

2020 Arson Incident Report (AIR)



**UNITED STATES BOMB DATA CENTER (USBDC)  
ARSON INCIDENT REPORT**

**2020**

*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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## 2020 Arson Incident Report (AIR)

# EXECUTIVE SUMMARY

## OPERATING HIGHLIGHTS

The *2020 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 2,332 interagency partners and 11,184 registered users. This report examines the total number of fire-related incidents reported in BATS for calendar year 2020 and includes *Incendiary (Arson), Undetermined, Accidental, Threats, Natural*, and *Wildland* fire 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, 2020, through December 31, 2020, BATS captured a total of 23,330 *fire-related incidents*. Of these, there were 7,039 incidents reported as “Incendiary or Arson,” which accounted for 30 percent of all the fires reported. The total amount of damages for all fire types was estimated at \$1,345,524,645 with 971 injuries and 558 fatalities associated with the 23,330 reported fire-related incidents. “Available Combustibles” was identified as the most widely utilized incendiary fire subtype, while “Residential” was identified as the most targeted property type.

## LOOKING AHEAD

The United States Bomb Data Center’s two sections, Bomb Arson Tracking System Section (BATSS) and Arson and Explosives Information and Analysis Section (AEIAS), continue to work 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.

James M. Watson  
Director, USBDC

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# FIRE TYPES – 2020

From January 1, 2020, through December 31, 2020, BATS captured a total of 23,330 fire-related incidents. Of those 23,330 fire-related incidents, 7,500 were listed in BATS as “Accidental,” along with 7,039 listed as “Incendiary or Arson,” 119 listed as “Natural,” 103 listed as “Threat,” 1,845 listed as “Under Investigation” and 187 listed as “Wildland.” There were also 6,537 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

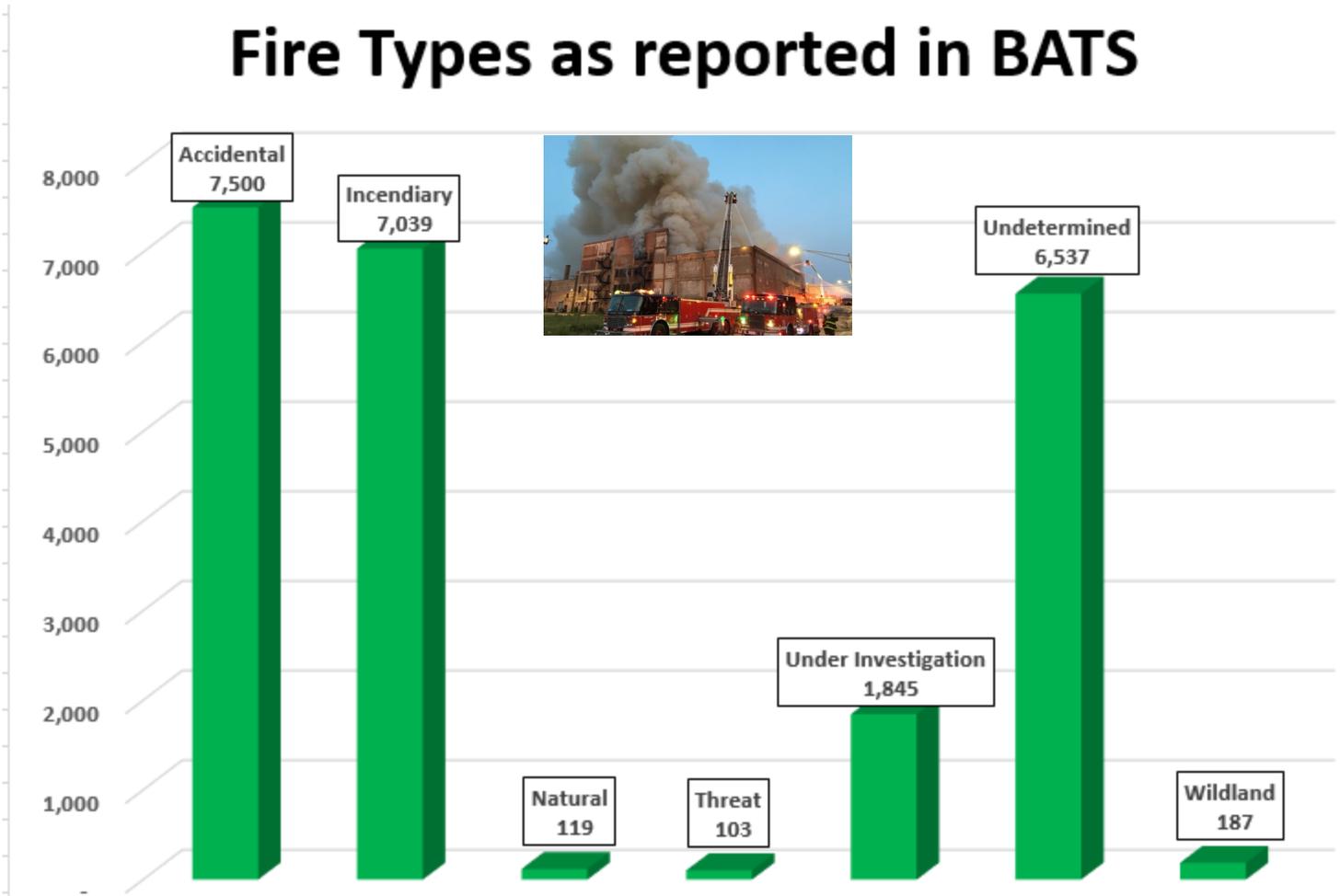


Figure 1. Fire Incident Types



\* 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) 2020.

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# FIRE INJURIES AND FATALITIES – 2020

<b>Injuries</b>					
	Fire Service	Law Enforcement	Suspects	Victims	Total
Accidental	72	5	2	280	359
Incendiary	36	10	31	77	154
Natural	3	12	0	0	15
Under Investigation	39	5	3	47	94
Undetermined	112	8	6	223	349
<b>Total</b>	<b>262</b>	<b>40</b>	<b>42</b>	<b>627</b>	<b>971</b>

Figure 2. Fire Injuries



Victim injuries accounted for 78 percent of all injuries reported in 2020 and were the highest population reported for “Incendiary” and “Accidental” incidents.

Of the 154 injuries associated with “Incendiary” incidents, “Victims” were reported as the highest population with 50 percent.

<b>Fatalities</b>					
	Fire Service	Law Enforcement	Suspects	Victims	Total
Accidental	0	0	0	161	161
Incendiary	2	1	8	68	79
Natural	0	0	0	0	0
Under Investigation	1	1	4	46	52
Undetermined	0	0	2	264	266
<b>Total</b>	<b>3</b>	<b>2</b>	<b>14</b>	<b>539</b>	<b>558</b>

Figure 3. Fire Fatalities

Victim fatalities accounted for 97 percent of all injuries reported in 2020 and were the highest population reported for “Incendiary” and “Accidental” incidents.

Of the 79 fatalities associated with an “Incendiary” incidents, “Victims” was reported as the highest population with 86 percent.



