



Town of Plaistow FIRE DEPARTMENT

2021 Budget Presentation





Town of Plaistow

FIRE DEPARTMENT

FIRE/RESCUE MISSION

- Beyond the hazards of just fire activities
- Plaistow firefighters are **"ALL-HAZARD"** responders
- An essential service/critical infrastructure for a community





Town of Plaistow FIRE DEPARTMENT

FIRE/RESCUE MISSION

“Save LIVES and PROTECT property”





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3 ELEMENTS OF EFFECTIVE FIRE/RESCUE MANAGEMENT

1. Understanding the risks in the response environment
2. Deploying enough resources to manage every incident effectively
3. Being able to demonstrate how changes to response resources will affect the overall safety of responders and the community

Decision-Makers MUST Understand these elements





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RISK...

- (noun) The possibility of meeting danger or suffering harm or loss, or exposure to harm or loss.
- (noun) A person or thing insured or representing a source of risk.
- (verb) To expose to the chance of injury or loss





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DETERMINING RISK FACTORS

- The probability that an undesired event might occur.
- A harmful or undesirable consequence.
- The severity of the harm that might result.





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RISK MANAGEMENT IN THE COMMUNITY

Control Mission

Trained personnel coupled with specialized equipment on hand, emergency responders exemplify a community's response to risk

If the fire department cannot perform its fire/rescue control mission, the community's risk balance could be comprised





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FIRE DEPARTMENT

DEMOGRAPHICS

■ Community

- Mixed district of residential, commercial, and industrial districts
- Significant shifts in population (7,700 – 50,000)

■ Fire Department

- Five full-time
- Coverage from 6:00 am – 6:00 pm





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FIRE DEPARTMENT

COMMUNITY RISK FOR PLAISTOW

■ Fire

- Fire protection to a broad mix of residential units, commercial buildings, industrial complexes, and wildland-urban interfaced woodlands
- Combined value of over 1 billion dollars
- Involves the study and practice of mitigating the unwanted effects of potentially destructive fires
- Prevention efforts, suppression activities, and investigative processes





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COMMUNITY RISK FOR PLAISTOW

■ Pre-Hospital Emergency Medical Care

- Emergency Medical Technicians and paramedics provide a medical subspecialty service
- Emergency care for the medically ill and traumatically injured
- Through the New Hampshire scope of practice, these professionals reduce pain, suffering, long-term disability, and untimely deaths
- Daily transient population of 50,000+ people





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COMMUNITY RISK FOR PLAISTOW

- Motor-Vehicle Collision and Equipment Extrication
 - Plaistow Fire Department is the primary rescue agency that responds to vehicle and/or industrial accidents with injury or entrapment
 - Requires specialized tools and training
 - Thousands of vehicles that consist of passenger cars, transit busses, commercial vehicles, MBTA commuter trains, and chemical tankers drive through Plaistow daily





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COMMUNITY RISK FOR PLAISTOW

■ Hazardous Materials Response

- Plaistow Fire Department is the primary agency to initiate a response to any substance (biological, chemical, radiological, nuclear, etc.) that causes or may cause adverse effects on individual's health or safety, the general public, or the environment
- New Hampshire routes 108, 111, 121A, 125 and ancillary roads are thoroughfares for various tank trucks and hazardous cargo shipments
- Pan Am, the largest regional freight railroad in North America, transports millions of gallons of hazardous cargo through Plaistow annually





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COMMUNITY RISK FOR PLAISTOW

- Low and High – Angle Rope Rescue
 - Plaistow Fire Department is the primary rescue agency for both low and high-angle rescue
 - Car off the roadway in ditch, ravine, etc.
 - Commercial, construction, and industrial sites with fall arrest requirements
 - Motorized lifts with a railed platform





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COMMUNITY RISK FOR PLAISTOW

■ Confined Space Rescue

- Plaistow Fire Department is the primary rescue agency to initiate a response to a confined space emergency
- Underground vaults, storage silos, storage tanks, sewers
- A confined space has limited or restricted means for entry or exit and is not designed for continuous occupancy





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COMMUNITY RISK FOR PLAISTOW

■ Trench Collapse Rescue

- Plaistow Fire Department is the primary agency to initiate a response to a trench collapse
- Trench rescue involves shoring up the sides of an unstable trench to rescue a trapped worker
- Trenches as shallow as 2' feet have the potential to collapse
 - Spoil pile is a contributing factor
- Excavation of footers, basements, utility connections, waterlines, and sewer lines all pose a risk of collapse





