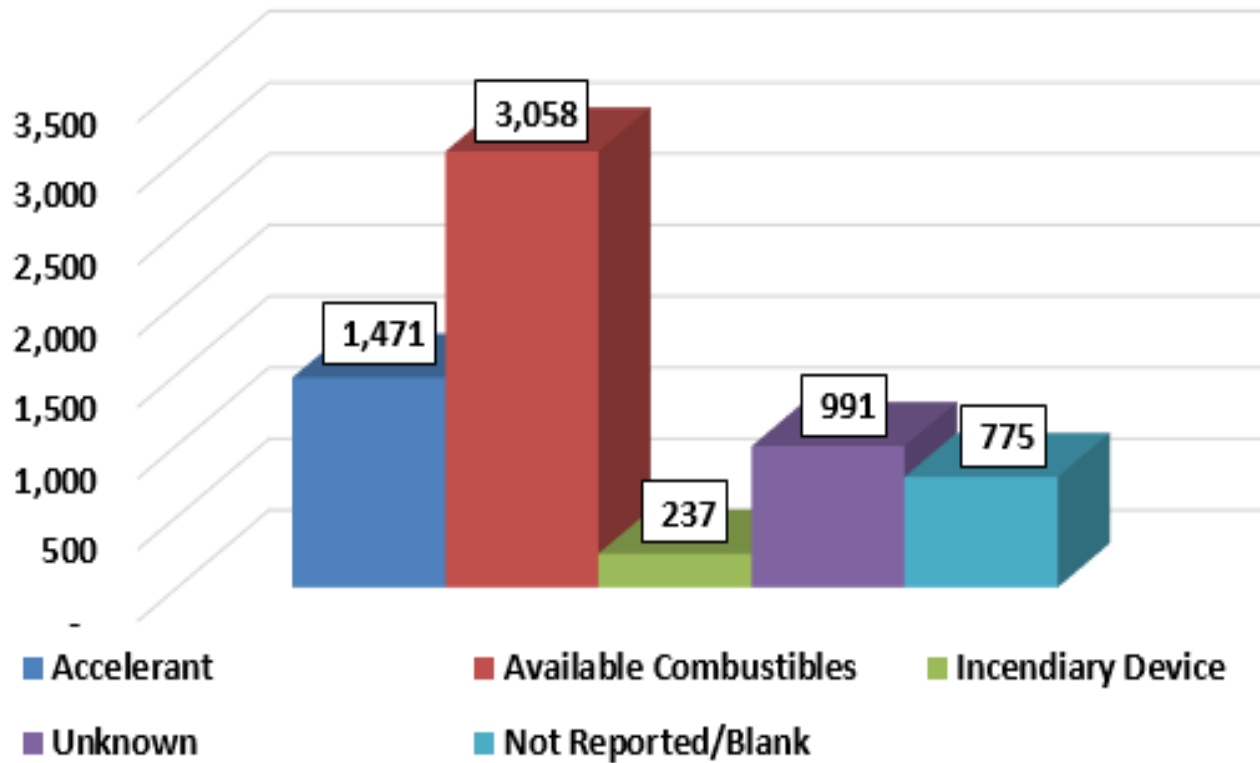


Figure 6. Incendiary Fire Subtypes

* The number of incidents listed above only accounts for the number of fire/arson incidents reported in BATS, and not the total number of fire/arson related incidents reported in the United States during calendar year 2018.



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INCENDIARY FIRES (STATE) – 2018

A review of the 6,532* fires listed in BATS as “Incendiary or Arson” by location (State) revealed the highest number of incidents were reported in Florida (756), followed by California (740) and then Texas (726). These three (3) States accounted for more than 34 percent of the total “Incendiary” fires reported in BATS during CY 2018.

