City of Grand Island

Tuesday, November 1, 2016

Study Session

Item -1

Presentation and Discussion regarding the Grand Island Fire Department

Staff Contact: Cory Schmidt, Fire Chief

Council Agenda Memo

From: Marlan Ferguson, City Administrator

Meeting: November 1, 2016

Subject: Review Grand Island Fire Department Operations

Presenter(s): Fire Chief Cory Schmidt

Background

During the budget process for the 2017 Fiscal Year Budget much discussion was concerning future budgets and sustainability. The Mayor and City Council have determined to have a balanced budget for Fiscal Year 2018. In order to accomplish that goal there will need to be some tough decisions made. Currently the City's expenditures in the general fund are growing at a faster rate than the revenues in the General Fund. This is the result of a number of events, including becoming an MSA community which causes salaries to increase substantially by way of comparing to a different array of Cities. At the same time the City made the decision after a recommendation from a Public Safety Study completed by the ICMA; to increase the number of police officers and support staff in the police department by 17 FTE since 2012. In the FY 2017 Budget 62% of the expenditures in the General Fund is for the Public Safety Departments. In addition 77% of the expenditures are for personnel costs. It is the administrations intent to review each department's operational activities to determine the level of service provided versus the cost of service.

Discussion

Tonight's study session is for the purpose of discussing and reviewing the Grand Island Fire Department. As you know the GIFD includes fire suppression, ambulance, and fire prevention. Members of this department serve on 24 hours shifts with the exception of the Chiefs, so is different than other departments. We want the City Council to have a good understanding of the current operating procedures in order to identify potential cost savings and what level of service is most desirable and at what cost. Chief Schmidt will provide details on the history, response times, rolling stock, department structure, operating budget, call volumes, future demands, and cost recovery options.

Conclusion

This item is presented to the City Council in a Study Session to allow for any questions to be answered and to create a greater understanding of the GIFD.

Grand Island Fire Dept.

All-Hazards Department



History of GIFD

- 1874 - organized as a fire department
- 1921 - changed from all volunteer to all career
- 1980 - ALS ambulance service started
- 2000 - paramedics assigned to engine companies
- 2002 - fire stations and crews began to specialize

Dept. Summary

- 3 shifts, 24 hours long (0700-0700)
  - 21 personnel on each shift, assigned to 4 stations
  - 1 Shift commander
  - 4 fire apparatus staffed
  - 2 ALS ambulances, 3rd staffed when possible

Why 24 hour shifts?

- Section 7k of the FLSA exempts cities from paying firefighters overtime for hours worked greater than 40 hours per week. Allows up to an average of 53 hours without requiring overtime pay.
- Reduces overtime costs and/or number of personnel

Dept. Summary

- Four stations strategically located
  - Station 1, 409 E. Fonner (2007)
  - Station 2, 1720 N. Broadwell (1956)
  - Station 3, 2310 S. Webb (1987)
  - Station 4, 3690 W. State (1996)

Personnel minimum staffing

- Minimum staffing level is 17 per shift (4 stations)
  - Shift commander (1)
  - Paramedic and firefighter on each ambulance (4)
  - Captain, firefighter/EMT, and firefighter/paramedic on each frontline engine/aerial (12)

17

Personnel (70 total)

Admin (5)

- Fire Chief
- 3 Division Chiefs
- 1 Admin Assistant
- 2 life safety inspectors*

Shift personnel (63)

- 3 shift commanders
- 12 Captains
- 27 firefighter/paramedics
- 21 firefighter/EMTs

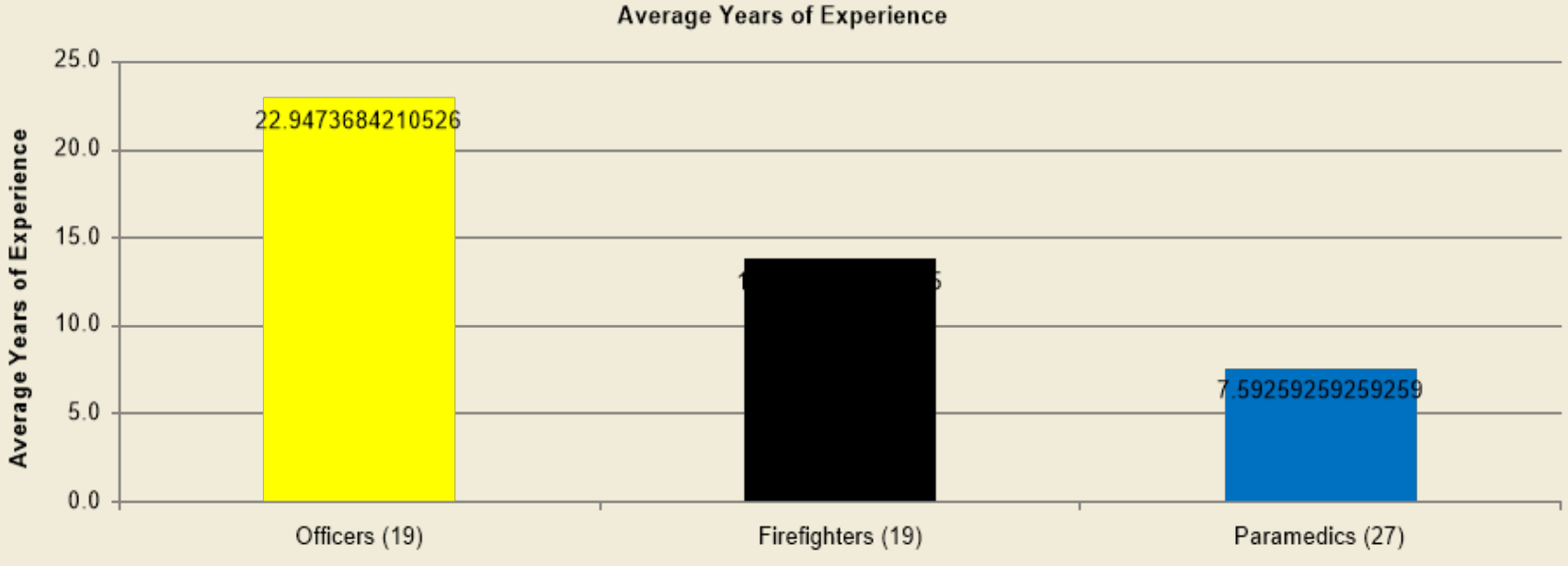
How do we compare?