# FIRE DAMAGES – 2020

## Damage Amount (\$) for Fire Types

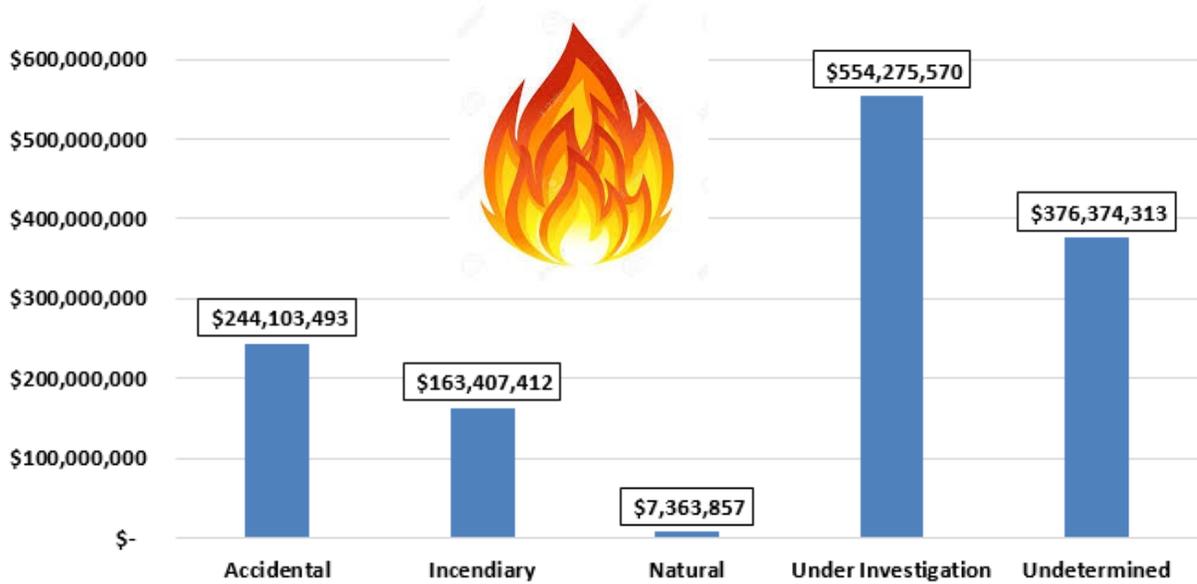


Figure 4. Damage Amount for Fire Types

Damages associated with the 23,330 fire incidents reported in BATS totaled \$1,345,524,645 for CY 2020. Fires categorized as “Under Investigation” led the fire type category with \$554,275,570 in damages.



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# INCENDIARY FIRE SUBTYPES – 2020

Of the 7,039 Incendiary (Arson) fire-related incidents reflected in BATS, there were 1,744 Incendiary fires listed as involving an “Accelerant,” along with 2,903 fires involving “Available Combustibles” and 407 fires involving an “Incendiary Device.” There were also 1,379 Incendiary fires listed as “Unknown” and 606 Incendiary fires with no information reported or left “Blank.”

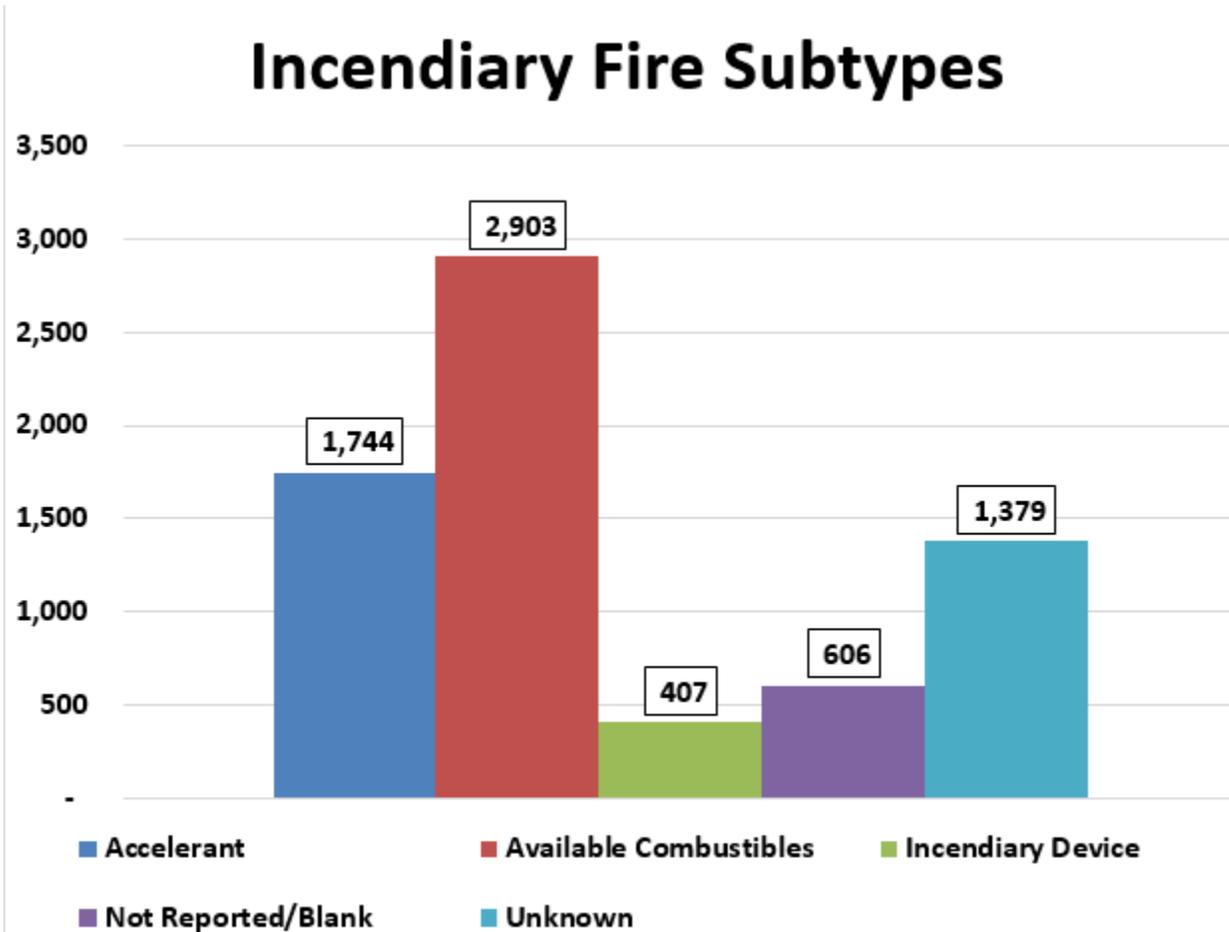


Figure 5. Incendiary Fire Subtypes

*\* 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 2020.*

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# INCENDIARY FIRES (STATE) – 2020

A review of the 7,039 incidents listed in BATS as “Incendiary or Arson” by location (State) revealed the highest number of incidents were reported in Texas (889), followed by Illinois (744) and then Florida (682). These three (3) States accounted for 33 percent of the total “Incendiary or Arson” fires reported in BATS during CY 2020 which had a state listed.

Note: Of the 7,039 incidents listed in BATS, 42 did not have the corresponding state listed (only 6,997 incidents are represented in figure 6).

