



NORTHVILLE
TOWNSHIP
FIRE DEPARTMENT

BE THE STANDARD

2020 | **ANNUAL REPORT**

MISSION

The Northville Township Fire Department will provide the highest level of fire, rescue, and emergency medical services to those who live, work, and play within our community. We shall accomplish this through our organizational values of professionalism, public outreach, and continuous improvement.

VISION

Building a foundation for the future.

VALUES

Professionalism
Public Outreach
Continous Improvement



2020 | BY THE NUMBERS

INCIDENT RESPONSE SUMMARY

INCIDENTS

3,138 Total incidents
723 Fire, rescue or hazardous condition
2,415 Emergency medical service

PERSONNEL

27 Operations / 4 Administration

INCIDENTS/DAY

8.6

CHANGE

37% increase in incident volume since 2010

TRANSPORTS

1,490 advanced life support transports

2007-2010

2,136 average incidents

2017-2020

3,296 average incidents

% INCREASE

54% (between 2007-2010 and 2017-2020)

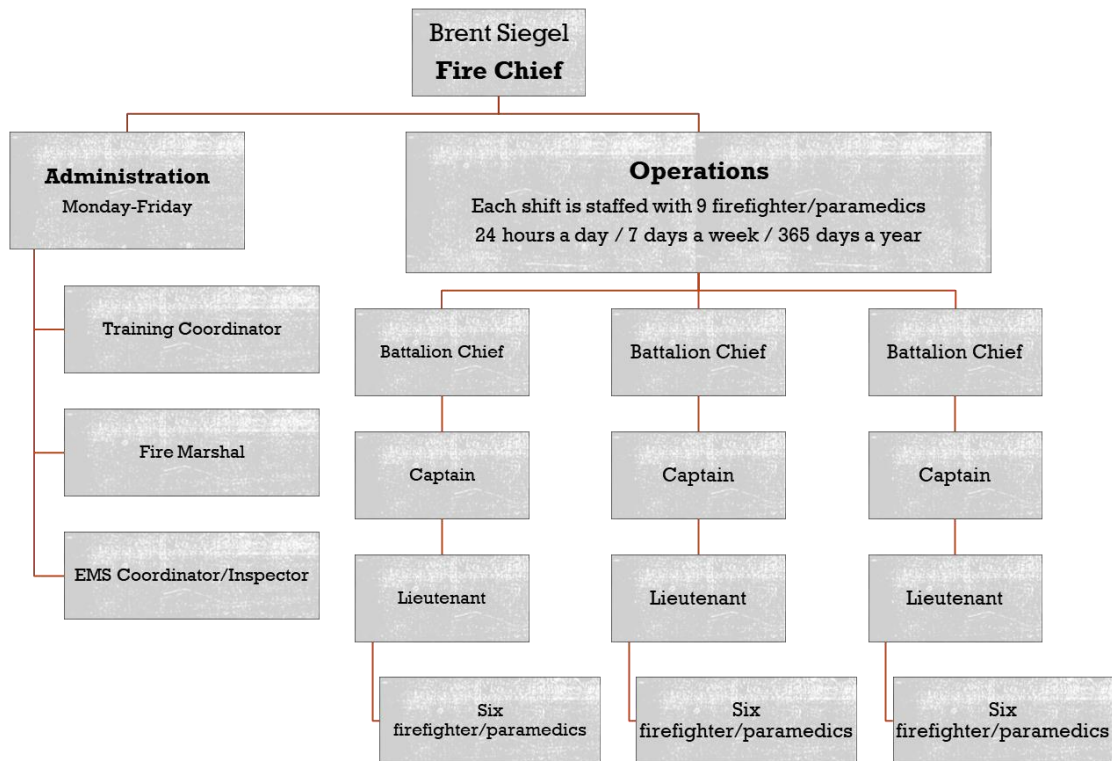


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Organizational Chart

The Northville Township Fire Department is part of a nominally consolidated Department of Public Safety. The Township Manager, Todd Mutchler, also serves as the Director of Public Safety. The Fire Chief reports to the Director of Public Safety and is responsible for Fire Services. Fire Services is comprised of two divisions, operations and administration. The focus of the operations division is for emergency response and preparedness to the Northville Township community. The administrative division focuses on training, code enforcement, community risk reduction and, most importantly, operations support.



Service Delivery

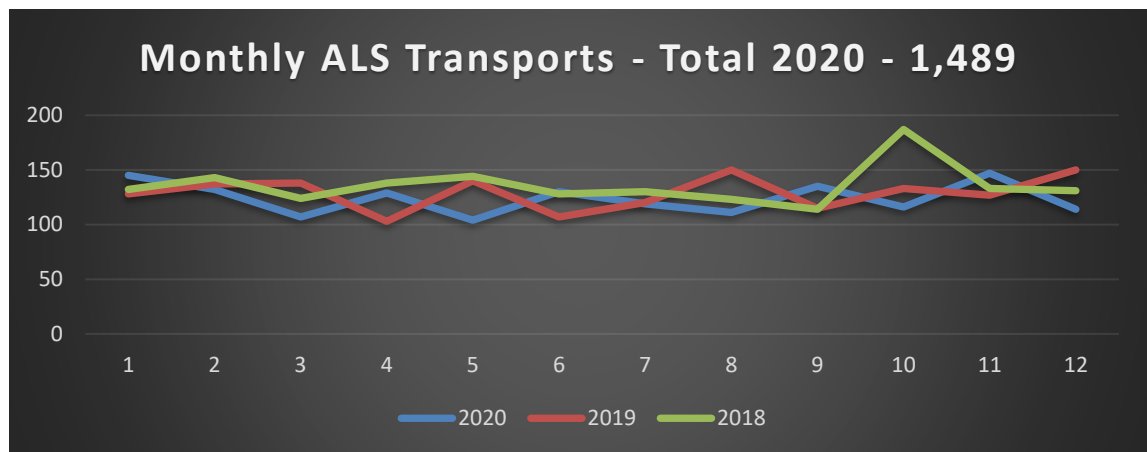
The Department maintains a daily minimum staffing of seven personnel with nine personnel assigned to each shift. Vehicle staffing and response capabilities vary based on the available staffing. At a minimum, the Department operates one ALS (Advanced Life Support) fire engine, one BLS (Basic Life Support) command vehicle, two ALS ambulances and one BLS ladder truck that operates with shared staffing from one of the two ambulances. Firefighter/paramedics staff all front line units that are equipped with self-contained breathing apparatus (SCBA) and full PPE (turnouts).

As an all-hazard emergency response department, we are responsible for far more than fire and emergency medical response. In 2020, the Department responded to 3,138 calls for service. The Department is fully trained and equipped to respond to the following incidents:

- Fire Suppression
- Emergency Medical Services (EMS)
- Rescue
 - Motor vehicle accidents
 - Open water & ice water rescue
 - Hostile incident response (active shooter/rescue task force)
 - Technical rescue (High-angle, collapse, trench, rope, machine, etc.)
 - Hazardous materials mitigation and response

Advanced Life Support (ALS)

The Northville Township Fire Department has served as the primary provider of Advanced Life Support (ALS) ambulance service to Northville Township since 2009. The ALS program has continued to develop and is recognized as a model program throughout the state. Our firefighter/paramedics are highly-trained practitioners that provide treatment and interventions beyond the scope of a basic EMT. Tasks performed include cardiac monitoring, intubation, establishing surgical airways, and administering dozens of intravenous (IV) medications.