- Firefighters per 1000 population
  - Nationwide: 1.67
  - GIFD: 1.25
  - Array: 1.28

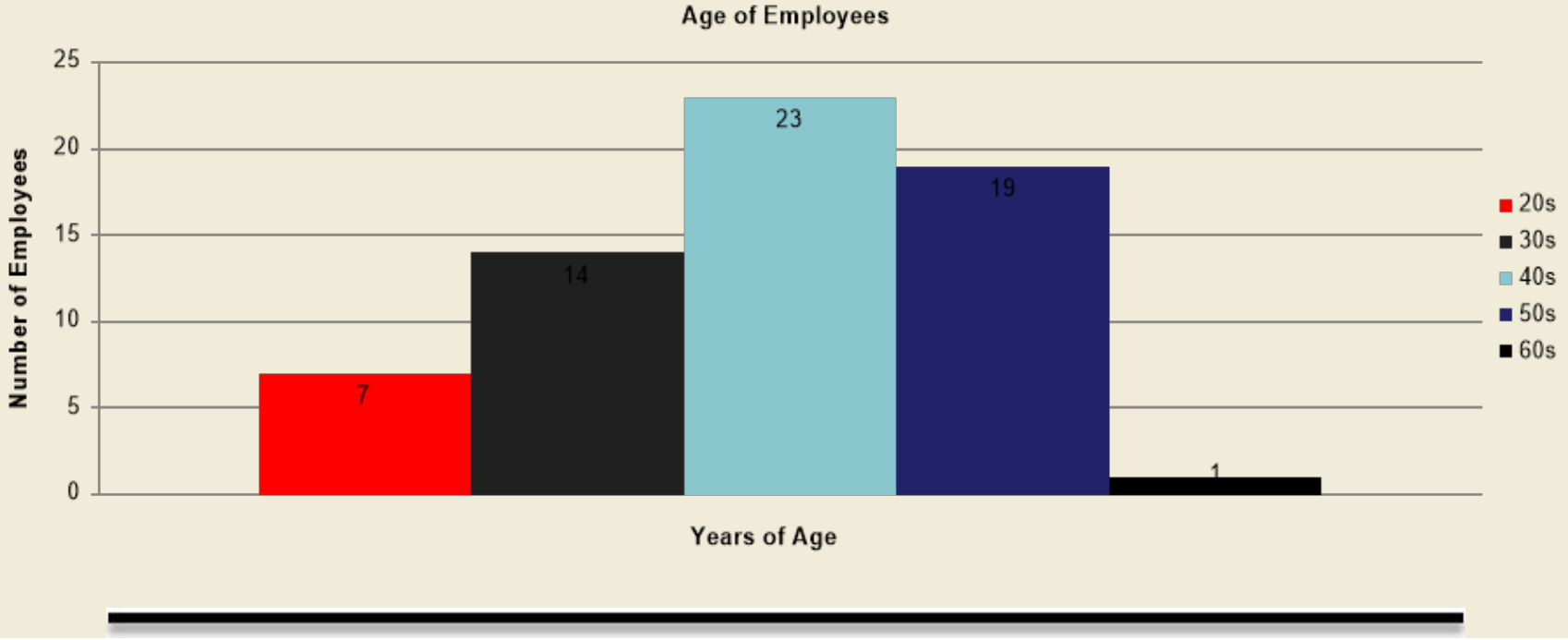
Personnel Changes

- 1985-87 – Added 6 firefighters (opened Sta. #3)
- 1996 – Added 9 firefighters (opened Sta. #4)
- 2000 – Added 6 firefighters (69 total)
- 2013 – Eliminated Division chief, reclassified 3 Captains to Shift Commanders, added life safety inspector (69 total)
- 2014 – Added life safety inspector (70 total)

Experience of employees



Employee age



Response time standards (Fire)

- NFPA 1710: Fire department's fire suppression resources shall be deployed to provide for the arrival of an engine company within a 2 minute travel time to 90 percent of the incidents.

- GIFD: Average time is 3:34, 90 percent is 6:25

Response time standards (EMS)

- NFPA 1710: Fire department's EMS for providing a first responder with AED shall be deployed to provide for the arrival of a first responder with AED company within 4 minute travel time 90 percent of the time; 8 minutes for ALS.

- GIFD: Average time is 2:57, 90 percent is 4:43

Rolling Stock

- 2016 Quint
- 2014 Engine
- 2013 Rescue/pumper
- 2000 Engine
- 1999 Engine*
- 1999 Aerial Platform*
- 1996 Engine*
- 2016 ambulance
- 2014 ambulance
- 2012 ambulance
- 2009 ambulance
- 2003 ambulance
- 2000 ambulance
- 2000 ambulance

Reserve Apparatus

- Three units (aerial platform, two pumpers)
  - Aerial – first out on large, commercial fires
  - Fire Engines– shift changes, recalls, break downs

Dual Purpose Vehicles

- 2013 Rescue pumper
  - Took place of 1987 pumper and 1998 Rescue truck
- 2016 Quint
  - Provide 2nd aerial and 1999 engine placed in reserve

Ambulance Fleet

- 2 front line units (staffed daily)
- 1 additional unit staffed when possible
- 4 reserves – one at each station
  - Break downs, recalls, cross-staffing

Vehicle replacement plan

- Fire Engines: 20 years of total service
- Aerials: 25 year service life
- Ambulance: Purchase one every other year, goal is to have units not older than 14 years

Vehicle needs

- Fire Engine (within 3 years)
- Ambulance every other year (FY 2018)

Dept. Structure

- Three major divisions, each under Division Chief supervision
  - Fire Operations and training
  - Emergency medical services (EMS)
  - Fire Prevention

Fire Operations Division

Grand Island Fire Department

Emergency Responses

- Fire Suppression
- Hazardous Materials
  - One of ten state MOU teams
  - Funded by NEMA
- Technical Rescue
  - Auto and machinery extrication
  - Ice rescue

Emergency Responses

- Trench rescue
- Confined space rescue and standby
- High and low angle rope rescue
- Tower rescue
- Severe weather response
- Aircraft rescue and firefighting (ARFF)
- Medical Responses (including vehicle accidents)

