

# JOINT WORKSHOP

CITY COUNCIL, PUBLIC SAFETY COMMITTEE, FIRE DEPARTMENT  
2016

## FIRE DEPARTMENT STAFFING



# AGENDA

- TERMINOLOGY
- IDENTIFY STAFFING CONCERNS
  - SHORT TERM
  - LONG TERM
- HISTORICAL DATA
  - DECEMBER, 2004 “FIRE PROTECTION NEEDS” STUDY
  - 2011 SHARED SERVICES STUDY, STILLWATER/MAHTOMEDI/LAKE ELMO
  - PUBLIC SAFETY COMMITTEE
  - “EMPTY BOOTS, QUIET SIRENS”, Mn State Fire Chiefs Study, 2014
- CURRENT STAFFING MODEL
  - DUTY CREWS
  - ALL CALLS
- IDENTIFY POSSIBLE SOLUTIONS
  - SHORT TERM
  - LONG TERM



- **TERMINOLOGY**

- Authority Having Jurisdiction (AHJ) – Per 2015 MN State Fire Code – “Any municipal fire code official serving within their appointed jurisdiction or the state fire marshal or any of their authorized representatives.”
- POC, (Paid On Call) – Firefighters that respond when paged. Formerly known as “Volunteers” until over time they were paid and recognized as city employees.
- Duty Crews – (Lake Elmo specific) Personnel, assigned to a specific window of time, during which, they have committed to be available to respond. They will remain, “in the area” during this period. There are many variations of this throughout the fire service, FT, PT or POC staff in the station, labeled “Shifts”, “Squads”, “Duty Shifts” or “Standby Crew”.
- NFPA (National Fire Protection Association), National Fire Codes consisting of Codes, Guides, Recommended Practices and Standards. These are nationally recognized industry standards that have been referenced in Courts of Law.
- Shared Services – Sharing of resources, (equipment, response personnel, administrative personnel, training, facilities, etc) as well as sharing the associated costs.



- **TERMINOLOGY**

- Mutual Aid – Sharing of resources, locally, regionally, statewide and nationally. Resources from other agencies respond WHEN REQUESTED by primary agency. Primary agency must request specific resource needs. (*This process has been in place for years and used by Lake Elmo. Utilized when local resources are exhausted or exceeded*)

NFPA Definition - **3.3.2.2 Mutual Aid.** Reciprocal assistance by emergency services under a written plan among AHJs that is part of communication center's dispatch protocol.

- Auto Aid – Sharing of resources, locally, regionally, statewide and nationally. Resources from other agencies respond automatically based on predetermined response needs identified by primary agency for specific incidents. Additional “groups” of resources can be requested by additional, predetermined “ALARMS”. (*Currently utilized on a very limited basis due to the restrictions of the current CAD system used by Wash. Cty. Dispatch*)

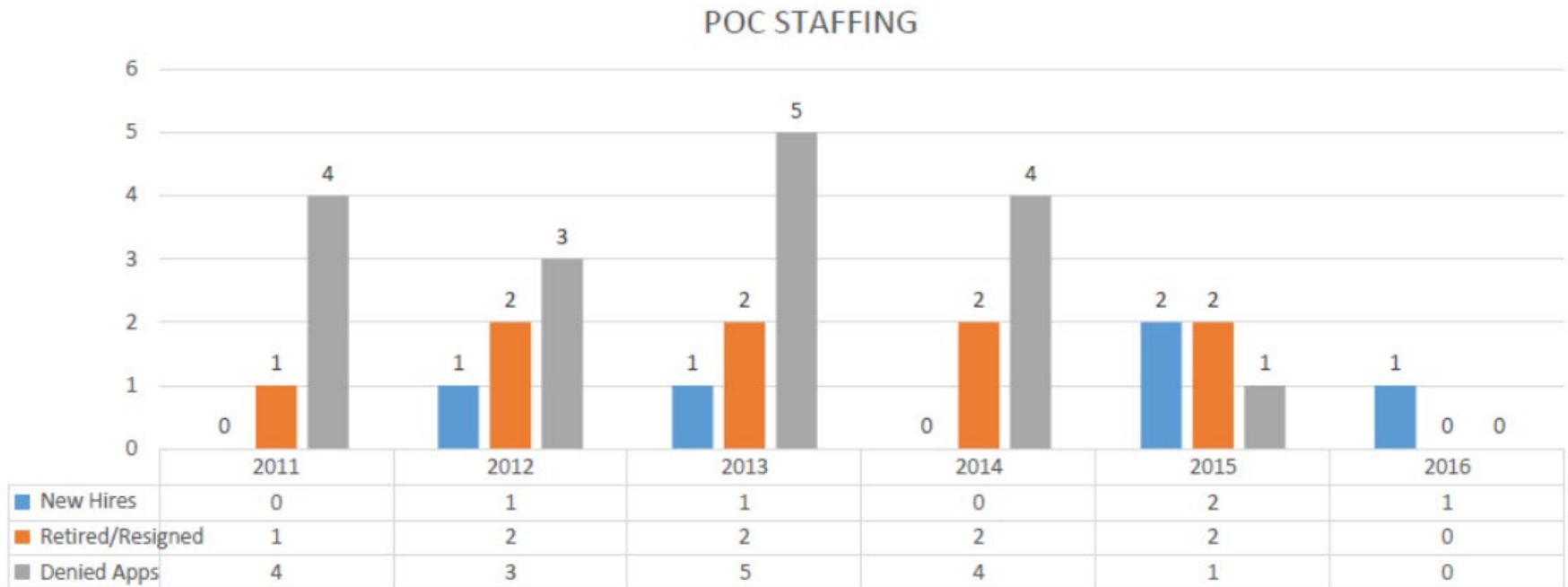
NFPA Definition - **3.3.2.1\* Automatic Aid.** A plan developed between two or more fire departments for immediate joint response on first alarms. [1142, 2012]



