

Tucson Fire Department Annual Report FY 2015



Tucson Fire Department Mission Statement

The Mission of the Tucson Fire Department is to protect the lives and property of the citizens of Tucson from natural and human caused hazards and acute medical emergencies through prevention, education and active intervention.

A Message from the Chief

Dear Mr. Ortega,

For the last 134 years, the Tucson Fire Department has been protecting the citizens and visitors of Tucson. We continue to do our best to serve with honor, courage, compassion, and dedication. I am very proud of the men and women of the Tucson Fire Department. This is a very difficult job that requires highly trained, dedicated, and skilled professionals who are pushed to their physical and emotional limits when they respond to an emergency. It's what we do, it's what the community expects, and it's why we earn the respect of those we serve.

Started in the early 1880s as an all-volunteer force, early firefighters watched Tucson grow from an isolated, Wild West frontier town into the territorial capital city. They watched the first Southern Pacific train pull into downtown, linking Tucson with the rest of the nation. They saw the University of Arizona open its doors in 1891. They witnessed the Arizona Territory become the nation's 48th state in 1912.

Today, Tucson is a vibrant, modern urban city with a promising future; the Tucson Fire Department is part of that. The Department continues to be a leader in providing cutting edge pre-hospital care, fire prevention, firefighting, specialized rescue, hazardous material, and all-hazard responses.

In Fiscal Year 2015, Tucson Fire Department responded to more than 85,000 emergency calls. *Firehouse Magazine*, August 2015 edition, showed Engine 14 as the 20th busiest engine in the United States responding to 4,720 incidents. Tucson Fire Station 7 was also listed as the 17th busiest station, responding to 15,056 calls last year.

The role of the first responder has drastically changed and become more complex in the last 50 years. It is a job that requires flexibility and the ability to change with the needs of the community it serves. Emergency medical response makes up 90% of our call volume; however, our department continues to experience a high volume of fire, specialty rescue, and hazardous material response.

The Tucson Fire Department will continue to provide the citizens of Tucson with the highest level of service delivery by highly trained and motivated individuals who are passionate about serving the community. I have generated this report to highlight the different programs within the Fire Department. I hope that this report makes you proud to live in, and work for, the City of Tucson.

Sincerely,



Fire Chief



Administration

Fire Administration oversees the human resources needs, payroll, finance and budget of the Department, as well as public records management. This program consists of the senior leadership of the Department and administrative support staff.

The mission of Administration is to provide superior customer service to the members of the Department, City of Tucson and Tucson community, through the use of best practices in financial management and human resource support. Below are the financial and personnel data specific to our ten primary programs.

Programs	FY 2014 Actuals Expenditures	FY 2015 Adopted Expenditures
Administration	\$ 1,255,291	\$ 1,196,680
Suppression and Emergency Medical Services	\$ 43,554,384	\$ 45,411,490
Emergency Management	\$ 549,599	\$ 641,790
Advanced Life Support	\$ 23,965,236	\$ 25,095,560
Communications Center	\$ 5,850,389	\$ 6,115,100
Training	\$ 2,251,740	\$ 1,937,560
Fire Prevention & Life Safety	\$ 4,073,400	\$ 4,242,490
Fire Logistics	\$ 2,244,470	\$ 2,740,750
Emergency Vehicle Management	\$ 2,129,128	\$ 2,235,790
Total General Fund Programs	\$ 85,873,636	\$ 89,617,210
Hazardous Waste Disposal (fund 054)	\$ 343,835	\$ 400,880
Total Fire Programs	\$ 86,217,471	\$ 90,018,090

Number of FTEs	FY 2014 Actuals	FY 2015 Adopted
Commissioned	619.00	619.00
Civilian	134.50	134.50
Total Number of FTEs	753.50	753.50