## INCENDIARY FIRES BY STATE

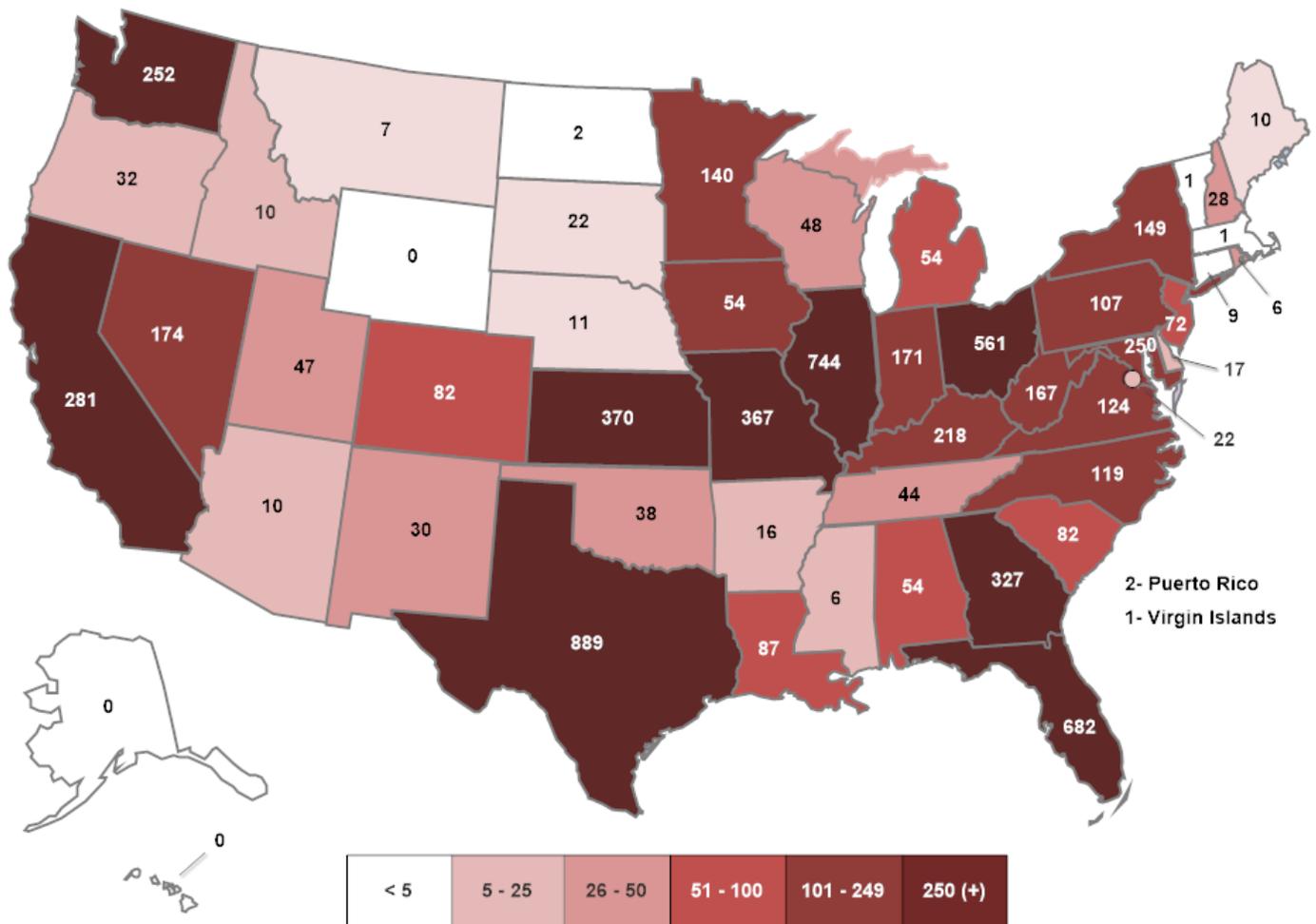


Figure 6. Incendiary Fires by State

\* 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 2020.

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# INCENDIARY FIRES (FEMA REGIONS) – 2020

A breakdown of the 7,039 incidents listed in BATS as “Incendiary or Arson” by Federal Emergency Management Agency (FEMA) Regions revealed the highest number of incidents occurred in the following three regions: Region V (1,718); Region IV (1,532); and Region VI (1,060). These three regions accounted for 62 percent of the total “Incendiary” fires reported in BATS during CY 2020 which had a state listed.

Note: Of the 7,039 incidents listed in BATS, 42 did not have the corresponding state listed (only 6,997 incidents are represented in figure 7).

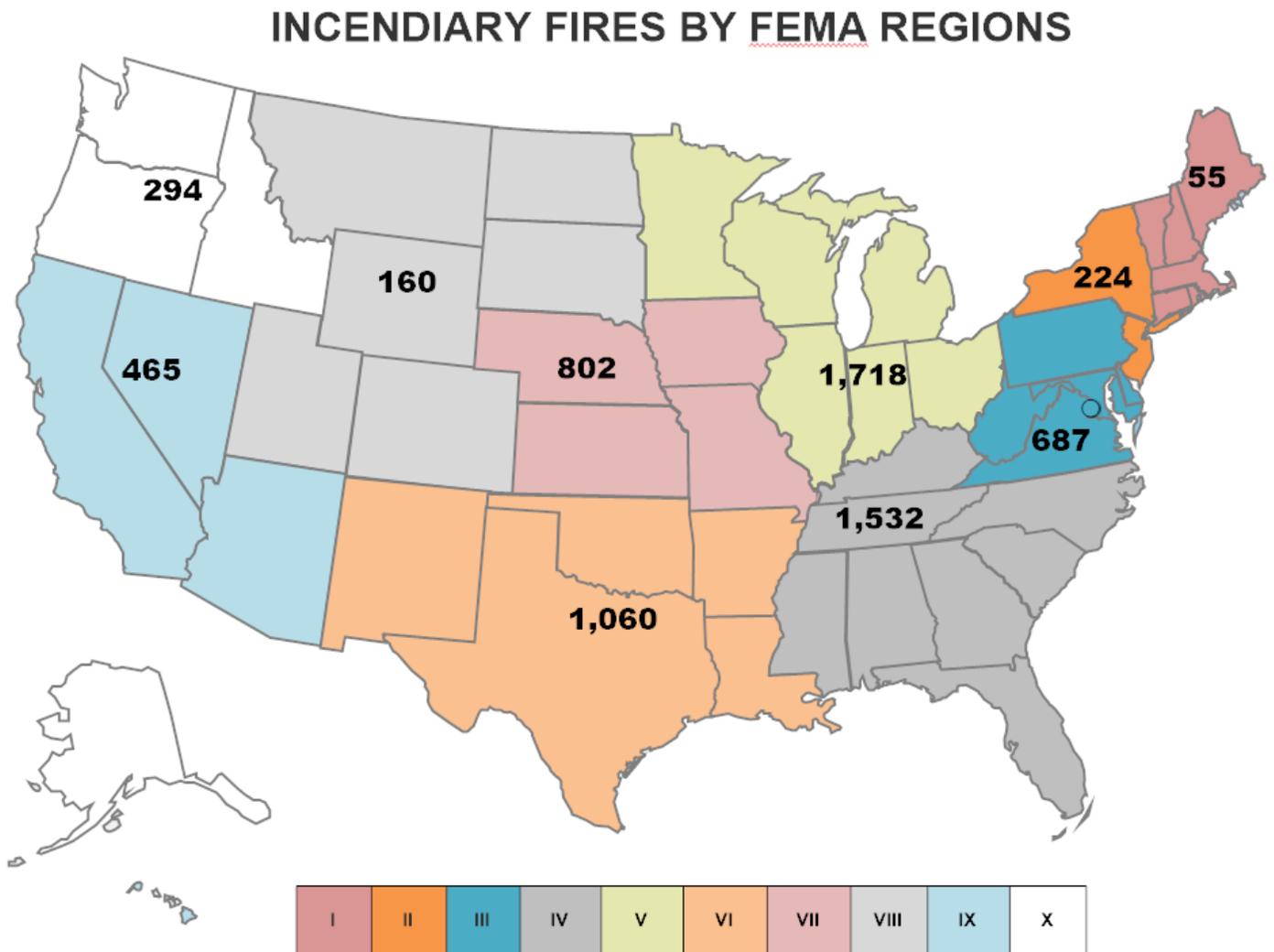


Figure 7. Incendiary Fires by FEMA Regions

\* 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 2020.

