

2016 Arson Incident Report (AIR)



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

# 2016

*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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## 2016 Arson Incident Report (AIR)

# EXECUTIVE SUMMARY

## OPERATING HIGHLIGHTS

The 2016 *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 2,500 interagency partners and 12,153 registered users. This report examines the total number of fire-related incidents reported in BATS for calendar year 2016 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, 2016, through December 31, 2016, BATS captured a total of 21,979 *fire-related incidents*. Of these, there were 7,389 incidents reported as “Incendiary or Arson,” which accounted for 34 percent of all the fires reported. The total amount of damages for all fire types was estimated at more than \$1 billion, with 1,650 injuries and 672 fatalities associated with the 21,979 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

During the latter part of 2016, the USBDC established two sections in order to provide enhanced operational support to all of our interagency partners and members of the BATS user community. The newly created BATS Section (BATSS) will focus on the BATS program and related systems, while the newly established Arson and Explosives Information and Analysis Section (AEIAS) will focus on arson and explosives analytical products as well as explosives identification, tracing and theft/loss reporting. AEIAS is responsible for developing and producing intelligence products such as this annual report as well as a variety of other standardized, automated and on-demand reports that serve to inform the BATS user community and increase regional and national situational awareness concerning explosives and arson related incidents. This realignment within the USBDC, along with the release of BATS 8.1 and mobile BATS (*mBATS2.1*), will continue to establish the USBDC as a center of excellence for arson and explosives related reporting within the United States.

Brandt A. Schenken  
Director, USBDC

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# FIRE TYPES – 2016

From January 1, 2016, through December 31, 2016, BATS captured a total of 21,979\* fire-related incidents. Of those 21,979 fires, 7,389 were listed in BATS as “Incendiary or Arson,” along with 6,729 listed as “Accidental” and 115 as “Natural.” There were also 7,746 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.

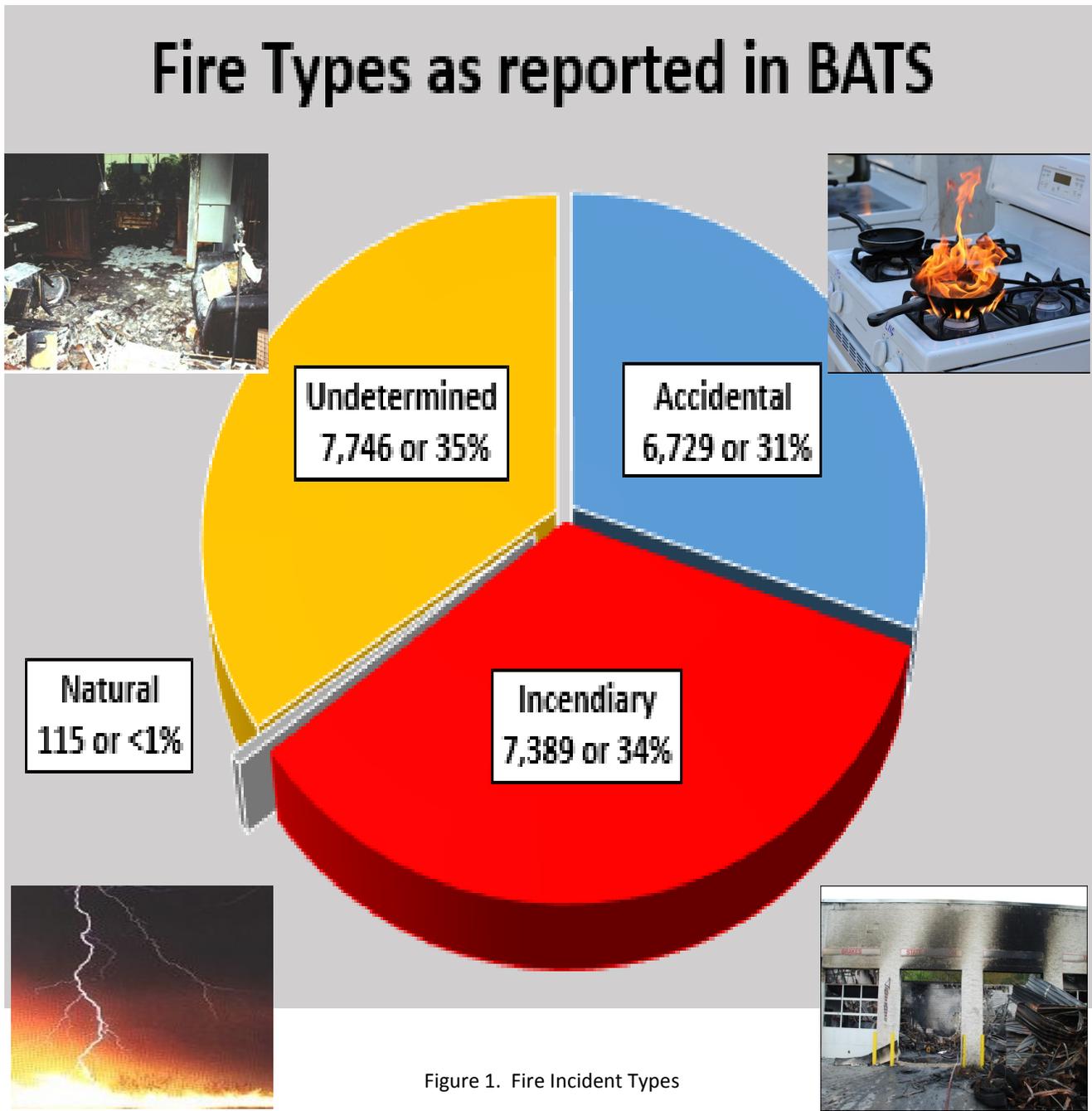
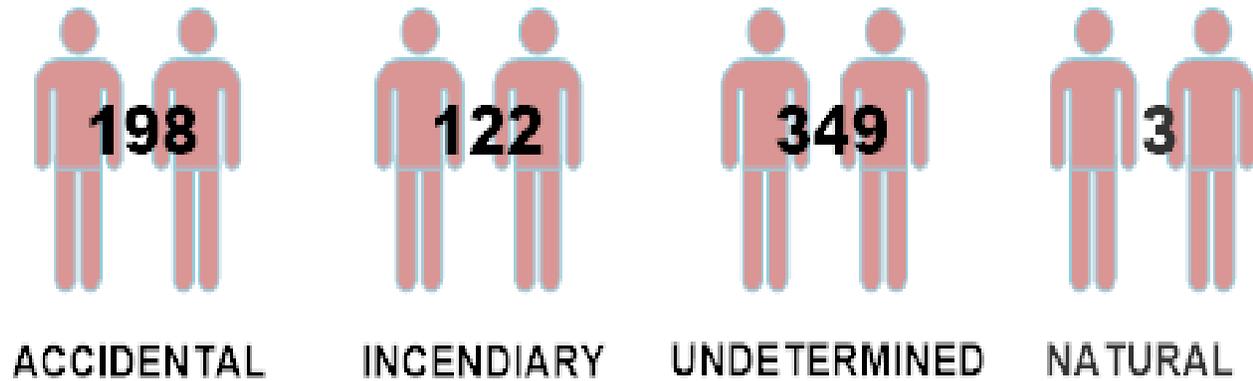


Figure 1. Fire Incident Types

\* 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 2016.

# FIRE FATALITIES – 2016

## 672 Fire Fatalities in 2016



Of the 672 deaths, 657 individuals were identified as “Victims” and 4 were identified as “Fire Service.” There were also 11 individuals killed who were identified as a “Suspect.”

