



2018 ANNUAL REPORT  
BOZEMAN FIRE DEPARTMENT

## MISSION

*Problem Solving Through Professionalism  
and Compassionate Service since 1884*

## VISION

*We will provide exceptional service as a unified team to promote  
a professional department that grows with the community*

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## MESSAGE FROM FIRE CHIEF WALDO

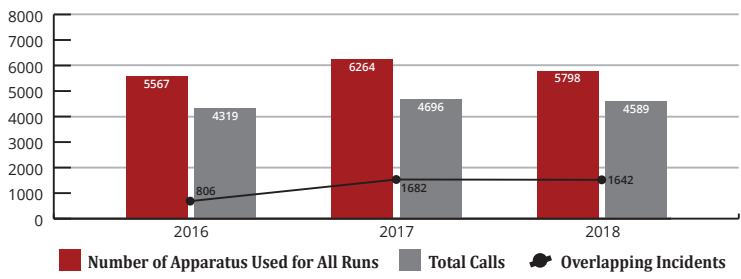
I am pleased to present the 2018 Bozeman Fire Department Annual Report. 2018 served as another year of progress and growth for the fire department as we continue to adjust and adapt to the needs of our community and citizens. We are excited about the passage of the Bozeman Public Safety Center (BPSC) as it addresses one of the biggest needs we have for the future of the department. Another milestone event for the fire department in 2018 was the adoption of the department's first ever strategic plan. The strategic plan takes recommendations from the 2017 Fire Master Plan, 2018 City Strategic Plan, and internal planning efforts and incorporates them into a singular plan for the fire department to follow over the next three years. The Fire Department Strategic Plan is a requirement of the Center for Public Safety Excellence Accreditation process, as is a self-assessment, community risk assessment and standards of covers. This work coupled with the department's continued work on professional development of employees and the emergency preparedness of the department and community, continues to make Bozeman a safe and welcoming community to live. The members of BFD are looking forward to the challenges and opportunities that are coming in 2019 and feel confident that we are prepared to meet them, while continuing to provide a high level of service for residents and visitors here in Bozeman.

Yours in service,

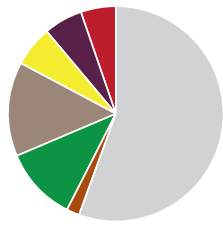


Joshua L. Waldo, EFO, CFO  
Fire Chief

## INCIDENT NUMBERS



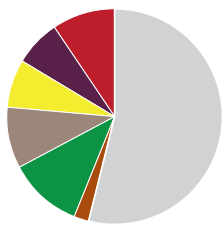
## RESPONSE BREAKDOWN



### 2016

- Fire (2%)
- EMS (55%)
- Vehicle Accidents (5%)
- Service Calls (6%)
- Good Intent Calls (14%)
- False Calls (11%)
- Hazardous Condition (6%)

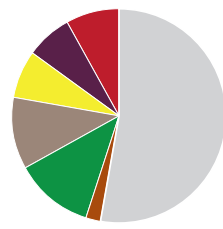
TOTAL RUNS: 5,567



### 2017

- Fire (2%)
- EMS (53%)
- Vehicle Accidents (9%)
- Service Calls (7%)
- Good Intent Calls (9%)
- False Calls (11%)
- Hazardous Condition (7%)

TOTAL RUNS: 6,264



### 2018

- Fire (2%)
- EMS (53%)
- Vehicle Accidents (8%)
- Service Calls (7%)
- Good Intent Calls (11%)
- False Calls (12%)
- Hazardous Condition (7%)

TOTAL RUNS: 5,798

When a request for fire department response is made, an incident is created in the records management system. Depending on the type of incident, the number of fire department apparatus / units that respond will vary. Incidents are different from runs, as each incident can create a number of different run totals. For most EMS type events, a single apparatus would run the incident, whereas a fire alarm at a nursing home would trigger three fire apparatus to run on the incident. It is important to track the total number of runs that a department makes as it is a more accurate reflection of the workload on the emergency response system. Below are the total number of runs each primary unit made in 2018.