INCENDIARY FIRES BY STATE

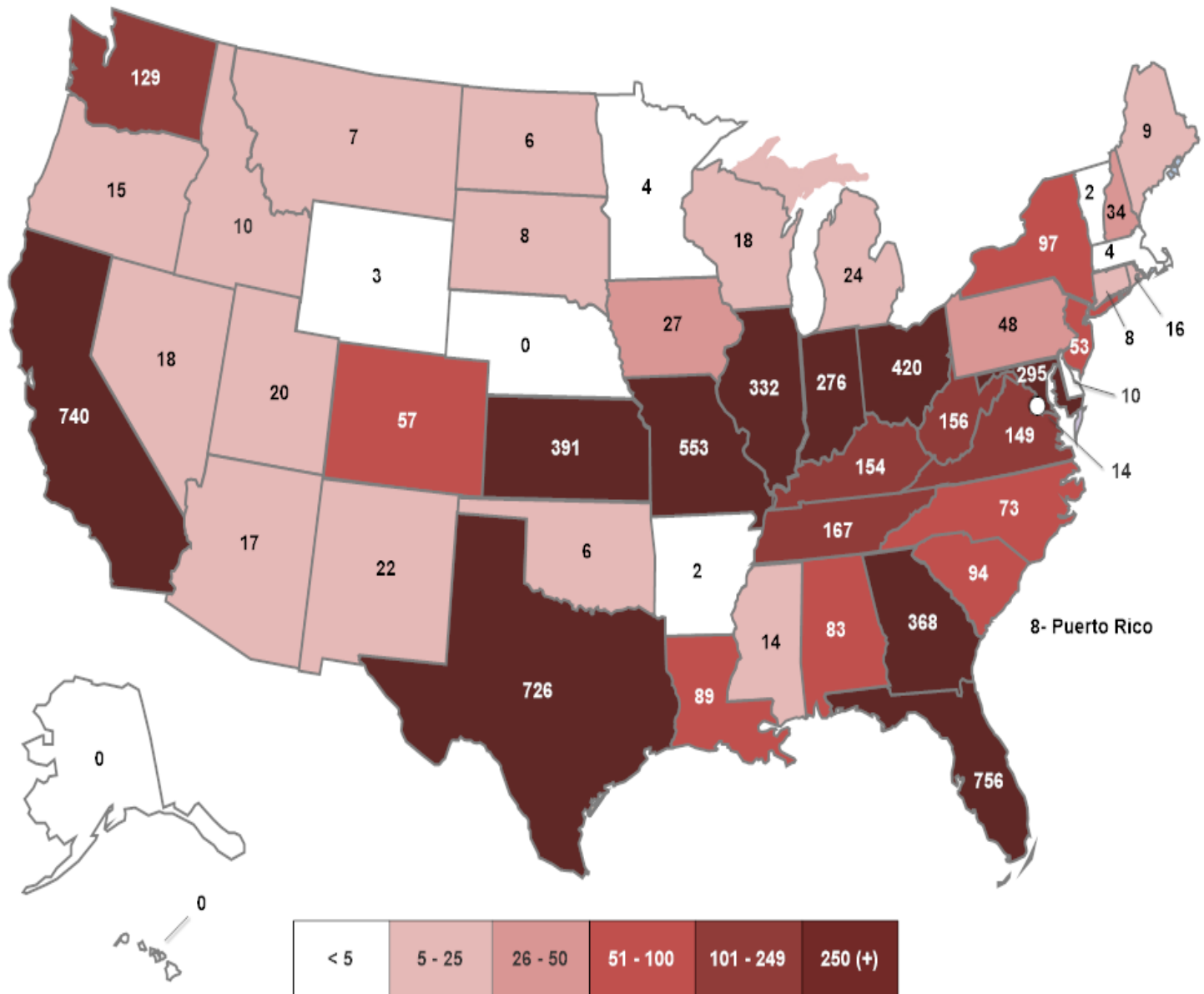


Figure 7. Incendiary Fires by State

* The number of incidents listed above only accounts for the number of fire/arson incidents reported in BATS, and not the total number of fire/arson related incidents reported in the United States during CY 2018.

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INCENDIARY FIRES (FEMA REGIONS) – 2018

A breakdown of the 6,532* fires listed in BATS as “Incendiary” by Federal Emergency Management Agency (FEMA) Regions revealed the highest number of incidents occurred in the following three regions: Region IV (1,709); Region V (1,074); and Region VII (971). These three regions accounted for more than 57 percent of the total “Incendiary” fires reported in BATS during CY 2018.

INCENDIARY FIRES BY FEMA REGIONS

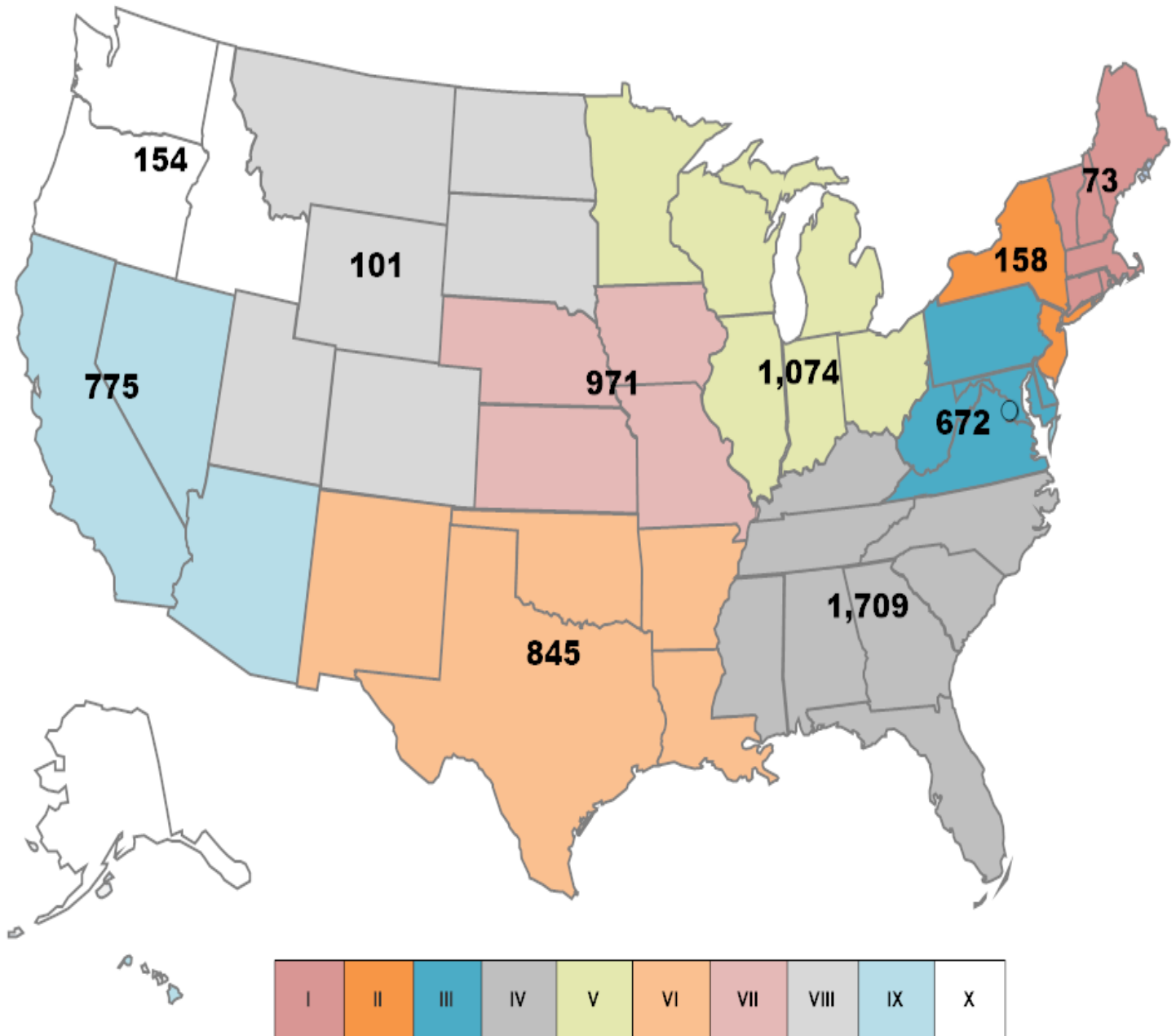


Figure 8. Incendiary Fires by FEMA Regions

* The number of incidents listed above only accounts for the number of fire/arson incidents reported in BATS, and not the total number of fire/arson related incidents reported in the United States during CY 2018.

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PROPERTY TYPES – 2018

There were 22 different “Property” types selected within BATS that involved “Incendiary” fires for 2018. Residential fires accounted for more than 41 percent of all “Incendiary” incidents reported for 2018, followed by vehicles (14 percent) and outside/special properties (4 percent).