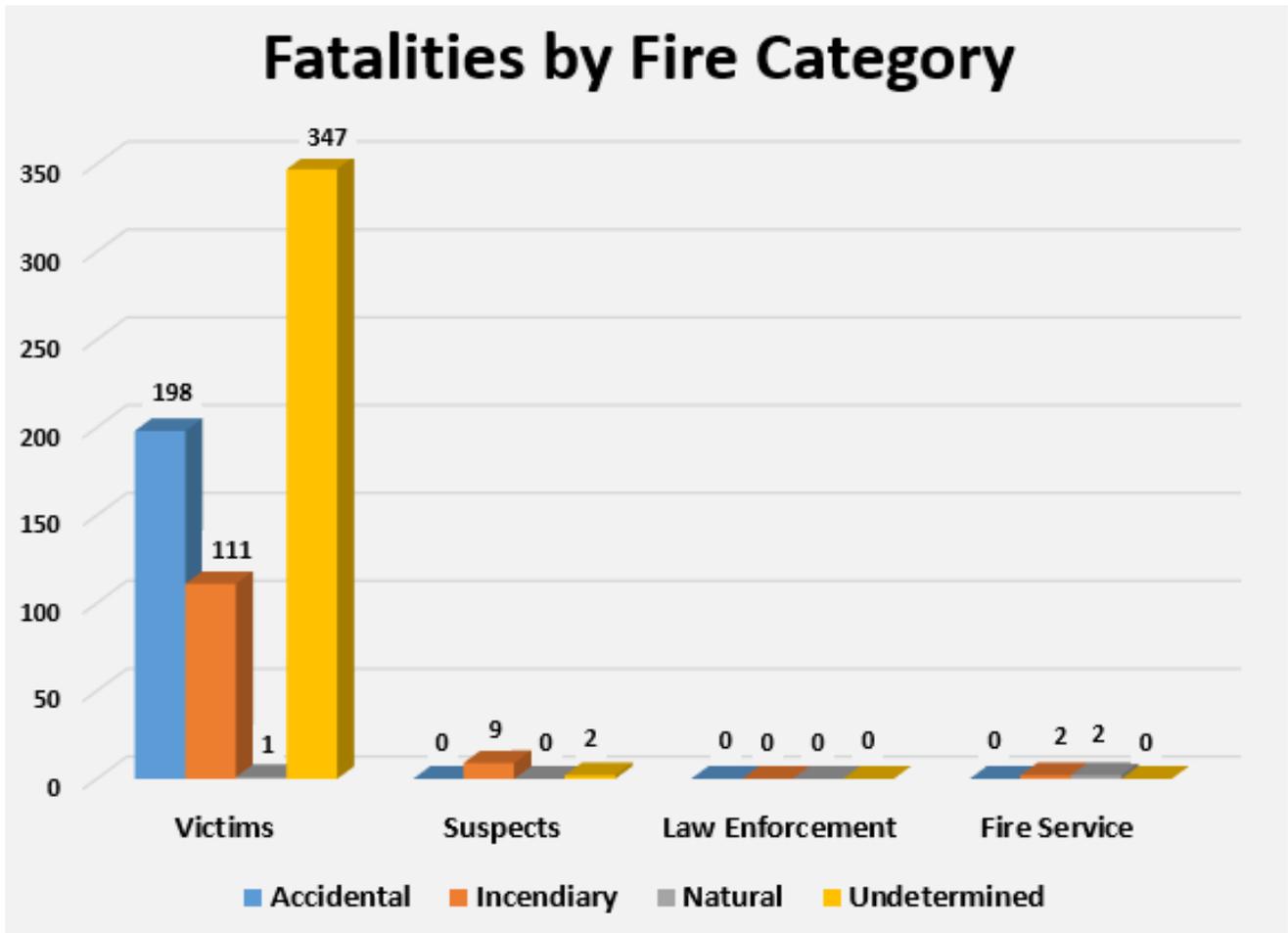
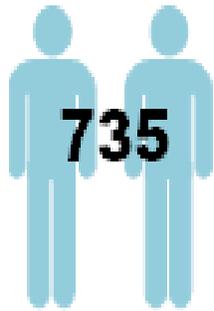


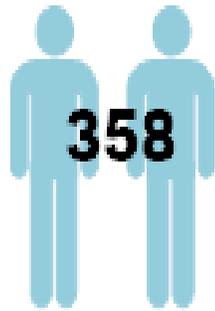
Figure 2. Fatalities by Fire Category

# FIRE INJURIES – 2016

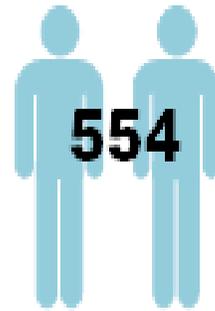
## 1,650 Fire Injuries in 2016



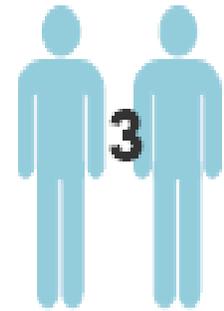
**ACCIDENTAL**



**INCENDIARY**



**UNDETERMINED**



**NATURAL**

Of the 1,650 injuries, 1,096 individuals were identified as “Victims,” 435 were identified as “Fire Service” and 41 were identified as “Law Enforcement.” There were also 70 individuals injured who were identified as a “Suspect.”

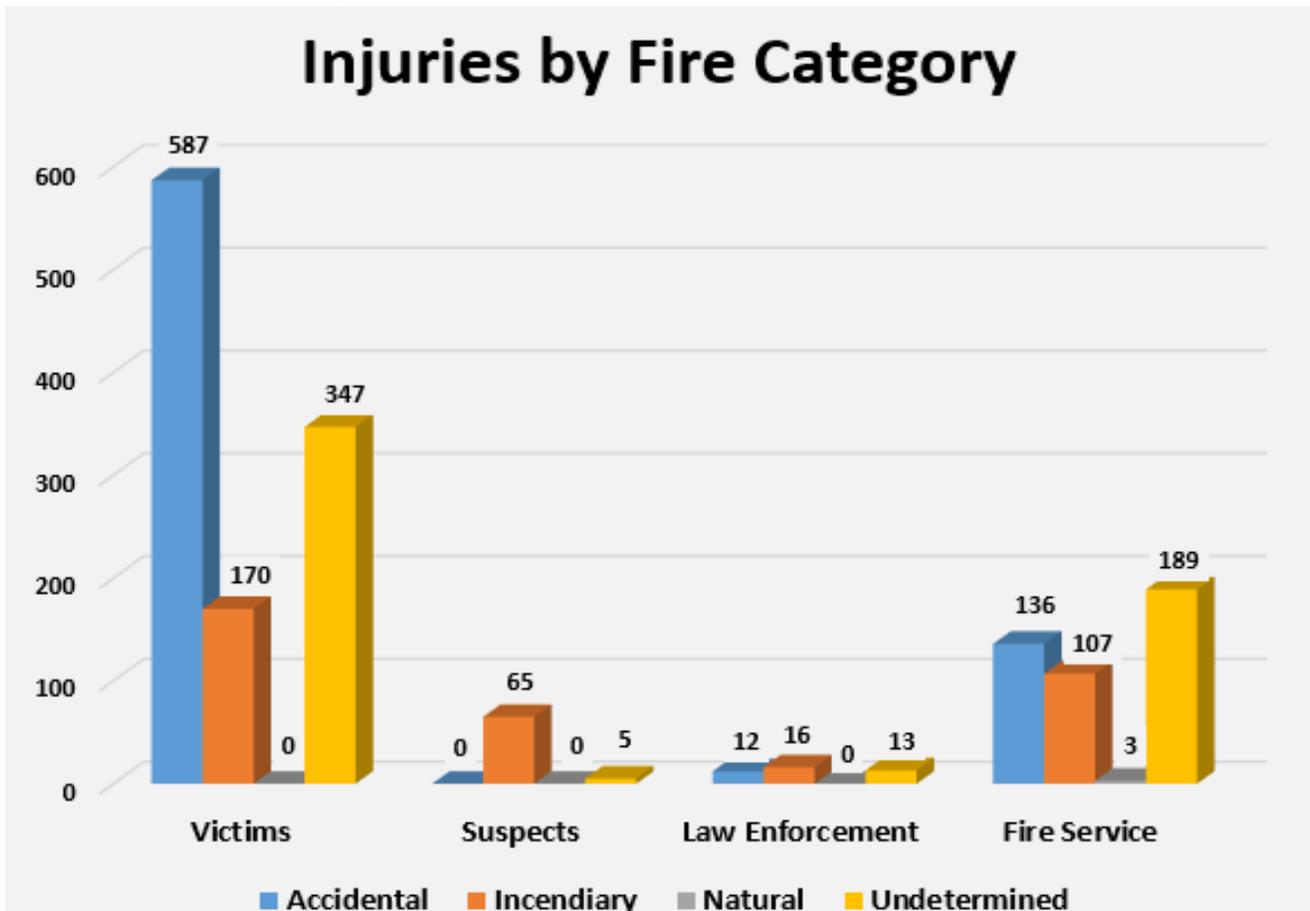


Figure 3. Injuries by Fire Category

# FIRE DAMAGES – 2016



## Damage Amount (\$) for Fire Types

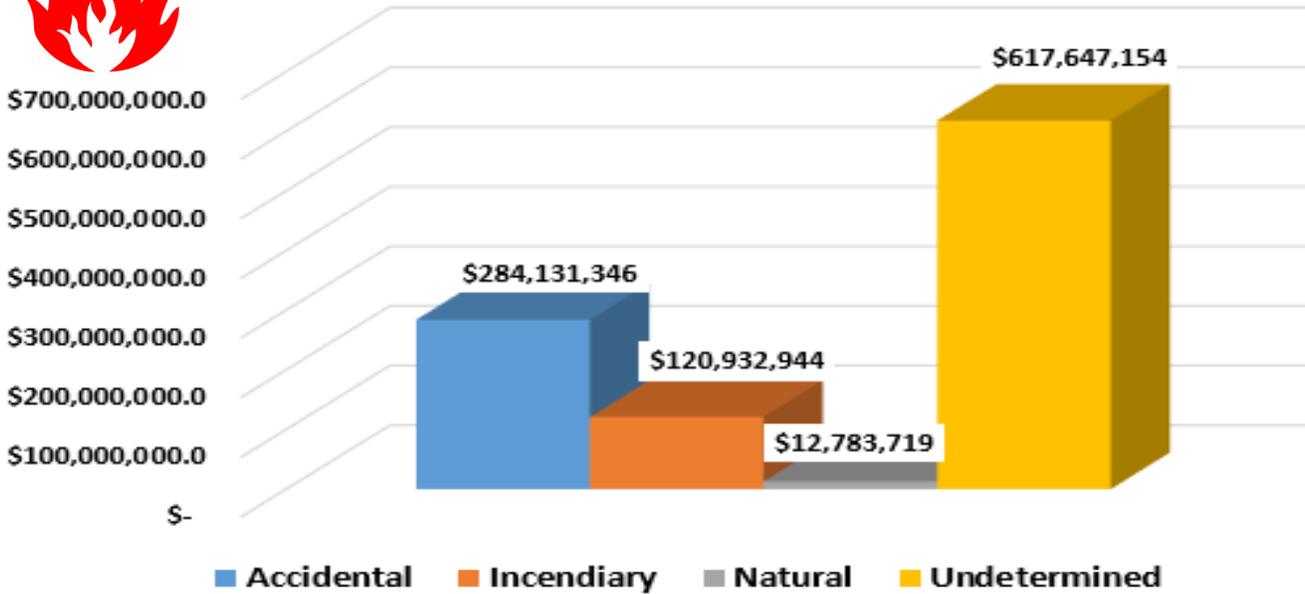


Figure 4. Damage Amount for Fire Types

Damages associated with the 21,979 fire incidents reported in BATS totaled more than \$1,035,495,163 for calendar year (CY) 2016. Fires listed as “Undetermined” led the fire type category with \$617,647,154 in damages, while “Residential” properties was the leading category of property types associated with Incendiary (Arson) fires, with damages at \$63,572,559.