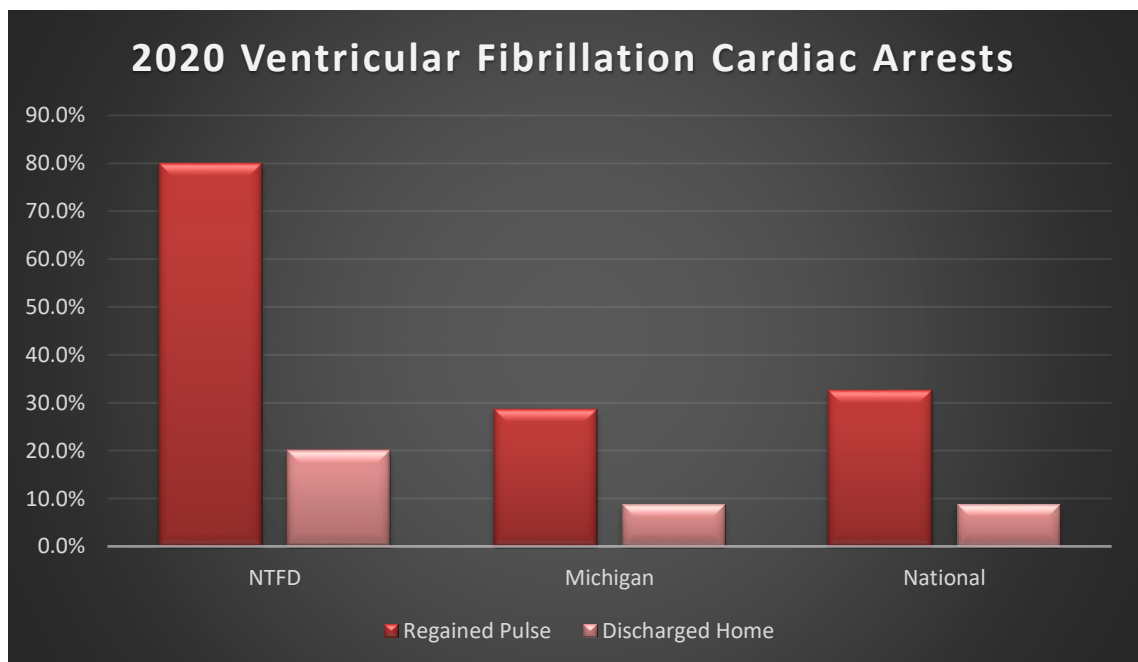
Cardiac Arrest Survival

We pride ourselves on our cardiac arrest survival outcomes. A person who experiences cardiac arrest (specifically ventricular fibrillation (VFIB) arrests) in Northville Township has a survival rate that is five times greater than if that VFIB occurred elsewhere in the state or nation. Our Department has achieved this by implementing the best practices used across the world, including high-performance CPR. This involves performing chest compressions at the ideal depth and rate to minimize compression interruptions and avoid leaning on the patient's chest. We are constantly training and examining new methods. We focus on a holistic, layered approach to CPR and advanced cardiac life support (ACLS) including:

- Community CPR education
- 911 dispatch guided CPR instructions
- CPR provided by all police officers
- High-performance CPR
- Definitive interventions through advanced life support program
- Rapid ambulance transport for definitive cardiac care
- Post-incident reviews and continuous training



**MORE
LIKELY
TO SURVIVE**
VFIB CARDIAC ARREST IN
NORTHVILLE TOWNSHIP
AVERAGE 2017 - 2020



ISO Public Protection Classification (PPC)

In 2018, Northville Township Fire Department improved its ISO Public Protection Classification (PPC) rating from a Class 5 to a Class 3 fire department. This places our department in the top 1% in the state of Michigan. Residents of Northville Township benefit from this improved PPC rating because it reduces the cost of their homeowner's/business insurance premiums. It is another advantage of receiving high-quality service from their fire department with the intent of saving lives and property. ISO evaluation includes the following: 911 communications center call processing, municipal water supply, fire department resources (staffing, equipment and apparatus), incident response times, fire prevention programs and firefighter training levels.



Western Wayne Mutual Aid Association

Northville Township is a member of the Western Wayne County Mutual Aid Association. This is a consortium of 21 departments in Western Wayne and Oakland counties. This consortium operates under the Inter-Local Agreement in conjunction with the Urban Cooperation Act of 1976. This agreement allows consortium members to provide reciprocal services to each other when requested. Mutual aid given/received in the form of staffing and/or equipment. Mutual aid is used when a department's resources are exhausted or an incident requires technical resources that exceed an individual department's ability.

The Association runs two special operations teams, the Western Wayne Urban Search and Rescue (USAR) and the Western Wayne Hazardous Materials Response Team (WWHMRT). Chief Siegel is the Special Operations Oversight Chief responsible for both of these teams.

Western Wayne County HazMat Team

The Western Wayne County Hazardous Materials Response Team (WWHMRT) currently has 45 members. The WWHMRT has a response area that encompasses parts of three counties and protects more than 2.9 million residents. Northville Township Fire Department has three hazardous material technicians assigned to this team and two of them are team leaders. One of the team's HazMat trucks is stored at the Fire Station and is available to be deployed 24 hours a day.

Western Wayne County Urban Search and Rescue Team

The Western Wayne County Urban Search and Rescue (USAR) team is comprised of members from departments throughout our mutual aid association. The USAR team is a specialized resource designed to operate on the scene of trench, confined space, high-angle, wide-area search and structural collapse incidents. Due to the complexity of their operations, specialized training is needed to prepare team members. Our Department currently has four members that have received this special training and function as members of the USAR team.

Routine Reciprocal Aid

We have simultaneous emergency incidents that occur daily. Most of these incidents are handled with our own staffing and resources. However, there are many times when all units are already dedicated to incidents, or the incident requires additional manpower that requires mutual aid. On average, we request mutual aid seven times a month. The Township relies on mutual aid to provide personnel for the following incidents:

- First alarm structure fires
- Incidents with more than one critical patient
- Multiple concurrent incidents
- Incidents that require technical rescue

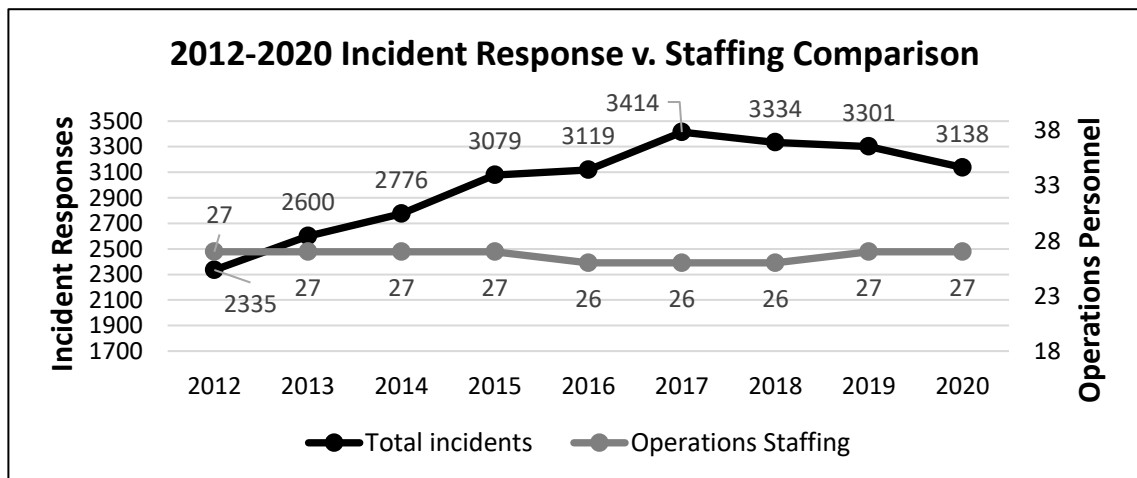
In 2020, we provided mutual aid to neighboring communities on 43 incidents and received mutual aid on 83 incidents.

2020 MUTUAL AID - GIVEN/RECEIVED

INCIDENT TYPE	MEDICAL	VEHICLE ACCIDENT	FIRE	MISC	TOTAL
TOTAL GIVEN	11	6	17	9	43
TOTAL RECEIVED	73	1	5	4	83

Staffing vs. Incidents

In 2012, the Department responded to more than 2,300 incidents (largest volume on record to that point). From 2017-2020, the Department averaged approximately 3,300 incidents annually, an increase of approximately 1,000 incidents per year from the 2012 volume. This is a 43% annual increase in service demand without any subsequent increase in operations staffing. From 2007-2010 the Department averaged 2,136 incidents annually. From 2017-2020, the Department averaged 3,296 incidents. Over the last 10 years, our incident volume has increased by 1,160 annually or 54%.