Non-emergent Responses

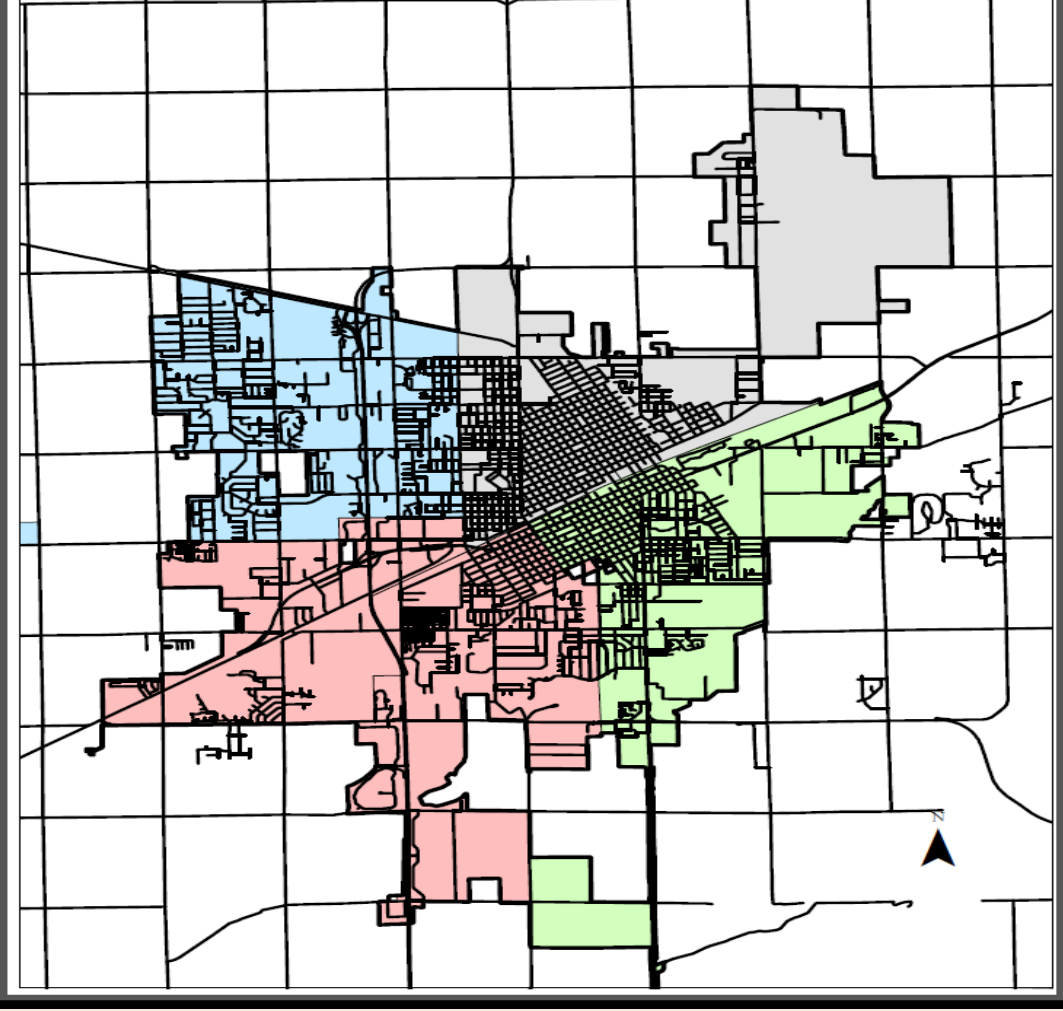
- Service Calls
  - Elevator rescue, smoke and water removal
- Public Education
  - Fire Prevention Week activities
  - Civic and social group talks
  - Fire extinguisher classes
  - Business/public events

Station Staffing and Specialization

- Station One – Technical Rescue
  - E1/L1 (1 Capt, 1 FF, and 1 FF-P)
  - A1 (1 FF and 1 FF-P)
  - Shift Commander
- Station Two – ARFF
  - E2 (1 Capt, 1 FF, and 1 FF-P)
  - A-2 (1 FF and 1 FF-P)

Station Staffing and Specialization

- Station Three - Heavy Rescue
  - R3 (1 Capt., 1 FF, and 1 FF-P)
- Station Four - Hazmat
  - E4 (1 Capt., 1 FF, and 1 FF-P)
  - A4 (1 FF and 1 FF-P [when staffing allows])



Recruit Training Cost

- Total wage package……$27,100
- Equipment and Uniform……..$3,400
- Total costs for recruit training....$30,500

Initial Recruit Training

- Six week academy
  - Firefighter I certification
  - Hazmat Operations certification
  - Basic technical rescue training
  - Rapid Intervention/Safety
  - Emergency Medical Training
  - Emergency vehicle operations training

Initial Recruit Training

- On shift
  - Streets and maps
  - Firefighter II
  - In depth technical rescue/specialty training
  - Live burns whenever possible

Continuous Training

- Driver/Operator……20 hours
- Technical Rescue……...20 hours
- ARFF……10 hours
- Rapid Intervention……16 hours
- Hazardous Material……18 hours
- Fire Operation……54 hours
- Emergency Medical……...68 hours

Total

Emergency Deployment

- Structure Fires
  - 3 fire engines and 1 aerial
  - 1 ambulance
  - 1 shift commander
    - 15 personnel minimum

Emergency Deployment

- Motor vehicle crash
  - 1 ambulance
  - 1 fire engine
  - 1 rescue truck if extrication is needed
  - 1 shift commander
    - 6 personnel minimum

Emergency Deployment

- Automatic Alarms
  - 1 fire engine and 1 additional engine or aerial
    - 6 personnel minimum
- Vehicle and Grass Fires
  - 1 fire engine
    - 3 personnel minimum

Emergency Deployment

- Medical (depends on nature of call)
  - 1 ambulance
  - 1 fire engine (If criteria is met)
  - Shift Commander (very serious calls)
    - 2 personnel minimum, ALS calls normally 5 personnel

Emergency Medical Services Division

Grand Island Fire Department

Emergency Medical Technician Training

- 120 hours Classroom education
  - +10 hours of field experience with 5 patient contacts
- 40 hours of continuing education every two years
  - 20 hours of topics set by the National Registry of EMT
- Nebraska state licensed

Paramedic Training

- EMT - 500 hours classroom education
  - +600 hours of field experience
    - Ambulance, Emergency Department, ICU, Surgery, OB
- 60 hours of continuing education every two years
  - 30 hours of topics set by the National Registry of EMT
- Nebraska state licensed

EMT Probation Training

- Third person on ambulance –three shifts
- Watch, learn, skills
- Documentation
- Driving ambulance after Emergency Vehicle Operations Class (EVOC).