## Damage Amount (\$) of Incendiary Fire Targets

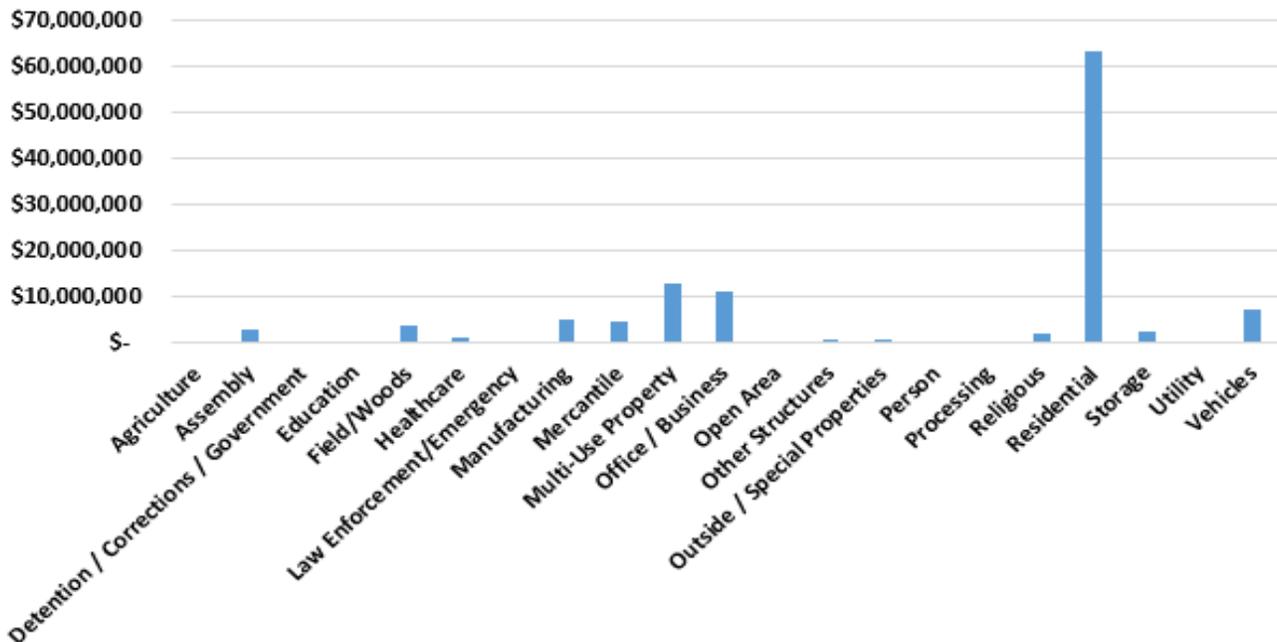


Figure 5. Damage Amount of Incendiary Fire Targets

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# INCENDIARY FIRE SUBTYPES – 2016

Of the 7,389\* Incendiary (Arson) fire-related incidents reflected in BATS, there were 1,491 Incendiary fires listed as involving an “Accelerant,” along with 4,107 fires involving “Available Combustibles,” 358 fires involving an “Incendiary Device” and 1,419 fires listed as “Pending Laboratory Analysis.” There were also 14 Incendiary fires listed with no information or “Blank.”

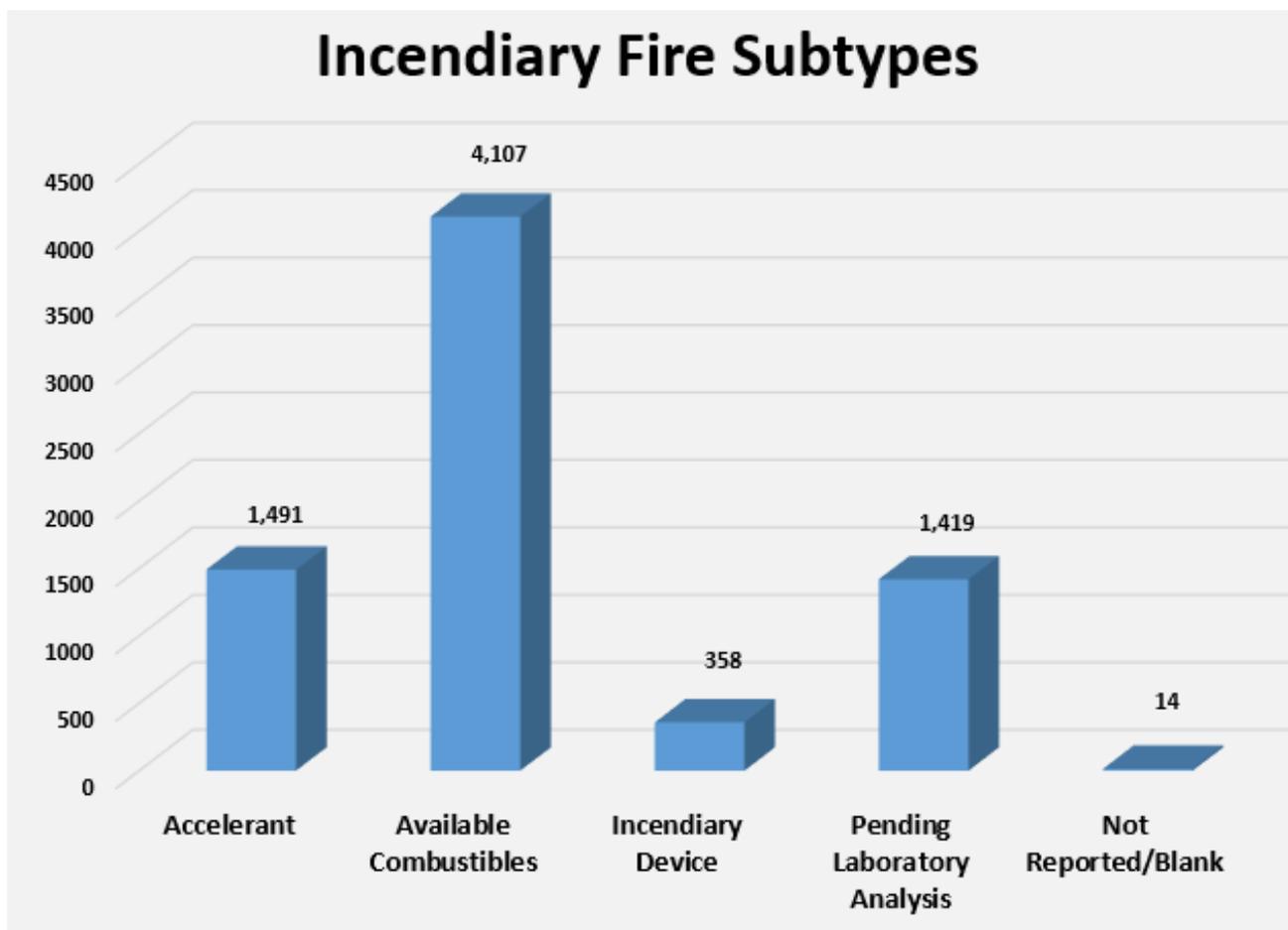


Figure 5. Incendiary Fire Subtypes

\* 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 2016.



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# INCENDIARY FIRES (STATE) – 2016

A review of the 7,389\* fires listed in BATS as “Incendiary or Arson” by location (State) revealed the highest number of incidents were reported in California (1,124), followed by Florida (999) and then Texas (761). These three States accounted for more than 39 percent of the total “Incendiary” fires reported in BATS during calendar year 2016.