Engine 1 – 1,928  
 Engine 2 – 1814

Truck 3 – 1238  
 Battalion 1 – 656

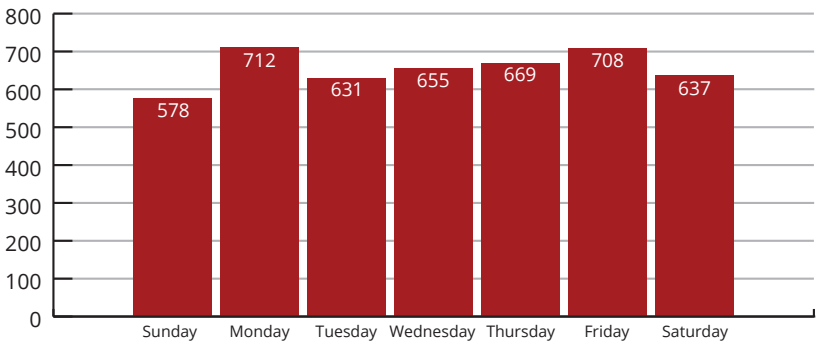
*Does not include all apparatus, only the primary in service units.*

## OVERLAPPING INCIDENTS

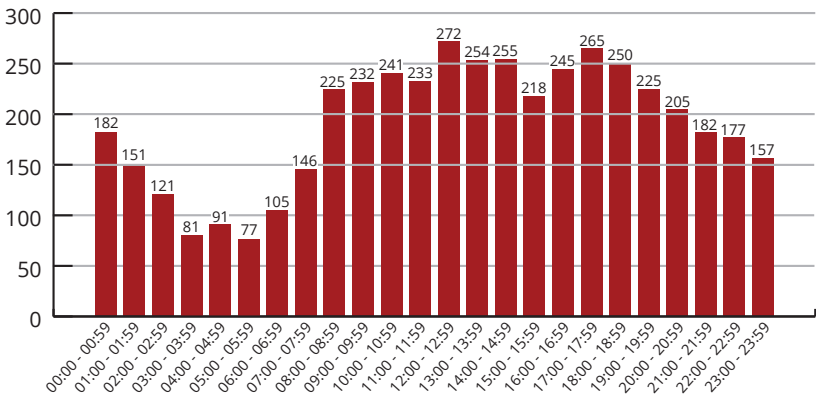
2018 — 1700 (37%)    2017 — 1682 (36%)    2016 — 806 (19%)

Overlapping incidents occur when the department has more than one incident response going at the same time. This is an important data point to track as some incidents require more than one fire department unit to respond. Having two or more calls overlapping at the same time could result in a situation where not enough units are available for response or units are responding across town to cover additional calls.

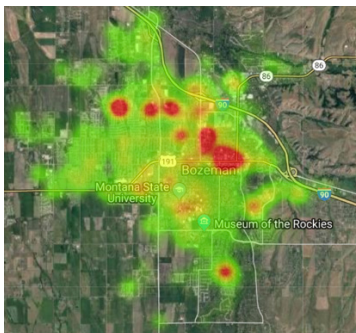
### CALLS FOR SERVICE BY DAY OF THE WEEK



### CALLS FOR SERVICE BY HOUR OF THE DAY



Heat map showing call distribution for 2018



## RESPONSE TIMES

An emergency response can be broken down into numerous segments or intervals of an event. To measure emergency response times, the fire department uses two standards from the National Fire Protection Association (NFPA) for benchmarking and evaluating emergency response times.

- NFPA 1221, 2019 Edition: *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*
- NFPA 1710, 2020 Edition: *Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*

These two standards allow the fire department to measure the time from a call being answered by the 911 center until a fire department unit arrives on scene to provide service. To measure our performance, the department evaluates the following time intervals of an emergency call.

**Alarm Processing Time:** The time interval from when the alarm is acknowledged at the communication center until response information begins to be transmitted via voice or electronic means to emergency response facilities and emergency response units.

**Turnout Time:** The time interval that begins when the emergency response facilities and emergency response units notification process begins by either an audible alarm or visual annunciation or both and ends at the beginning point of travel time.

**Travel Time:** The time interval that begins when a unit is en route to the emergency incident and ends when the unit arrives at the scene.



NFPA provides the following recommendations for emergency response times:

Alarm Processing from NFPA 1221 states, “emergency alarm processing for the highest prioritization level emergency events shall be completed within 60 seconds, 90 percent of the time”. NFPA 1221 goes on to define the highest prioritization level calls to be the following:

- Trauma
- Neurologic emergencies
- Cardiac-related events
- Unconscious / unresponsive patients
- Allergic reactions
- Patient not breathing
- Choking
- Fire involving or potentially extending to a structure(s)
- Explosion
- Other calls as determined by the Authority Having Jurisdiction (AHJ)

For 2018 the average call processing time for calls that the department responded emergent on was **1:44**. The 90th percentile for this same period was **3:12**.