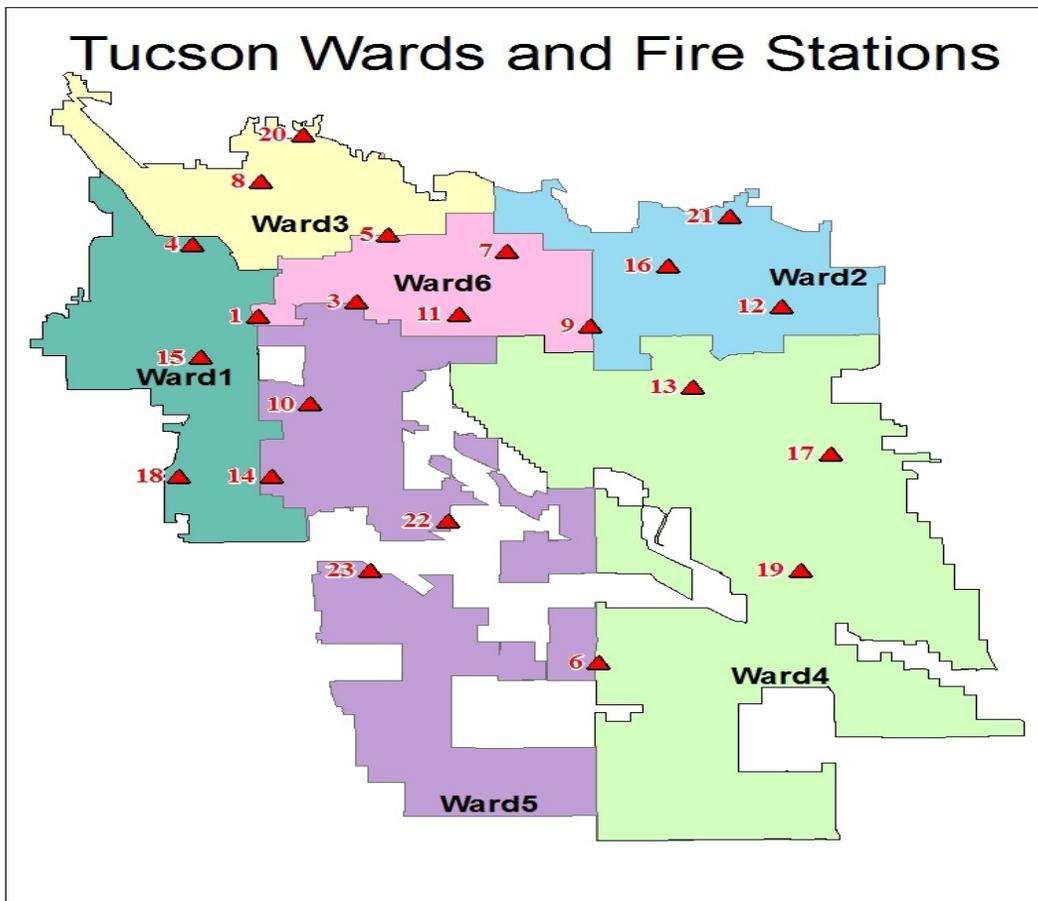
Department Revenues	FY 2015 Adopted Budget	FY 2015 Projected	FY 2016 Projected
ALS Transports	\$ 11,000,000	\$ 10,900,000	\$ 11,000,000
Dispatch IGAs	\$ 899,300	\$ 928,891	\$ 937,300
Misc. Revenue	\$ 311,220	\$ 351,979	\$ 310,730
Total General Fund Revenues	\$ 12,210,520	\$ 12,180,870	\$ 12,248,030



Suppression and Emergency Medical Services

The Suppression and Emergency Medical Services makes up our Operations section. Operations are made up of the firefighters who staff our fire stations and are charged with being the face of the Fire Department. The men and women in Operations come in contact with the citizens of Tucson every day during emergency and non-emergency calls. Some encounters are on the worst day of the citizen's life. We are here to give the best service that all citizens expect and deserve to help them get through that day.