# IDENTIFY STAFFING CONCERNS

## – Recruitment/Retention

### Recruitment/Retention Trends



Reasons for denial – Failed background check, failed psychological evaluation, reside outside response requirement of 5 ½ minutes, outside Lake Elmo or neighboring community, attended drill and decided not for them, withdrew application.



# IDENTIFY STAFFING CONCERNS

- Recruitment/Retention
- Meet Minimal NFPA Staffing Recommendations
  - Firefighter Safety
  - Deliver Service

**Table 4.3.2** shall be used by the AHJ to determine staffing and response time objectives for structural fire fighting, based on a low-hazard occupancy such as a 2000 ft<sup>2</sup> (186 m<sup>2</sup>), two-story, single-family home without basement and exposures and the percentage accomplishment of those objectives for reporting purposes as required in **4.4.2**.

Table 4.3.2 Staffing and Response Time

Demand Zone <sup>a</sup>	Demographics	Minimum Staff to Respond <sup>b</sup>	Response Time (minutes) <sup>c</sup>	Meets Objective (%)
Urban area	>1000 people/mi <sup>2</sup>	15	9	90
Suburban area	500–1000 people/mi <sup>2</sup>	10	10	80
Rural area	<500 people/mi <sup>2</sup>	6	14	80
Remote area	Travel distance ≥ 8 mi	4	Directly dependent on travel distance	90
Special risks	Determined by AHJ	Determined by AHJ based on risk	Determined by AHJ	90

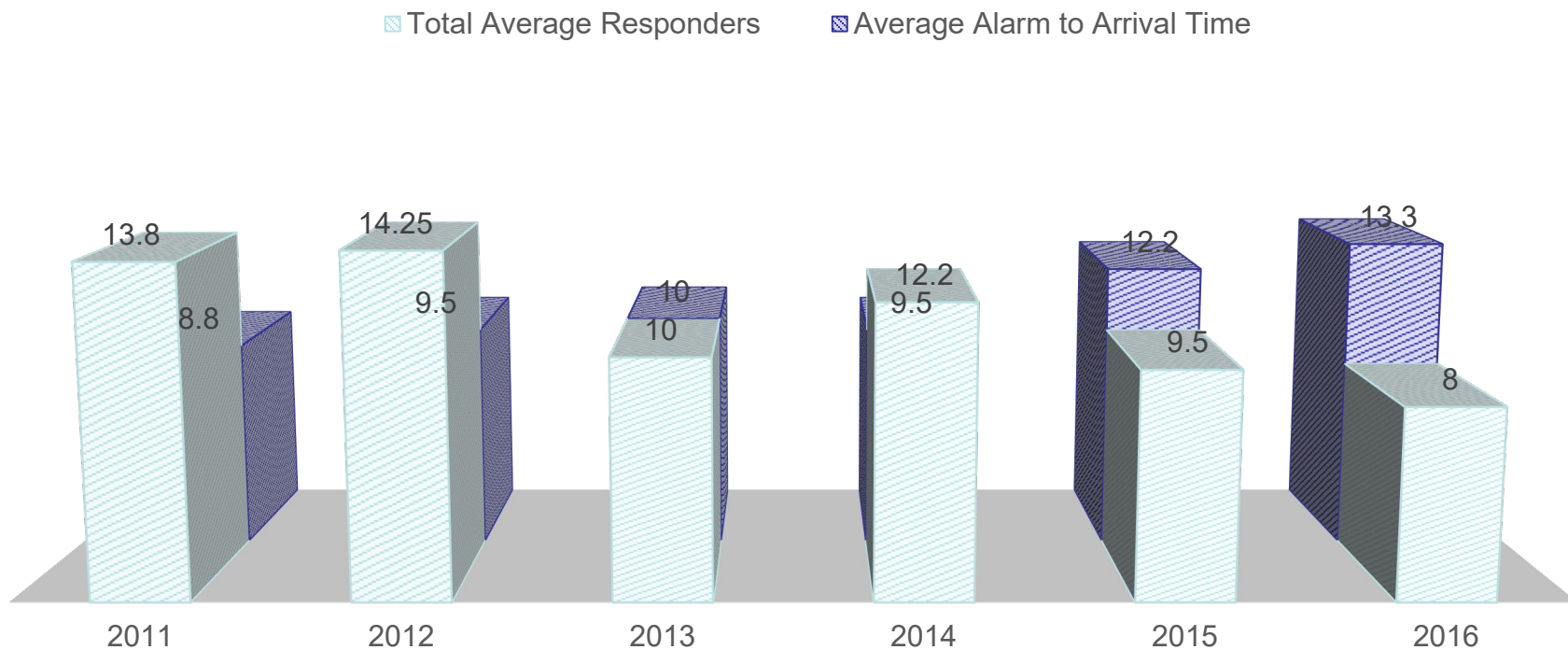
<sup>a</sup>A jurisdiction can have more than one demand zone.