Incendiary Fires by Property Types

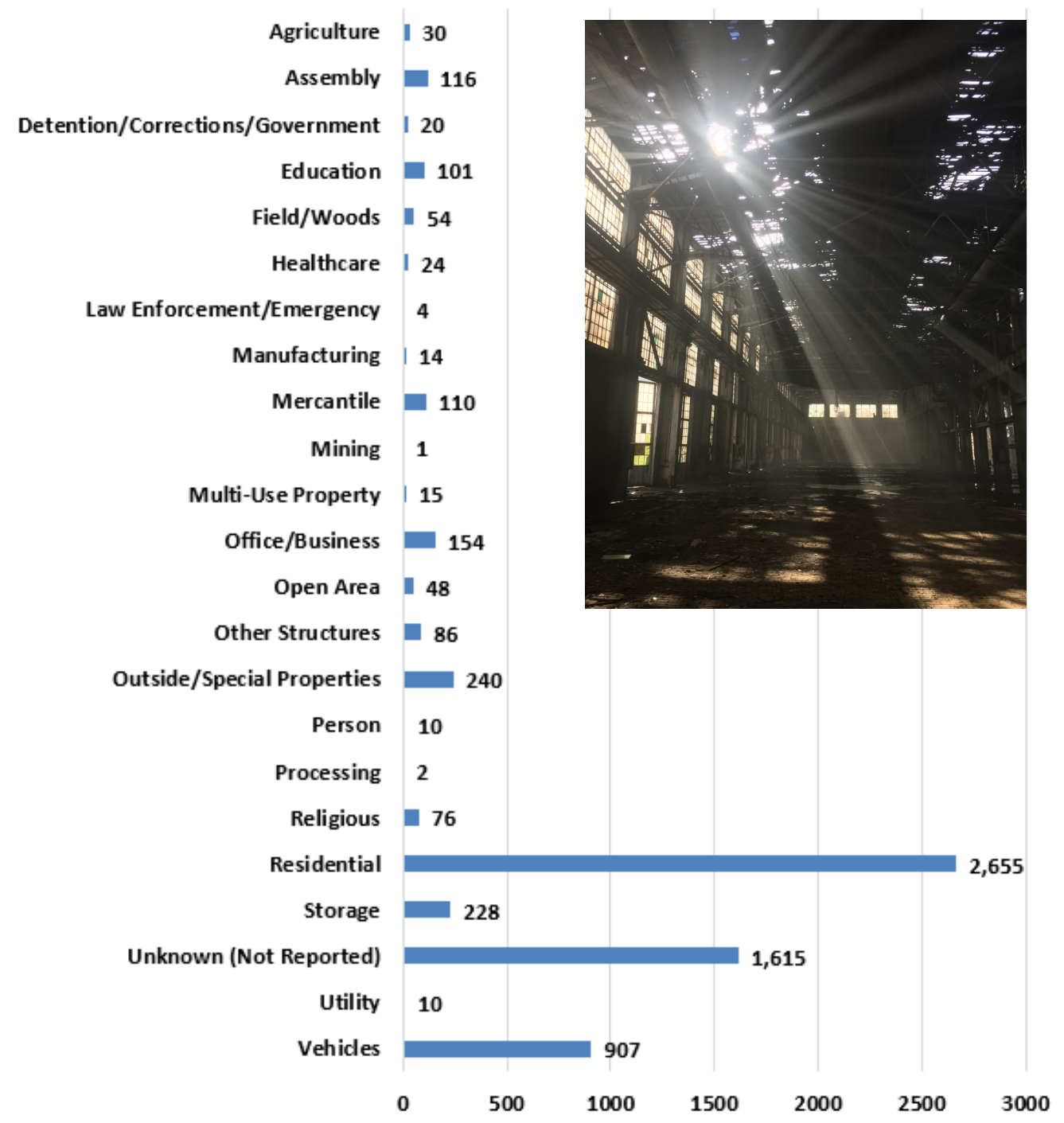


Figure 9. Incendiary Fires by Property Types

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TIME/DAY/MONTH OF OCCURRENCE – 2018

A review of the time of day that “Incendiary” fires occurred showed a noticeable difference between the hours of daylight and darkness. Incidents of “Incendiary” fires occurring during the predominant hours of darkness (21:01 until 03:00) accounted for 39 percent of the incidents. On the other hand, the time period of 06:01 until 09:00 (early morning hours) accounted for only 9 percent of incendiary fires reported in BATS during CY 2018.