Paramedic Probation Training

- Phase 1- watch, learn, skills – third person
- Phase 2- team leader, documentation – third person
- Phase 3- specific call types (61)
- Phase 4- driving ambulance after EVOC, crew integration

Cardiopulmonary Resuscitation

- 27% “clinical” save rate
- Lucas Device
- Emergency Department lead time 7.6 minutes



Severe Trauma

- Scene Time 11.28 minutes
- Emergency Department lead time 9.1 minutes
- Notification of Trauma Team
  - Surgeon(s)
  - Portable x-ray

Stroke

- Cincinnati Stroke Scale assessment
- Blood glucose check
- Document “last known well” time
- Lead time 6.2 minutes
- Notification of CT scanner technician

ST Segment Elevation Myocardial Infarction

- Care starts upon arrival of EMS
- 12 lead EKG transmitted in 10.1 minutes of arrival
- Hospital notification lead time 7.5 minutes
- Notification of Interventional Cardiologist and Heart Catheterization Lab personnel

4 Ambulances on calls at the same time

- Saturday, August 27, 2016 6:32 pm
  - Two car accident at 10th St. and Lincoln Ave.-11 patients
  - Initial response 1 ambulance, 1 engine, 1 Shift Commander
  - Second ambulance requested 6:35pm
  - Third ambulance requested 6:39pm
  - Fourth ambulance requested 6:51pm
- One engine still in station- recall of personnel

4 Ambulances out at the same time

- Saturday, August 13, 2016
  - 2:45am ambulance and engine to Chest Pain
  - 2:51am ambulance to COPD (County call)
  - 2:55am back-up ambulance and engine to COPD
  - 3:11am second back-up ambulance, Shift Commander, and same engine to cardiac arrhythmia
- No personnel in station- recall of personnel

4 Ambulances out at the same time

- Saturday, August 13, 2016
  - 2:45am help arrived in 5:54 minutes of 9-1-1 call
  - 2:51am help arrived in 13:31 minutes (county call)
  - 2:55am help arrived in 6:55 minutes
  - 3:11am help arrived in 9:14 minutes (secondary districts)

Medical Physicals

- Hazardous Waste Operations and Emergency Response, 29 CFR Part 1910.120
- *IDLH* or *Immediately dangerous to life or health* means an atmospheric concentration of any toxic, corrosive, or asphyxiant substance that poses an immediate threat to life or would interfere with an individual's ability to escape from a dangerous atmosphere.
- **(f)(3)(i)(B)** At least once every twelve months for each employee covered unless the attending physician believes a longer interval (not greater than biennially) is appropriate;

Fire Prevention Division

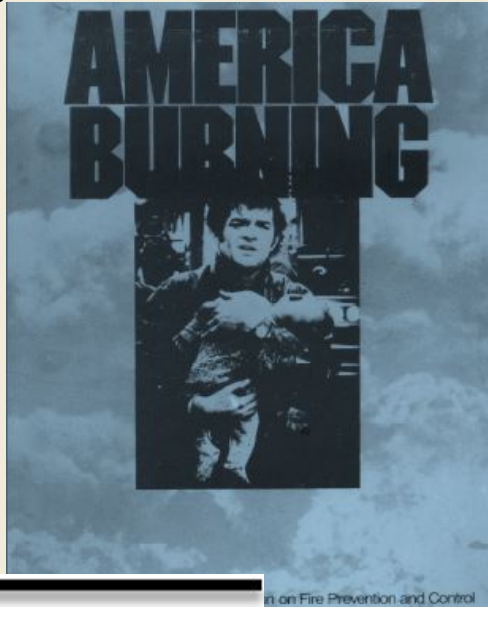
Grand Island Fire Department

Fire Prevention Division

- Code Enforcement
- Arson Investigation
- Public Education

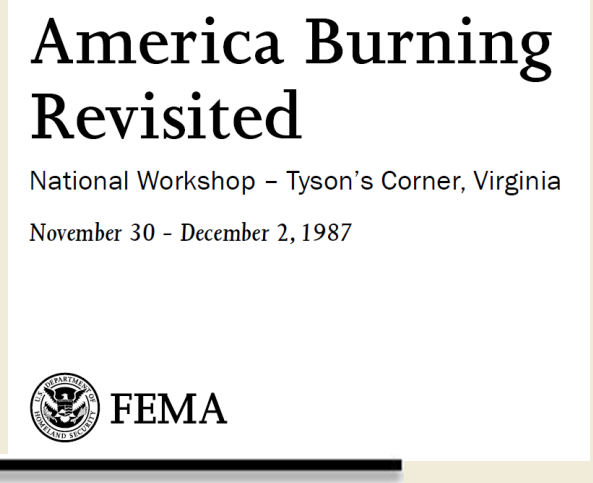
Importance of the Fire Prevention or what difference does it make?

- America Burning “72”
  - Fire Deaths
  - Injuries
  - Property Loss
  - Burn Victims and Cost Associated



Importance of the Fire Prevention

- America Burning Revisited “87”
  - Fire Deaths
  - Injuries
  - Property Loss
  - Burn Victims and Cost Associated



Where don't we inspect?

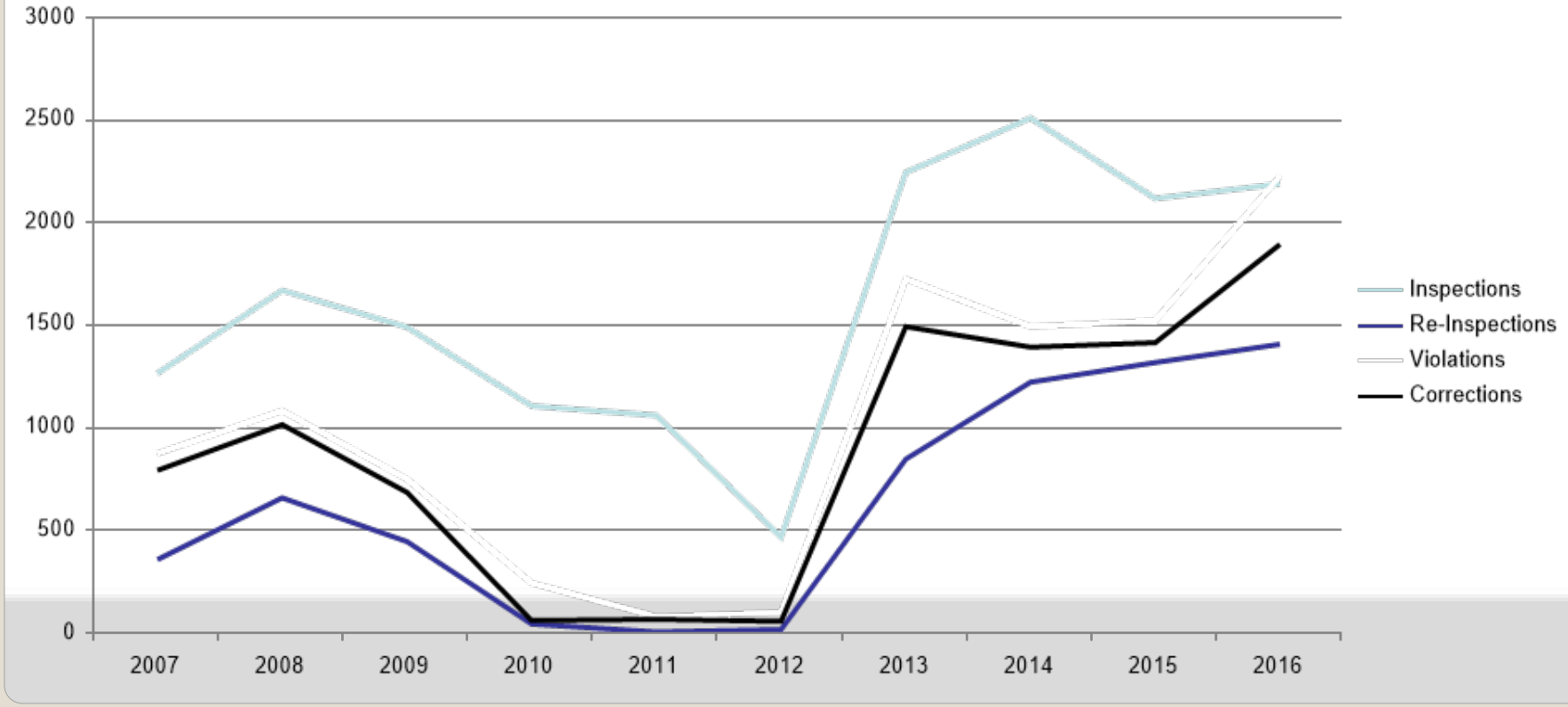
- We do not inspect single and two family dwellings
- We don't typically inspect multifamily residential property if no commons areas under 11 units.
- We don't inspect buildings and structures on private residential property used under residential permits