<sup>b</sup>Minimum staffing includes members responding from the AHJ's department and automatic aid

<sup>c</sup>Response time begins upon completion of the dispatch notification and ends at the time interval shown in the table.



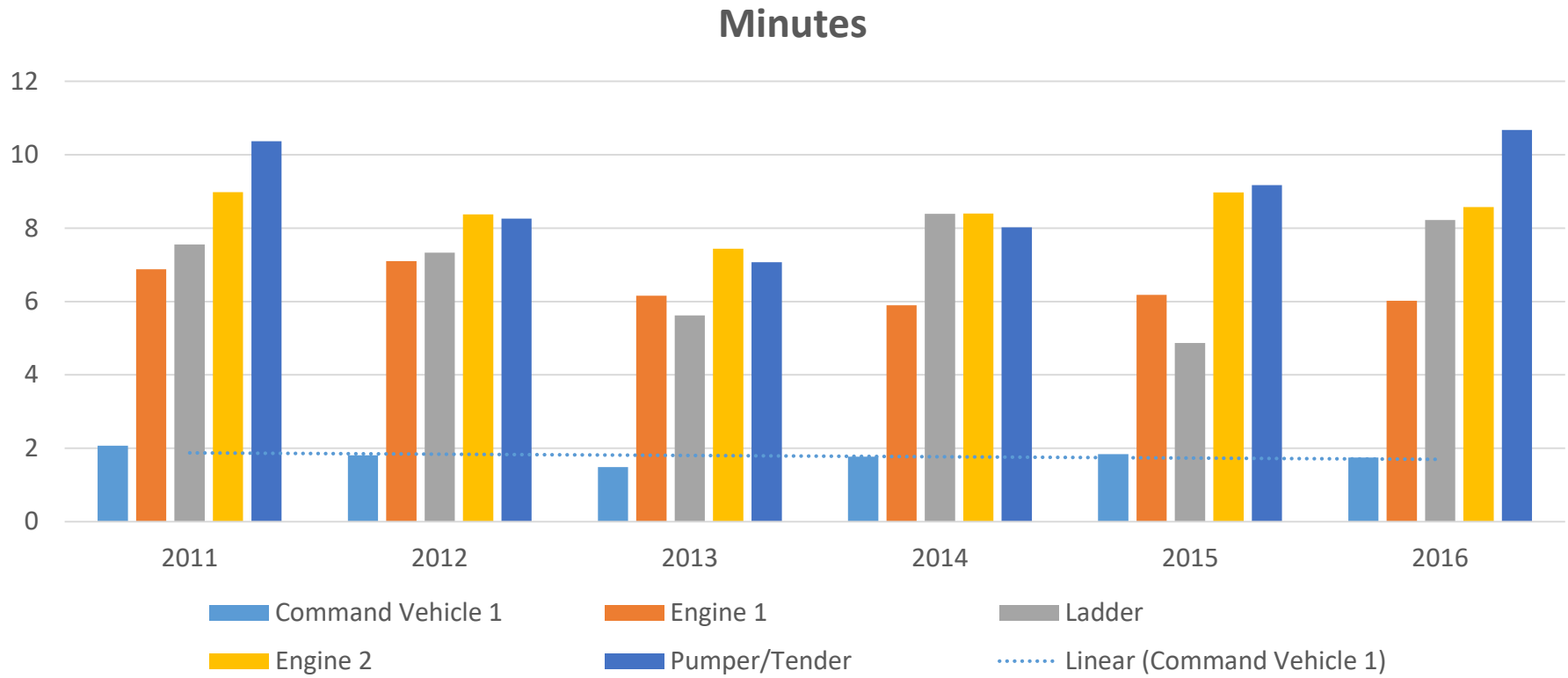
# Responders and Alarm to Arrival Data for Building Fire Calls Only