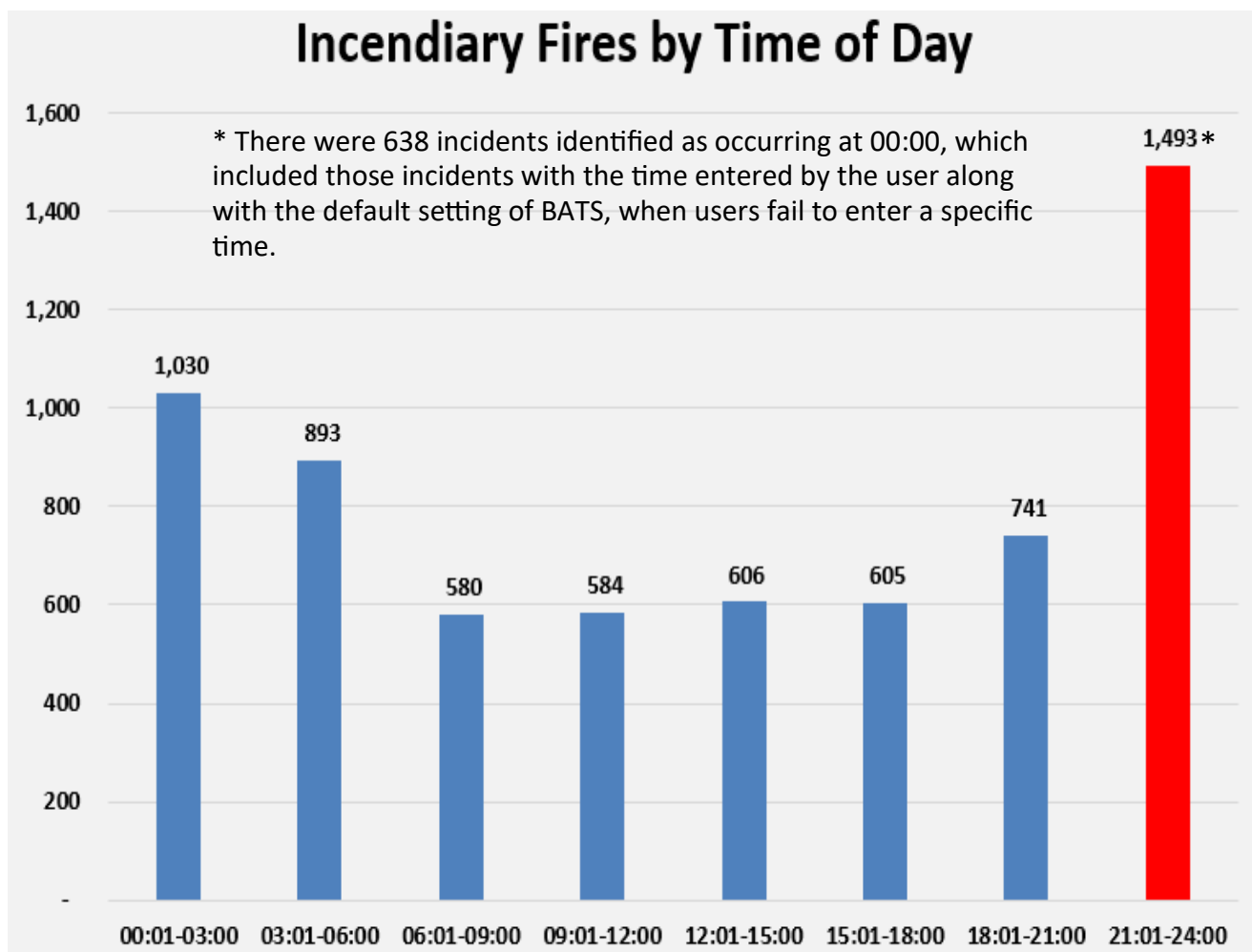


Figure 10. Incendiary Fires by Time of Day

A review of the day of the week that “Incendiary” fires occurred did not show any significant variation between the 7 days of the week. Incidents reported on Sunday were identified as having the highest rate of occurrence, with 15 percent of all reported incidents. Friday was identified as having the lowest rate of occurrence of “Incendiary” fires, with 13 percent of all reported incidents.

A review of the months that “Incendiary” fires occurred did not show any significant variation among the 12 months of CY 2018. Incidents occurring in July were identified as the most frequent month of the year in which an “Incendiary” fire did occur, with 9 percent of reported incidents. December was identified as having the lowest frequency of “Incendiary” fires occurring, with 7 percent of reported incidents.

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INCENDIARY FIRES (VEHICLES) – 2018

During CY 2018 there were 907 incidents of incendiary fires associated with vehicles. Of those vehicle fires, 58 percent were associated with an “Automobile/Car,” 12 percent were associated with a “Truck (Pickup)” and 9 percent were associated with a “Sport Utility Vehicle (SUV).” There were also 122 fires or 13 percent associated with “Other” vehicles.

Incendiary Fires by Type of Vehicle

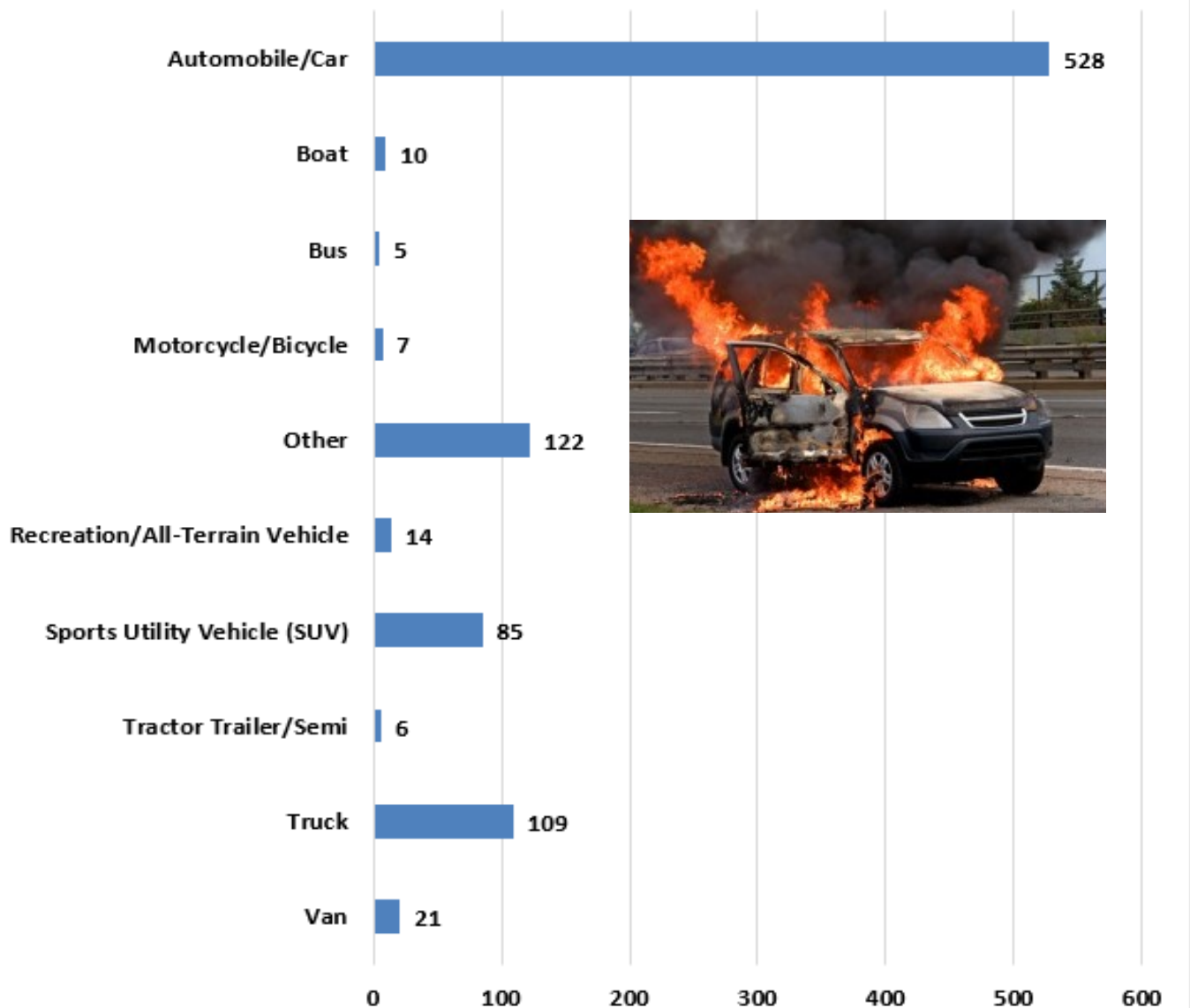
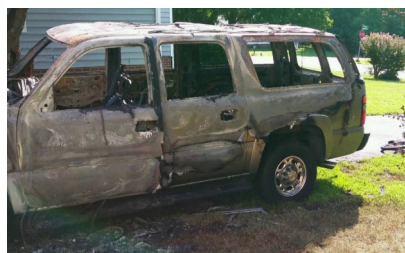


Figure 11. Incendiary Fires by Type of Vehicle



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INCENDIARY FIRE DESCRIPTORS – 2018



The top three (3) “Fire Descriptors” identified for the 6,532 Incendiary fires reported in 2018 were Open Flame, Ignitable Liquid and Ordinary Combustibles.