The mission of the Suppression and Emergency Medical Services is to provide all-hazard risk protection and response to the Tucson community. The Department achieves this by providing contemporary, efficient and compliant emergency response service, through highly trained professional and dedicated members.

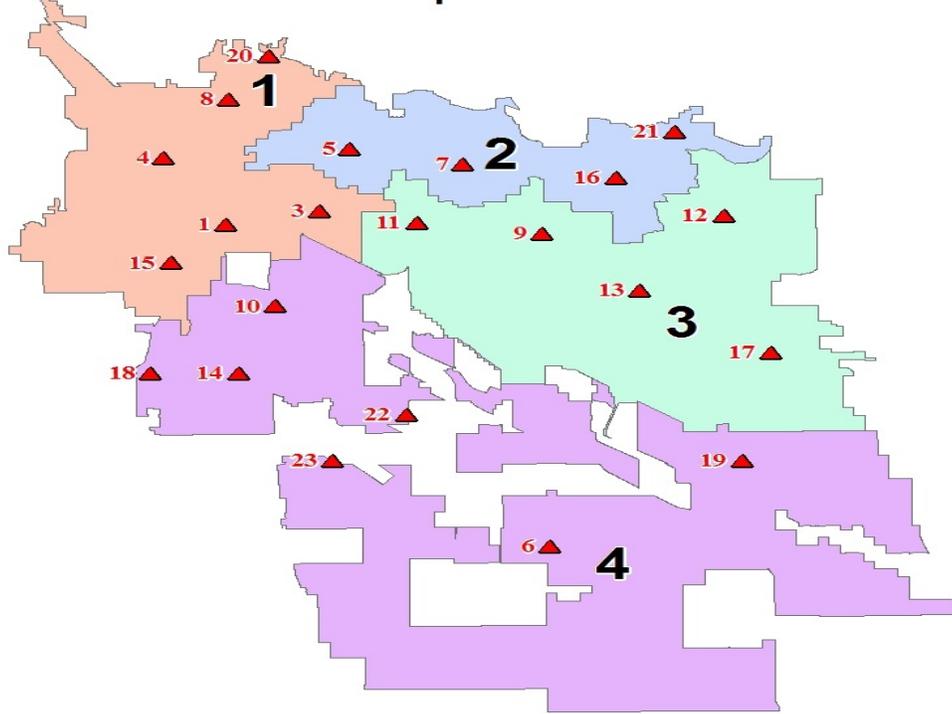


	ALS	BLS	Fire	Totals
Ward 1	6571	4711	1115	12397
Ward 2	7460	5581	1126	14167
Ward 3	9092	6697	1389	17178
Ward 4	4484	3255	927	8666
Ward 5	7383	4926	1433	13742
Ward 6	9209	6713	2147	18069
Totals	44199	31883	8137	84219

ALS – Advanced Life Support
 BLS – Basic Life Support
 Fire – Fire/rescue type calls



Tucson Fire Department Battalions



<u>Battalion 1</u>	
Unit	Calls
EN 01	3,779
EN 02	3,705
LD 01	2,364
PM 01	4,113
Station 01	13,961
EN 03	5,233
PM 03	3,821
Station 03	9,054
EN 04	2,890
LD 04	527*
PM 04	2,389
Station 04	5,806
EN 08	4,652
PM 08	4,122
RE 08	4,104
Station 08	12,878
EN 15	2,528
PM 15	2,235
Station 15	4,763

<u>Battalion 2</u>	
Unit	Calls
EN 05	4,450
LD 05	1,827*
LT 05	1,185*
PM 05	3,893
RE 05	1,142*
Station 05	12,497
EN 07	4,731
EN 47	3,408*
LD 07	748*
LT 07	474*
PM 07	3,549
PM 47	3,450
Station 07	16,360
EN 16	3,537
LD 16	1,310
LT 16	1,992
PM 16	3,334
Station 16	10,173
EN 21	1,184
Station 21	1,184