# IDENTIFY STAFFING CONCERNS

- Meet Customer Response Expectations
  - Ability to Safely Perform Required Duties

## Dispatch to En Route Time





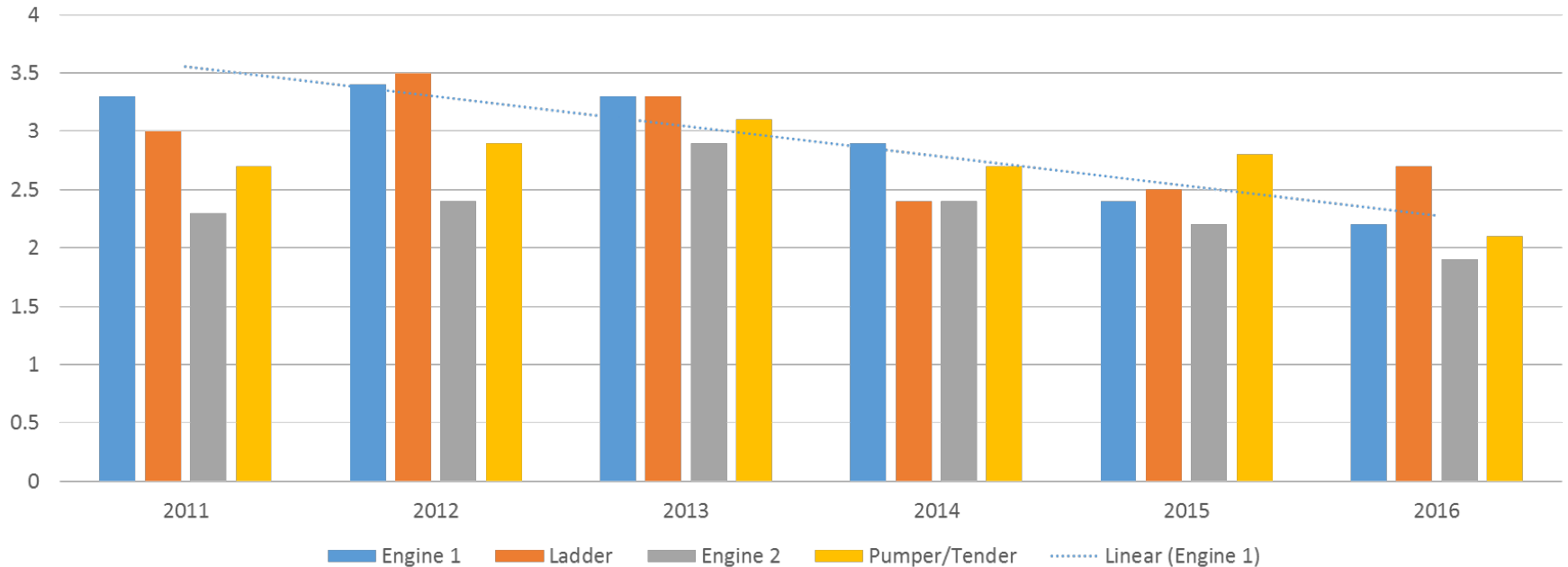
# IDENTIFY STAFFING CONCERNS

## SHORT TERM

- Ensure Proper Staffing Under Current Operation

# Responders Per Apparatus

2011-2016



# IDENTIFY STAFFING CONCERNS

- Meet Customer Response Expectations
  - Ability to Safely Perform Required Duties