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# PROPERTY TYPES – 2020

There were 23 different “Property” types selected within BATS that involved “Incendiary” fires for 2020 (7,039 total incidents). Of the reported “Incendiary” incidents reported for 2020, “Residential” fires accounted for 39 percent, followed by vehicles (18 percent).

## Incendiary Fires by Property Types

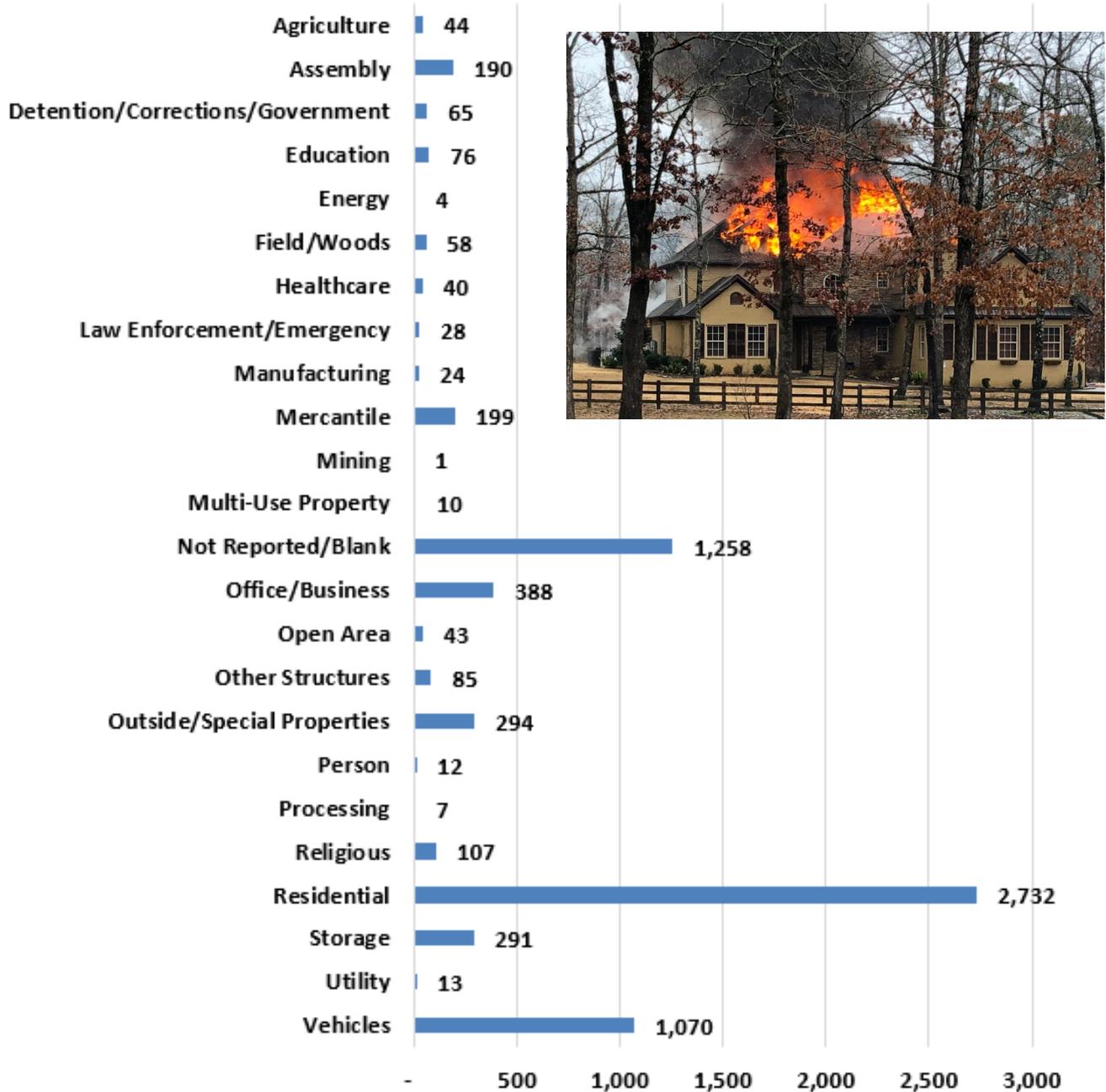


Figure 8. Incendiary Fires by Property Types

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## TIME/DAY/MONTH OF OCCURRENCE – 2020

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 06:00) accounted for 48 percent of the incidents. On the other hand, the time period of 06:01 until 12:00 (early morning hours until noon) accounted for only 19 percent of incendiary fires reported in BATS during CY 2020.