## INCENDIARY FIRES BY STATE

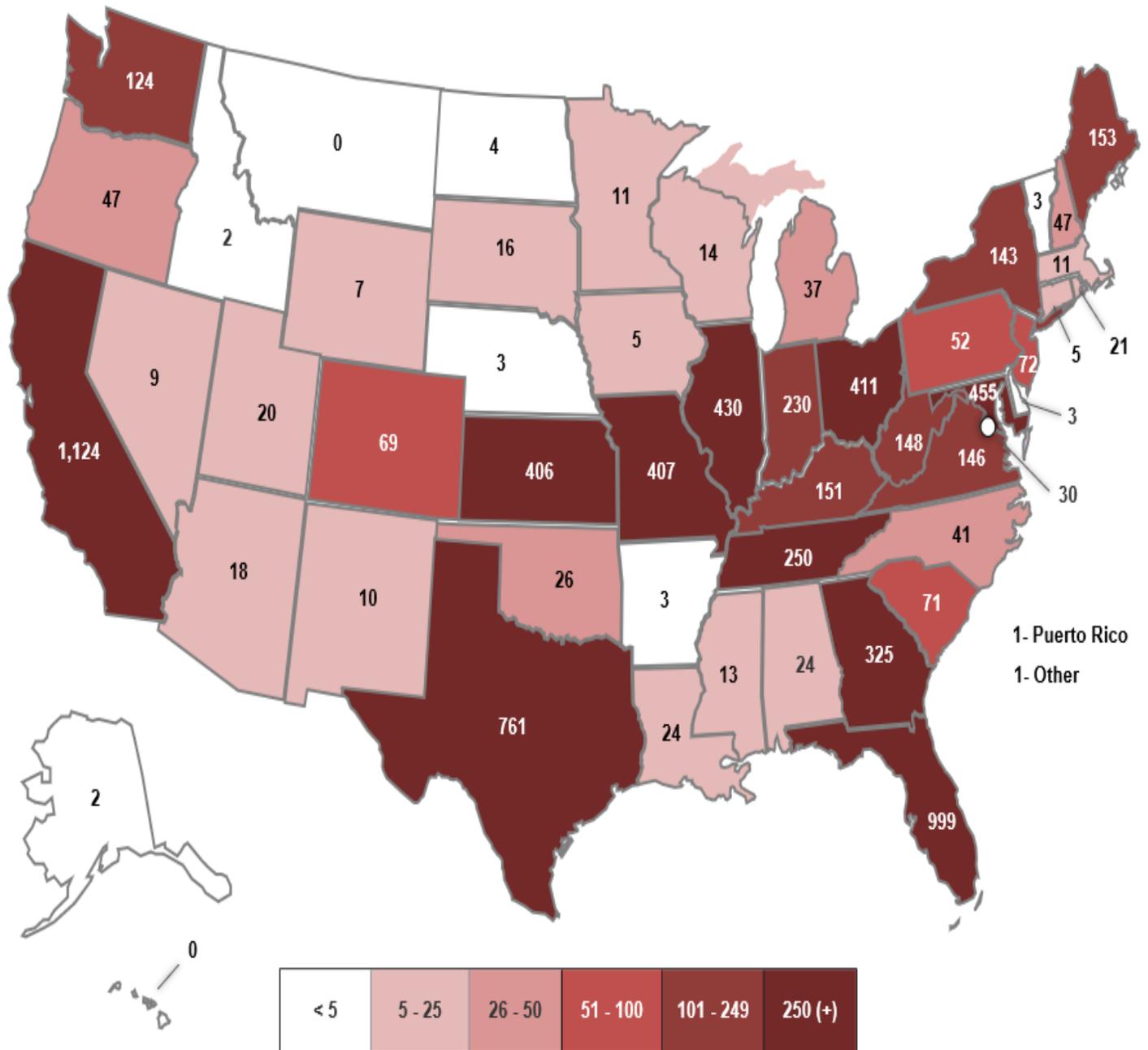


Figure 7. Incendiary Fires by State

\* 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 calendar year 2016.

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# INCENDIARY FIRES (FEMA REGIONS) – 2016

A breakdown of the 7,389\* 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 (1,874), Region IX (1,152) and Region V (1,133). These three regions accounted for more than 56 percent of the total “Incendiary” fires reported in BATS during calendar year 2016.

## INCENDIARY FIRES BY FEMA REGIONS

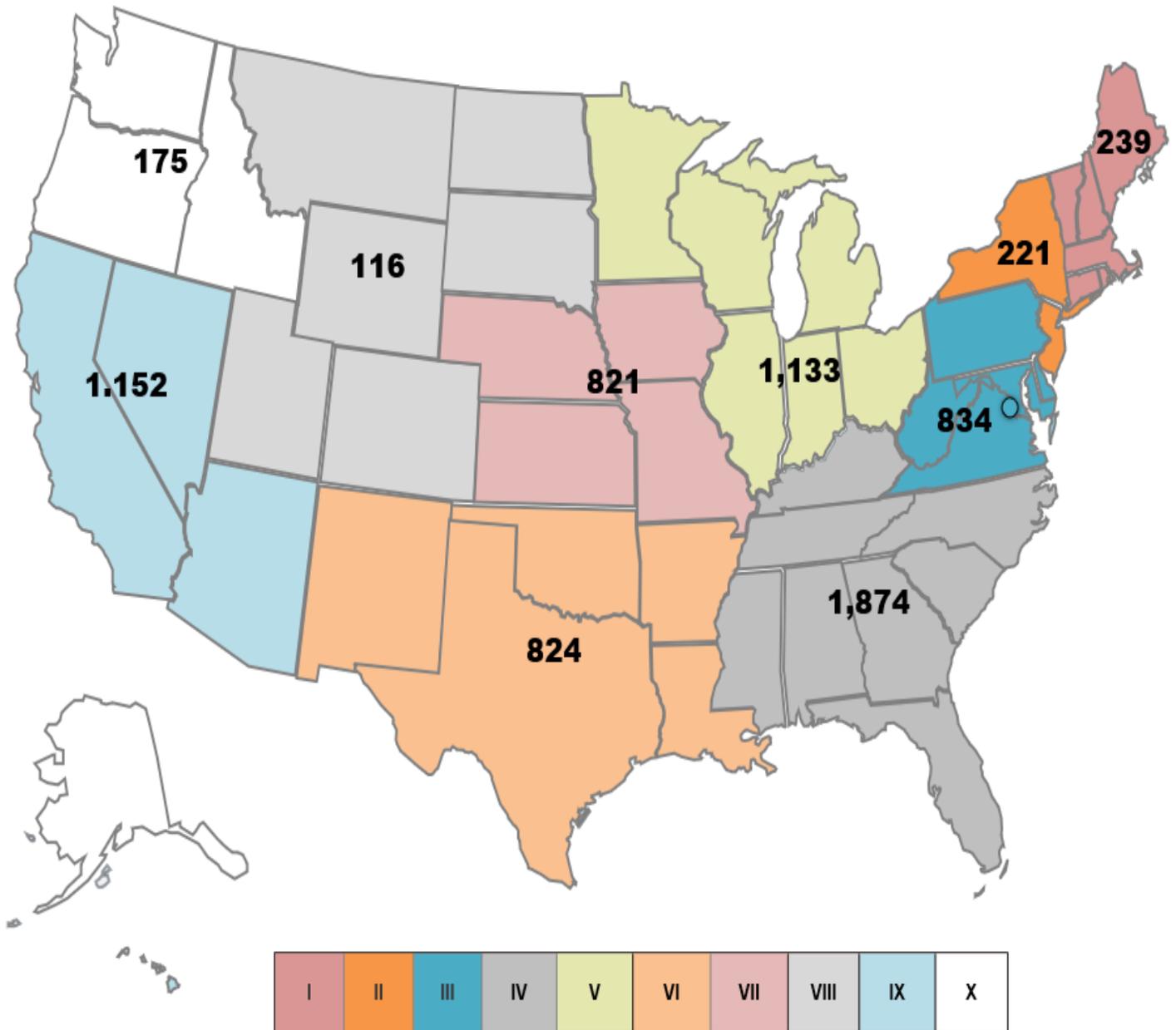


Figure 8. Incendiary Fires by FEMA Regions

\* 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 calendar year 2016.

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# PROPERTY TYPES – 2016

There were 23 different “Property” types selected within BATS that involved “Incendiary” fires for 2016. Residential fires accounted for more than 46 percent of all “Incendiary” incidents reported for 2016, followed by vehicles (20%) and other structures (9%).

## Incendiary Fires by Property Types

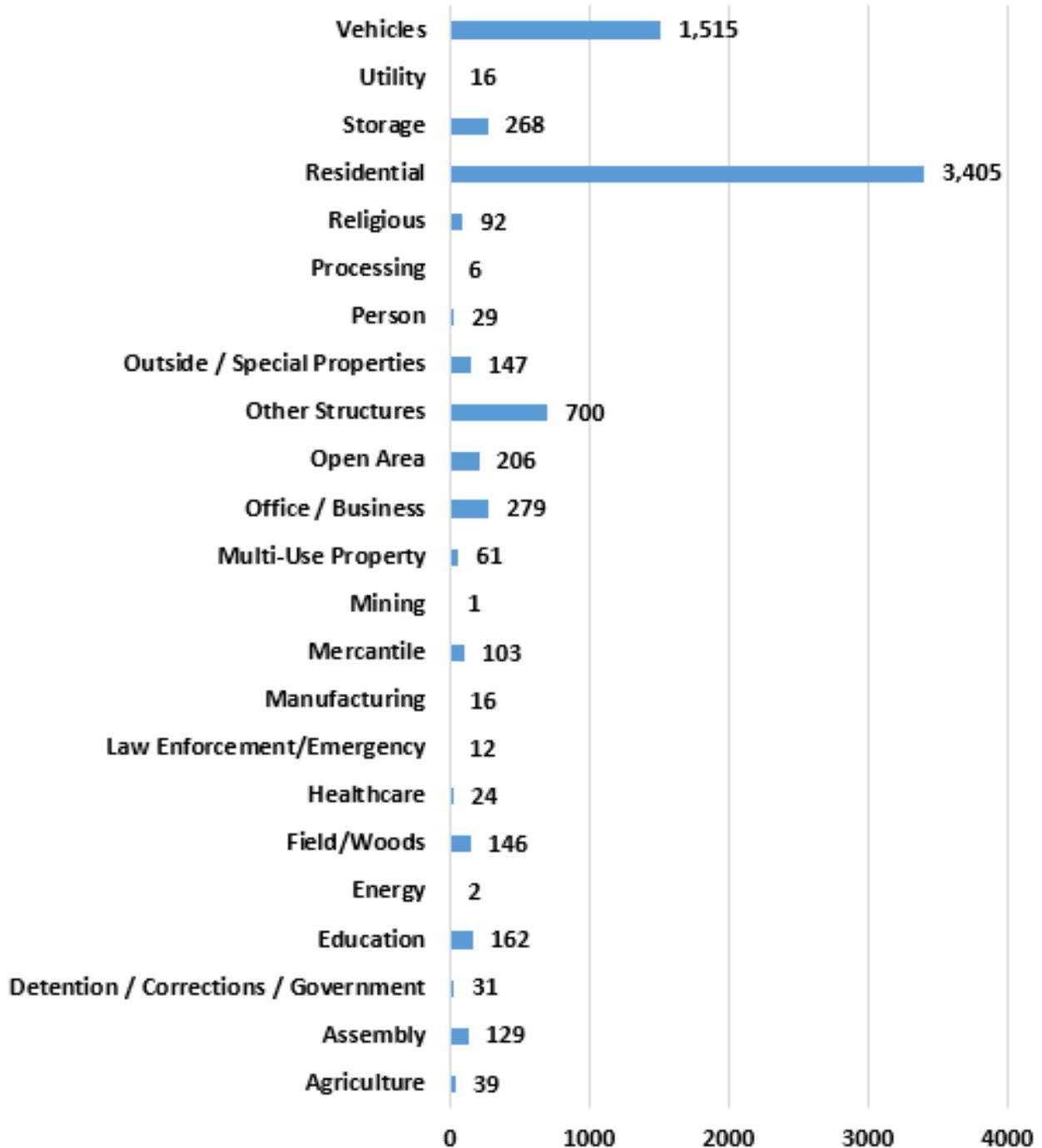


Figure 9. Incendiary Fires by Property Types

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# TIME/DAY/MONTH OF OCCURRENCE – 2016