## SHORT TERM

- Ensure Proper Staffing Under Current Operation

## LONG TERM

- Ensure Adequate Staffing to Meet Future Demands



# HISTORICAL DATA

- “FIRE PROTECTION NEEDS” STUDY

Submitted by Dahlgren, Shardlow and Uban, December, 2004

This study primarily focused on fire station locations with regards to response times and warning siren locations. Most of the “detail” in the report related to inadequacies and future needs of fire stations. Staffing information, mentioned need for “2 full time fire employees” and cited 2000 census statistics for hiring 18-25 year olds. Also focused in on 4 and 2 station model with both 4 and 4 ½ minute response (calculated from “In-Service” to “On Scene”)



# *Stillwater, Lake Elmo, Mahtomedi Minnesota*

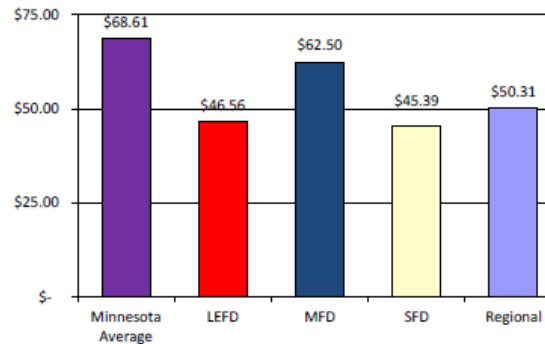
## Feasibility Study for Shared or Cooperative Fire and Emergency Services

September 2011

### Per Capita Cost of Fire Protection

National Average	\$104.00
Minnesota Average	\$68.61
<b>Lake Elmo FD</b>	<b>\$46.56</b>
Mahtomedi FD	\$62.50
Stillwater FD	\$45.39

Figure 16: Per Capita Cost Comparison



# HISTORICAL DATA

## – 2011 SHARED SERVICES STUDY, STILLWATER/MAHTOMEDI/LAKE ELMO

In addition to the operational consolidation of the three departments, ESCI provides 16 functional cooperative effort strategies designed to improve cooperation and efficiency across the three agencies. These strategies include:

A – Develop Standard Operating Guidelines

*Documents are shared regularly throughout the Fire Service*

B – Shared Specialty Teams

*Regional HazMat, County wide FD Dive Rescue Team, County wide FD Investigation Team(pending)*

C – Develop a Regional Fire Safety Education Coalition

D – Create a Unified Occupational Medicine Program

E – Create a Unified Wellness and Fitness Program

F – Develop and Adopt Common Training Standards

*8-Wash. Cty. Depts using Regions 1/4rly EMS, MBFTE, Century CEU Program*

G – Create a Regional Training Manual

*Training to NFPA Standards*

H – Develop an Annual Regional Training Plan

I – Develop a Regional Fire and EMS Training Facility

*JPA Members of the East Metro Public Safety Training Facility*

J – Develop Mutual Training Strategies



# HISTORICAL DATA

K – Purchase Uniform Emergency Apparatus

*Ranger-Regional Response, Most Apparatus designed for Communities unique needs*

L – Acquire AVL and MDC or MDT Capabilities

*Dependent on Washington County Dispatch CAD System*

M – Develop Uniform Pre-Incident Plans

*Most FD's using Image Trend and info will be in County CAD*

N – Provide for Joint Staffing of Stations and Apparatus

*Varying levels of service, Pay Rates, Relief Associations*

O – Provide for Joint Incident Command and Operations Supervision

*Standardized Officer Training (not adopted by all), Officers from other depts. fill roles on Mut. Aid*

P – Purchase and Implement an Electronic Staffing Program



# HISTORICAL DATA

## Station #1

Staff Features	
Adequate space for working in, on or around apparatus?	Space around apparatus cramped and movement is limited Apparatus parking is impeded due to inadequate space
Apparatus room accommodates working on small equipment, hose, tools, etc.?	Space is small and limited
Personnel can move quickly and easily to apparatus for response?	Compromised, turnout gear is cramped between equipment
Adequate space for cooking and eating?	Compromised, any eating occurs in classroom
Adequate space for local company training and drills?	Yes
Are compromises necessary for two-gender staffing?	No
Adequate space for personal hygiene?	No
Adequate space for sleeping?	Not intended for sleep accommodation
Adequate space for storage?	No
Identify any additional operational compromises made by staff or crew to compensate for facility inadequacies:	Classroom doubles as dayroom/lounge, dining room.
Facility features:	Separate watch room/station office Administrative/support offices Kitchen Classroom for >10 Turnout gear extraction washer SCBA filling station