<u>Battalion 3</u>	
Unit	Calls
EN 09	4,380
LD 09	2,520
LT 09	1,542
PM 09	3,079
PM 49	3,095
Station 09	14,616
EN 11	3,085
RE 11	1,629*
AT 11	1,003*
Station 11	5,717
EN 12	3,585
PM 12	2,488
Station 12	6,073
EN 13	4,014
PM 13	2,499
Station 13	6,513
EN 17	408
QT 17	779
Station 17	1,187

<u>Battalion 4</u>	
Unit	Calls
EN 06	765
Station 06	765
EN 10	3,770
LD 10	1,842
LT 10	1,729
PM 10	4,385
RE 10	1,128*
Station 10	12,854
EN 14	5,558
PM 14	4,106
Station 14	9,664
EN018	2,867
Station 18	2,867
EN 19	1,111
PM 19	854
Station 19	1,965
EN 22	1,228
LD 22	686*
LT 22	18*
PM 22	1,700
Station 22	3,632
EN 23	53*
Station 23	53

* Partial Year



Suppression and Emergency Medical Services *(cont. from page 5)*

The following graph shows the response times based off of the National Fire Protection Association 1710 requirement for an urban fire department. This standard specifies requirements for effective and efficient organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by career fire departments to protect citizens and the occupational safety and health of fire department employees.

NFA 1710 Response Times			
FY2015	Unit Response Time - Medical	Unit Response Time - Fire	Full Force (15 firefighters on scene)
Goal	90% / 6:12	90% / 6:32	90% / 9:20
Actual % met	85%	80%	100%
Actual time at 90%	6:42	7:55	7:05

Emergency Management

The mission of the Tucson Office of Emergency Management and Homeland Security is to protect the citizens of Tucson by providing all City departments with proper direction and guidance relative to the mitigation of, preparedness for, response to, and recovery from all hazards, including natural disasters, acts of terrorism, or other human-caused emergencies. This is accomplished through a partnership with the Tucson Police Department. Emergency Management was very busy in 2015. The section undertook and/or participated in the following programs and activities in 2015:

Programs

- Ongoing community education of Tucson Fire's Community Resiliency Program
- Foundation of the Rescue Task Force
- Participation in the Tucson Fire Community Risk Reduction Program
- Violent Encounters Training Program
- Emergency Critical Casualty Care Program
- Public Outreach enhancements
- Annual Emergency Preparedness Month program in September
- Employee preparedness
- City-wide Emergency Operations and Continuity of Operations Planning Efforts

