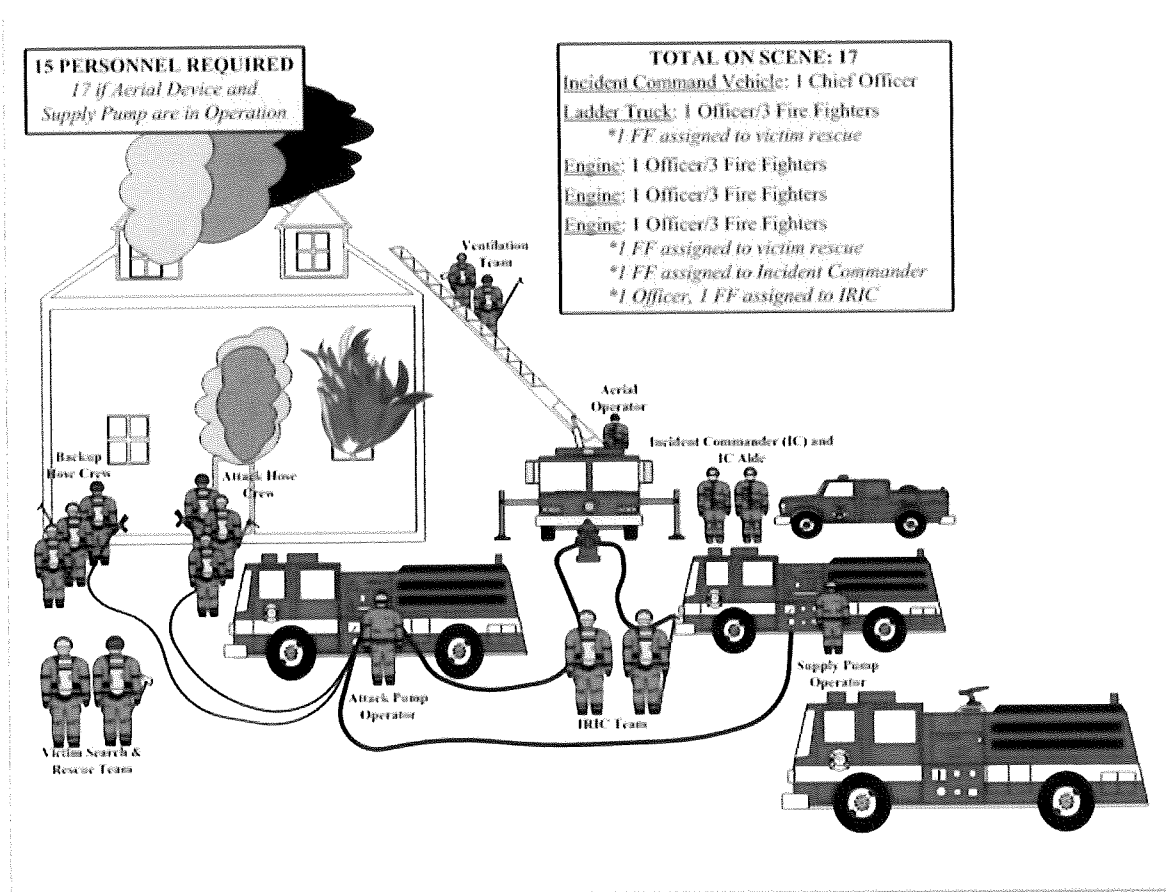


Critical Task Capabilities & Staffing Analysis

West Barnstable Fire Department

September 12, 2013



Visualization of a Typical Critical Task Analysis at a Single Family House Fire

A Critical Task Analysis is an analysis of human performance requirements at an emergency incident which, if not accomplished in a timely manner by qualified personnel, will likely have adverse effects on the outcome of the incident. Typically these adverse effects include increase property damage and loss, and injuries or death.

The Staffing Analysis component is a statement of where the West Barnstable Fire Department expects the appropriate staff to come from and the apparatus used to get them to the fire scene.