Where do we inspect?

- Commercial Buildings New and Existing (2637)
  - Factories, Mercantile Stores, Businesses, Body Shops, Malls, Restaurants, Strip Malls, Hospitals, Adult Care, Health Care, Child Care, Home Child Care, State Fair Grounds….etc.
  - Building Code vs Fire Codes
- Delegated Authority
- Fire Protection Systems

- Suppression Crews vs. Fire Code Inspectors
  - 2 inspectors replacing 12-15 Captains
  - More Personal Contact
  - The Quality of Inspections
  - Privatize (legal authority)
  - Privatize (non commissioned inspectors/contractors)

Inspection Chart

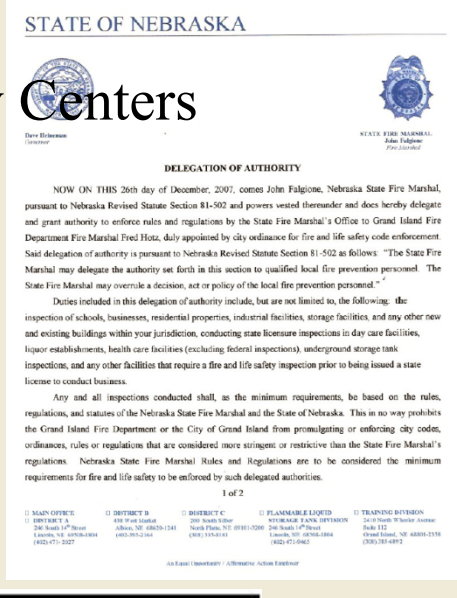


New Assignments:

- Patio Grills
- Fire Protection System Deficiencies
- Private Hydrant Maintenance
- Apartment Smoke Alarm and CO Detectors
- Underground Storage Tanks

Delegated by State Fire Marshal's Office

- Health Facilities:
  - Assisted Living Facilities
  - Hospitals, Alcohol and Drug Centers, Surgery Centers
  - Adult and Child Care Centers and Homes
- Liquor Licensures
- Corrections Facilities
- Underground Storage Tanks



STATE OF NEBRASKA

DELEGATION OF AUTHORITY

NOW ON THIS 26th day of December, 2007, comes John Falgione, Nebraska State Fire Marshal, pursuant to Nebraska Revised Statute Section 81-502 and powers vested thereunder and does hereby delegate and grant authority to enforce rules and regulations by the State Fire Marshal's Office to Grand Island Fire Department Fire Marshal Fred Hotz, duly appointed by city ordinance for fire and life safety code enforcement. Said delegation of authority is pursuant to Nebraska Revised Statute Section 81-502 as follows: "The State Fire Marshal may delegate the authority set forth in this section to qualified local fire prevention personnel. The State Fire Marshal may overrule a decision, act or policy of the local fire prevention personnel."

Duties included in this delegation of authority include, but are not limited to, the following: the inspection of schools, businesses, residential properties, industrial facilities, storage facilities, and any other new and existing buildings within your jurisdiction, conducting state licensure inspections in day care facilities, liquor establishments, health care facilities (excluding federal inspections), underground storage tank inspections, and any other facilities that require a fire and life safety inspection prior to being issued a state license to conduct business.

Any and all inspections conducted shall, as the minimum requirements, be based on the rules, regulations, and statutes of the Nebraska State Fire Marshal and the State of Nebraska. This in no way prohibits the Grand Island Fire Department or the City of Grand Island from promulgating or enforcing city codes, ordinances, rules or regulations that are considered more stringent or restrictive than the State Fire Marshal's regulations. Nebraska State Fire Marshal Rules and Regulations are to be considered the minimum requirements for fire and life safety to be enforced by such delegated authorities.

1 of 2

Fire Protection Systems

- Suppression Systems
  - Fire Water Service Lines
  - Automatic Sprinkler Systems
  - Hood Suppression Systems
  - Computer Rooms
  - Spray Booths
- Alarm Systems

Plan Reviews

- Commercial Buildings
  (Architect & Engineers Act)
  - Building Plans
  - Fire Protection Systems

Permits ($92,000 in 2015)

- Commercial Buildings to Build
- Commercial Building to Occupy
- New Occupancy Permits in existing buildings
- Open burning
- Fireworks Stands/Trailers

Fire Prevention Division

- Arson Investigation
  - ATF Trained Individuals
  - Nebraska Arson Investigation Association
  - City Police Department
  - State Fire Marshal's Office Assistance

Fire Prevention Division

- Public Education
  - Assisted Living
  - Adult Day Care
  - Fire Extinguisher Hands on Classes
  - Fire Prevention Week – Public Schools
  - Pre-School Tours
  - Smoke Alarm Programs

Fire Prevention Division

Fire Prevention Education Public Schools

- Visit Public and Private Schools (5,000 kids)
- Tour trucks and ambulance for Pre-k – 1st grade
- Firefighter visits classroom with PPE – 2nd grade
- Great Escape program/contest 3rd graders
- Visit Classrooms with FPW theme (new smoke alarms every 10 years) 4th&5th graders

Great Escape





Fire Prevention Division

- Code Enforcement
- Arson Investigation
- Public Education

Insurance Services Office (ISO)

- Evaluate fire departments and helps determine the fire insurance premiums for property owners in the department's jurisdiction
- Rates departments from 1 to 10
- GIFD is currently rated at 3
  - Scheduled for Nov 29 evaluation