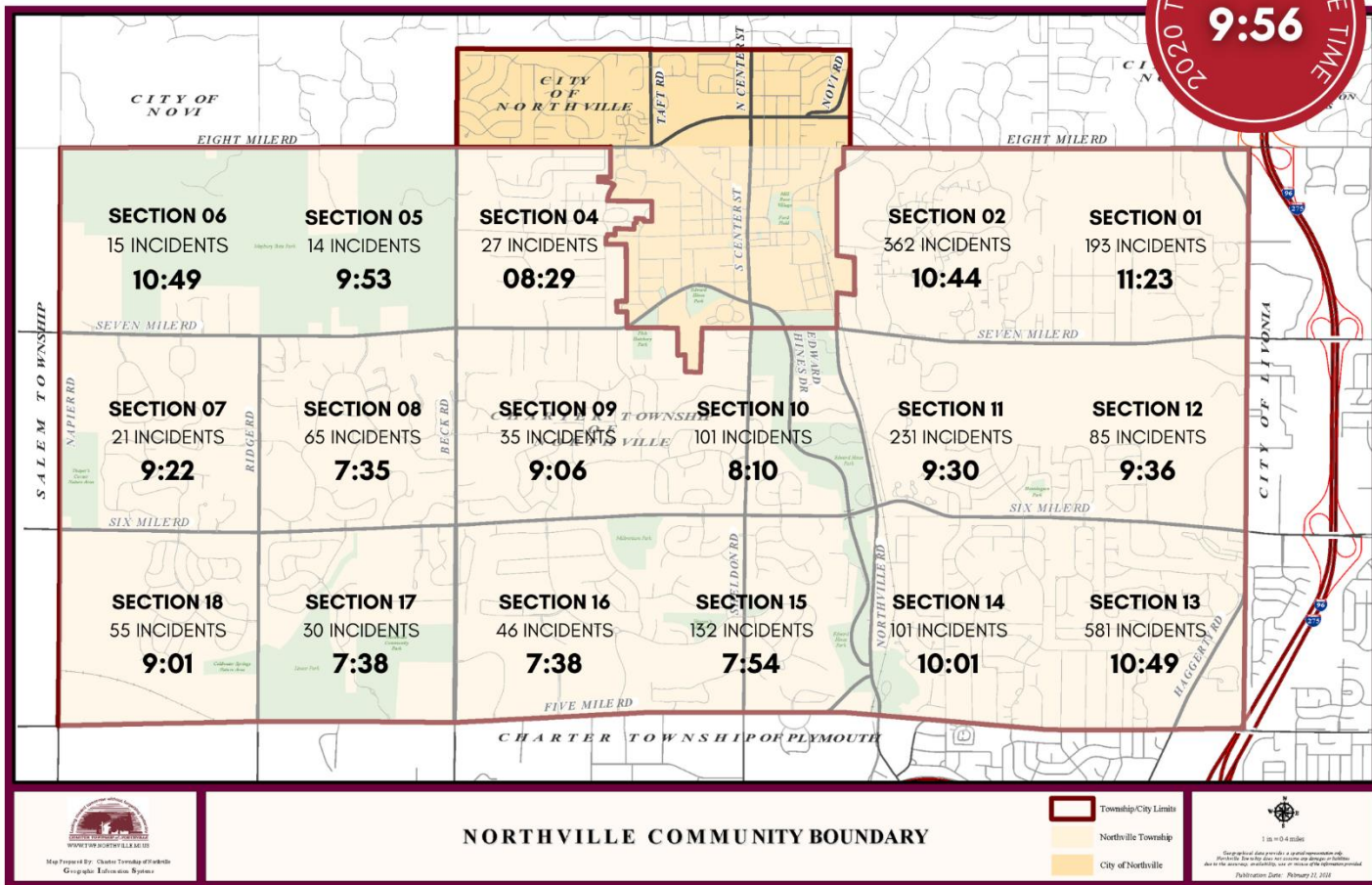


Response Times

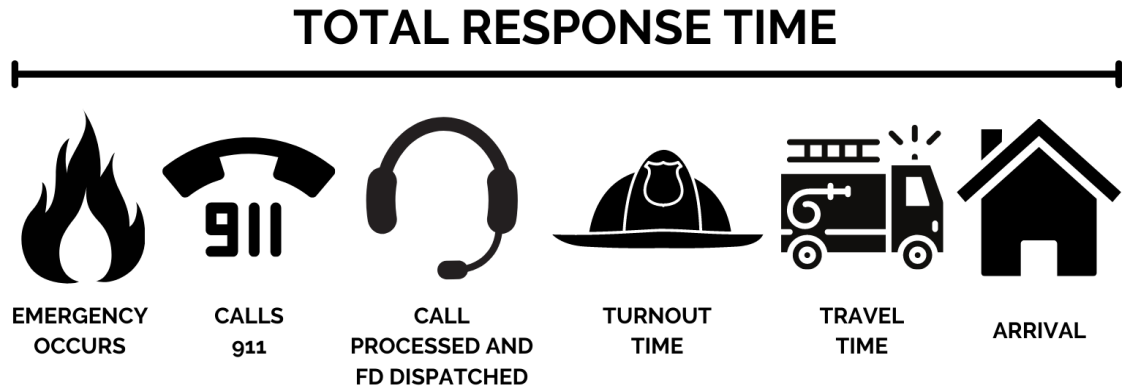
Our response times to the northeast portion of the Township are more than 10 minutes primarily due to travel distance. To address the prolonged response times to the northeastern portion of the community, the Township identified the need for a second fire station in 2004. The Township has been working to obtain a funding source for a second station for several years.

Average response times increased in 2020 due to COVID-19. This is due to adding necessary COVID-19 screening questions and the time it takes to don appropriate PPE, which is necessary to protect our first responders. The following map outlines our 2020 average response time for priority 1 incidents (lights and sirens response) to each district in the Township.

**2020 EMERGENCY RESPONSE TIMES
PRIORITY 1 INCIDENTS ONLY**



Response time is calculated and reported in a variety of manners. For our purposes, response time is measured as Total Response Time, which includes the time from the initial receipt of the 911 call to the arrival of the first unit on scene, as noted below:

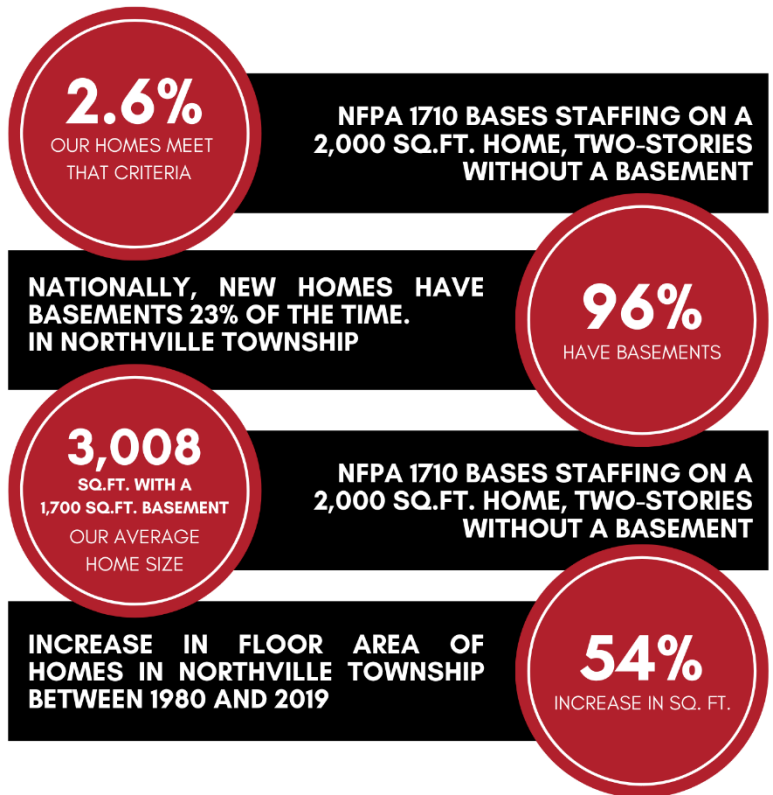


Why response times matter

The heat release rate (HRR) of fires has increased, the size of homes has increased exponentially, and the quality of construction materials has decreased (in regards to their ability to withstand fire). Once a fire starts, it will continue to worsen until the fire department provides active fire suppression measures. Similarly, in a medical emergency or, in the case of a water rescue, every minute without intervention will lead to worse outcomes. Effectiveness, in the emergency equation, is based on response time and response time is relative to travel distance.

NFPA 1710 provides guidance on the response times for fire, emergency medical and special operations. The Department is currently evaluating all of these factors as part of the Community Risk Assessment and Standards of Cover (CRA-SOC) process for accreditation. This analysis will measure current deployment and performance and make recommendations on benchmarks for Northville Township.

This evaluation will include a full review and updated internal standards on call taking and processing, turnout time, travel



time and overall response time. It will further outline our goals and how those goals relate to the NFPA 1710 standard.