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) identified 2,805 incidents and accounted for 38 percent of the incidents. The time period of 06:01 until 09:00 (daylight morning hours) had the lowest number of incidents at 613 or 8 percent of incendiary fires reported in BATS during 2016.

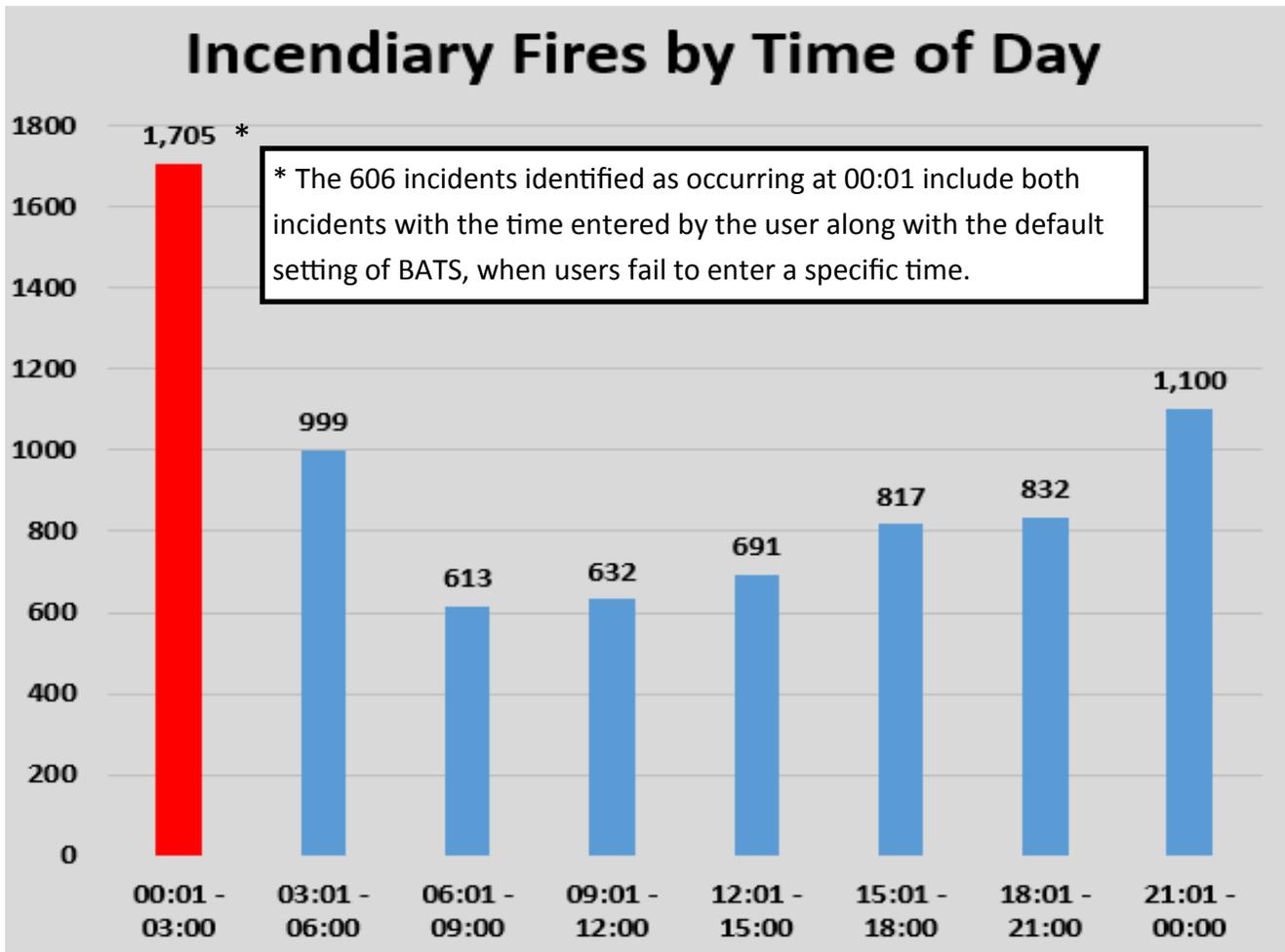


Figure 10. Incendiary Fires by Time of Day

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 1,155 (or 16%) of all reported incidents. Saturday was identified as having the lowest rate of occurrence of “Incendiary” fires, with 979 (or 13%) of all reported incidents.

A review of the months that “Incendiary” fires occurred did not show any significant variation among the 12 months of calendar year 2016. Incidents occurring in July were identified as the most frequent month of the year in which an “Incendiary” fire may occur, with 745 (or 10%) incidents. December was identified as having the lowest frequency of “Incendiary” fires occurring, with 443 (or 6%) incidents.

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# INCENDIARY FIRES (VEHICLES) – 2016

During calendar year 2016, there were 1,515 incidents of incendiary fires associated with vehicles. Of those vehicle fires, 1,024 were associated with an “Automobile/Car,” 177 were associated with a “Truck (Pickup)” and 128 were associated with a “Sport Utility Vehicle (SUV).” There were also 20 fires associated with a “Boat” and 5 fires associated with “Police/Emergency” vehicles.

## Incendiary Fires by Type of Vehicle

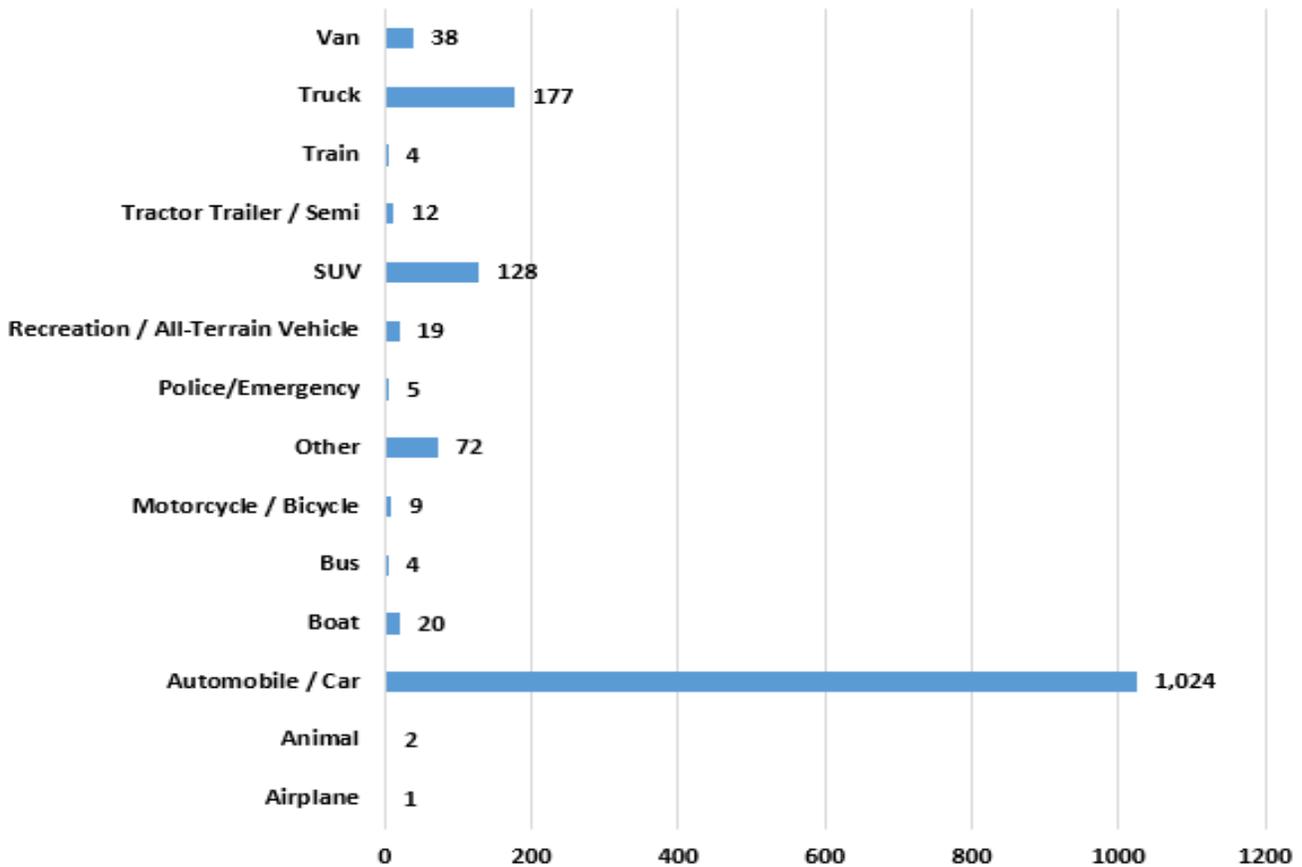


Figure 11. Incendiary Fires by Type of Vehicle



# INCENDIARY FIRE DESCRIPTORS – 2016



The top three “Fire Descriptors” identified for the 7,389 Incendiary fires reported in 2016 were Open Flame, Ignitable Liquid and Lighter.