### Incendiary Fires by Time of Day

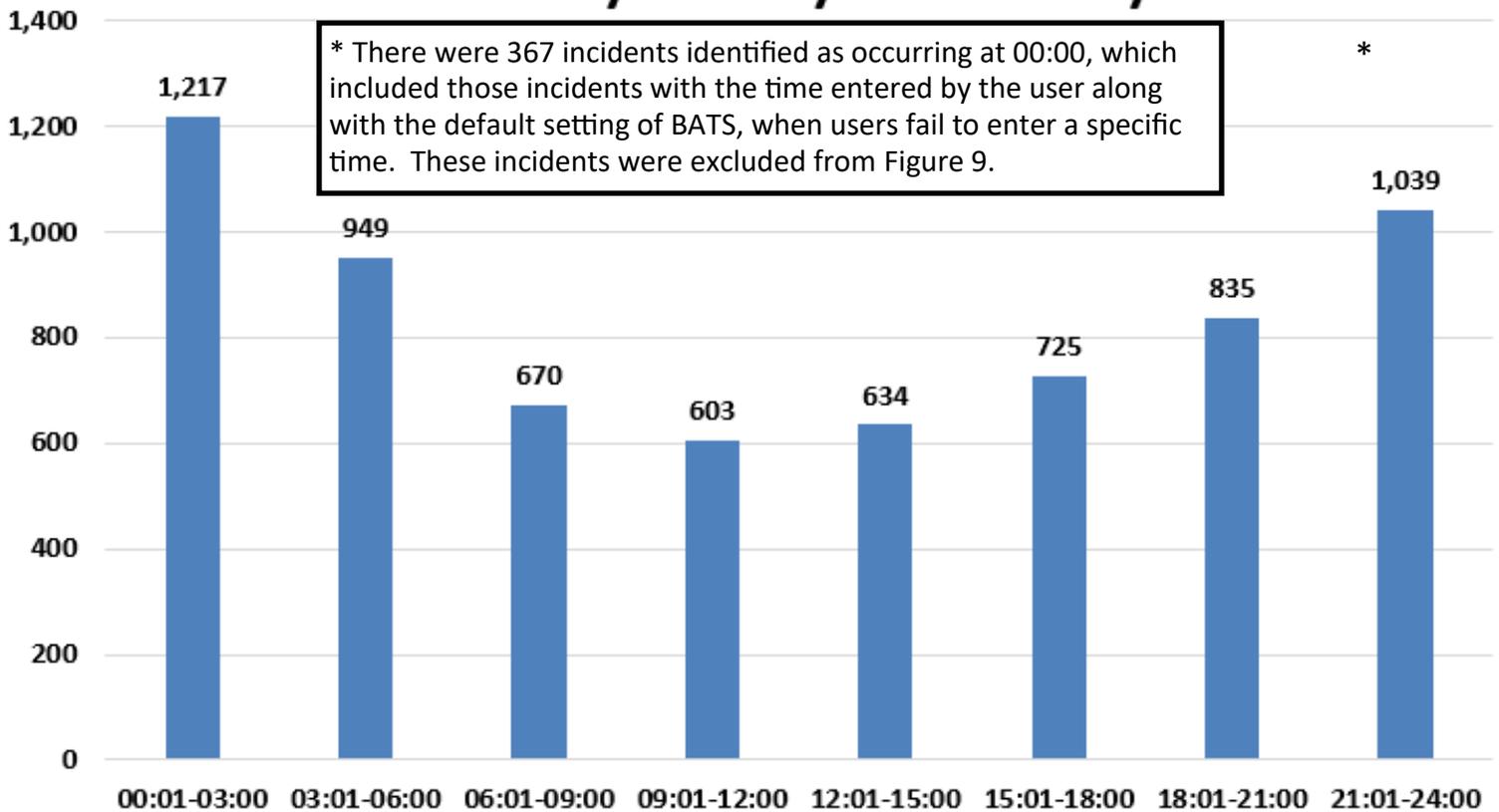


Figure 9. Incendiary Fires by Time of Day

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 Saturday and Sunday were identified as having the highest rate of occurrence, with 30 percent of all reported incidents when combined. Wednesday was identified as having the lowest rate of occurrence of “Incendiary” fires, with 14 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 2020. Incidents occurring in May were identified as the most frequent month of the year in which an “Incendiary” fire did occur, with 13 percent of reported incidents. December was identified as having the lowest frequency of “Incendiary” fires occurring, with 6 percent of reported incidents.

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# INCENDIARY FIRES (VEHICLES) – 2020

During CY 2020 there were 1070 incidents of incendiary fires associated with vehicles. Of those vehicle fires, 63 percent were associated with an “Automobile/Car,” 12 percent were associated with a “Truck (Pickup)” and 8 percent were associated with a “Sport Utility Vehicle (SUV).”

## Incendiary Fires By Type of Vehicle

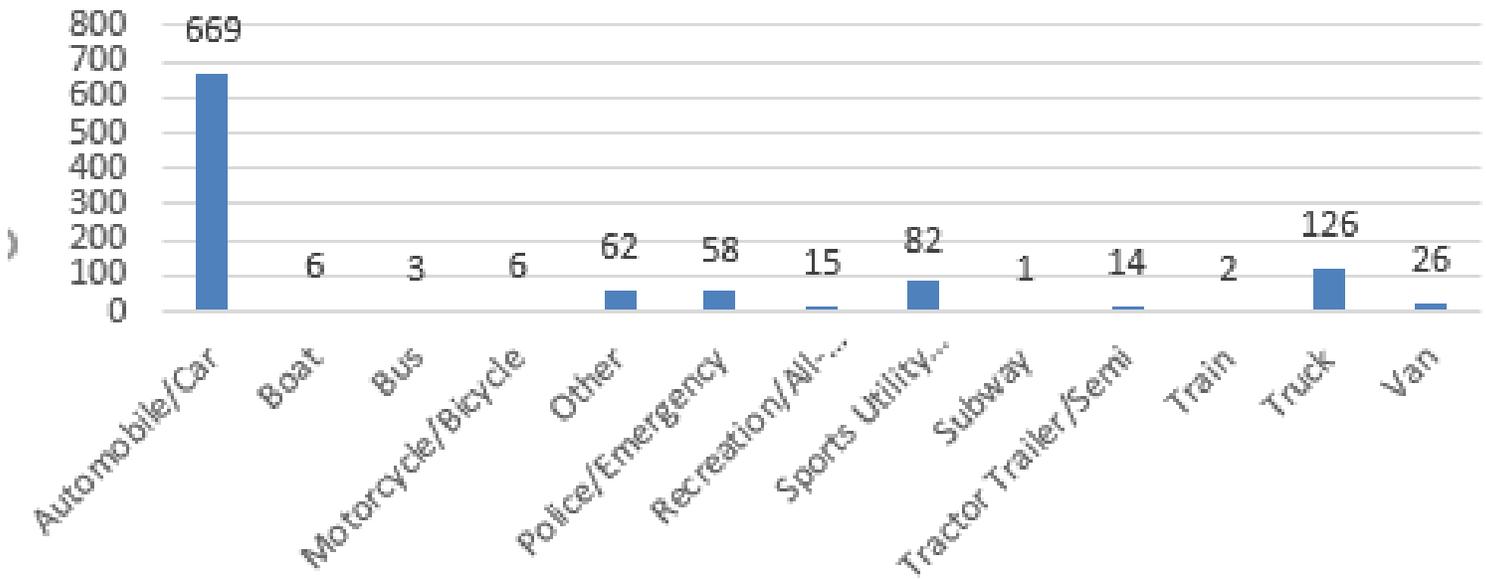


Figure 10. Incendiary Fires by Type of Vehicle



# INCENDIARY FIRE DESCRIPTORS – 2020



The top 3 “Fire Descriptors” identified for the 7,039 Incendiary fires reported in 2020 were “Open Flame”, “Ignitable Liquid,” and “Ordinary Combustibles.”