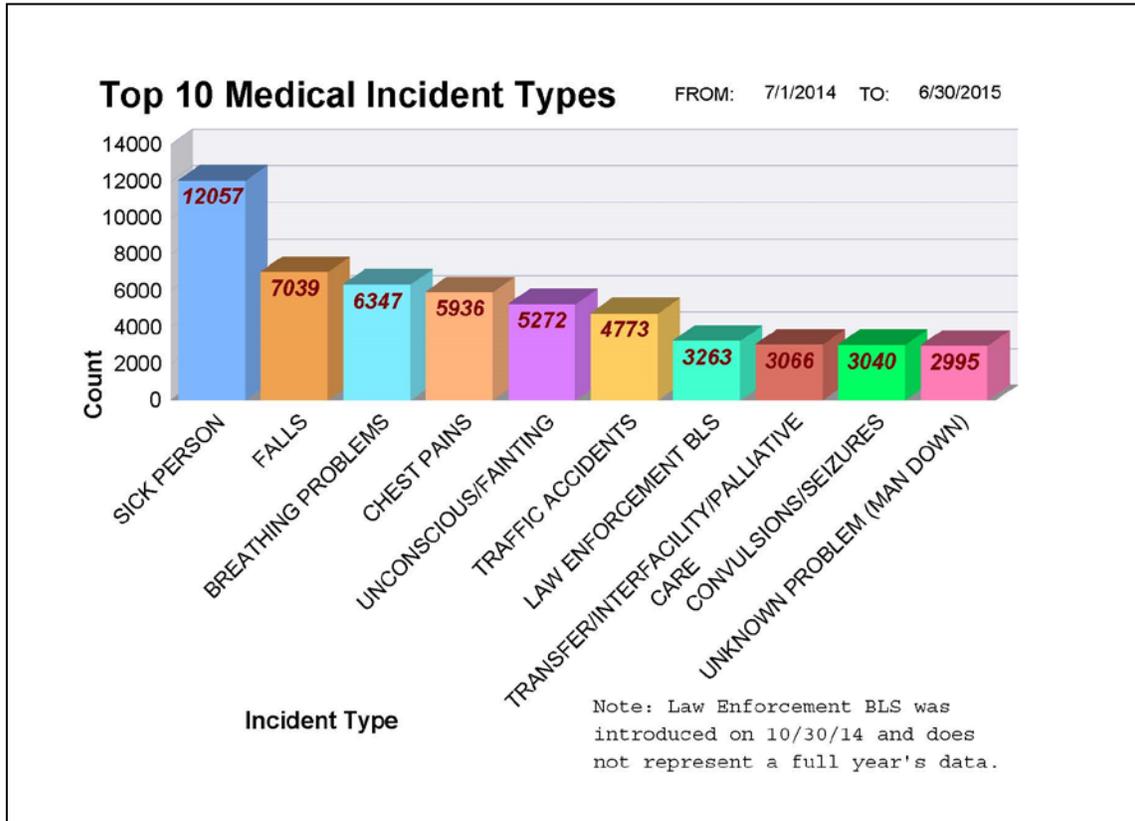
Activities

- Ebola Preparations – October and November 2014
- NCAA Planning and response – March 2015
- Norovirus Outbreak response – April 2015
- Domestic Nuclear Detection Office drill – June 2015
- National Disaster Medical System Drill – November 2015



Advanced Life Support (ALS)

The mission of the Medical Administration Section is to provide administrative support to the Advanced Life Support Program to include all TFD Emergency Medical Service (EMS) personnel by assuring that they have the tools, training and resources they need to deliver rapid, high quality pre-hospital care to the Tucson community. We must forecast changes in medical treatment and system delivery and orchestrate innovative, fiscally responsible ways to meet those demands.



Arizona uses a Certificate of Necessity (CON) system to regulate ground ambulance service. TFD provides ALS transport with the below response times for our paramedic units:

TFD CON Requirements	Count Meeting Requirement	%	Difference
9 Minutes 90.0%	39,456	91.4%	1.43%
10 Minutes 95.0%	40,603	94.1%	-0.91%
15 Minutes 97.0%	42,610	98.7%	1.74%
20 Minutes 100.0%	43,007	100%	0

Total EMS and CON Responses	
Total EMS Responses	77,425
Total Paramedic Unit Dispatches	49,518
Total Paramedic Unit Cancelled	6,365
Total Paramedic Unit At Scene	43,153
Total Paramedic Unit Transported	19,570
Paramedic Average Response Time	5:39



Advanced Life Support (ALS) (cont. from page 7)

Top 4 ALS Time Dependent Call Types		
Type	# of Incidents	Avg. Response Time
Cardiac Arrest	496	4:37
STEMI/Heart Attack	149	4:47
Stroke	741	5:03
Trauma/Injury	9,203	5:33

When it comes to critical patients, time matters. Our fast response, from the early recognition of medical emergencies, timely interventions, hospital notifications, and patient transmissions of EKGs; allows for better prep-time for hospitals, resulting in improved continuity of care and patient outcomes.

Dear Chief Critchley,

I fell in my kitchen....hitting my head and incurring a scalp injury with a lot of bleeding. I live alone and called 911 – within minutes....the team from Station 7 was there...I was aware that I was in the most competent of hands. Before carting me off to UMC, they made sure my cats were in, that I had my keys and that my house was secure.