***** More than 65 percent of reported Incendiary fires did not identify any type of fire descriptors.***

Top 10 Most Common Fire Descriptors

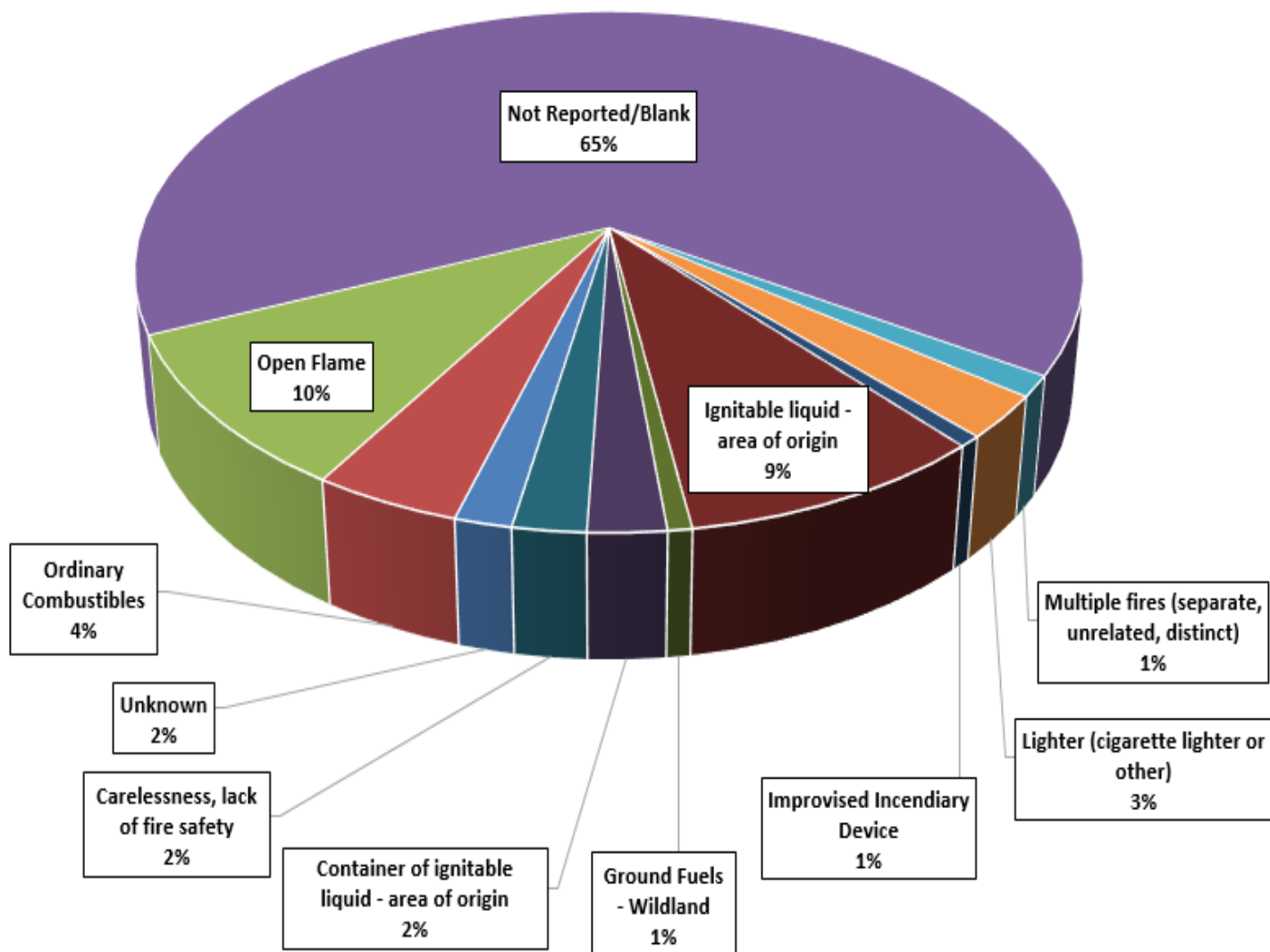


Figure 12. Common Fire Descriptors of Incendiary Fires

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MOTIVES FOR INCENDIARY FIRES – 2018

There were eight (8) types of motivation selected within BATS for an “Incendiary” fire. The top three (3) types of known motivation selected for the 6,532 Incendiary fires reported in 2018 were “Revenge,” “Crime Concealment,” and “Excitement.”

