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
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.

* 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.
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.

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.
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 ($) for Fire Types

<table>
<thead>
<tr>
<th>Type</th>
<th>Damage Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accidental</td>
<td>$264,045,938</td>
</tr>
<tr>
<td>Incendiary</td>
<td>$142,012,381</td>
</tr>
<tr>
<td>Natural</td>
<td>$6,930,226</td>
</tr>
<tr>
<td>Under Investigation</td>
<td>$145,394,240</td>
</tr>
<tr>
<td>Undetermined</td>
<td>$324,129,381</td>
</tr>
</tbody>
</table>

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

- Agriculture
- Assembly
- Education
- Field/Woods
- Healthcare
- Manufacturing
- Mercantile
- Multi-Use Property
- Office/Business
- Open Area
- Other Structures
- Outside/Special Properties
- Person
- Religious
- Residential
- Storage
- Utility
- Vehicles

Figure 4. Damage Amount for Fire Types

Figure 5. Damage Amount of Incendiary Fire Targets
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.”

* 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.
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.

* 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.
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.

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.
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).
A review of the day of the week 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

- 00:01-03:00: 1,030
- 03:01-06:00: 893
- 06:01-09:00: 580
- 09:01-12:00: 584
- 12:01-15:00: 606
- 15:01-18:00: 605
- 18:01-21:00: 741
- 21:01-24:00: 1,493*

* There were 638 incidents identified as occurring at 00:00, which included those incidents with the time entered by the user along with the default setting of BATS, when users fail to enter a specific time.

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.
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.
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.

Figure 12. Common Fire Descriptors of Incendiary Fires
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.”

**Figure 13. Motives for Incendiary Fires**
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**

- Agriculture: 3
- Assembly: 13
- Detention/Corrections/Government: 2
- Education: 44
- Field/Woods: 8
- Manufacturing: 1
- Mercantile: 6
- Not Reported/Blank: 14
- Office/Business: 7
- Open Area: 4
- Other Structures: 6
- Outside/Special Properties: 23
- Religious: 5
- Residential: 159
- Storage: 13
- Vehicles: 14

Figure 14. Property Types of Juvenile Offender Fires
The top 3 “Areas of Origin” identified for the 6,532 Incendiary fires reported in 2018 were “Function Areas,” “Transportation, Vehicle Areas” and “Other.”*

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

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.”*

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

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.”*

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

* 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.
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**

![Bar chart showing the distribution of different categories of HOW fires.]

**Denomination of HOW Incendiary Fires**

![Bar chart showing the distribution of incendiary fires across different denominations.]

Figure 15. House of Worship Fires

Figure 16. Denomination of HOW Fires
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” target.
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