# HISTORICAL DATA

## Station #2

### Staff Features

Adequate space for working in, on or around apparatus?	Space around apparatus is adequate
Apparatus room accommodates working on small equipment, hose, tools, etc.?	Space is small and limited
Personnel can move quickly and easily to apparatus for response?	Yes
Adequate space for cooking and eating?	No
Adequate space for local company training drills?	Yes
Are compromises necessary for two-gender staffing?	No
Two-gender compromises:	
Adequate space for personal hygiene?	No
Adequate space for sleeping?	Not intended for sleep accommodation
Adequate space for storage?	No
Identify any additional operational compromises made by staff or crew to compensate for facility inadequacies:	Not capable of on-site residency
Facility features:	Separate watch room/station office Day room/lounge Turnout gear extraction washer





# HISTORICAL DATA

Figure 20: Services Provided by Department

	Lake Elmo	Mahtomedi	Stillwater
Fire Suppression	Yes	Yes	Yes
EMS First Response	BLS	ALS	BLS
EMS Transport	No	ALS	No
Extrication	Yes	Yes	Yes
Technical Rescue	Surface Water	Surface Water, Ice, Dive	High Angle, Low Angle, Surface Water, Ice, Dive
Fire Prevention Inspections	Yes	Yes	Yes
Public Education	Yes	Yes	Yes
Hazardous Materials	Operations	Operations	Operations

The following provides a summary of the total operational personnel available to each agency.

Figure 21: Emergency Services Operational Personnel

	MFD	LEFD	SFD
Captain	0.00	0.00	3.00
POC Captain	5.00	4.00	3.00
POC Lieutenant	0.00	0.00	3.00
Firefighter/Engineer	0.25	0.00	3.00
POC Firefighter/Engineer	31.00	4.00	8.00
POC Firefighter	0.00	14.00	12.00
<b>Total Operations</b>	<b>36.25</b>	<b>22.00</b>	<b>32.00</b>



# HISTORICAL DATA

## Public Safety Committee

- 11/13/13 – First meeting of the Public Safety Committee. Began discussion on recruitment/staffing. Many ideas proposed and pursued during this and future meetings.

Newsletter

Cable Channel

Explorer Program

Demographics

HOA's

Retention

Rotary Meeting

Solicit Businesses

Increase Response Times

Public Works Staff

Responding to Scenes

Promo Video

Turnover

Community Meetings-Surveys

Mailings

Reduce Requirements

Ads w/LMC

Open Houses

Incentives

Morale

### KARE11, NOVEMBER 2014

"Emergency Management Magazine: Volunteer Fire Departments Face Recruitment, Retention Challenges Minnesota's recruitment and retention efforts have been falling since the 1980s."

<http://www.emergencymgmt.com/disaster/Volunteer-Fire-Departments-Face-Recruitment-Retention-Challenges.html>

"Fire departments face funding, recruitment challenges"

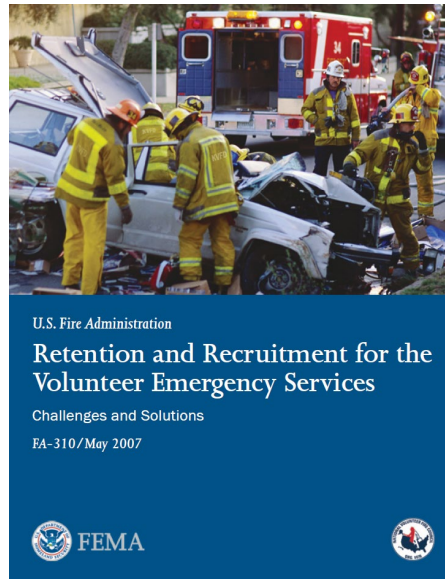
<http://www.argusleader.com/story/news/2015/04/18/fire-departments-face-funding-recruitment-challenges/25994171/>

FEMA: Retention and Recruitment in the Volunteer Fire Service: Problems and Solutions (LEFD has applied all feasible solutions presented here)

<https://www.usfa.fema.gov/downloads/pdf/publications/fa-310.pdf>



# HISTORICAL DATA



## 261 Page Report

- 6/19/14 – The following topics discussed:

Response Times	Staffing	Maplewood Model
POC vs PT vs FT	Shifts	Service Level
Shared Services Study from September 2011		Staffing Costs
- 9/18/14 – Maplewood Fire Chief Steve Lukin presented to the committee the “Maplewood Model” of staffing with PT shifts and the process they had recently gone through regarding staffing and building a station. This presentation followed a previous meeting between Lake Elmo and Maplewood Chief Officers to discuss these topics.