Motives for Incendiary Fires

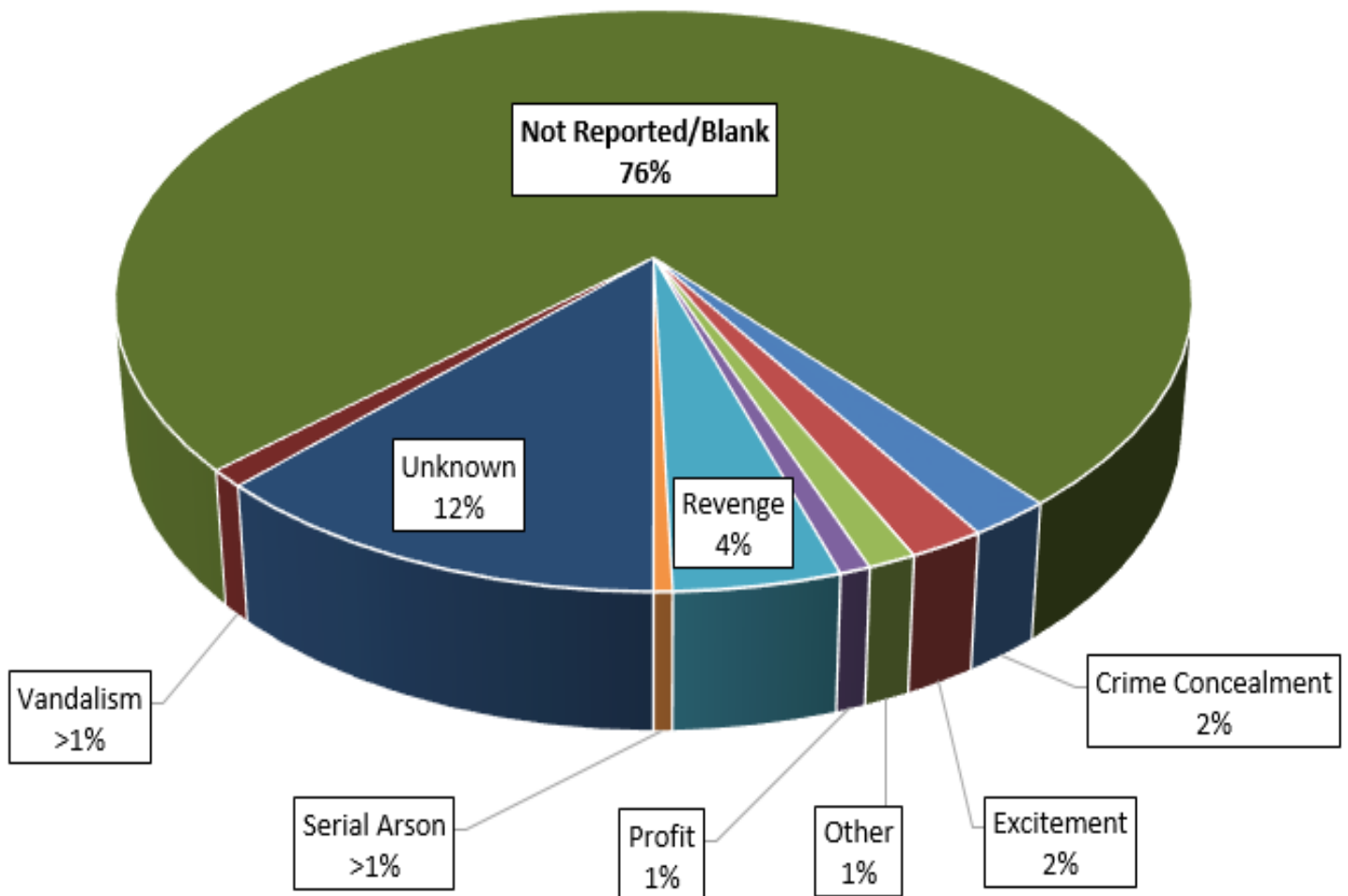
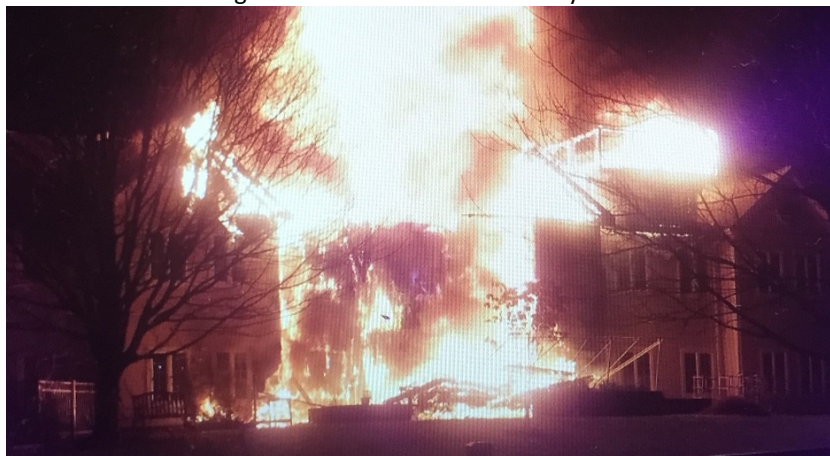


Figure 13. Motives for Incendiary Fires



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JUVENILE OFFENDER FIRES – 2018

There were 322 Incendiary fires recorded in BATS during 2018 where the suspect was listed as a “Juvenile Offender.” A review of the property type involved in those 322 incidents revealed the primary property target of juvenile offenders was “Residential” followed by “Education.” These two (2) property types accounted for 203 incidents or 63 percent of the property types targeted by juvenile offenders during 2018.