Critical Task Capabilities & Staffing Analysis
West Barnstable Fire Department
September 12, 2013

For any given emergency that the West Barnstable Fire Department responds, there are critical tasks that must be completed. These tasks can range from the immediate rescue of trapped occupants with a burning structure to providing lifesaving emergency medical care to patients in need. A set of critical tasks have been developed to identify what minimum staffing resources are needed for each incident type.

Critical tasking has been identified for the following incident types:

1. Structure Fire: Low/Moderate Risk
2. Emergency Medical Incident
3. Motor Vehicle Crash with injuries
4. Hazardous Materials: Minor Incident
5. Wildland Fire

Structure Fire: Low/Moderate Risk
Non-Hydrant Zone

Initial Assembly: Assumes Tank Water Attack
Assembly in 14 minutes or less

CRITICAL TASK	NEEDED PERSONNEL
Incident Command	1
Pump Operator	1
Attack Hose Line/Search Team	2
Initial RIT Team	2
Total Firefighters	6

First Alarm: Assumes Nurse Tanker Operation
Assembly in 24 minutes or less

CRITICAL TASK	PERSONNEL NEEDED
Command	1
Safety/Accountability	1
Pump Operators/Water Supply	2
Attack Hose Line	3
Initial RIT Team	2
Aerial Operator	1
Ventilation/Search Team	2
Total Firefighters	12

Working Fire:**Assumes Nurse Tanker Operation**

CRITICAL TASK	PERSONNEL NEEDED
Incident Command	1
Chief's Aide/Communications	1
Safety	1
Accountability	1
RIT Team	4
Attack Hose Line Team	3
Pump Operators/Water Supply	3
Ventilation Team	2
Search/Second Hose Team	3
Total Firefighters	19

Second Alarm Fire:**Assumes Water Shuttle Operations – 500 to 750 gpm
Assumes Exterior Firefighting**

CRITICAL TASK	PERSONNEL NEEDED
Incident Command	1
Chief's Aide/Communications	1
Safety	1
Accountability	1
Water Supply Manager	1
RIT Team	4
Fire Attack Hose Line Team	3
Second Fire Attack Hose Line Team	3
Third Fire Attack Hose Line Team	3
Water Dump Site Manager	1
Water Tanker Fill Sites	6
EMS/Rehab	3
Pump Operators/Aerial Operator	4
Water Tanker Crews	14
Total Firefighters	46

**Structure Fire: Low/Moderate Risk
Hydrant Zones**

**Initial Assembly: Assumes Tank Water Attack
Assembly in 14 minutes or less**

CRITICAL TASK	NEEDED PERSONNEL
Incident Command	1
Pump Operator	1
Attack Hose Line/Search Team	2
Initial RIT Team	2
Total Firefighters	6

**First Alarm: Assumes a Single Hydrant Operation
Assembly in 24 minutes or less**

CRITICAL TASK	PERSONNEL NEEDED
Command	1
Safety/Accountability	1
Pump Operators/Water Supply	2
Attack Hose Line	3
Initial RIT Team	2
Aerial Operator	1
Ventilation/Search Team	2
Total Firefighters	12

Working Fire: Assumes Two Hydrant Operation

CRITICAL TASK	PERSONNEL NEEDED
Incident Command	1
Chief's Aide/Communications	1
Safety	1
Accountability	1
RIT Team	4
Attack Hose Line Team	3
Pump Operators/Water Supply	3
Ventilation Team	2
Search/Second Hose Team	3
Total Firefighters	19

Second Alarm Fire: Assumes Three Hydrant Operation

CRITICAL TASK	PERSONNEL NEEDED
Incident Command	1
Chief's Aide/Communications	1
Safety	1
Accountability	1
Water Supply Manager	1
RIT Team	4
Fire Attack Hose Line Team	3
Second Fire Attack Hose Line Team	3
Third Fire Attack Hose Line Team	3
Ventilation Team	3
Pump Operators/Aerial Operator	5
EMS/Rehab	3
Total Firefighters	29