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COMMUNITY RISK FOR PLAISTOW

■ Natural Disasters

- Plaistow Fire Department responds to a multitude of natural disasters which are outlined in the latest hazard mitigation plan
 - Flooding
 - Hurricanes
 - High-Wind Events
 - Severe Winter Weather
 - Wildfires
 - Earthquakes
 - Drought





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COMMUNITY RISK FOR PLAISTOW

■ Human-Made Disasters and Hostile Events

- The Plaistow Fire Department is the primary agency to initiate a response to accidental or intentional events
 - Involve an element of human intent, negligence, or error
- Merrimack Valley gas explosions of 2018
 - 40 homes impacted
 - 80+ building fires
 - 1 death
 - 30,000 forced to evacuate





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OPERATIONAL READINESS

Control Mission

Capability to have the needed equipment, training, and personnel to perform the functions for which the organization is responsible for

These performance goals are part of the plan that places public safety with high regard and assures that there is no needless loss of life or property damage





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OPERATIONAL NEEDS

- The fire/rescue services' operational needs that protect a community are not determined through personal opinions
- Public safety managers, department heads, and government decision-makers cannot use the fallacy that things will not happen in their town

Risk is NOT based on an actual occurrence, but based on an event's opportunity and consequences





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OPERATIONAL NEEDS

- An opinion may be that trench collapses just do not happen in the New England area or that people will always follow OSHA standards and use a trench box

WORKER RESCUED AFTER TRENCH COLLAPSES ON HIM IN ROCHESTER



Mar 23, 2020

ROCHESTER, NH — A 60-year-old contractor was transported to the hospital after a sewer trench collapsed on him on Pine Street Monday afternoon.

The man was conscious and alert and sustained no external injuries from being buried waist-deep in sand, loose soil and frozen soil outside 60 Pine St., Rochester Assistant Fire Chief Tim Wilder said.

Wilder said preliminary evidence at the scene indicates the trench collapsed around 1:08 p.m. Monday *because it lacked a trench box to help stabilize the hole.*





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OPERATIONAL NEEDS

- Several codes, standards, and publications should be adopted and referenced for operational needs, readiness, and determining deficiencies
 - Occupational Safety and Health Administration (OSHA)
 - Ensure safe and healthful working conditions
 - National Fire Protection Association (NFPA)
 - Publishes more than 300 codes and standards
 - Insurance Services Office Mitigation (ISO Mitigation)
 - Develops the Public Protection Classification for a community
 - Center for Public Safety Excellence (CPSE)
 - Self-assessment model for industry best practices and proven strategies





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CURRENT OPERATIONAL DEFICIENCIES

It is essential to understand that this section is not meant to blame any specific individual or the governing body

The primary purpose of evaluating weaknesses and threats is to bring forward the operational deficiencies that negatively impact Plaistow's public safety

Therefore, creating a platform for the stakeholders and policymakers the ability to compose an informed, competent, and efficient budget plan





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FIRE DEPARTMENT

CURRENT OPERATIONAL DEFICIENCIES

- Insurance Services Office Mitigation (ISO Mitigation)
 - Plaistow Fire Department is currently an ISO Class 4 (64.48)
 - There are three elements of fire suppression that ISO reviews for effectiveness
 - Communications Center 10%
 - Fire Department 50%
 - Water Supply 40%





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FIRE DEPARTMENT

CURRENT OPERATIONAL DEFICIENCIES

- Insurance Services Office Mitigation (ISO Mitigation)
 - Communications Center 10%

FSRS Feature	Earned Credit	Credit Available
Emergency Communications		
414. Credit for Emergency Reporting	0.30	3
422. Credit for Telecommunicators	2.40	4
432. Credit for Dispatch Circuits	1.65	3
440. Credit for Emergency Communications	4.35	10