**\*\* More than 55 percent of reported Incendiary fires did not identify any type of fire descriptors.**

## 10 Most Common Fire Descriptors for Incendiary Fires

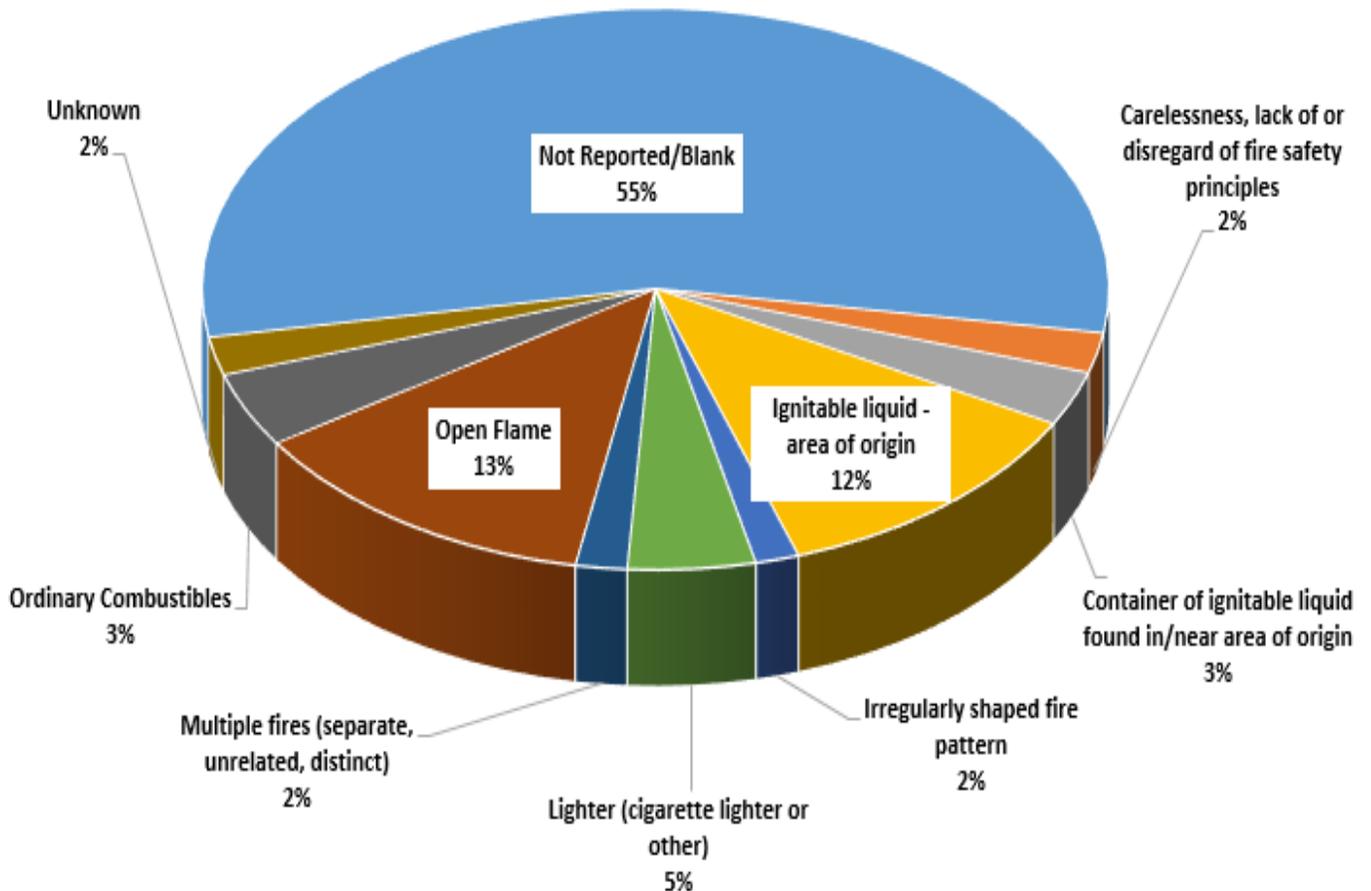


Figure 12. Common Fire Descriptors of Incendiary Fires

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**MOTIVES FOR INCENDIARY FIRES – 2016**

There are currently nine types of motivation available for selection within BATS for an “Incendiary” fire. The top 3 types of known motivation selected for the 7,389 Incendiary fires reported in 2016 were “Revenge,” “Vandalism” and “Other.”

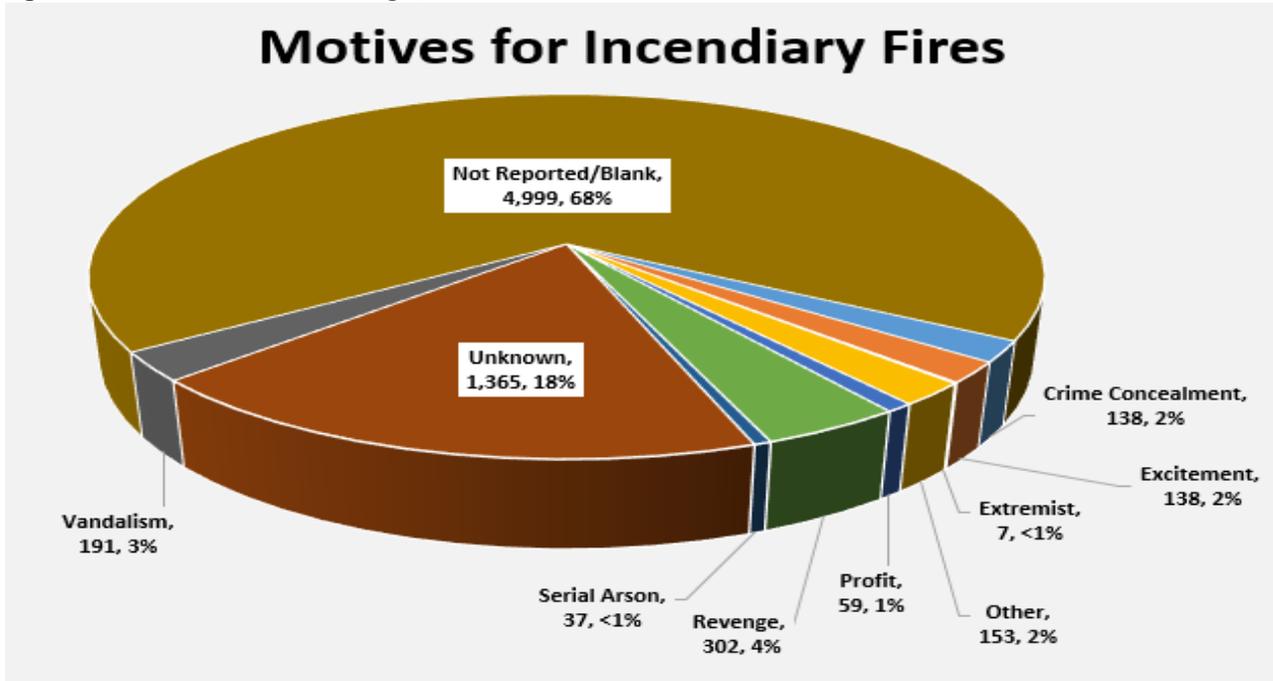


Figure 13. Motives for Incendiary Fires

There were eight types of motivation selected within BATS for an “Incendiary” fire involving a juvenile offender. The top three types of known motivation selected for the 488 Incendiary fires reported in 2016 were “Excitement,” “Vandalism” and “Other.”