Property Types of Juvenile Offender Fires

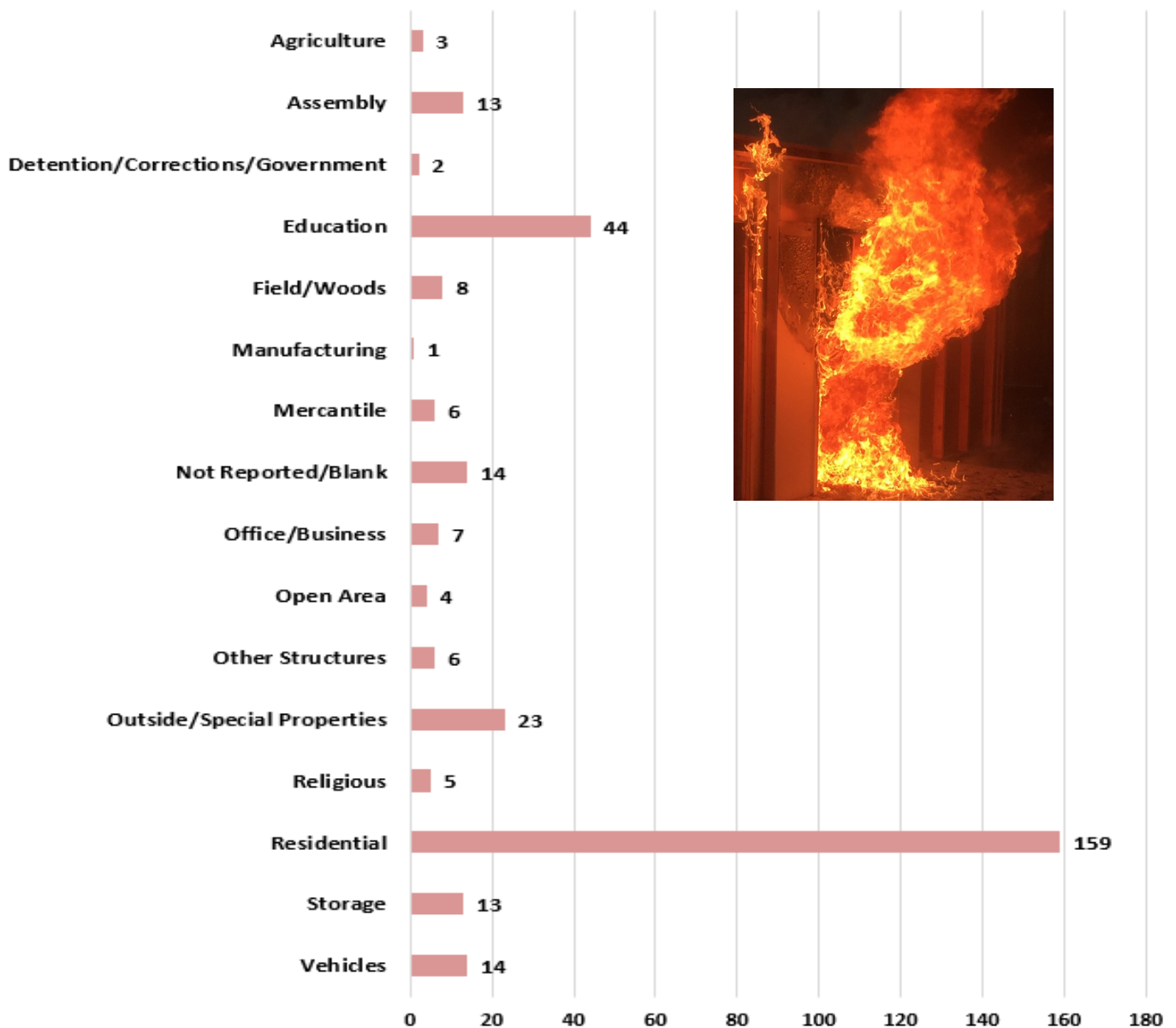


Figure 14. Property Types of Juvenile Offender Fires

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AREAS OF ORIGIN – 2018

The top 3 “Areas of Origin” identified for the 6,532 Incendiary fires reported in 2018 were “Function Areas,” “Transportation, Vehicle Areas” and “Other.”*



Areas of Origin	Total
Assembly, Sales Areas (Groups of People)	249
Function Areas	671
Means of Egress	207
Multiple Places of Origin/Placement	305
Not Applicable	7
Other	398
Service Areas	7
Service, Equipment Areas	10
Storage Areas	279
Structural Areas	307
Technical Processing Areas	3
Transportation, Vehicle Areas	608
Unknown	3,481

The top 3 “Areas of Origin” identified for the 2,665 Residential Incendiary fires reported in 2018 were “Function Areas,” “Multiple Places of Origin/Placement” and “Structural Areas.”*



Residential Fires – Areas of Origin	Total
Assembly, Sales Areas (Groups of People)	196
Function Areas	527
Means of Egress	162
Multiple Places of Origin / Placement	247
Not Applicable	1
Other	134
Service Areas	1
Service, Equipment Areas	2
Storage Areas	135
Structural Areas	246
Transportation, Vehicle Areas	26
Unknown	988

The top 3 “Areas of Origin” identified for the 543 incendiary fires related to Commercial use reported in 2018 were “Storage Areas,” “Function Areas” and “Structural Areas.”*



Commercial Fires – Areas of Origin	Total
Assembly, Sales Areas (Groups of People)	27
Function Areas	56
Means of Egress	15
Multiple Places of Origin / Placement	22
Not Applicable	1
Other	36
Service Areas	3
Service, Equipment Areas	6
Storage Areas	104
Structural Areas	37
Technical Processing Area	1
Transportation, Vehicle Areas	20
Unknown	215

* The category of “Unknown” was not listed as a top area of origin for incendiary fires, as the category includes all incidents where “Unknown” was selected or left blank by the user.

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HOUSE OF WORSHIP FIRES – 2018

During CY 2018, BATS captured a total of 198 fire-related incidents involving a house of worship (HOW). Of the 198 HOW fires, 76 were listed in BATS as “Incendiary,” 50 as “Accidental” and 4 as “Natural.” There were also 42 fires listed as “Undetermined” and 26 listed as “Under Investigation,” as the incident was pending further investigative activities and/or laboratory examination.