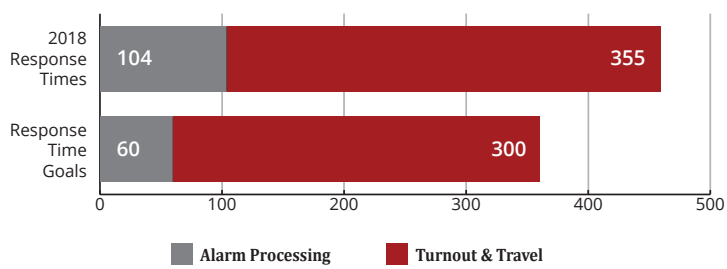
Once a call has been answered, processed, and dispatched, NFPA 1710 states that

- The fire department should have an “80 second turnout time for fire and special operations response and 60 second turnout time for EMS response”.
- The fire department should have a “240 seconds or less travel time for the arrival of the first engine company at a fire suppression incident”.
- The fire department should have a “240 seconds or less travel time for the arrival of a unit with a first responder with automatic external defibrillator (AED) or higher-level capability at an emergency medical incident.

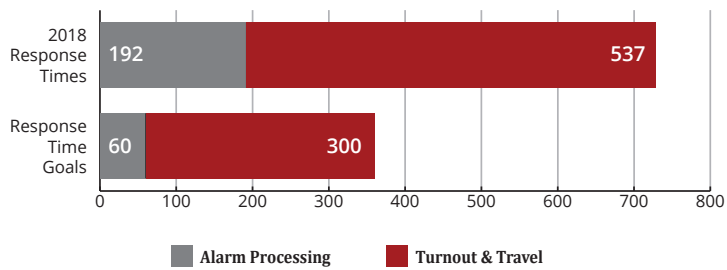
For 2018 the average **combined** turnout and travel time for calls that the department responded emergent on was **5:55**. The 90th percentile for this same period was **8:57**.



### AVERAGE RESPONSE TIME IN SECONDS



### 90TH PERCENTILE RESPONSE TIME IN SECONDS





BE





# BOZEMAN<sup>MT</sup> PUBLIC SAFETY CENTER

The fire department worked collaboratively with multiple departments across the city during 2018 on the Bozeman Public Safety Center (BPSC) educational programs. The passage of the November 6th bond initiative undoubtedly will go down as a major milestone in the department's history. We are excited about this project and look forward to the continued collaboration with other departments on this project in the coming years.

## DEVELOPMENT OF THE 2019 - 2021 FIRE DEPARTMENT STRATEGIC PLAN

The department rolled out its first ever strategic plan that will cover 2019 – 2021. The department incorporated recommendations from the 2017 Fire Master Plan, 2018 City Strategic Plan, and internal planning efforts into a singular guiding document. The plan is limited to a 3 year window by the Center for Public Safety Excellence Commission on Fire Accreditation, as it is our first plan, and should be used in our pursuit of Accreditation.



## COMMUNITY RISK ASSESSMENT WORK WITH MSU

The fire department, along with tremendous assistance from the City of Bozeman GIS and MSU emergency management and facilities group, began the process of collecting information for a community wide risk assessment. Data was collected on building construction features, fire safety features, occupancy type and load, and impact on the community via a system built in house by the City GIS staff. This data, most of which was collected by MSU students, will be used to develop the risk assessment model and standards of cover document in 2019 by the fire department as required by the CPSE Accreditation process.



## IMPLEMENTATION OF THE BLUE CARD HAZARD ZONE MANAGEMENT SYSTEM

One of the keys to success on emergency scenes is the consistent presence of an incident management system. While the fire department has adopted and follows the National Incident Management System (NIMS) from the Federal Emergency Management Agency (FEMA), which is primarily used for Type I – III incidents such as hurricanes, earthquakes, floods, and major wild fires, the Blue Card program is tailored for Type IV and V incidents such as structure fires, motor vehicle accidents, and other localized incidents. All members of the fire department completed this training in 2018.