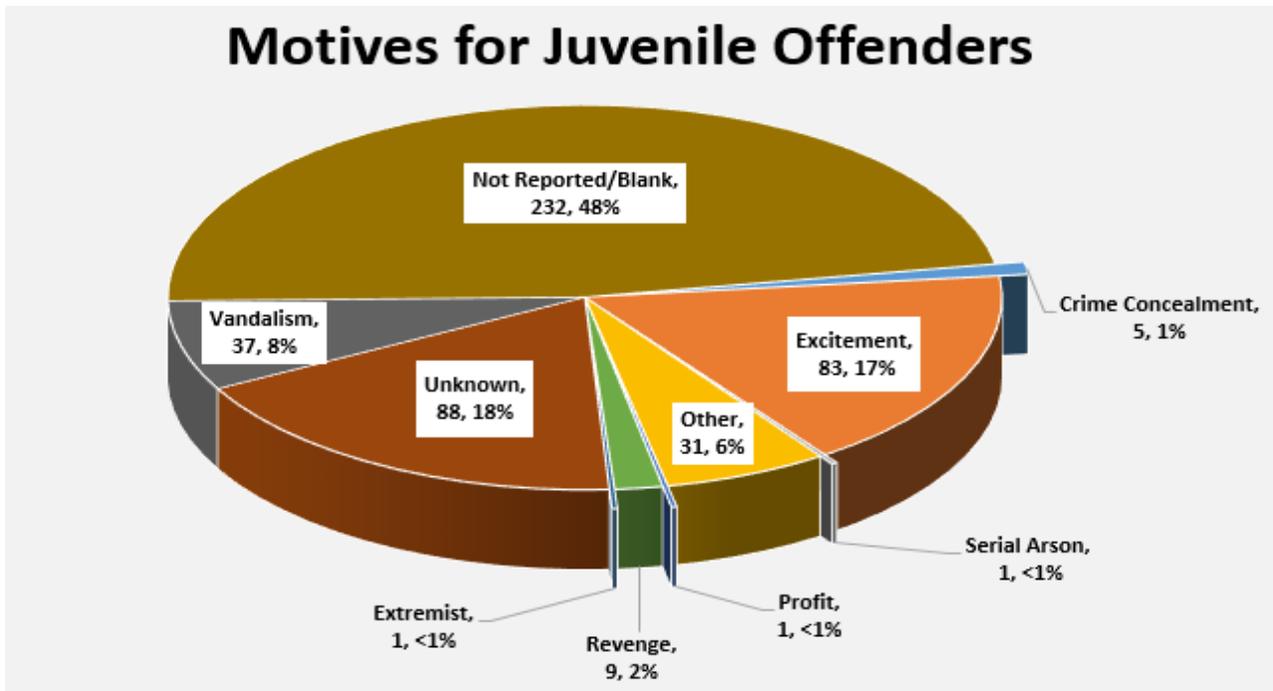


Figure 14. Motives for Juvenile Offenders

# JUVENILE OFFENDER FIRES – 2016

There were 488 Incendiary fires recorded in BATS during 2016 where the suspect was listed as a “Juvenile Offender.” A review of the property type involved in those 488 incidents revealed the primary property target of juvenile offenders was “Residential” followed by “Education” and “Storage.” These 3 property types accounted for 333 incidents or 68 percent of the property types targeted by juvenile offenders during 2016.



## Property Types of Juvenile Offender Fires

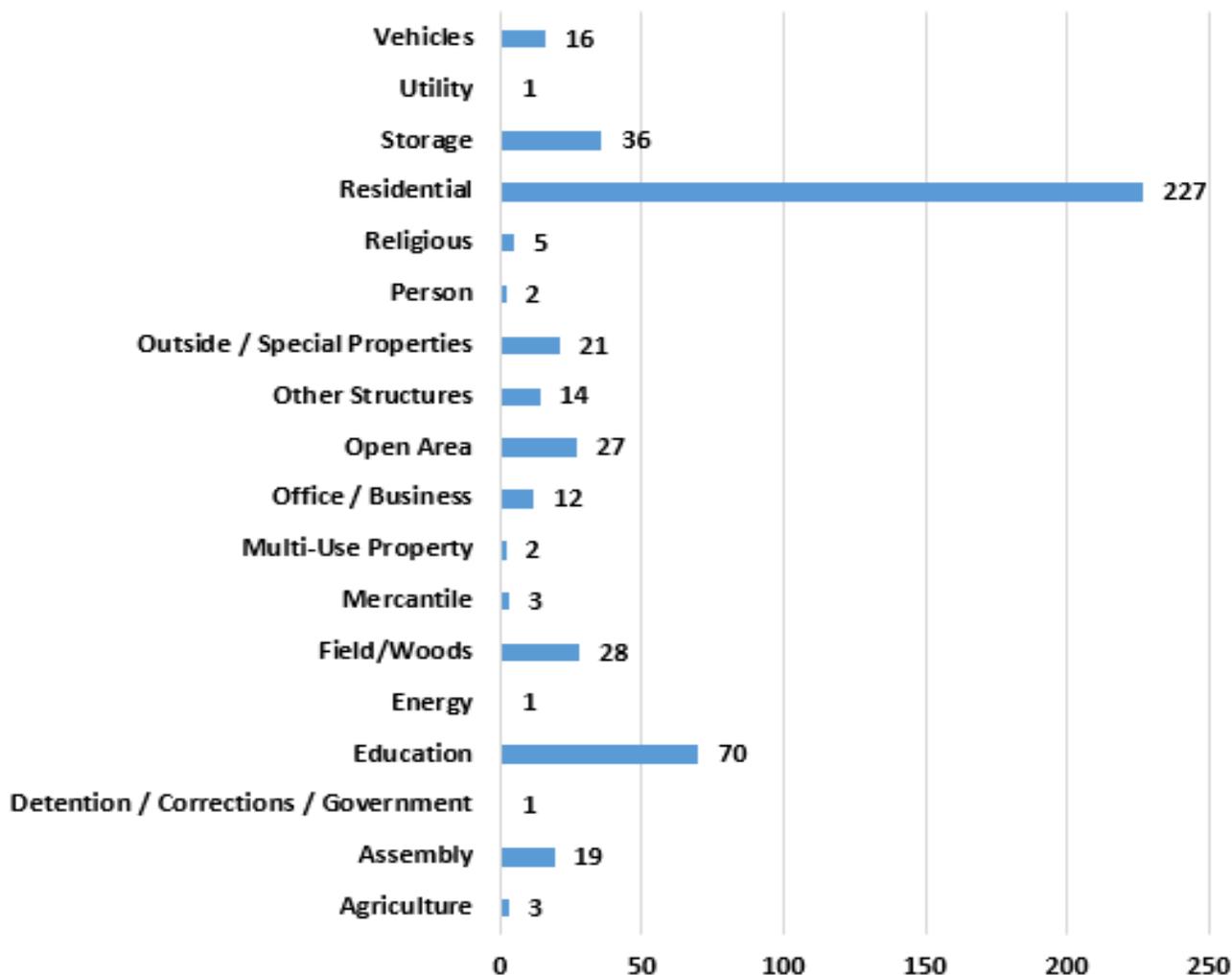
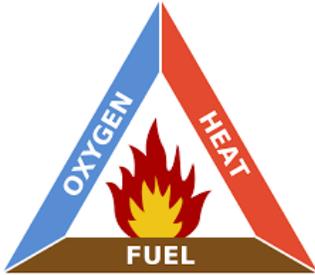


Figure 15. Property Types of Juvenile Offender Fires

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# AREAS OF ORIGIN – 2016

The top 3 “Areas of Origin” identified for the 7,389 Incendiary fires reported in 2016 were “Function Areas,” “Transportation-Vehicle Areas” and “Other.”\*



| Areas of Origin                          | Total |
|--|-------|
| Assembly, Sales Areas (Groups of People) | 277   |
| Function Areas                           | 767   |
| Means of Egress                          | 301   |
| Multiple Places of Origin / Placement    | 492   |
| Not Applicable                           | 32    |
| Other                                    | 500   |
| Service Areas                            | 11    |
| Service, Equipment Areas                 | 19    |
| Storage Areas                            | 323   |
| Structural Areas                         | 327   |
| Technical Processing Area                | 3     |
| Transportation, Vehicle Areas            | 765   |
| Unknown                                  | 3,572 |

The top 3 “Areas of Origin” identified for the 3,405 Residential Incendiary fires reported in 2016 were “Function Areas,” “Multiple Places of Origin/Placement” and “Structural Areas.”\*



| Residential Fires – Areas of Origin      | Total |
|--|-------|
| Assembly, Sales Areas (Groups of People) | 205   |
| Function Areas                           | 622   |
| Means of Egress                          | 238   |
| Multiple Places of Origin / Placement    | 358   |
| Not Applicable                           | 16    |
| Other                                    | 131   |
| Service Areas                            | 4     |
| Service, Equipment Areas                 | 7     |
| Storage Areas                            | 138   |
| Structural Areas                         | 259   |
| Transportation, Vehicle Areas            | 34    |
| Unknown                                  | 1,393 |

The top 3 “Areas of Origin” identified for the 262 incendiary fires related to Commercial use reported in 2016 were “Function Areas,” “Storage Areas” and “Other.”\*



| Commercial Fires – Areas of Origin       | Total |
|--|-------|
| Assembly, Sales Areas (Groups of People) | 21    |
| Function Areas                           | 29    |
| Means of Egress                          | 19    |
| Multiple Places of Origin / Placement    | 22    |
| Other                                    | 26    |
| Service Areas                            | 2     |
| Service, Equipment Areas                 | 2     |
| Storage Areas                            | 29    |
| Structural Areas                         | 14    |
| Transportation, Vehicle Areas            | 2     |
| Unknown                                  | 96    |

\* 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 – 2016

Between January 1, 2016, and December 31, 2016, BATS captured a total of 235 fire-related incidents involving a house of worship (HOW). Of the 235 HOW fires, 92 were listed in BATS as “Incendiary,” 42 as “Accidental” and 3 as “Natural.” There were also 98 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.