Emergency Medical Incident

CRITICAL TASK	PERSONNEL NEEDED
Incident Management	1
Ambulance Driver/Lifting/Support	1
Patient Care/Paramedic	1
Patient Care/EMT	1
Total Firefighters	4

**Motor Vehicle Crash with Injuries:
Assumes One Patient
Assumes No Fire
Assumes No Extrication**

CRITICAL TASK	PERSONNEL NEEDED
Incident Command/Safety	1
Ambulance Driver	1
Patient Care/Paramedic	1
Patient Care/EMT	1
Hazmat/Hazard Mitigation Team	2
Total Firefighters	6

**Motor Vehicle Crash with Injuries:
Assumes One Patient
Assumes Fire or Extrication**

CRITICAL TASK	PERSONNEL NEEDED
Incident Command/Safety	1
Ambulance Driver	1
Patient Care/Paramedic	1
Patient Care/EMT	1
Hazmat/Hazard Mitigation Team	2
Fire Suppression/Extrication Team	4
Total Firefighters	10

**Hazardous Material Incident: Minor Spill
Assumes No IDLH Atmosphere**

CRITICAL TASK	PERSONNEL NEEDED
Incident Command/Safety	1
Damming & Diking	3
Fire Prevention/Standby Hose	2
Total Firefighters	6

**Hazardous Materials Incident: Minor Leak
Assumes limited or no entry into IDLH Atmosphere**

CRITICAL TASK	PERSONNEL NEEDED
Incident Command/Safety	1
Metering/Monitoring	2
Hose Line (Initial RIT if Needed)	2
Pump Operator/Water Supply	1
Total Firefighters	6

**Hazardous Materials Incident
Carbon Monoxide in a Residence**

CRITICAL TASK	PERSONNEL NEEDED
Incident Command	1
Metering/Monitoring	2
Ventilation	2
Patient Assessment/Care	2
Total Firefighters	6

Wildland Fire

First Alarm

CRITICAL TASK	PERSONNEL NEEDED
Incident Command	1
Fire Attack Hose Line Team	2
Hand Tool Team	2
Pump Operator	1
Total Firefighters	6

**Building Fire Incident Staffing
West Barnstable Fire Department**

This incident staffing analysis seeks to identify the source of the staffing needed for building fires at the First Alarm, Working Fire and Second Alarm level based upon the critical task analysis.

Structure Fire Non-Hydrant Zones

**Initial Assembly: Minimum of Six Firefighters
Assumes Tank Water Attack
Assembly in 14 minutes or less**

Number of Firefighters:	Firefighter's Roles:	Expected Apparatus:
		All from Wbfd
One Firefighter:	Command	C-291
One Firefighter:	Pump Operator	E-294
Two Firefighters:	Attack Line Team	L-297
Two Firefighters:	Initial RIT Team	

**First Alarm: Minimum of Twelve Firefighters
Assumes Nurse Tanker Operation
Assembly in 24 minutes or less**

One Firefighter:	Command	C-291
One Firefighter:	Safety/Accountability	E-294
Two Firefighters:	Pump Operators/Water Supply	L-297
Three Firefighters:	Attack Line Team	E-202 (Barnstable)
Two Firefighters:	Initial RIT Team	T-464 (Sandwich)
One Firefighter:	Aerial Operator	ET-296
Two Firefighters:	Ventilation Team	T-286
		C-201(BJD Chief)

**Working Fire: Minimum of Nineteen Firefighters
Assumes Nurse Tanker Operation**

One Firefighter:	Command	C-291
One Firefighter:	Chief's Aide	E-294
One Firefighter:	Safety	L-297
One Firefighter:	Accountability	E-202 (Barnstable)
Four Firefighters:	RIT Team	T-464 (Sandwich)
Three Firefighters:	Attack Line Team	ET-296
Three Firefighters:	Pump Operators/Water Supply	T-286