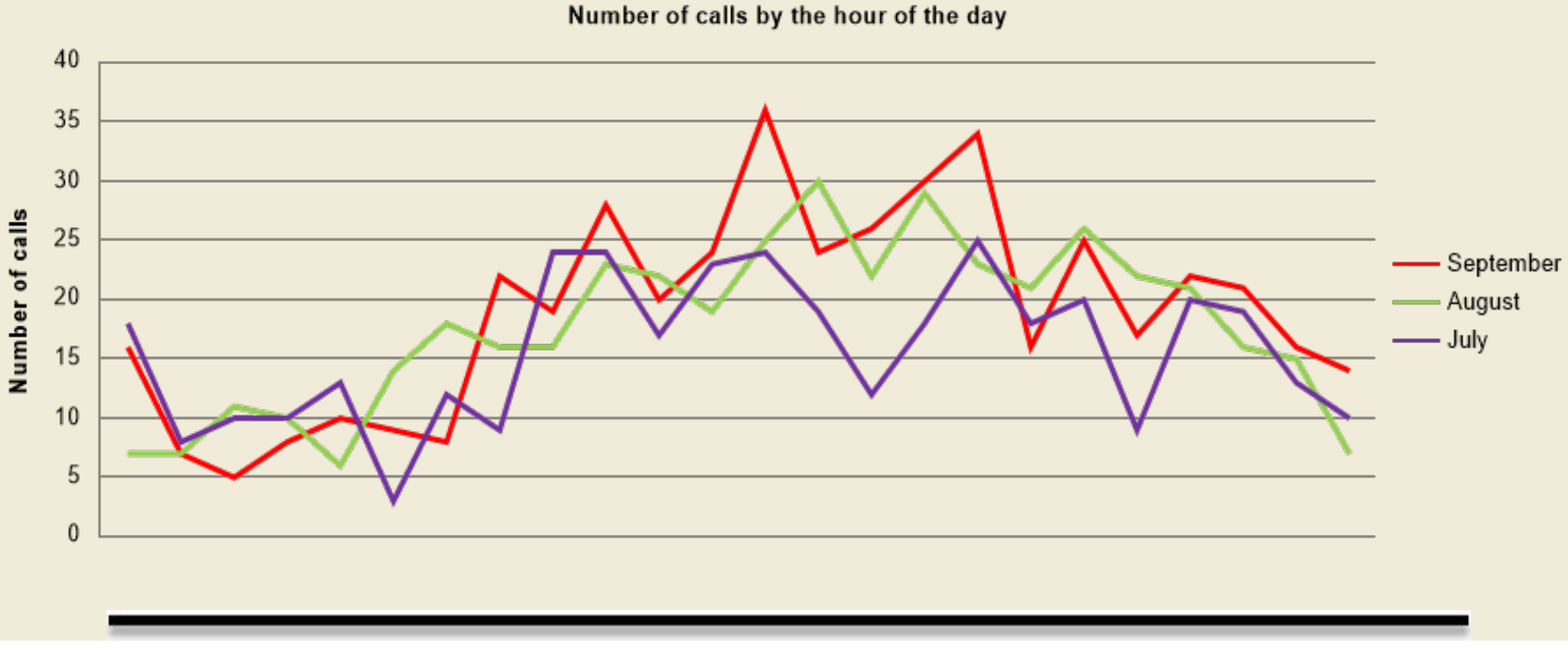
Insurance Services Office

- 4 areas evaluated:
  - Emergency communications (10 points)
  - Fire Department (50 points)
  - Water supply (40 points)
  - Community risk reduction (5.5 bonus)

Peak Staffing

- Very difficult to predict emergencies
- Could be utilized for LDT's and transports

Peak Staffing



Volunteer Department?

- Recruitment and retention is very difficult
- Availability of volunteers during business hours
- Number of personnel available can vary
- Amount of time required substantial
- Level of proficiency is hard to maintain

Volunteer Department?

- Trend in Nebraska, as cities grow, they tend to transition from volunteer to career departments
- Response times are critical
- Insurance rates

Why provide EMS?

- Geographical location of stations
- Cross-trained personnel benefit both fire and EMS
- System capabilities higher than private provider
- Decrease scene time
- Seamless patient care

Why provide EMS?

- Extremely high level of service
- Subsidize providers when not fire based
- Excellent source of cost recovery

Other Nebraska Cities' EMS Service

- 2001 Lincoln changed from private to Fire Dept.
- 2006 Omaha evaluated private EMS provider, stayed with Fire Dept.
- 2011 Hastings changed from private to Fire Dept.
- 2016 Hamilton County evaluated private EMS provider over county based EMS - pending

Why do fire engines respond on medical calls?