The Township has inherent challenges to meet these response standards. This includes a variety of components, including:

- Single station operation covering 16.6 square miles.
- Traffic impact as development and growth continues.
- Home sizes. Upon evaluation of all single-family homes in Northville Township, less than 2.6% of our homes are 2,000 square foot or less, two-stories without a basement.
- Mutual aid and location with direct mutual aid partners.

Accreditation

We are pursuing accreditation through the Center for Fire Accreditation International (CFAI). This process began in 2020, and while greatly impacted by the response to COVID-19, is still moving forward. Accreditation is awarded through the Center for Public Safety Excellence (CPSE) and the Commission for Fire Accreditation International (CFAI). CFAI accreditation is a comprehensive, multi-year evaluation of fire and emergency service operations. CFAI standards are industry best, consensus practices that require a peer-review and site assessment for verification. Accreditation is the culmination of the work performed to build a community-focused, data-driven, outcome-focused, strategic-minded and well-organized department. Accreditation requires a formal review of all aspects of an operation, including policies, procedures, staffing, equipment, response times, outcomes and more. The goal of accreditation is constant improvement. This process provides the framework to evaluate current operations, identify gaps and improve operations. Accreditation aligns with our organization's mission of "continuous improvement" in every aspect of the definition. Currently there are only four (4) accredited agencies in the state of Michigan.

The Department conducted shift training on the accreditation process to underscore the purpose and scope of CFAI accreditation. This accreditation process



**COMMUNITY RISK ASSESSMENT
STANDARDS OF COVER**

will continue through 2021 and 2022. Upon successful completion, not only will the Department have the honor of receiving the recognition that comes along with it, the work will continue in perpetuity. Accreditation is a process of constant improvement, not a stand-alone project.

2020 | BY THE NUMBERS

T R A I N I N G A N D P R E P A R E D N E S S

TRAINING HOURS | 4,934

COMPLETIONS | 3,607

COVID DEDICATED | 670 hours

INCIDENT MANAGEMENT | 1,575 hours

FIREGROUND | 715 hours

EMS | 1,554 hours

VEHICLE OPERATIONS | 498 hours

PREVENTION | 187 hours

HAZMAT | 213 hours

SPECIAL OPERATIONS | 193 hours



**NORTHVILLE
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Training

Focused on preparedness and training

Our organizational value of continuous improvement illustrates our commitment to an on-going, never-ending cycle of preparedness and training. Preparedness both individually and collectively is critical to operational success. Our work as fire, rescue and emergency medical services professionals is not only vast in scope, but it is also ever-evolving. There are countless challenges surrounding us in each discipline. Our job is to identify, understand and master the challenges we face. These challenges include large residential structures built with lightweight construction materials, vehicles built with ultra-high-strength metals such as boron, and a global pandemic that affects all aspects of our mission, especially patient care.

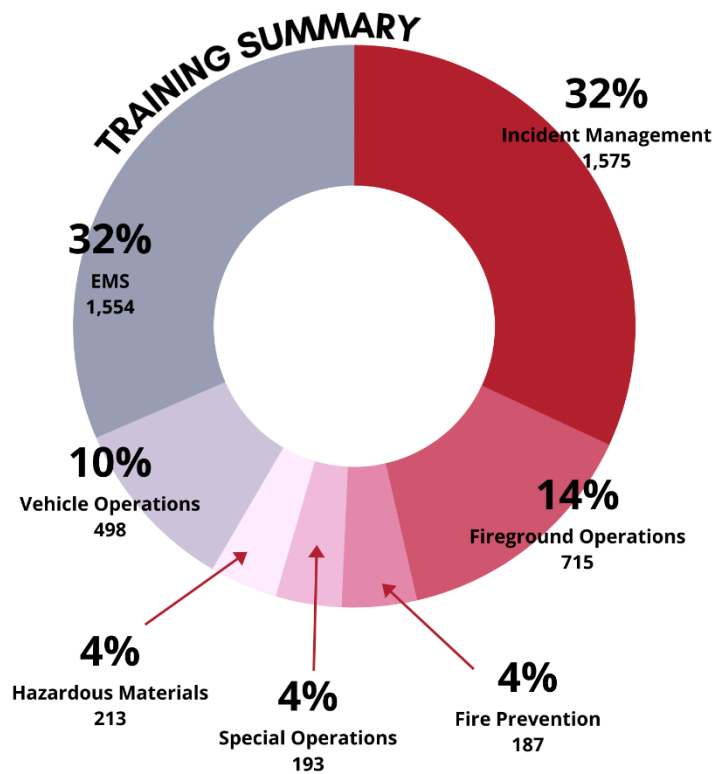
Over the past three years, the department conducted 24,090 hours of training. During the same period, the department averaged more than 6,000 hours of training annually, which equates to more than 200 hours per member. The department trains on a number of disciplines including: emergency medical services, fire prevention, fire ground operations, hazardous materials, incident management, special operations and vehicle operations.

These numbers include the disruption in 2020 caused by the COVID-19 pandemic.

Training during COVID

2020 was challenging on the training front. Due to the pandemic and the focus on maintaining a healthy staff prepared for emergency response, we cancelled all external training. This includes monthly USAR and HazMat training as part of the Western Wayne County Special Operations Teams. These cancellations, as well as a number of other factors directly related to COVID-19 caused a 24% decrease in training hours from 2019 to 2020.

In 2020, we dedicated more than 670 training hours to preparedness and response to COVID-19. This increased our hazardous materials response training by 25%. Although there were many training restrictions due to the pandemic, the Department maximized the use of technology to deliver training in creative formats to ensure a safe environment.



2020 | BY THE NUMBERS

C O M M U N I T Y R I S K R E D U C T I O N

INSPECTIONS | 199

SQ. FT. INSPECTED | 7,025,287

**OCCUPANCIES
INSPECTED** | 180

VIOLATIONS | 224

REINSPECTIONS | 116

**STRUCTURES WITH
PRE-PLANS** | 472

**PRE-INCIDENT
PLAN COMPLETION** | 95%

OCCUPANTS | 646



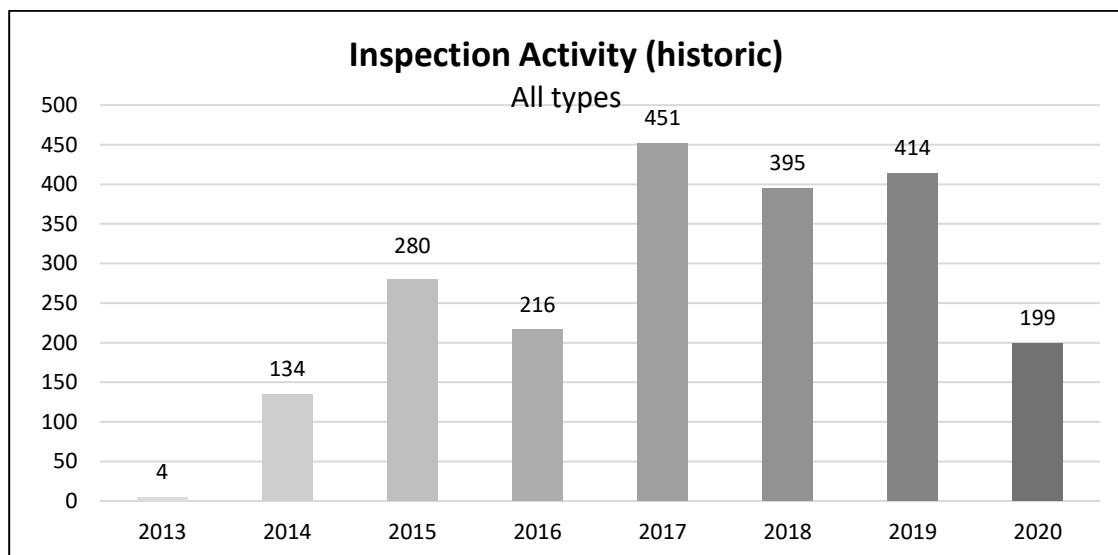
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Community Risk Reduction

Fire inspections

Inspections include complaint, annual, certificate of occupancy, building renovations or modifications, fire protection system acceptance testing, open burning, construction, tents and special events. COVID-19 had a tremendous impact on our fire prevention and community risk reduction programs. As noted below, there was more than a 50% reduction in the number of inspections conducted. This was a result of changing priorities to support the operations of the Department and coordinate effective response to the public. We conduct inspections on mandatory items, such as new construction, fire protection system testing, etc. To slow the spread of COVID-19, all maintenance inspections were cancelled. We reassigned administrative personnel to focus on COVID-19 response, planning and preparedness.