Reported House of Worship (HOW) Fires

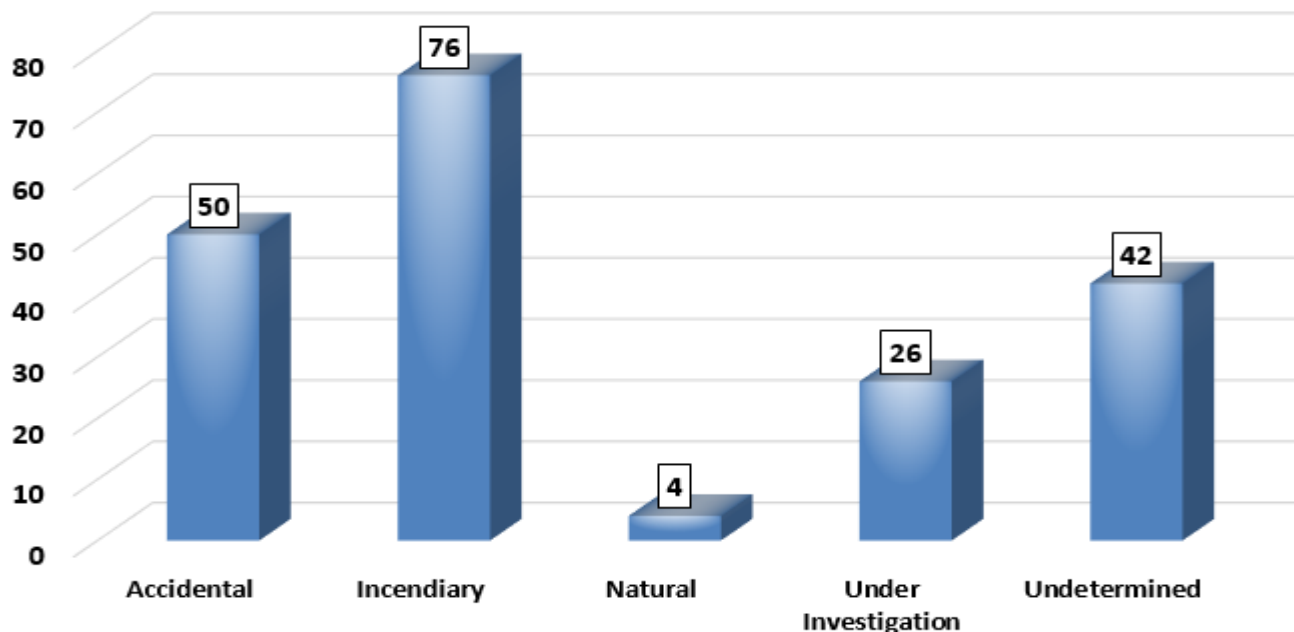


Figure 15. House of Worship Fires

Denomination of HOW Incendiary Fires

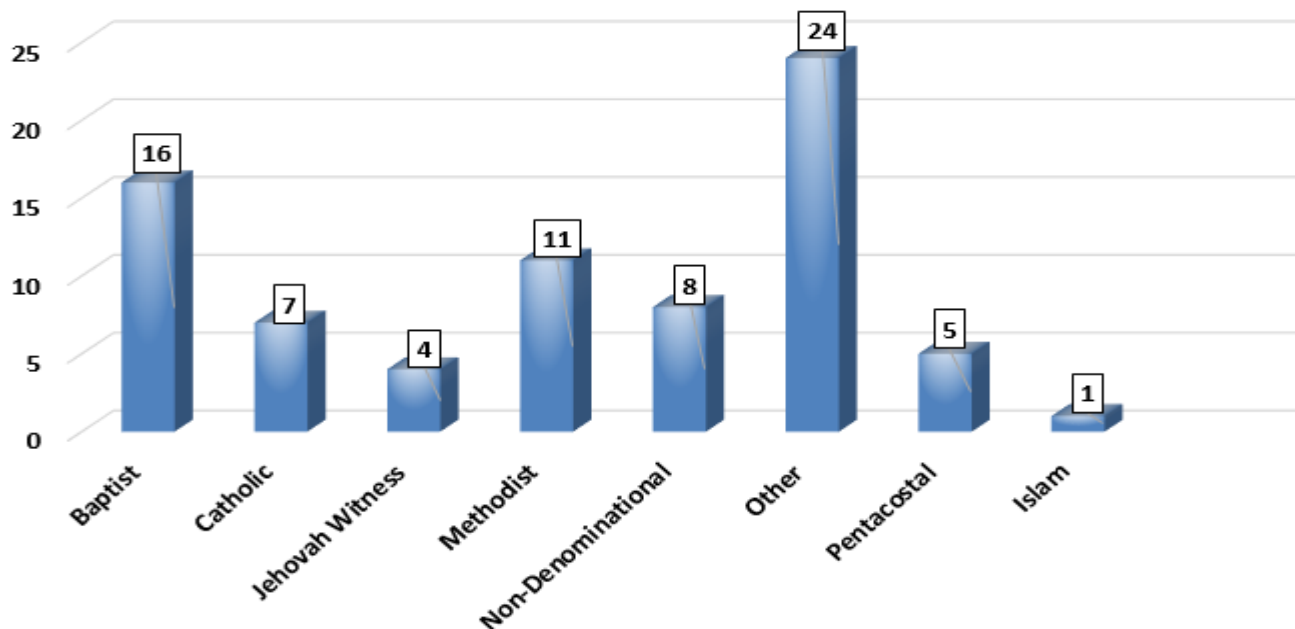


Figure 16. Denomination of HOW Fires

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EDUCATION FIRES – 2018

There were 186 fires associated with an “Education” target during CY 2018. Of those 186 fires reported in BATS, 101 were listed as “Incendiary,” 47 were listed as “Accidental,” 25 were listed as “Undetermined” and 1 fire listed as “Natural.” There were also 12 fires listed as “Under Investigation” as the incident was pending further investigative activities and/or laboratory examination. The target subtype category of “High School/Junior High/Middle School” accounted for 49 percent of all fire types and 62 percent of all Incendiary fires associated with an “Education”

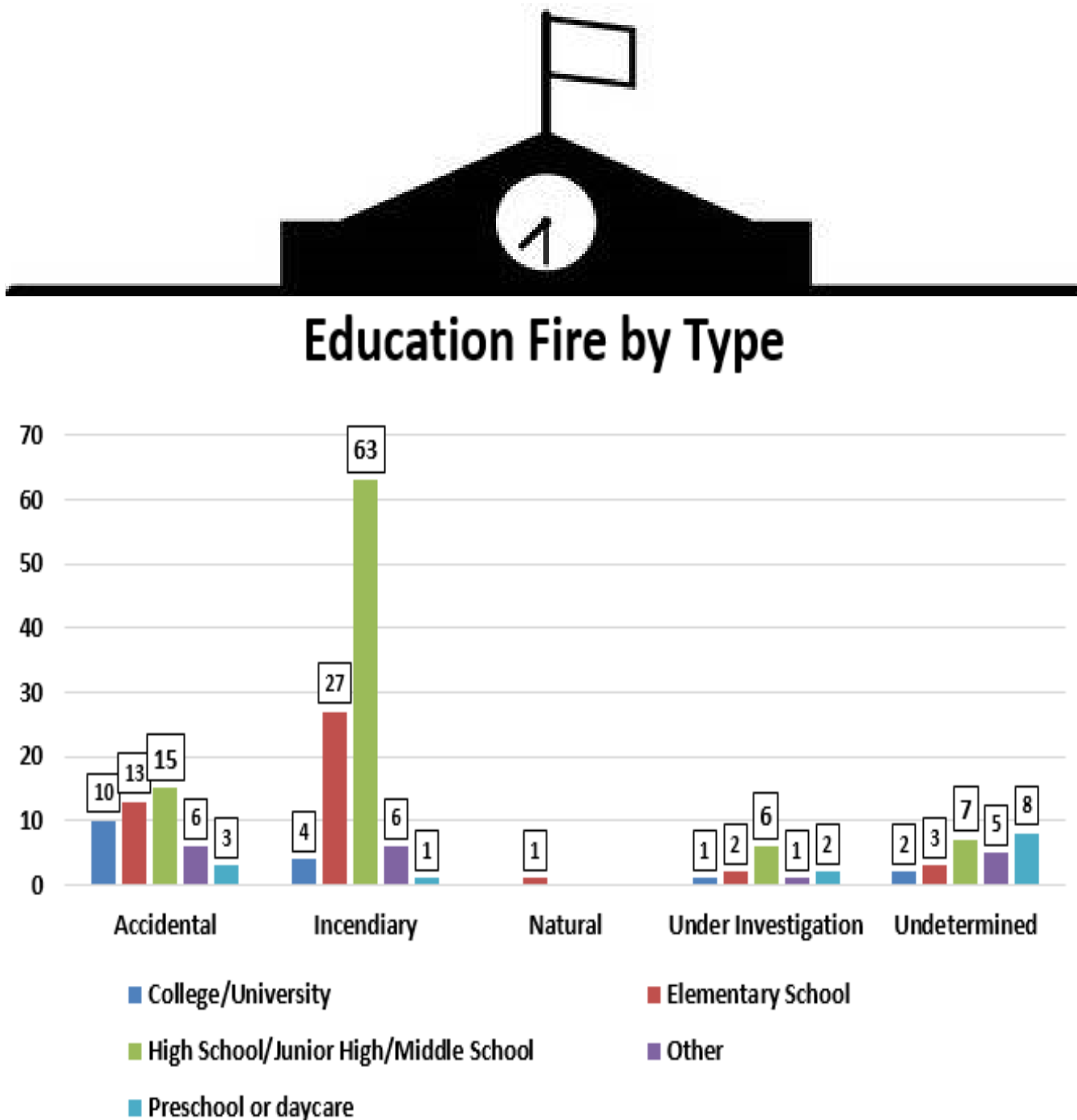


Figure 17. Education Fires

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