- Dispatch Info
- Patient Care
- Time
- Readiness
- Discretion

Personnel Budget

2007

- $5,362,033
  - Reg salaries: $3,464,035
  - Health Ins.: $814,044

2017

- $7,390,467
  - Reg salaries: $4,844,654
    - Health Ins: $1,142,596

Operating Budget

2007

- $665,761

2017

- $569,161

- Reduced $89,400 compared to 2016 budget

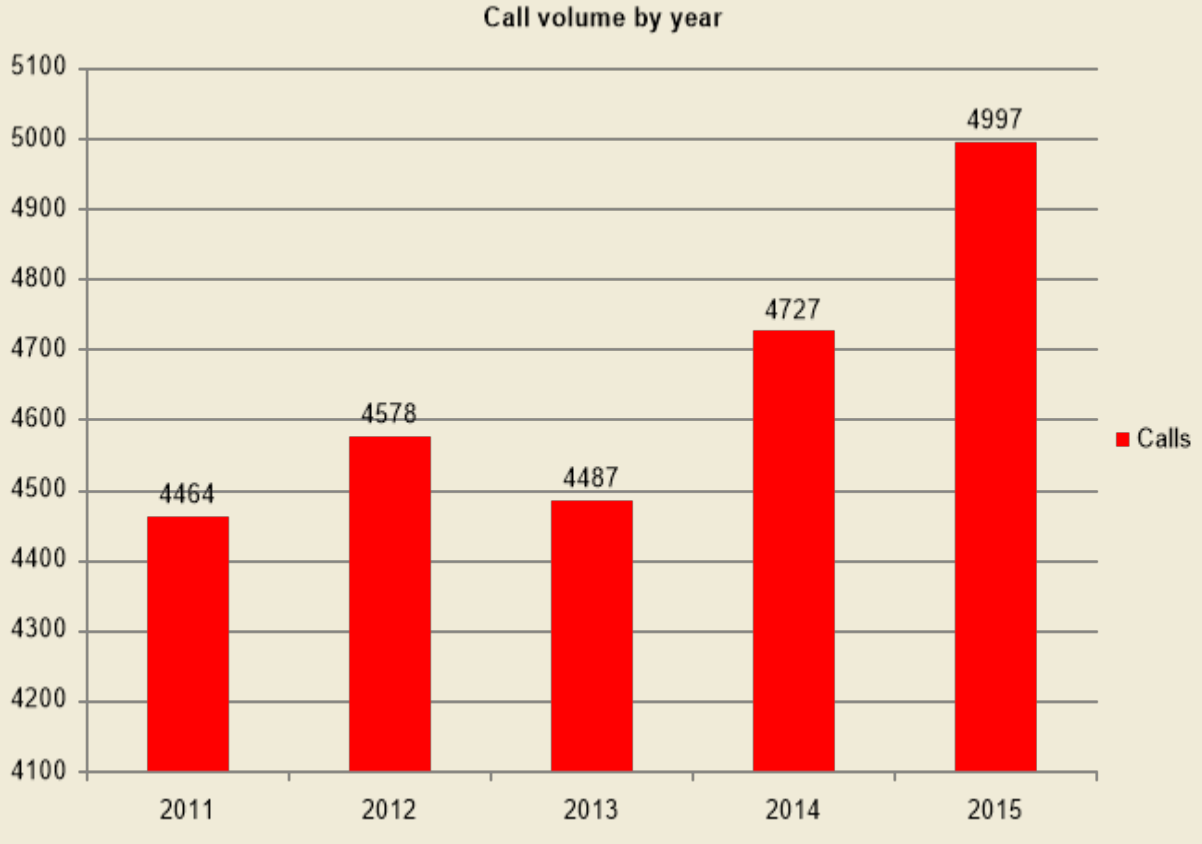
Cutting costs?

- Operating budget: made significant reductions

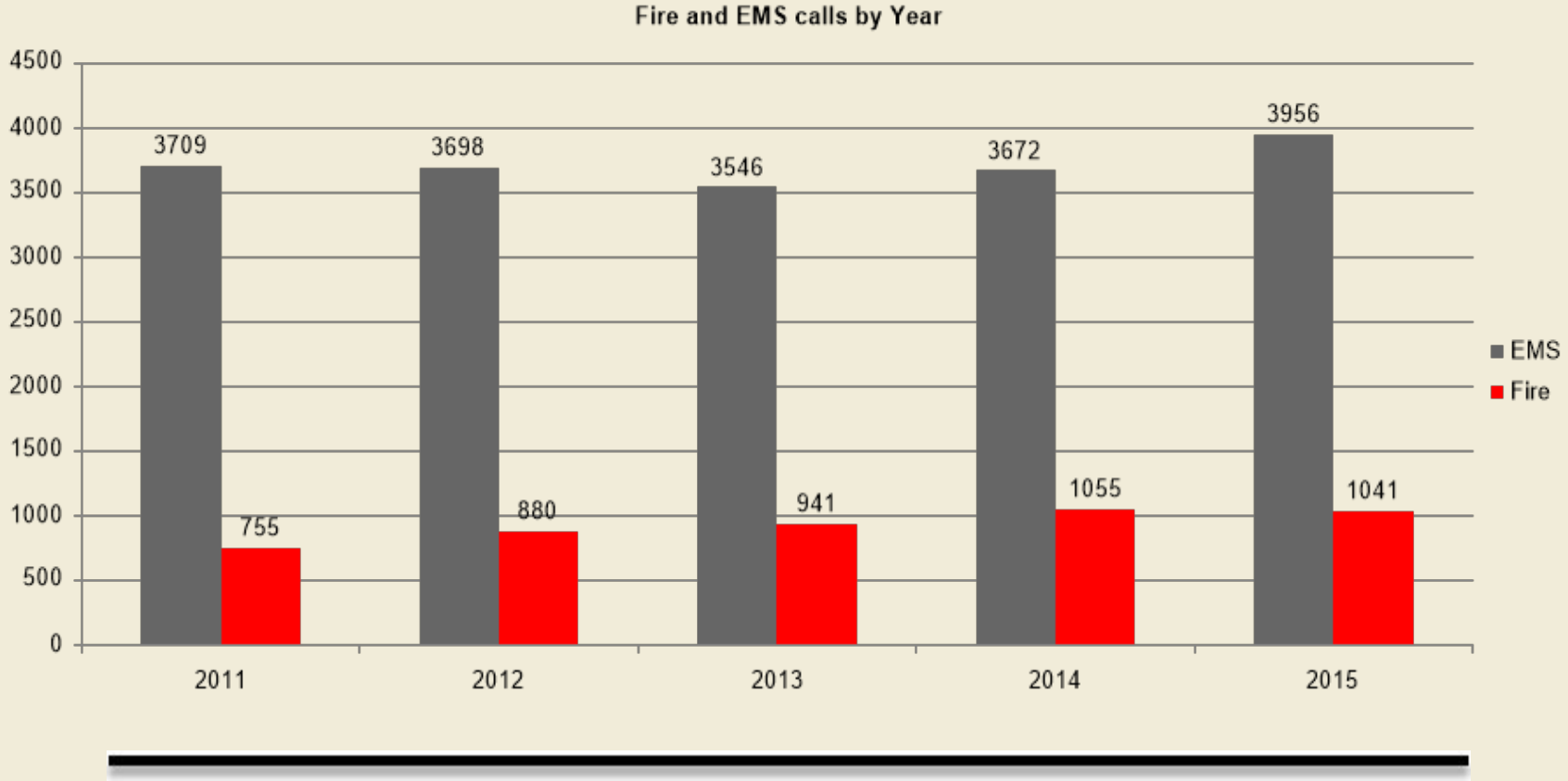
- Personnel budget: minimum staffing, terms of contract, rising insurance costs, and increased call volume make cost reduction difficult

Rising call volume

- Recalls for 2015: 37
- Recalls for 2016: 44 (as of 10-26-16)


Call volume by year
5100
5000
4900
4800
4700
4600
4500
4400
4300
4200
4100
4464
4578
4487
4727
4997
2011
2012
2013
2014
2015
Calls