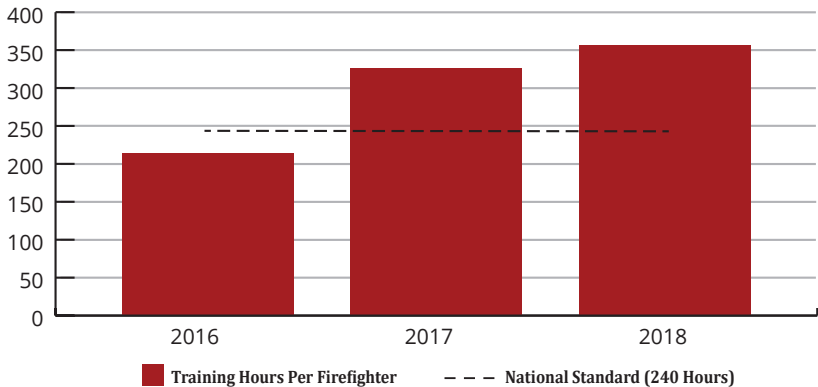
## **CERTIFICATION OF 14 INCIDENT SAFETY OFFICERS**

All incident command systems require the presences of an incident safety officer and for some events the command system may require multiple safety officers. The BFD had 14 members complete the incident safety officer program via the Fire Department Safety Officer Association and saw all 14 of these members complete testing to receive national certification.

## **PLACED IN SERVICE NEW WILDLAND FIREFIGHTING EQUIPMENT**

In late 2017 the fire department received a \$58,000 dollar grant from FEMA to purchase wildland firefighter personal protective equipment for all members of the fire department. All of this equipment was purchased, trained on, and issued during 2018. This new equipment and accompanying training has brought the fire department's wildland program back in line with Montana Department of Natural Resources and Conversation.

## TOTAL TRAINING HOURS



The Bozeman Fire Department strives to ensure that its members are trained to meet or exceed consensus national standards and best practices. In 2018 the department logged 15,011 hours of training total or 357 hours per member. The 15,011 hours exceed the required minimums set by the Insurance Service Office and the National Fire Protection Association by over 5,000 hours.

A major factor in the increase in the training numbers for 2018 is the completion of several key training programs by our members,

- Blue Card Hazard Zone Management System
- Incident Safety Officer
- Fire Officer I
- Wildland Firefighter
- Enhancements to our Technical Rescue training

The department has several training goals for 2019 as members will have the ability to move on to Fire Officer II and the department will begin the process of obtaining national certifications for all of our Engineers via the Montana Fire Service Training School. The department continues to pursue professional certifications and professional credentials for our members. The department completed the Fire Officer I training program in 2018 and members will be testing for their national certifications in 2019. At the completion of this testing, 100% of our members will be certified to the Fire Officer I level. The numbers below show the progress of member certification from 2016 – 2018, as well as the current status of some new training efforts for 2019.



**PROFESSIONAL CERTIFICATIONS (2016 → 2018)**

- Firefighter I - 62% → 100%
- Firefighter II - 38% → 100%
- Fire Instructor I - 9% → 100%
- Fire Officer I - 9% → 100%

**NEW TRAINING EFFORTS FOR 2019**

- Fire Officer II - 9%
- Pumper Driver / Operator - 0%
- Aerial Driver / Operator - 0%

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**RETIREES**

Mark A. Criner  
1994 - 2018

**PROMOTIONS**

Captain James Short  
Battalion Chief Travis Barton  
Deputy Chief Scott Mueller

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The Bozeman Fire Department has a full service fire prevention and community risk reduction division that provides services such as plans review, inspections, fire investigation, public fire education, car seat installation, and many other public programs. The fire department prevention and risk reduction programs are run under the supervision of the Deputy Chief – Fire Marshal who is assisted by three full-time fire inspectors and support from firefighters assigned to emergency response.

The department conducts plans review of all new commercial buildings constructed in the city and completes on-site inspections of these buildings to ensure code compliance during construction.

Number of plans reviewed:

2016: 415

2017: 383

2018: 770

Number of inspections completed:

2016: 1,734

2017: 2,678

2018: 2,348

Number of car seats installed or checked: 129

Number of community outreach events: 191

# FACILITIES



**STATION 1**  
34 N. Rouse Ave.



**STATION 2**  
410 S. 19th Ave.



**STATION 3**  
1705 Vaquero Parkway

**BOZEMAN**<sup>MT</sup>

FIRE DEPARTMENT

34 N. Rouse Ave.

Bozeman, MT 59715

(406) 582-2350