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FIRE DEPARTMENT

CURRENT OPERATIONAL DEFICIENCIES

- Insurance Services Office Mitigation (ISO Mitigation)
 - Fire Department 50%

Fire Department		
513. Credit for Engine Companies	5.97	6
523. Credit for Reserve Pumpers	0.00	0.50
532. Credit for Pump Capacity	3.00	3
549. Credit for Ladder Service	3.70	4
553. Credit for Reserve Ladder and Service Trucks	0.00	0.50
561. Credit for Deployment Analysis	7.45	10
571. Credit for Company Personnel	2.98	15
581. Credit for Training	2.72	9
730. Credit for Operational Considerations	2.00	2
590. Credit for Fire Department	27.82	50





Town of Plaistow

FIRE DEPARTMENT

CURRENT OPERATIONAL DEFICIENCIES

- Insurance Services Office Mitigation (ISO Mitigation)
 - Water Supply 40%

Water Supply			
616. Credit for Supply System	30.00	30	
621. Credit for Hydrants	3.00	3	
631. Credit for Inspection and Flow Testing	2.40	7	
640. Credit for Water Supply	35.40	40	





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CURRENT OPERATIONAL DEFICIENCIES

- Insurance Services Office Mitigation (ISO Mitigation)

Divergence	-6.57	--
1050. Community Risk Reduction	3.48	5.50
Total Credit	64.48	105.50





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CURRENT OPERATIONAL DEFICIENCIES

- Insurance Services Office Mitigation (ISO Mitigation)
 - Training
 - Extreme weakness and significant concern
 - Current payroll budget only supports 30% of what is required
 - Training is more than ISO points; It is preparation

The services of public safety require a competent level of technical knowledge, skills, and abilities

Training is the backbone for the safety of first responders and the community





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FIRE DEPARTMENT

CURRENT OPERATIONAL DEFICIENCIES

- Insurance Services Office Mitigation (ISO Mitigation)
 - NFPA 1710 Response Times

4.1.2.1

The fire department shall establish the following performance objectives for the first-due response zones that are identified by the AHJ:

- (1) Alarm handling time completion in accordance with 4.1.2.3
- (2) 80 **seconds** turnout time for fire and special operations response and 60 **seconds** turnout time for EMS response
- (3)* 240 **seconds** or less travel time for the arrival of the first engine company at a fire suppression incident





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FIRE DEPARTMENT

CURRENT OPERATIONAL DEFICIENCIES

- Insurance Services Office Mitigation (ISO Mitigation)
 - NFPA 1710 Response Times
 - Before 24-hour staffing and after hours
 - Average of 10-minutes to respond an apparatus
 - With 24-hour staffing
 - 5 minutes 38 seconds from notification to scene
 - 18 seconds over the industry standard





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CURRENT OPERATIONAL DEFICIENCIES

- Insurance Services Office Mitigation (ISO Mitigation)
 - NFPA 1710 Response Personnel
 - Average number of people available for a first alarm assignment
 - Currently only receiving credit for 1.43 on-duty response personnel and 10-call personnel
 - 20% effectiveness
 - This can change with a minimum staffing standard

Personnel is the heart of public safety





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CURRENT OPERATIONAL DEFICIENCIES

- Motor-Vehicle Collision and Extrication
 - The Plaistow Fire Department is not equipped, trained, or prepared to handle a vehicle rescue that is beyond that of a small passenger vehicle
 - This deficiency exemplifies the risk of responding to an accident involving a larger vehicle such as a;
 - School Bus
 - Passenger Bus
 - Dump Truck
 - Cargo Truck
 - Passenger / Cargo Train





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FIRE DEPARTMENT

CURRENT OPERATIONAL DEFICIENCIES

■ Motor-Vehicle Collision and Extrication

GOLDEN HOUR

- Coined by Dr. Cowley
- "There is a golden hour between life and death. If you are critically injured you have less than 60 minutes to survive. You might not die right then; it may be three days or two weeks later – but something has happened to your body that is irreparable." (from U of MD website)
- "the first hour after injury will largely determine a critically-injured person's chances for survival" (MD State Medical Journal 1975)





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CURRENT OPERATIONAL DEFICIENCIES

■ Hazardous Materials Response

- The Plaistow Fire Department is not equipped, trained, or prepared to handle any sizeable amount of a hazardous materials incident or response
- The comfort of being part of the Southeastern N.H. Hazardous Materials Mutual Aid District has created a deception for preparedness, response, and mitigation capabilities
 - “On a good day” it would take them 45+ minutes to respond and 1 hour to have a team functioning
- Currently do not have the capability to establish a firefighting foam line on a flammable liquids fire