# Preliminary Staffing Costs for 1 Station, PT shifts

This is having 1 officer @ \$14.20/hr and 2 FF's @ \$12.20/hr

	# FF Needed	Hours per week	Cost Per Hour	Total Cost	
FF's PT M-F 8-4	2FF @ \$12.20	40	\$24.40	\$976.00	FT staff will be the officer
	2 @ \$12.20 & 1 Officer @ \$14.20				
FF's PT M-F 4pm-8am	\$14.20	80	\$38.60	\$3,088.00	
FF's PT Friday 4pm - Monday 8 am	2 @ \$12.20 & 1 Officer @ \$14.20	48	\$38.60	\$1,852.80	
Hours per week		168		Total Cost Per Week \$5,916.80	
				Total Cost Per Year (52 Weeks) <b>\$307,673.60</b>	
	SS	6.20%		\$19,075.76	
	Medicare	1.45%		\$4,460.27	
	ER Pera	16.20%		\$49,843.12	
	Work Comp	\$7.31/\$1000		\$2,246.09	
		<b>TOTAL</b>		<b>\$383,298.84</b>	



# Empty Boots, Quiet Sirens

The State of Minnesota's Non-Career Firefighting



HUMPHREY SCHOOL  
OF PUBLIC AFFAIRS

UNIVERSITY OF MINNESOTA  
*Driven to Discover™*



*July 2014*

Partha Chevuru, Maria Cote,  
Brad Hasskamp, and Mamta Verma

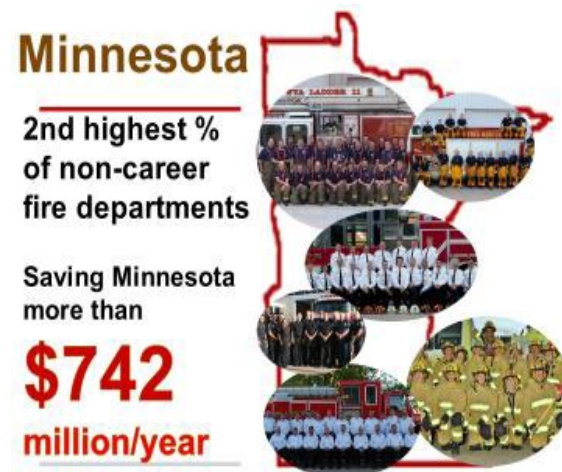


In May 2014, the Minnesota State Fire Chiefs Association (MSFCA) engaged four students from the Humphrey School of Public Affairs to help determine the nature, scope and magnitude of the problems facing the recruitment and retention of Minnesota’s non-career firefighters. The study sought answers to the following research questions:

- ☐ Do Minnesota Fire Departments have the non-career staff necessary to adequately protect people, property and the environment?
- ☐ What are the factors affecting non-career firefighter recruitment and retention in Minnesota?
- ☐ What best practices, public policy implications, and areas for further study can be identified and how could they be applied in Minnesota?

Regional Comparison Data (per 10,000 population)					
State	Non-Career Firefighters	Career Firefighters	Total Firefighters	Fire Stations	Fire Departments
ND	110.5	7.5	118	4.92	4.31
SD	83.23	6.31	89.54	3.9	3.37
IA	53.38	6.2	59.58	2.63	2.38
WI	39.34	7.96	47.3	1.77	1.33
MI	20.26	7.56	27.82	1.46	0.96
<b>MN</b>	<b>32.89</b>	<b>3.57</b>	<b>36.46</b>	<b>1.68</b>	<b>1.33</b>
USA overall	23.30	10.44	33.74	1.57	0.85

U.S. Fire Administration – National Fire Department Census Database, 2014



## Findings

1

Recruitment and retention of non-career firefighters is a local problem requiring local solutions and state resources. “If you’ve seen one fire department, you’ve seen one fire department.” Each community has unique economic, political, demographic and other factors that impact its ability to recruit and retain non-career firefighters.

2

Rural areas are more likely to experience difficulty recruiting and retaining non-career firefighters. Eighty-eight percent of career firefighters in the state of Minnesota are in communities with populations of 100,000 or more. Seventy-seven percent of relief associations that reported a decrease of 10% or more from 2008-2012 serve communities with populations of 4,000 or less.

3

Additional information is needed at the state level in order to provide the most impactful support to local communities. There is a lack of statewide data related to the existing force of non-career firefighters in Minnesota. In order to determine effective recruitment and retention strategies, additional data must be collected and analyzed.