Policy and procedure development

Policy and procedures are critical to organizational development. Fire prevention works to assist in development of fire department operational policies, the operations manual and is continuing to work on processes and procedures for Fire Insurance Withholding, fee schedules, applications and permits, underground flush, hydrant flow tests and more. Policy is not only critical for internal operations, but provides guidance to business owners, contractors and the public to improve customer interactions.

Pre-incident planning

The pre-incident planning program provides responding firefighters with additional knowledge and information to improve decision-making and save lives. Pre-incident planning involves visiting the site and taking photos of the layout, gathering maps and diagrams and updating



contact information. These plans provide responding crews with up-to-date structure information including construction type, presence of hazardous materials, fire protection systems, hydrant locations and hoselay distances. As of the end of 2020, more than 96% of commercial structures in Northville Township have a completed pre-plan with the remaining structures in progress.

The Department is now working on Version 2.0 of these pre-incident plans and will continue to improve the information and imagery provided. Along with the creation of the pre-plan, we have also implemented a response software that provides real-time information updates and accessibility to plans while enroute to an emergency.

Fire origin and cause investigation

The Fire Department has three members trained as fire investigators. Fire investigations determine the origin and cause of a fire to help identify common fire causes and hazards, provide community education and to determine arson. Fire investigators are contacted on large fires, fires of an unknown origin, fires with a high value loss and fires involving injury and/or death. The fire investigator documents all aspects of the investigation via photographs, scene diagrams, witness statements, and interviews and/or audio/video tapes. Documentation of these incidents by responding crews in the National Fire Incident Reporting System and by fire investigators helps to mitigate hazardous conditions throughout the community. The primary goal of fire investigations is to identify the cause of an incident and to mitigate these incidents through the engineering, enforcement and community education.

Community engagement and education

The impact of COVID-19 on department operations and services was felt in our community education and engagement efforts. Public education is the backbone of community risk reduction and has been a focal point over the last few years. Public education programs include individual events such as station or truck tours, Boy/Girl Scout groups and individual classes or programs. Over the last five years, the Department has focused our education programs to meet the needs of the community. We have refocused efforts on the annual open house (more than 1,000 attendees annually) and the development and implementation of the **NHS Hands-Only CPR and AED Program** and the **Kindergarten Fire and Life Safety Program**.

The latter programs provide Northville students and families with important fire and life safety information. This partnership with Northville Public Schools (NPS) is critical to the success of these programs. The department has developed the curriculum to make the program implementation as easy as possible for the staff. The district assists with curriculum delivery and communication with both the students and families. This program is incorporated into the annual district curriculum and has been very well received. This partnership has reinforced the importance of fire and life safety education into the fabric of the community.

Due to COVID-19, all in-person public education events were cancelled beginning in March 2020. The annual open house, all car seat inspections, and fire department headquarters were closed to the public to prevent the spread of COVID-19 and to focus efforts on our response to the pandemic. The Department did participate in a number of events when social distancing was possible such as the NHS Senior Parade and birthday parades with the Northville Township Police Department. Due to the uncertainty surrounding mass vaccinations and the continued danger associated with the pandemic, group events, stations tours, the open house and other public education programs are on-hold until circumstances allow for safe resumption.

NPS Kindergarten Fire and Life Safety Education

The Department developed a Fire and Life Safety Education Program in 2016. Through a partnership with Northville Public Schools this program was implemented district wide in 2017.

The program includes one-week of instruction and materials for each class/school. The program is completed over three consecutive weeks to reach all schools across the district.

The program is based around a four (4) day in-class deliverable that is instructed by the district's kindergarten teachers. All of the content was created and adapted from national standards including NFPA, USFA and others. A key component of the program is to engage the students' parents and families. To accomplish this objective, we included "homework" that was provided by the teachers to the parents to highlight important messages and tips to protect their loved ones.



On the last day of the week, the Fire Department conducts an on-site education event that includes a fire safety lesson that summarizes the four main objectives learned during the week, as well as a fire truck and equipment tour. The primary messaging includes:

- 1) Firefighters are community helpers
- 2) Stay away from hot things
- 3) Smoke alarms are important
- 4) Get outside and stay outside.

Along with these core messages, we also focus on learning your address, recognizing an emergency, calling 9-1-1 and home escape planning.

While we were forced to cancel the fall 2020 delivery, access is still provided to the district to utilize the education materials at their convenience. We will revisit this program with the district in early 2021.

Northville High School Hands-Only CPR and AED Training:

In 2017, Northville Township also began a partnership with Northville High School (NHS) to deliver hands-only CPR training to each health class. The Department developed a program to deliver this important training to NHS annually. Since health class is a graduation requirement, the schools chose to include this training during their health curriculum. This allows the school the ability to verify that the program reached each student to meet the states mandate.

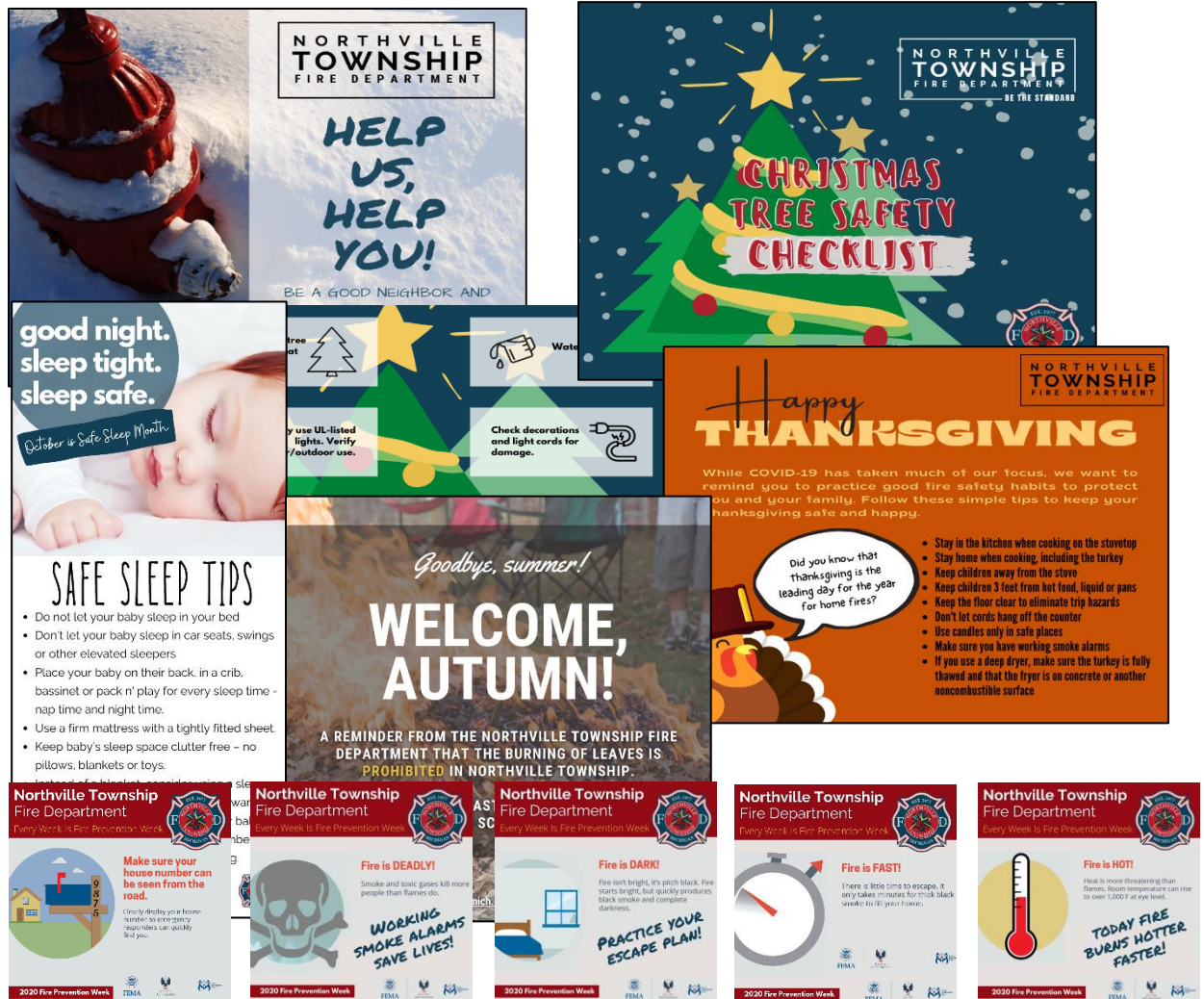


Annually, this program will reach more than 600 students and help to create an “army” of “first responders” across the community who can take life-saving action when needed. This program aligns with our mission by helping to bridge the gap between a cardiac arrest event and response by the Fire Department. Statistically, patient outcomes increase exponentially with the delivery of quality bystander CPR prior to arrival of advanced life support (ALS). This program is important to the community and serves to assist in our goal of increasing cardiac arrest survival. The program content is updated and delivered annually to NHS in both the spring and the fall.