**\*\* 69 percent of reported Incendiary fires did not identify any type of fire descriptors.**

## TOP 10 MOST COMMON FIRE DESCRIPTORS

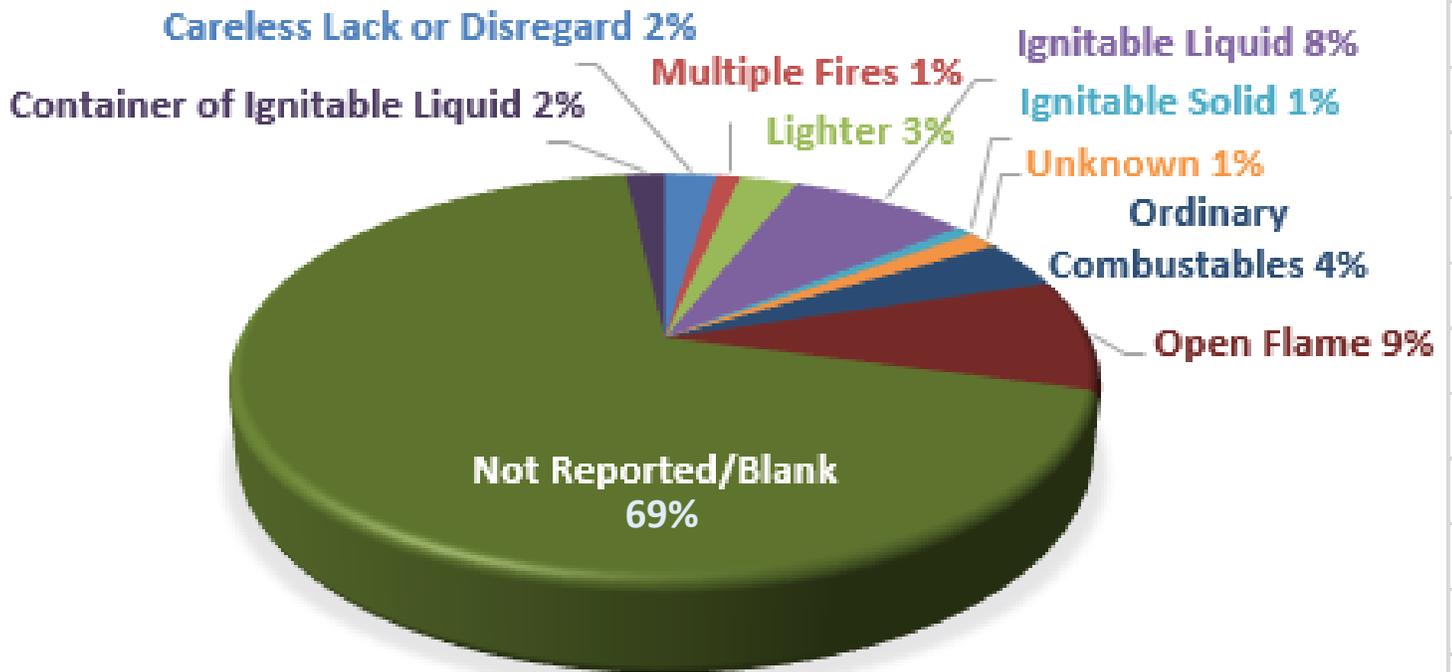


Figure 11. Common Fire Descriptors of Incendiary Fires

# MOTIVES FOR INCENDIARY FIRES – 2020

There were nine (9) types of motivation selected within BATS for an “Incendiary” fire. The top 3 types of known motivation selected for the 7,039 Incendiary fires reported in 2020 were “Revenge,” “Crime Concealment,” and “Excitement.”

## TOP 10 MOST COMMON MOTIVES FOR INCENDIARY FIRES



Figure 12. Motives for Incendiary Fires



# JUVENILE OFFENDER FIRES – 2020

There were 158 Incendiary fires recorded in BATS during 2020, where the suspect was listed as a “Juvenile Offender” (2% of total incendiary fires). A review of the property type involved in those 158 incidents revealed the primary property target of juvenile offenders was “Residential” followed by “Outside/Special Properties.” These 2 property types accounted for 92 incidents or 58 percent of the property types targeted by juvenile offenders during 2020.



## Property Types of Juvenile Offender Fires

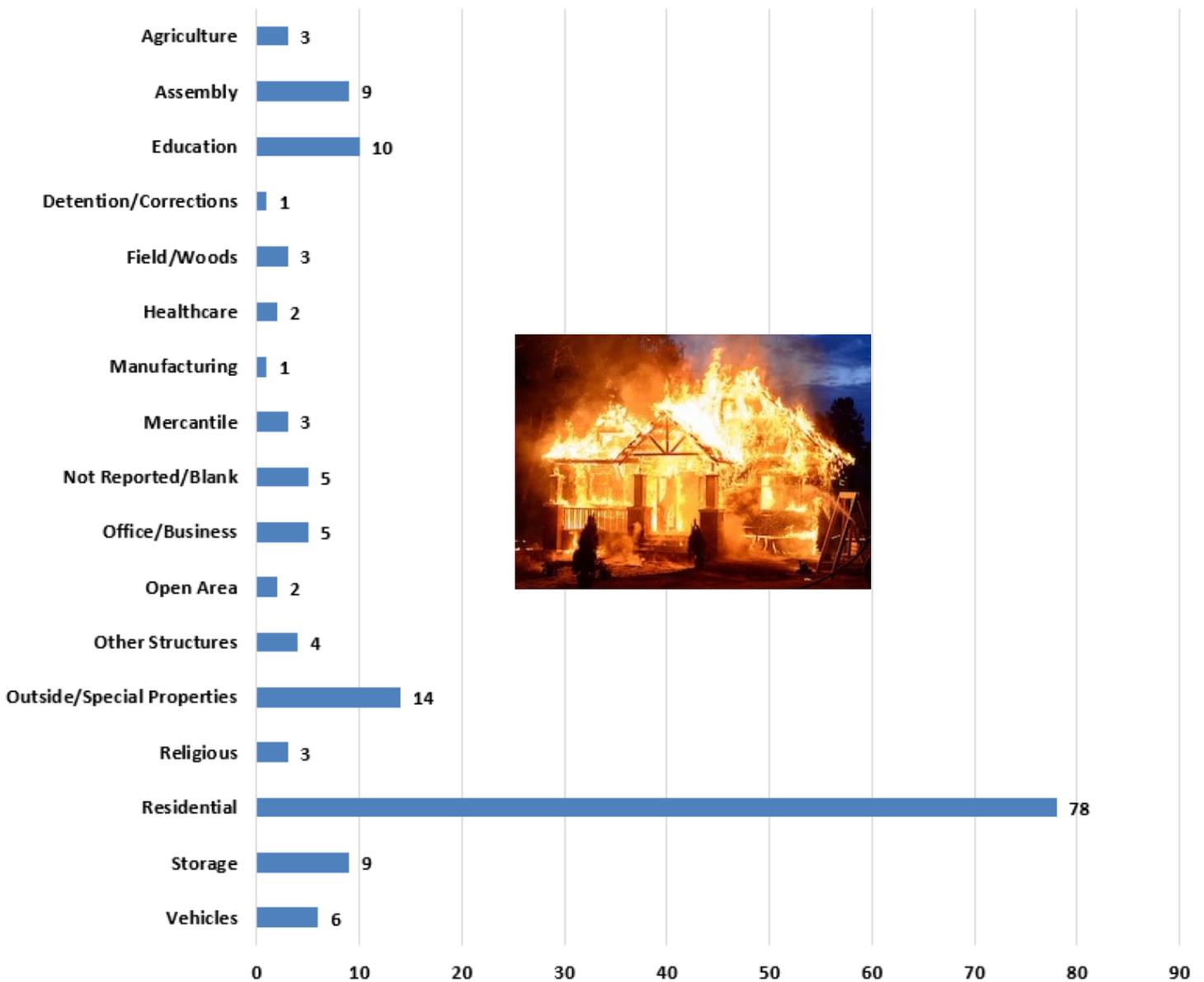


Figure 13. Property Types of Juvenile Offender Fires

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## AREAS OF ORIGIN – 2020

The top 3 “Areas of Origin” identified for the 7,039 Incendiary fires reported in 2020 were “Transportation, Vehicle Areas,” “Function Areas,” and “Other.”



Areas of Origin	Total
Assembly, Sales Areas (Groups of People)	231
Function Areas	627
Means Of Egress	228
Multiple Places of Origin / Placement	304
Not Applicable	7
Other	529
Service Areas	20
Service, Equipment Areas	7
Storage Areas	292
Structural Areas	325
Transportation, Vehicle Areas	692
Unknown	117
Not Listed/Blank	3,660

The top 3 “Areas of Origin” identified for the 2,732 Residential Incendiary fires reported in 2020 were “Function Areas,” “Structural” and “Multiple Places of Origin/Placement.”



Residential Fires – Areas of Origin	Total
Assembly, Sales Areas (Groups of People)	153
Function Areas	492
Means Of Egress	162
Multiple Places of Origin / Placement	210
Not Applicable	2
Other	189
Service Areas	6
Service, Equipment Areas	3
Storage Areas	117
Structural Areas	239
Transportation, Vehicle Areas	24
Unknown	75
Not Listed/Blank	1060

The top 3 “Areas of Origin” identified for the 923 Incendiary fires related to Commercial use reported in 2020 were “Storage Areas,” “Other,” and “Function Areas.”