## Relief Associations Reporting a Decline of 25% or More in Non-Career Firefighters, 2008-2012

Maplewood	59%	Bovey	31%
Federal Dam	47%	Elmer	31%
Greenwood	44%	Frost	31%
Hokah	44%	Shevlin	30%
Bigfork	38%	Foreston	30%
Harris	38%	Colvill	29%
Roseville	38%	Fisher	29%
McDavitt	36%	Tofte	29%
Culver	36%	Hollandale	27%
Hector	36%	St. Francis	27%
Magnolia	36%	Clarks Grove	26%
Hitterdal	35%	Granada	25%
Bertha	33%	Remer	25%
Mazeppa	32%		

## 10 Factors Affecting Staffing Levels

- 1 A desire for greater work-life balance
- 2 Increased training requirements
- 3 Increased volume of non-fire-related calls
- 4 Evolving and increased firefighter responsibilities resulting in a decrease in the social nature of volunteering
- 5 Decreased sense of community in urban, suburban and rural areas
- 6 Department leadership challenges
- 7 Increased federal legislative requirements
- 8 Internal departmental conflicts
- 9 Increased housing costs prevent potential firefighters from living in more affluent communities
- 10 Shifting demographics – aging population, retirement of Baby Boomers, racial/ethnic diversity





## Factors Impacting Recruitment & Retention

A multitude of challenges stand between a non-career firefighter and long-standing tenure in a single department. These challenges vary widely by individual and community. As a result, no list is comprehensive. However, the research identified 10 common factors significantly affecting recruitment and retention of non-career firefighters in Minnesota that fall into three broad categories: 1) increased demands; 2) local management; and 3) changing communities.

### Departments Face New Demands



### Communities are Changing

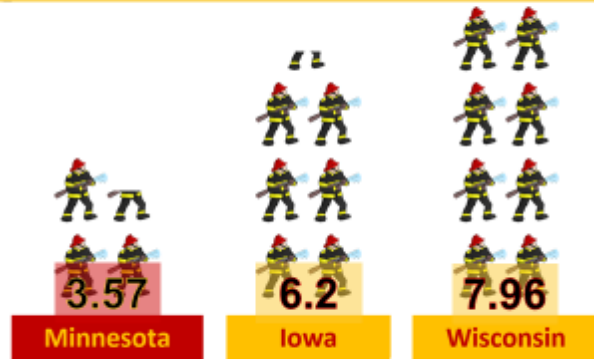


### Departments Face Local Issues





## Minnesota: Fewest Career Firefighters in the U.S.



Career Firefighters/10,000 population

Source: FEMA and U.S. Census

## Minnesota Depends on its Non-Career Firefighters



Non-Career Firefighters/10,000 population

Source: FEMA and U.S. Census

## Minnesota's Aging Fire Force



In 2012

- 22% over age 50
- 46% age 35-49



# CURRENT TYPES of PAGING

- **DUTY CREWS**

- **NIGHTTIME**– Monday – Thursday, 2200-0500 hrs. (ending Friday AM)
  - Assigned Duty Crew will respond to all calls during their shift.
  - Only assigned personnel will respond to “Duty Crew Paged” events.
  - All Non Duty Crew personnel shall respond under the following conditions:
    - Report of Any Fire whether confirmed or not. This does not include fire alarms.
    - All accidents (MVA, 10-52’s) that are paged as requiring extrication.
    - Tones paged out as an “All Call”.
    - Mutual Aid
- **DAYTIME** – Monday – Friday, 0800-1630 hrs.
  - Paging criteria will be the same as Nighttime Duty Crew
  - Only personnel designated as “Daytime Responders” will be required to sign up for a daytime shift and will be required to respond to all calls during their shift.
  - All available personnel may respond to both Duty Crew and All Call events.

- **ALL CALLS**



# WHERE ARE WE NOW?

- FD is understaffed and struggling to get POC's. National problem.
  - What has Lake Elmo FD Done?
    - Implemented “Stay at Home Duty Crews”, (unique to Lake Elmo)
    - Increased Response Time Requirements
    - Reduced response percentage requirements
    - Implemented “Incentive Pay”
    - Implemented Daytime Duty Crews
    - Increased and expanded pay
    - Vacation
    - Leave of Absence
    - Created Lieutenants position
- Address current staffing shortfalls.
- Need to plan for future staffing.

## QUESTIONS?



# Where Do We Go?

## Paid On Call

- Expand Duty Crews?

Need more POC's

Nights?

Weekends?

Require minimum number of shifts or hours?

How long are shifts?

Stay with "In Area" or staff station?

- Increase Response Time Requirement?

Possibly more POC's

Increased response times

Delays for All Calls

## Part Time Shifts

24/7?

Daytime Only?

Weekdays Only?

Weekends?

Combine With POC?

Competing with other agencies for staffing?

## Full Time Shifts



# DISCUSSION