Two Firefighters:	Ventilation Team	C-201(BFD Chief)
Three Firefighters:	Second Attack Line	L-307 (COMM)
		E-262 (Cotuit)
		C-261 (Cotuit Chief)

Second Alarm Fire: Minimum of Thirty-Three Firefighters
Assumes Water Shuttle Operation – 500 to 750 gpm
Assumes Exterior Firefighting

One Firefighter:	Command	C-291
One Firefighter:	Chief's Aide	E-294
One Firefighter:	Safety	L-297
One Firefighter:	Accountability	E-202 (Barnstable)
One Firefighter:	Water Supply	T-464 (Sandwich)
Four Firefighters:	RIT Team	ET-296
Three Firefighters:	First Attack Line Team	T-286
Three Firefighters:	Second Attack Line Team	C-201 (Barnstable)
Three Firefighters:	Third Attack Line Team	L-307 (COMM)
One Firefighter:	Dump Site Manager	E-292 (Cotuit)
Five Firefighters:	Tender Drivers	C-261 (Cotuit Chief)
Six Firefighters:	Water Fill Sites	E-305 (COMM)
Three Firefighters:	EMS/Rehab	E-823 (Hyannis)
		E-451 (Sandwich)
		E-42 (Yarmouth)
		T-3 (Plymouth)
		T-414 (MMR)
		ET-352 (Mashpee)
		C-301 (COMMChief)
		C-802 (HyFD Chief)
		MA - Ambulance

Structure Fire Hydrant Zones

Initial Assembly: Minimum of Six Firefighters Assumes Tank Water Attack

Number of Firefighters:	Firefighter's Roles:	Expected Apparatus:
One Firefighter:	Command	C-291
One Firefighter:	Pump Operator	E-294
Two Firefighters:	Attack Line Team	L-297
Two Firefighters:	Initial RIT Team	

First Alarm: Minimum of Twelve Firefighters Assumes Single Hydrant Operation

One Firefighter:	Command	C-291
One Firefighter:	Safety/Accountability	E-294
Two Firefighters:	Pump Operators/Water Supply	L-297
Three Firefighters:	Attack Line Team	E-202 (Barnstable)
Two Firefighters:	Initial RIT Team	
One Firefighter:	Aerial Operator	ET-296
Two Firefighters:	Ventilation Team	C-201 (Barnstable)

Working Fire: Minimum of Nineteen Firefighters Assumes Two Hydrant Operation

One Firefighter:	Command	C-291
One Firefighter:	Chief's Aide	E-294
One Firefighter:	Safety	L-297
One Firefighter:	Accountability	E-202 (Barnstable)
Four Firefighters:	RIT Team	ET-296
Three Firefighters:	Attack Line Team	C-201 (Barnstable)
Three Firefighters:	Pump Operators/Water Supply	L-307 (COMM)
Two Firefighters:	Ventilation Team	E-823 (Hyannis)
Three Firefighters: Chief)	Second Attack Line	C-802 (Hyannis)

Second Alarm Fire:

**Minimum of Thirty Firefighters
Assumes Three Hydrants in Use**

One Firefighter:	Command	C-291
One Firefighter:	Chief's Aide	E-294
One Firefighter:	Safety	L-297
One Firefighter:	Accountability	E-202 (Barnstable)
One Firefighter:	Water Supply	ET-296
Four Firefighters:	RIT Team	C-201 (Barnstable)
Four Firefighters:	First Attack Line Team	L-307 (COMM)
Four Firefighters:	Second Attack Line Team	E-823 (Hyannis)
Four Firefighters:	Third Attack Line Team	C-802 (Hyannis)
Chief)		
Four Firefighters:	Ventilation Team	E-263 (Cotuit)
Two Firefighters:	Relay Pumping	C-261 (Cotuit Chief)
Three Firefighters:	EMS/Rehab	E-305 (COMM)
		C-301 (COMMChief)
		L-450 (Sandwich)
		Sandwich Ambulance