Commercial Fires – Areas of Origin	Total
Assembly, Sales Areas (Groups of People)	45
Function Areas	47
Means Of Egress	32
Multiple Places of Origin / Placement	40
Not Applicable	1
Other	72
Service Areas	7
Service, Equipment Areas	4
Storage Areas	122
Structural Areas	43
Transportation, Vehicle Areas	11
Unknown	18
Not Listed/Blank	481

Figure 14. Areas of Origin

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# HOUSE OF WORSHIP FIRES – 2020

During CY 2020, BATS captured a total of 247 fire-related incidents involving a house of worship (HOW). Of the 247 HOW fires, 107 were listed in BATS as “Incendiary,” 35 as “Accidental” and 8 as “Natural.” There were also 61 fires listed as “Undetermined” and 36 listed as “Under Investigation,” as the incidents were pending further investigative activities and/or laboratory examinations.

## Reported House of Worship (HOW) Fires

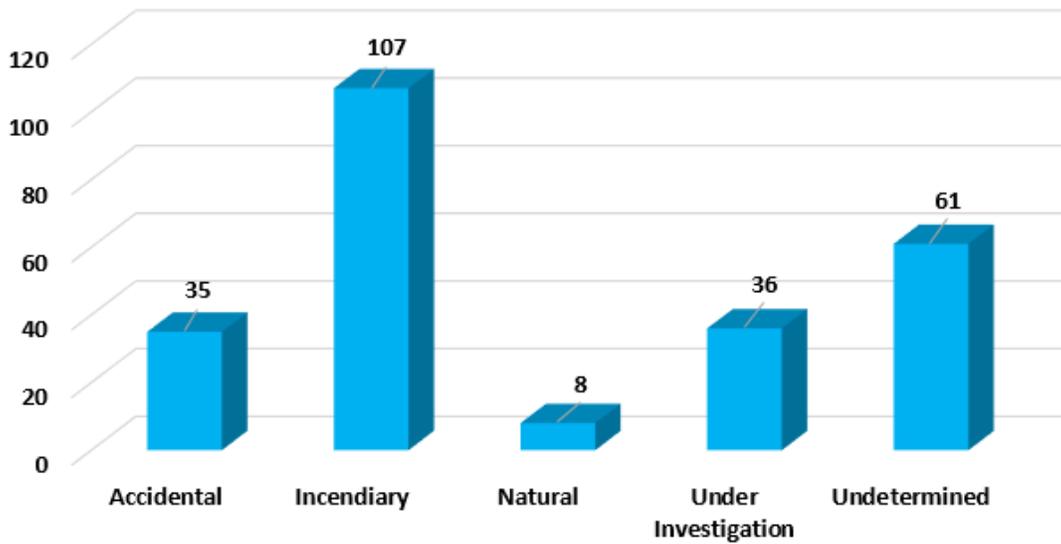


Figure 15. House of Worship Fires

## Denomination of HOW Incendiary Fires

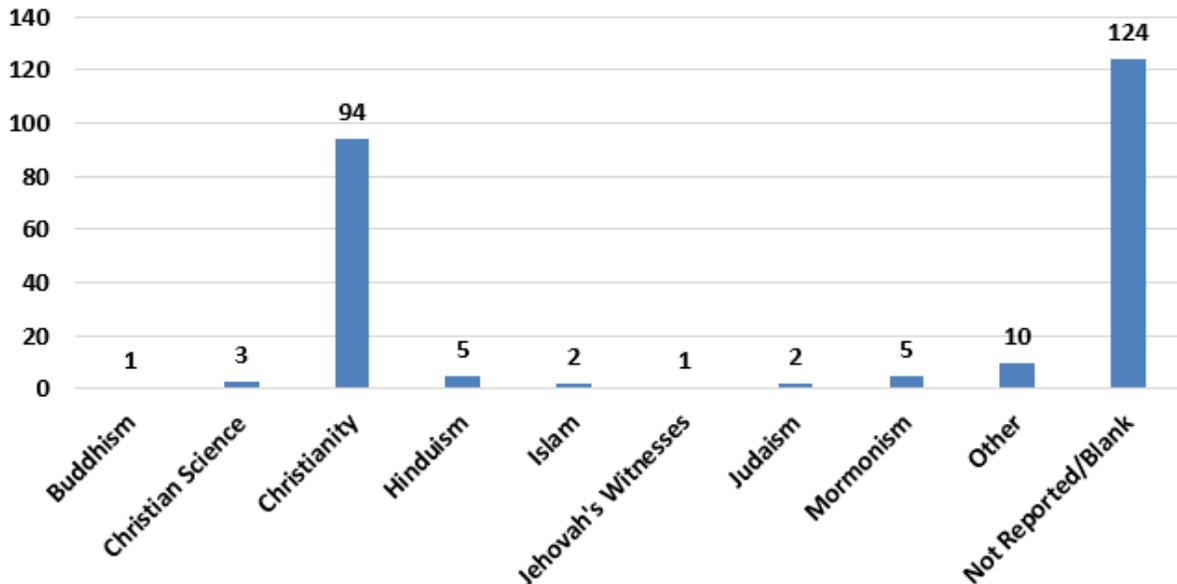
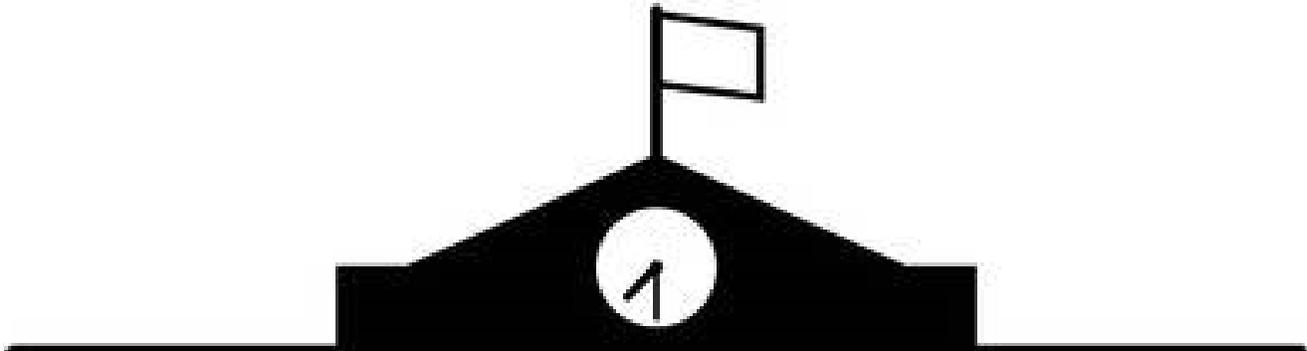


Figure 16. Denomination of HOW Fires

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# EDUCATION FIRES – 2020

There were 148 fires associated with an “Education” target during CY 2020. Of those 148 fires reported in BATS, 78 were listed as “Incendiary,” 44 were listed as “Accidental,” 17 were listed as “Undetermined.” There were also 9 fires listed as “Under Investigation,” as the incidents were pending further investigative activities and/or laboratory examinations. The target subtype category of “High School/Junior High/Middle School” accounted for 33 percent of all fire types and 63 percent of all Incendiary fires associated with an “Education” target.