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CURRENT OPERATIONAL DEFICIENCIES

- Low and High-Angle Rescue
 - The Plaistow Fire Department is not equipped, trained, or prepared to handle a high angle rescue
 - Any injured patients would have to wait for a mutual-aid department to respond (if they were available) with an estimated response time of 30-45 minutes





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CURRENT OPERATIONAL DEFICIENCIES

- Confined Space and Trench Collapse Rescue
 - The Plaistow Fire Department is not equipped, trained, or prepared to handle an either of these incident types
 - Any injured patients would have to wait for a mutual-aid department to respond (if they were available) with an estimated response time of over an hour

Remember the “GOLDEN HOUR” of survival





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CURRENT OPERATIONAL DEFICIENCIES

- Natural Disasters, Human-Made Disasters, and Hostile Events
 - As the department improves the necessary level of services listed above, these categories would also enhance
 - The Equipment, training, and preparation for individual levels of risk directly related to responding to a larger scale event





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CURRENT OPERATIONAL DEFICIENCIES

- Fire Inspections and Pre-Incident Planning
 - Fire inspection is completed for new construction and remodel permits
 - Lack of inspections for existing commercial properties
 - Fire Department should be inspecting commercial businesses two times a year for life safety code violations

An adequate life safety inspection program is the first line of defense for preventing disastrous consequences





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CURRENT OPERATIONAL DEFICIENCIES

- Fire and Life Safety Education
 - The Fire Department does not have anyone trained in the specialty of fire and life safety education
 - Funding for this program would significantly improve fire safety programs delivered at school and in the community
 - Significant ISO points are awarded for having a credentialed fire and life safety educator





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GRANT FUNDING

- Federal Emergency Management Agency (FEMA)
 - Assistance to Firefighters (AFG) funding programs
 - Plaistow Fire Department is active in applying for these programs
- Notice of Funding Opportunity (NOFO)
 - Establishes priorities
 - Different then a departments “needs”





Town of Plaistow FIRE DEPARTMENT

BUDGET HOUSE CLEANING

- Combination of budget line items
- Realignment of full-time salaries
- Enhance job descriptions





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FIRE DEPARTMENT

UNIFORM LINE

- Combination of
 - Shift/duty apparel and personal protective equipment for entire department
 - NFPA 1500
 - NFPA 1851
 - NFPA 1971
 - OSHA 1910.156 Protective Clothing
 - OSHA 1926.1211 Rescue and Emergency Services
 - Expiration dates of structural firefighting gear
 - 5 and 10 years





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MEDICAL PHYSICALS

- Fit for duty medical assessments
 - For entire department
 - Baseline and annual
 - NFPA 1582
 - OSHA 1910.120
 - Required every 12 months





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PRE-INCIDENT PLANNING SOFTWARE

- The fire department shall make building familiarization and pre-incident planning tours of each commercial, industrial, institutional, and other similar buildings
 - Annual visits
 - Must be coordinated with an incident management system
 - NFPA 1620
 - ISO Mitigation





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PER-DIEM STAFFING

- Replace a fractured system from 6:00 am – 6:00 pm
 - 3rd person during critical hours of the day
- Provide for continued night coverage
 - 2 responders at night and a supervisor
 - ISO Mitigation





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PAYROLL FOR TRAINING

- Ability to meet minimum standards for training and continuing education
 - NFPA 1001
 - NFPA 1002
 - NFPA 1006
 - NFPA 1021
 - NFPA 1026
 - NFPA 1031
 - NFPA 1051
 - NFPA 1670
 - OSHA 1910.156
 - ISO Mitigation





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FIRE DEPARTMENT EQUIPMENT

- Ability to meet minimum standards for equipment and replace outdated and unreliable equipment
 - Majority of the trench equipment is a one-time purchase
 - Fire hose outdated and unreliable
 - Length of fire hose is dangerous to firefighters
 - Threads on hose are not national standard threads
 - Unable to perform basic fire department functions because of missing equipment





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CONCLUSION

- Understanding and transparency to the Plaistow Fire Department's funding needs
 - Improve and balance public safety in Plaistow
 - Police department budget is \$2,011,175
 - Fire Department budget is \$718,791
 - Full awareness of decision-making factors
 - Composition of Inadequate funding
 - Authoritative and competent solutions

19 Cents
a day