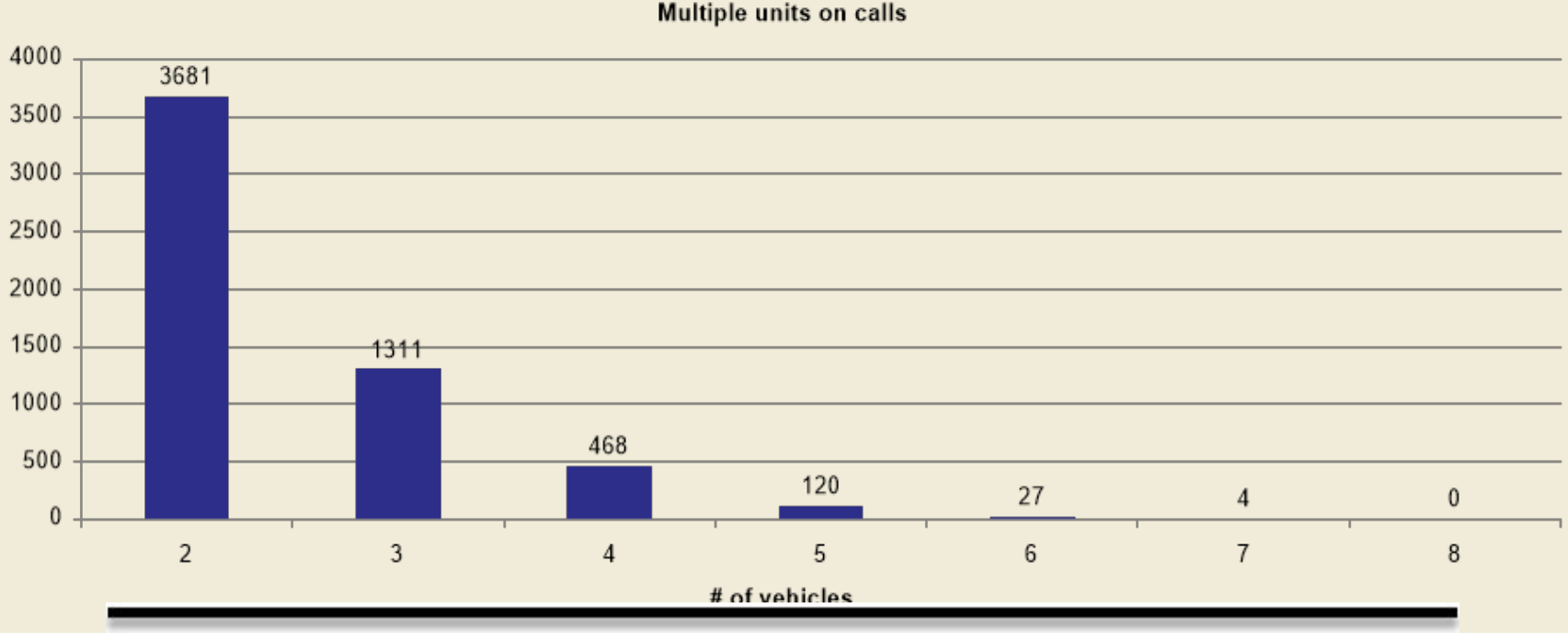
Fire


Fire and EMS calls by Year
4500
4000
3500
3000
2500
2000
1500
1000
500
0
3709
755
3698
880
3546
941
3672
1055
3956
1041
2011
2012
2013
2014
2015
EMS
Fire

How to meet future demands?

- Need to staff an additional ALS ambulance
  - 2015 and 2016: Requested six additional personnel
    - (2 per shift x 3 shifts)

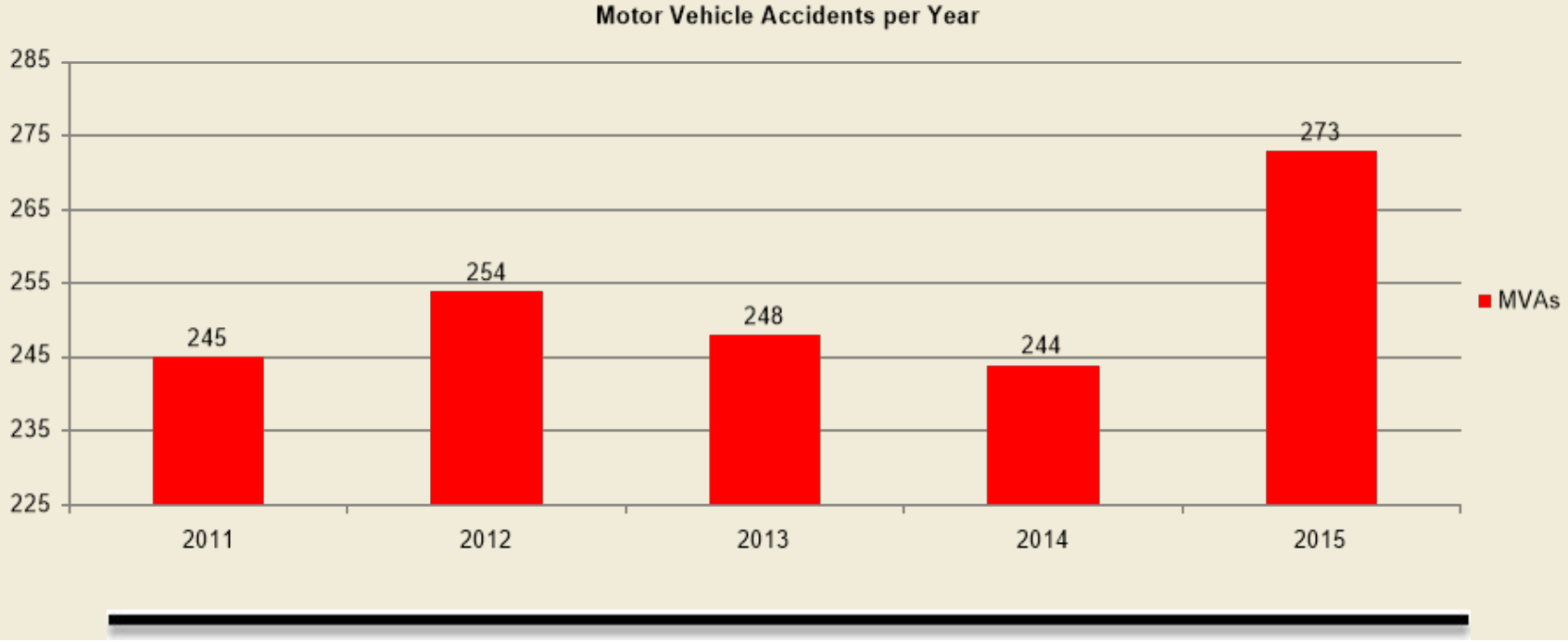
Crews assigned at same time 2016 YTD



Cost Recovery Options

- Fees for service
  - Discussed at previous study session
- Increase EMS transports (local and LDT)
  - Staff isn't adequate to take on more calls – require additional personnel
- Contract with Hall County
  - Currently: $196,200

MVCs


Motor Vehicle Accidents per Year
285
275
265
255
245
235
225
245
254
248
244
273
2011
2012
2013
2014
2015
MVAs

Questions?

