Fires reported in the month

- Structure Fires …… 42
- Vehicle Fires …… 21
- Other Fires …… 7

2021 Monthly Fire Counts

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>127</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>197</td>
</tr>
</tbody>
</table>

Dollar loss attributed to fire year to date $7,835,450.00

Total incidents reported for the month 2,306

Most reported fire type for the month
- Building fires ................................................................. 35.71%
- Passenger vehicle fire ..................................................... 15.71%

Most reported heat source for the month
- Radiated, conducted heat from operating equipment .................. 14.49%
- Undetermined ........................................................................ 43.48%
Injuries and Fatalities Caused by Fire

<table>
<thead>
<tr>
<th></th>
<th>Month</th>
<th>Year to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civilian fire casualties</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Civilian fire injuries</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Fire service injuries</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

Percentage of fire departments reporting for the month ........................................ 27%
Percentage of fire departments reporting for the year to date ............................... 40%

Incident totals by type year to date 2021

<table>
<thead>
<tr>
<th>Fires</th>
<th>Rupture/explos.</th>
<th>Rescue (EMS)</th>
<th>Hazardous Conditions</th>
<th>Service</th>
<th>Good Intent</th>
<th>Severe Weather</th>
<th>Special Incident</th>
<th>False Calls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>197</td>
<td>15</td>
<td>4,383</td>
<td>267</td>
<td>319</td>
<td>615</td>
<td>0</td>
<td>28</td>
<td>790</td>
<td>6,614</td>
</tr>
</tbody>
</table>

Update from the State Fire Marshal’s Office:

As can be seen in our fire losses again this month, it has been a difficult start for fire safety in 2022. North Dakota recorded three casualties due to fire in February. As we grapple with the losses from the month, please remind your communities about the critical importance of basic fire safety tenets: smoke alarms, carbon monoxide alarms, storage of combustibles, correct use of electrical appliances, smoking hazards and many more.

Fire reporting for the year of 2021 is still open until the end of June 2022. If you still have incidents to enter, you have time. Please let us know if there is anything that we can do to assist with getting fire incidents entered. Please note if you are using Emergency Reporting by ESO, that incidents are not released to our office until they are “reviewed” and turn green.

Over the next month, we will begin reaching out to those fire departments that have unreleased incidents still in the Emergency Reporting by ESO system.

The Deputy Fire Marshal District 4 (Fargo Office) position has been filled. We are proud to announce that Kirstin Greaney-Stanger has taken the position and is just about done with the first phase of her training with us. Kirstin is a volunteer for the West Fargo Fire Department, and we are excited to see the quality of work that she will bring to the State Fire Marshals Office. Please join us in welcoming Kirstin to the State Fire Marshals Office and the North Dakota Fire Service!

The public education and outreach for this month is the informational flyer from the Propane Education & Research Council. The flyer details the importance of following fire codes for safe storage and handling of propane tanks. This includes the codes related to the practice of repurposing anhydrous ammonia tanks to store propane (which is not allowed in tanks under 3,000 gallons). Please contact us if you have any questions regarding propane safety or fire code compliance.

Thank you,
Douglas Nelson
ND State Fire Marshal
Public education and outreach for the month:
More public education resources can be found on the following organizations websites.

United States Fire Administration:  https://www.usfa.fema.gov/index.html

National Fire Protection Association:  www.nfpa.org


SAFETY ALERT
Conversion of Anhydrous Ammonia Containers to Propane Service

The purpose of this alert is to advise those who may be considering conversion of containers from ammonia to propane that NFPA 58 and the NBIC are clear on the subject.

Although containers used for anhydrous ammonia storage are essentially manufactured the same as a propane container and are built to the same standard as propane containers, there are some significant issues to be aware of:

- Anhydrous ammonia (NH₃) is corrosive while propane is noncorrosive.
- Anhydrous ammonia is toxic while propane is non-toxic.
- Under similar release conditions, inhalation of NH₃ can be deadly.
- A propane container contaminated with anhydrous ammonia • May be subject to an independent pressure build called “sticking” • May affect appliance operating systems.
- Under certain conditions may create a dangerous toxic gas when burned within appliances.

Conversion has been associated with stress corrosion cracking in areas of high stress such as welds and seams.

- Anhydrous ammonia valves and fittings must be steel while propane valves and fittings are typically brass. Brass is subject to severe stress corrosion cracking when subjected to NH₃ and is evidenced by a blue-green stain on the brass when contaminated by ammonia.
- The flow requirements for the relief device in an ammonia tank are not nearly what is required for a propane container; the opening in the container may not be large enough to accommodate the relief device necessary for propane service.
- The manufacturer of the NH₃ tank may have marked the data plate “For NH₃ Only.”
- Cargo tanks and ASME containers larger than 3,000 gallons water capacity must go through rigorous conversion procedures by a qualified vendor to contact the manufacturer to successfully make their way from NH₃ to LPG service.

This ALERT has detailed the conversion of small storage containers is not allowed by codes and outlined the dangers involved if ANY conversion is performed improperly. The primary conclusion here is SAFETY. Safety of the container, safety of the product, safety of the propane system, and safety of the customer being supplied. The risk is just too great.

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