While we were forced to cancel both the spring and fall 2020 courses, classes are scheduled to resume in early 2021.

Social Media

Social media has become an important component of communication with the community. The department utilized social media to provide important messages to help reduce risk. In 2020 there were more than 10 posts made via social media, including open burning, holiday safety, safe sleep tips and fire prevention week GIFs.



2020 | ACCOMPLISHMENTS

B E T H E S T A N D A R D

SUCCESS

While COVID-19 impacted all aspects of department operations in 2020, we still experienced tremendous success. Accomplishments are not possible without the direct involvement of our entire team. And personal achievements are the direct result of the hard work, commitment and dedication of our staff.

Many of our accomplishments align directly with the department's goals, while others were a direct result of COVID-19 and required immediate response and action by the Department.

It's amazing what you can accomplish if you don't care who gets the credit.

DWIGHT D. EISENHOWER



NORTHVILLE
TOWNSHIP
FIRE DEPARTMENT

BE THE STANDARD

Successful grant awards

The Fire Department recognizes the tremendous value of obtaining grant funding to offset expenditures, which are necessary to continue to provide an exceptional level of service to Northville Township. Seeking alternate funding sources is a vital component of being good stewards of taxpayer money. In the last five years, the Fire Department has applied for 29 grants and awarded more than \$460,000 in funding to offset budgeted expenses.

In 2020, grants provided funding for the following projects:

1. Assistance to Firefighters Grant (AFG), Ambulance Cots \$160,000.
2. Assistance to Firefighters Grant (AFG), Fire Hose \$60,000.
3. Assistance to Firefighters Grant (AFG), Truck Radios \$90,000.
4. System Maintenance of Knowledge and Education (SMOKE), Fire Staff & Command \$3,000.
5. Assistance to Firefighters Grant (AFG), Station Diesel Exhaust Removal System. This grant was awarded for \$112,480 and the project will be completed in 2021.

Technology implementation

Microsoft Office applications were implemented into a number of operations to improve efficiency. This includes SharePoint, Planner and Teams. These systems increase collaboration, improve communication and allows remote work. Additionally, the Department leveraged such software as Adobe DC, Adobe Premium Rush, Canva and others to produce high-quality videos, signage and other deliverables.

Website

All fire department sections of the Township website were updated with supporting documents where necessary. The Township is undergoing a website redevelopment project in early 2021 and staff will serve as part of the development team.

Map update

Emergency Response Guidebooks were updated with a new GIS overlay. Additional features include bodies of water and Quick Reference guides, additional multi-family complexes and schools. All of these additions provide valuable information to first responders while they are enroute for quick reference and efficient response.

CPSE Fire Marshal designation

Fire Marshal Tom Hughes successfully completed the process that awards the professional designation of “Fire Marshal” (FM). The Commission on Professional Credentialing (CPC) met on December 1, 2020, to confer the designation. Fire Marshal Hughes was unanimously approved and becomes only one of four in the state of Michigan and one of only 194 FMs worldwide.

ISFSI Board appointment

Training Coordinator Jesse Marcotte was appointed by leaders in his field to the Mentoring and Coaching Committee and the Professional Development Task Force for the International Society of Fire Service Instructors (ISFSI). In his service, his peers selected him as Chair of the Mentoring

and Coaching Committee. The ISFSI is a world-renowned organization that focuses their efforts on training and development within the fire service. The ISFSI leads fire and EMS instructors in their efforts to reduce firefighter fatalities and injuries, increase firefighter safety, and improve professionalism through education and training.

Chief Siegel appointed as Special Operations Oversight Chief

Chief Siegel was appointed to the position of Special Operations Oversight Chief responsible for both the Western Wayne Hazardous Materials (HazMat) and Urban Search and Rescue (USAR) teams.

Education

Firefighter Jeff Darby received his bachelor's degree in 2020. With his degree, Jeff becomes one of the over 65% of our staff with a bachelor's or master's degree.

Staff and Command

EMS Coordinator Will Caruso completed Eastern Michigan University's School of Fire Staff and Command. He becomes the 14th member of the Department to complete this program

Battalion 1

The Apparatus Committee completed specifications on a new command vehicle that was completed and placed in service in 2020. This vehicle is a major upgrade over previous versions and is truly purpose built to support the operations of the Department. This includes a variety of improved safety features to protect both staff and the public.

Patch logo

The Department completed a patch redesign and all affiliated work to complete implementation. This includes an update of all uniforms, vehicles, paperwork, etc. An internal committee developed the design of the patch to incorporate our history and the services that we provide to the community.



Figure 2: Retired



Figure 1: New patch

Operations Manual

Three new sections of the Operations Manual were completed in 2020:

- Chapter 6. Incident Organization and Escalated Command Operations
- Chapter 7. On-Going Command Operations: Operational Planning Cycle
- Chapter 8. Demobilization, De-escalation and Termination of Command

Mental health

First responders are exposed to horrific tragedy that has been proven to take a toll on mental health and emotional wellness. In 2020, we made a commitment to support the mental health and wellness of our first responders through a new initiative in partnership with other agencies. The following items represent the core components of this initiative:

- Health/wellness training
- Peer support team
- Annual mental health checks
- Critical Incident Stress Management support

Awards and recognition

Department awards are conferred in the year following the act or action that lead to their award. This means that 2020 awards are presented in 2021. The below awards for 2019 were received in 2020. COVID caused us to delay our annual award distribution and caused us to cancel our in-person ceremony. However, awards were presented to all staff for their accomplishments in 2019.

Firefighter of the Year

The Firefighter of the Year Award is bestowed to the department member who, over the course of the year, has continually put forth an effort of the highest degree. This may involve fire suppression, emergency medical service, fire prevention, training, or any combination of the above. Further, it may involve an individual event or a collection of exceptional performances. The 2019 Firefighter of the Year was awarded to Lieutenant Jason Hendrian.

Lifesaving Awards

Lifesaving Awards are presented annually to those individuals or collection of individuals whose actions are directly responsible for saving a human life. Lifesaving awards may be granted as a result of a fire, medical, or rescue incident. The following members received lifesaving awards:

A. Burton	J. Darby	D. Deslover	C. Kolinski
S. Leach	K. Lewis	C. Madzik	L. Mancini
R. McAllister	D. Micallef	B. Muller	B. Neuhart
B. Siriani	P. Sutherland	C. Wiggins	

Department Citations

Department Citations are awarded to an individual or collection of individuals, for their display of extraordinary performance for any of the following: any departmental member whose actions involved an extraordinary performance that was displayed on the scene of an incident in which the individual overcame any and all challenges and/or obstacles that would have otherwise prevented a successful outcome of the incident or any departmental member whose actions involved an extraordinary contribution to the overall mission of the Northville Township Fire Department and thereby contributed to a higher degree of professional excellence. The following members received department citations:

A. Burton	W. Caruso	J. Darby	D. Deslover
D. Dipple	J. Fedel	J. Hendrian	H. Jordan
C. Kolinski	C. Koth	K. Lewis	J. Marcotte
D. Micallef	F. Molina	B. Muller	M. Obermiller
G. Ryan	J. Sims	B. Siriani	K. Susewitz
P. Sutherland	C. Wiggins		

Meritorious Service

Meritorious Service Awards are presented to an individual or collection of individuals, whose actions have distinguished them from the standard performance expected of the position; either in the execution of a specific task or in the outstanding performance of general duties over an extended period. The following members received meritorious service awards:

A. Burton	T. Hughes	M. Obermiller	J. Sims
H. Jordan	D. Dipple	D. Micallef	F. Molina
W. Caruso	J. Hendrian	J. Darby	B. Muller
D. Desloover	P. Sutherland	B. Siriani	C. Wiggins

Completion of probation

Firefighter Jacob Fedel and Firefighter Logan Mancini successfully completed their probationary program in 2020. The Probationary Firefighter Training Program sets the bar for what is expected of our newest members. Our probationary training program is compliant with the requirements and standards referenced in MIOSHA Part 74 and NFPA 1001. This program exceeds these requirements in every facet. Our probationary firefighters averaged 336 hours of training during their first year, exceeding the requirements of ISO. We believe that the probationary training program is the foundation of the organization and sets employee expectation at all levels.