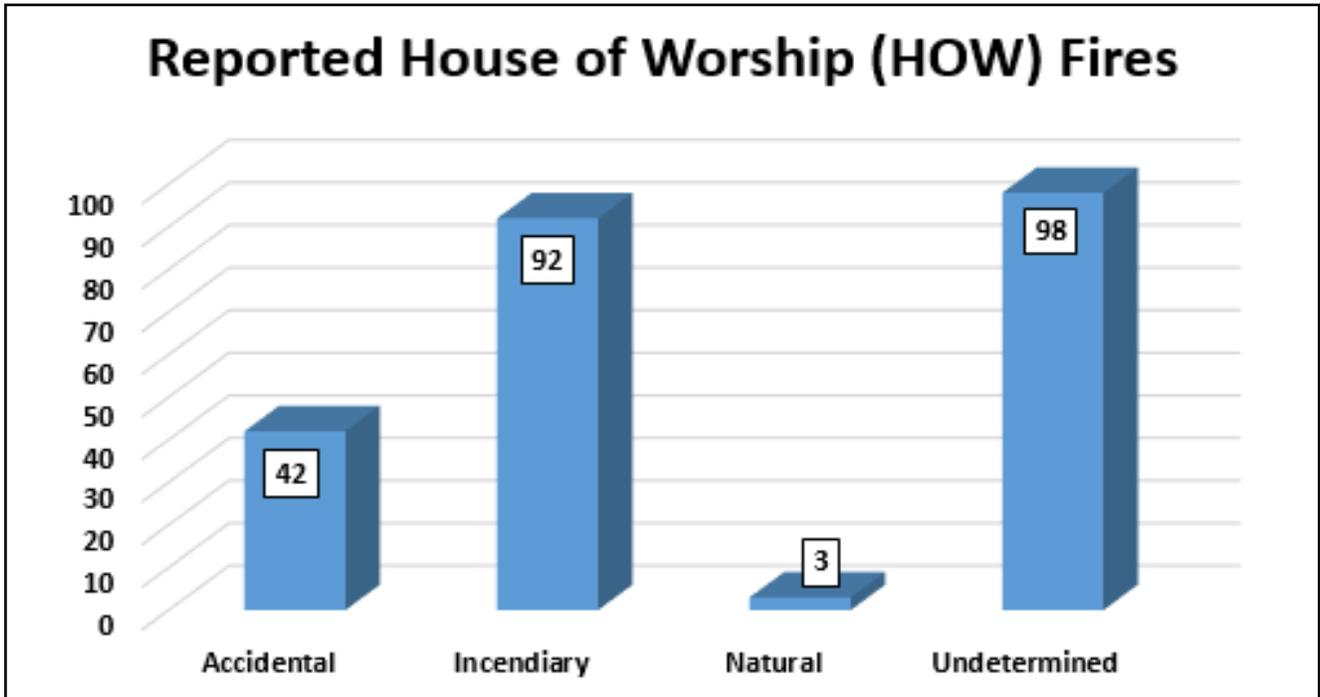


Figure 16. House of Worship Fires

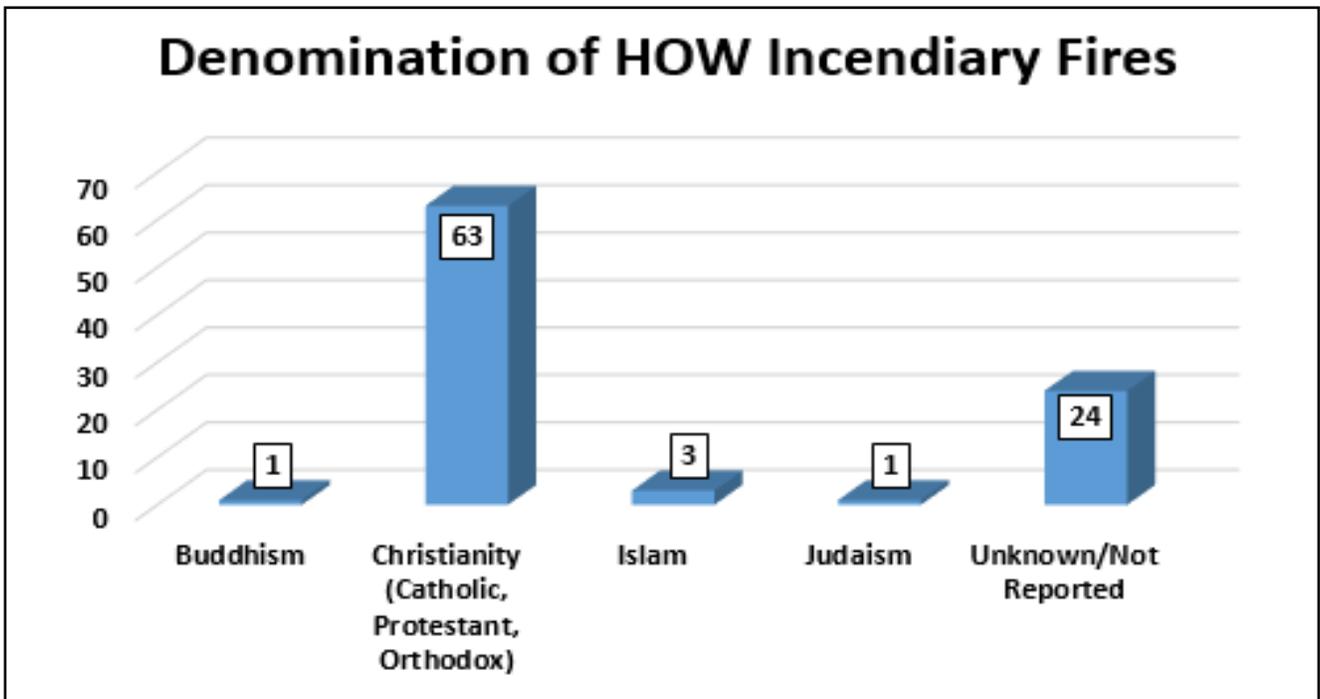


Figure 17. Denomination of HOW Fires

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# EDUCATION FIRES – 2016

There were 258 fires associated with an “Education” target between January 1, 2016, and December 31, 2016. Of those 258 fires reported in BATS, 162 were listed as “Incendiary,” 54 were listed as “Accidental” and 1 was listed as “Natural.” There were also 41 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. The target subtype category of “High School/Junior High/Middle School” accounted for 42 percent of all fire types and 52 percent of all Incendiary fires associated with an “Education” target.

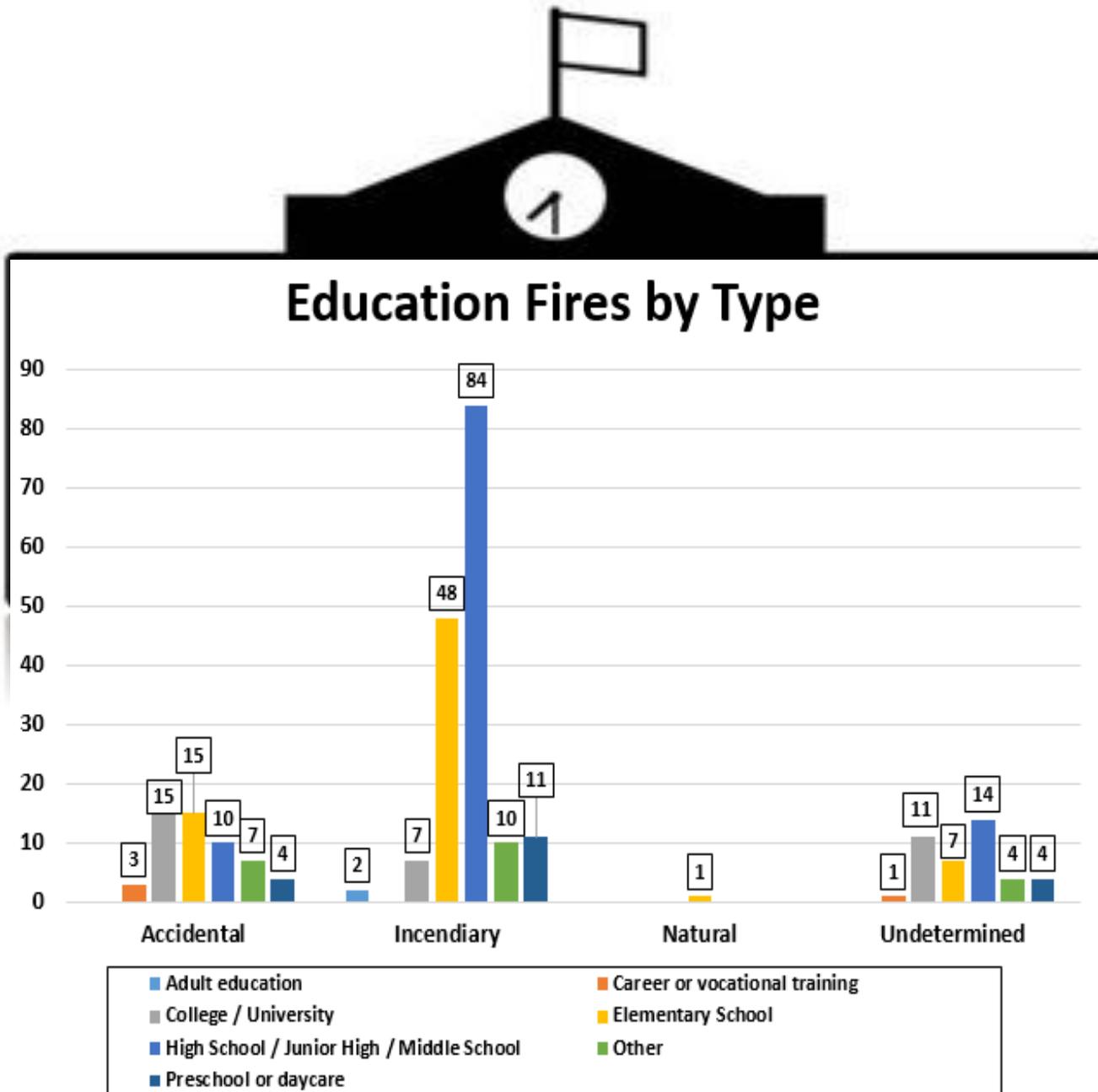


Figure 18. Education Fires

# CONTACT INFORMATION

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