## Education Fire by Type

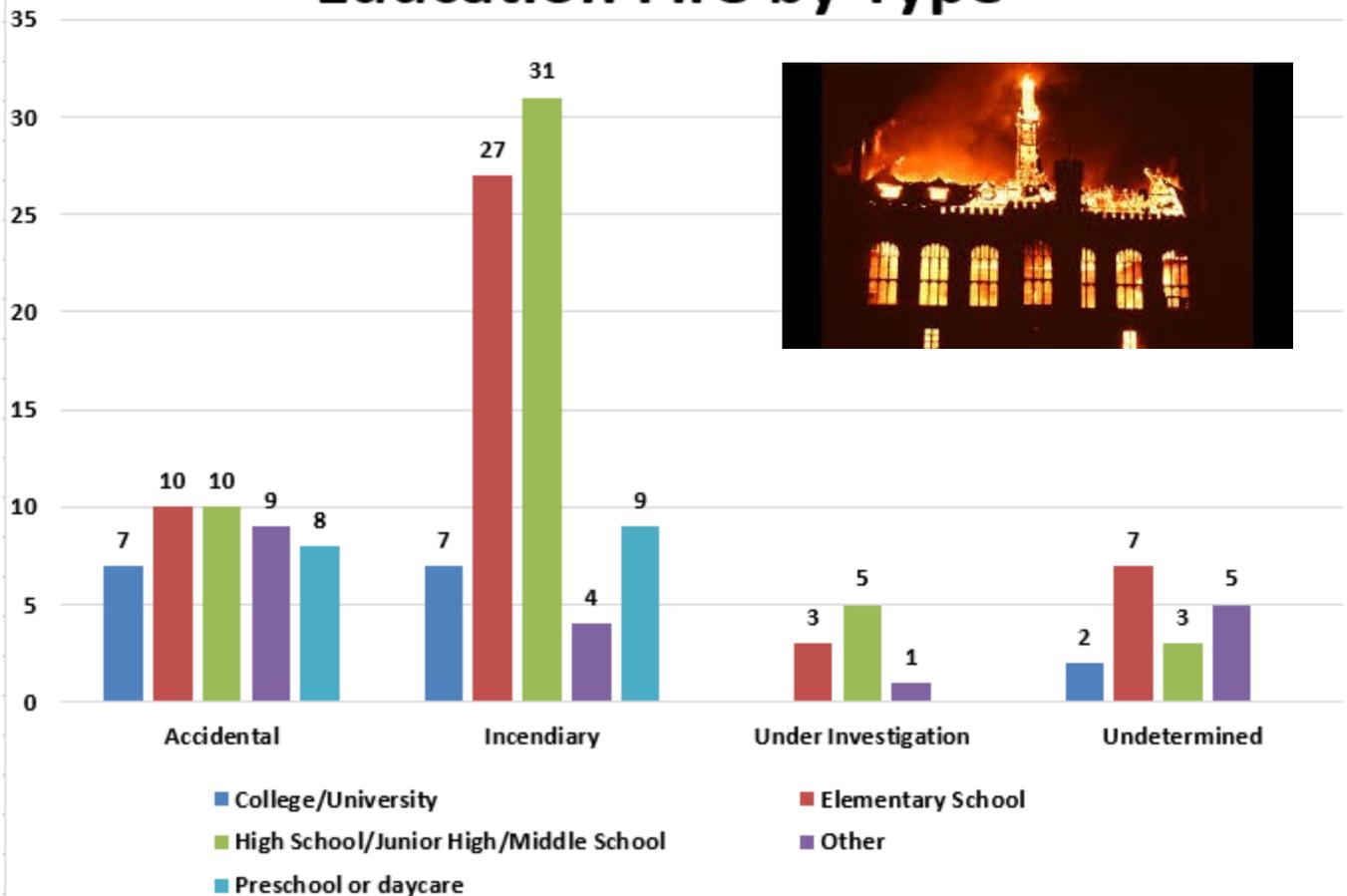


Figure 17. Education Fires

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# WILDLAND FIRES – 2020

In 2020, there were 187 “Wildland” fire incidents entered into BATS. Of those 187 fires, 40 were listed as “Debris Burning,” 38 were listed as “Incendiary” and 20 listed as “Equipment Use.”

## Wildland Fire Types

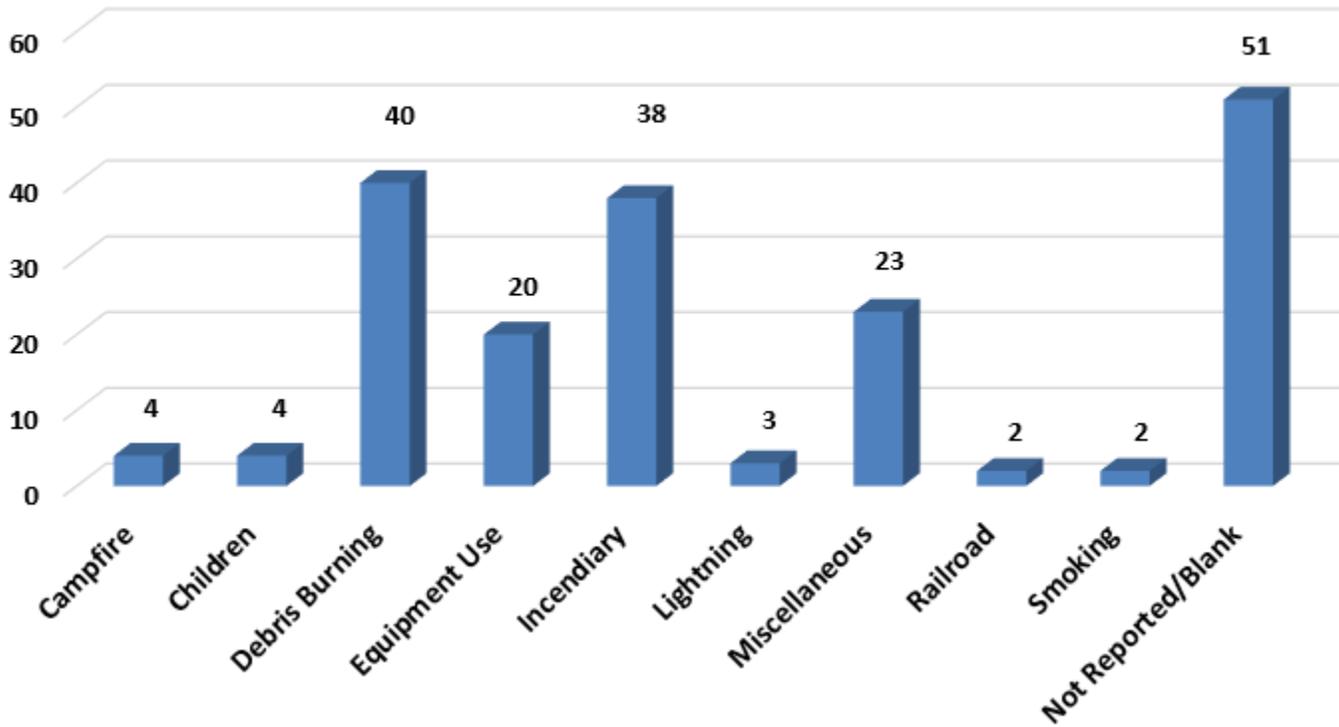


Figure 18. Wildland Fire Types



## CONTACT INFORMATION

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