Professional affiliations

Members of the Northville Township Fire Department actively participate in professional associations locally, regionally and statewide. Membership in these organizations allow Northville Township to impact and influence legislation, code, policy standards and training for departments in the area. These organizations include Metro Detroit Fire Inspectors Society, Michigan Fire Inspectors Society, Health Emergency Medical Services (HEMS) – Medical Control Authority of Western Wayne County, The International Association of Fire Chiefs, Michigan Association of Fire Chiefs, Southeastern Michigan Association of Fire Chiefs, Western Wayne County Mutual Aid Association, and the State of Michigan Emergency Medical Services Coordination Committee.

COVID-19

COVID-19 is the biggest challenge the Department has faced. It affected every aspect of our operation and was truly our greatest success. We responded to almost 400 COVID incidents and were able to keep our staff safe with improved PPE, planning, engineering controls, etc. Our workforce is our single greatest asset and its health and safety are paramount to our success. Working together, every member of the Department took part in creating and adapting to the ever-changing demands of the pandemic.

2020 | BY THE NUMBERS

COVID-19 INCIDENT RESPONSES

COVID-19 INCIDENTS | 389

% TRANSPORTED | 70.5%

TRANSPORT DURATION

Pre COVID-19: 66.8 minutes
COVID-19: 94 minutes
40.7% DURATION INCREASE

**NON-TRANSPORT
DURATION**

Pre COVID-19: 34.3 minutes
COVID-19: 60 minutes
74.9% DURATION INCREASE

EQUIVALENT INCIDENTS

103 Additional transports
77 Additional non-transports
Total incident increase to 3,311



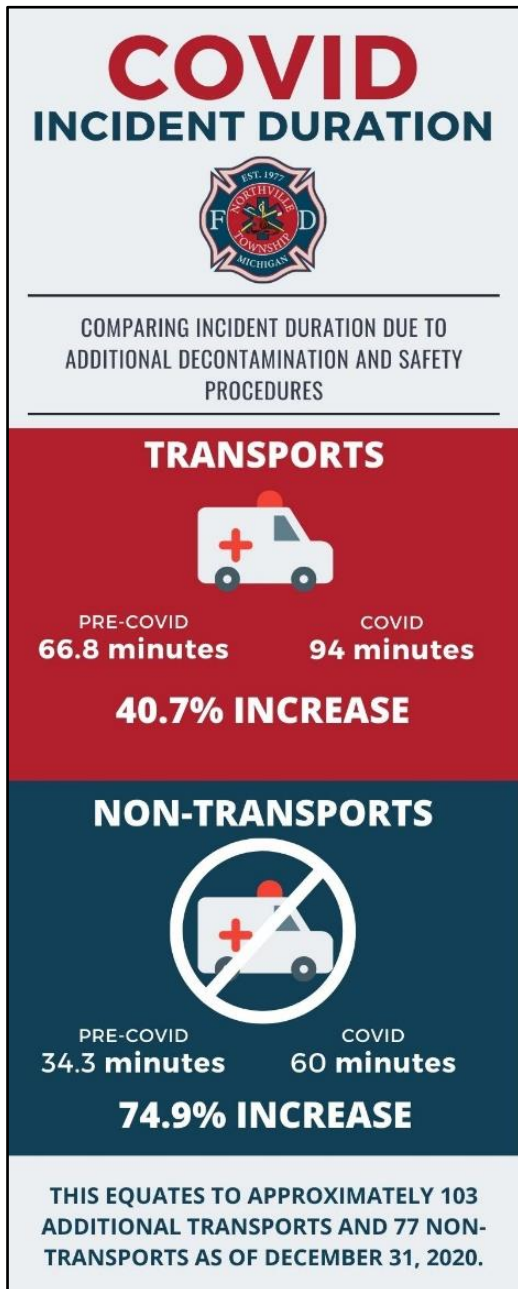
**NORTHVILLE
TOWNSHIP**
FIRE DEPARTMENT

BE THE STANDARD

COVID-19

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus that causes COVID-19, hit our community in early 2020. Since February, the response required for this pandemic required immense planning, preparation and execution to meet its ever-changing, rapidly evolving critical factors. COVID-19 has required modification of almost all aspects of our operations including our response, personal protective equipment, dispatch procedures, engineering controls, staffing models, communications and more.

COVID-19 has changed almost every aspect of our operation. In an effort to provide effective response while protecting both the staff and the community, numerous policies, procedures and practices were established.



Increased incident duration

During periods of the year, incident duration increased by 41% for transports and 75% for non-transport incidents. This is directly related to the potential exposure and the need to implement stringent decontamination protocols.

These increases caused additional staffing shortages as units were out-of-service and unavailable to respond to concurrent emergencies. It further equates to additional equivalent workload while not reflected in the total daily run volume.

Increased hazard and exposure

As new information was identified, the Department reacted swiftly to incorporate new scientific information into our response plans.

Increased employee stress

Both on and off duty, employee stress during the ongoing pandemic increased. This was due to the hazard, the concern of taking home this disease and spreading it to loved ones, the difficulty in conducting regular departmental duties due to the PPE, masks, etc.

Increased PPE

PPE evaluation, and more importantly, procurement are strategic factors in preparing for response.

On COVID-19 incidents, all staff remove clothing and PPE and shower immediately. This increases the total time required on each incident.

Increased equipment and resources

Electrostatic foggers, decontamination chemicals, and vehicular and equipment modifications were all required to protect staff and continue to deliver effective operations. This includes alternative scheduling for additional drivers to maintain a "clean cab" and to limit the spread of COVID-19 into the driver/passenger compartment of the vehicle.

Increased financial cost

PPE, the modification of vehicles, staffing and overtime, etc. have all caused a financial impact.

Increased and dynamic mitigation strategies

Communication and quick response was critical to adapting to this crisis and mounting an effective response. This included daily communication, implementation of telework technologies, tracking mechanisms, creating training videos, etc.

Personal protective equipment (PPE)

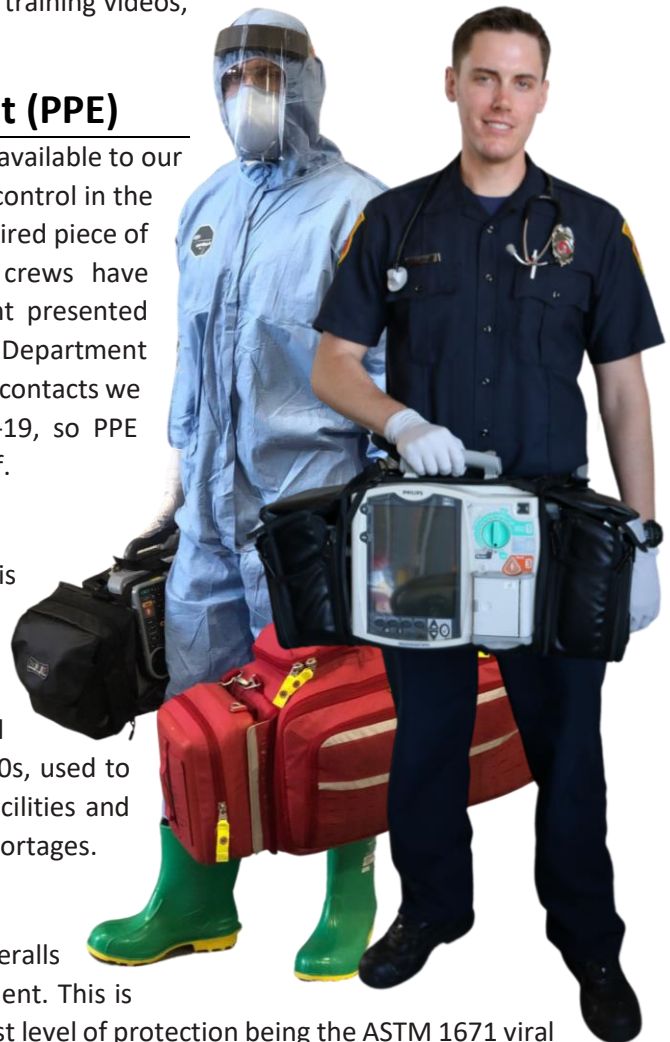
PPE is the most basic and important control available to our responders. While PPE is the least effective control in the hierarchy of controls, it will always be a required piece of the puzzle in emergency response. Our crews have multiple options based on the environment presented and the expected hazard. In most cases, the Department has little control over limiting the number of contacts we have with the hazard, in this case COVID-19, so PPE becomes a critical barrier to protect our staff.

Respiratory protection

At a minimum, N95 respiratory protection is provided to each employee on every incident. Due to the large number of asymptomatic carriers, it is necessary to equip all staff with N95 or equivalent on all incidents. Additional resources include P-100s, used to conduct COVID-19 testing at senior living facilities and SCBAs as a backup due to nationwide N95 shortages.

Gowns and coveralls

Operations include both gowns and coveralls based on the level of suspicion for the incident. This is broken into a tiered response with the highest level of protection being the ASTM 1671 viral rated coveralls. Viral rated coveralls relieve crews of the need to remove clothing and shower as part of the decontamination process.



Eye protection

Eye protection is provided in the form of safety glasses, face shields and goggles. Each piece of equipment was implemented into the Department's tiered response.

Administrative controls

Administrative controls include actions that change the way that people work. The Department modified policy, procedures, quick drills, training, SharePoint and the Continuity of Operations Plan (COOP) to change operations.

Dispatch screening

Enhanced dispatch screenings are utilized on every incident to screen for COVID-19 risk factors.

Secondary screening

A secondary screening is now conducted by FD personnel on all incidents. This includes an additional survey of symptoms, evaluation of risk factors and history and provides direction to the caller and the patient to reduce risk and increase efficiency. This screening allows crews and callers to be better prepared for the changes required by COVID-19.

PERSONNEL DECONTAMINATION

COVID-19

TIER I (HIGH RISK)

CONFIRMED/HIGHLY SUSPECTED

Proper decontamination following incidents using **Tier I PPE** includes properly removing all PPE items in a manner that prevents cross-contamination. When done properly, personnel are not required to change their uniform or shower.

TIER II (MODERATE RISK)

UNKNOWN/REASONABLY SUSPECTED

Proper decontamination following incidents using **Tier II PPE** includes properly removing all PPE items in a manner that prevents cross-contamination. Full decon of personnel, apparatus and equipment is not indicated without evidence of direct contact with a high risk patient.



TIER III (LOW RISK)

NOT SUSPECTED

Proper decontamination following incidents using **Tier III PPE** does not include a full decon of personnel, apparatus or equipment unless there is evidence of direct contact with a high-risk patient.

FINAL DISCRETION

PPE and decontamination processes are at the discretion of the care providers and may be upgraded at any point. Please keep in mind that **source control** is critical to each level.

PPE TIERS


COVID-19

Response to potential COVID-19 incidents can be categorized into three categories: **High Risk** (confirmed or highly-suspected), **Moderate Risk** (unknown or reasonably-suspected), and **Low Risk** (not-suspected). These risks are based solely on the potential for disease transmission regarding COVID-19.

TIER I (HIGH RISK)

CONFIRMED/HIGHLY SUSPECTED


- ASTM 1671 certified coveralls
- Safety glasses **and** face shield or safety goggles
- N95 respirator
- EMS gloves (two layers)
- Rubber boots



TIER II (MODERATE RISK)

UNKNOWN/REASONABLY SUSPECTED


- Surgical gown
- Safety glasses **and** face shield or safety goggles
- N95 respirator
- EMS gloves (two layers)





TIER III (LOW RISK)

NOT SUSPECTED

- Safety glasses or goggles
- N95 respirator
- EMS gloves



SharePoint

The department utilized SharePoint to convey continuous updates to staff. This includes incident volume, facility risk information, protocol and procedure changes, etc. This is continually updated and available for all staff to reference.

COOP

The Continuity of Operations Plan (COOP) ensures that the department performs our Primary Mission Essential Functions of the department at the highest possible level during the COVID-19 pandemic. The COOP is a dynamic document that serves as the roadmap for the agency to continue to provide service in a rapidly evolving environment and to plan for illness, staffing changes, equipment and resource shortages, policy and procedures, etc.

Engineering controls

Engineering controls help isolate the people from the hazard. Engineering controls are critical to any risk mitigation process. COVID-19 forced us to adapt to the ever-changing information to provide our staff with the most up-to-date resources, and information. While emergency response is inherently dangerous, the Department took a multitude of steps to create layers of controls including the engineering controls listed below:

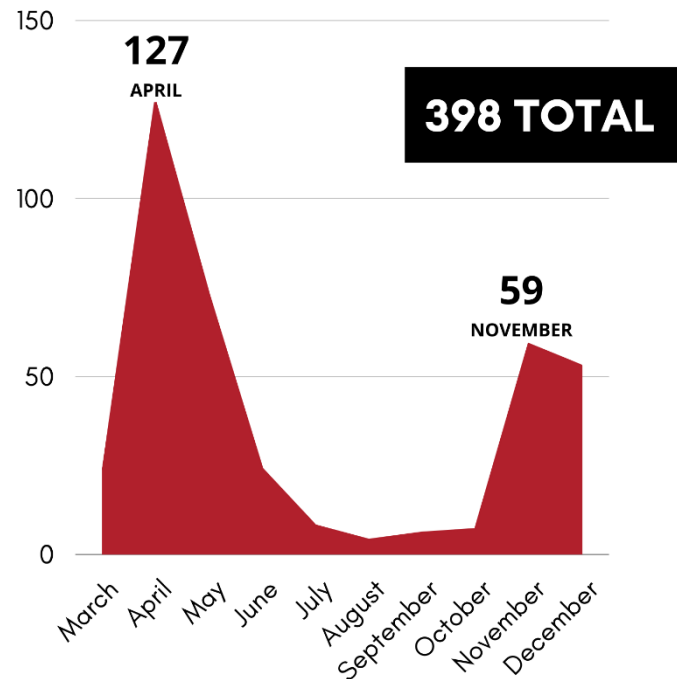
- Social distancing
- Wearing of masks
- PPE procurement and use
- Dispatch protocol changes
- Secondary screenings
- Additional drivers
- The isolation of workgroups including alteration of sleeping quarters, reallocation of office and shared spaces, storage, training and collaboration areas, etc.
- Daily command briefing
- Equipment modifications
- Wearing of masks
- Daily command briefing
- Equipment modifications
- Alternative staffing

Eradication

The primary hopes for elimination are the release of the COVID-19 vaccine. As part of the first wave of vaccine recipients, our Department received the Pfizer mRNA vaccine. The availability of vaccination is the only way to mitigate the hazard of COVID-19 and to return to any level of "normalcy." Phase 1A of the vaccine distribution plan includes fire departments that provide EMS services. The Department led the way and received their first round of the Pfizer/BoiNTech mRNA vaccine in late December. Subsequent second doses followed in 21 days later and were completed in early 2021. The COVID-19 vaccine offers:

- 95% efficacy
- The active ingredient is mRNA, or messenger RNA, that carries instructions for making the virus's spike protein, which it uses to gain entry into cells.

COVID-19 RESPONSES BY MONTH



- This allows the spike protein to be recognized as foreign by the immune system and mount an attack against it.
- The vaccine is available to individuals 16 years of age and older through emergency use authorization (EUA).
- To gain herd immunity, it's expected we will need 70-90% vaccination (measles = 94%)

BE THE STANDARD

Our firefighters received the COVID-19 vaccine to lead by example and continue to offer Northville Township residents the fire and emergency services they rely on. While COVID marked 2020 with many obstacles for the Department, it clearly was our opportunity to shine. **Our response was our greatest success.**

The best method of overcoming obstacles is the team method.

COLIN POWELL



**NORTHVILLE
TOWNSHIP**
FIRE DEPARTMENT
BE THE STANDARD

BUILDING A FOUNDATION FOR THE FUTURE.