After I got to the hospital where I spent the night, I worried that my cats were in and tramping in my blood and carrying it everywhere – but no! When I arrived home, the floor had even been mopped!

I am telling everyone...I want you to know too, how very much I appreciate their promptness, their skill, and their kindness.

*Appreciative
Tucson Citizen*

Tucson Fire has been a national leader in cardiac 12-lead transmissions and E-Telemetry communications with the hospitals.

The ALS response model adopted by TFD is to provide the optimum pre-hospital medical care with two Certified Emergency Paramedics on every ambulance transport. Our EMS care is leading hospital care through evidence-based research that shows that our interventions and treatment on scene and in transport make a difference in patient results.

TFD’s Human Service Referral Program (HSRP) which is a part of Community Risk Reduction (CRR) helps connect social service agencies with citizens in need. As we move to the future, we will be working collaboratively with community leaders to assist in a plan to get those citizens in need with the right resource at the right time. The goal is to get the citizens that call on us to the proper place to assist with their needs and medical care.



Communications Center

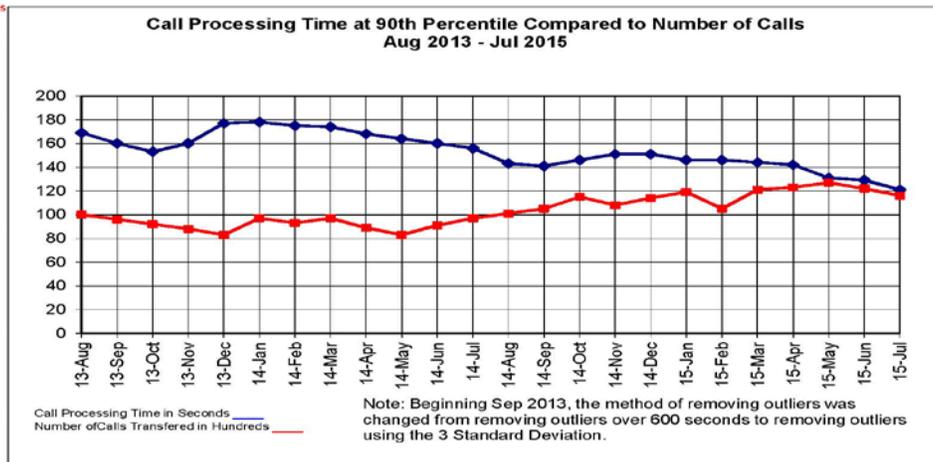
The Tucson Fire Communications Center is responsible for the dispatch of Tucson Fire, Northwest Fire, Golder Ranch Fire, Avra Valley Fire, Picture Rocks Fire, Three Points Fire, Mountain Vista Fire, Mt Lemmon Fire, and the South Tucson Fire Department. In FY 2015, the Communications Center dispatched units 118,972 times (85,557 City/33,415 County). TFD Communications also maintains and operates the Medical Emergency Dispatch System (MEDS), generally referred to as Tucson MEDS Control, for Southeast Arizona. MEDS facilitates radio telemetry support between field units and local area hospitals with an average of 97,800 telemetries per year. MEDS also dispatched 1,303 medical helicopters in FY 2015.

Tucson Fire Communications Center is the Primary Public Safety Answering Point (PSAP) for all 911 calls originating within the City of Tucson, and a Secondary PSAP for all Fire and EMS calls in Pima County. In FY 2015, calls to the Primary PSAP increased 7% to 545,678 from 507,839 in FY 2014. Wireless telephone calls account for 78% of all incoming calls to the PSAP. Wireless calls increased 2% from the previous year, and that ratio is expected to increase in the future.

A critical goal of the Tucson Fire Communications Center is timely and accurate dispatch of emergency response units. Medical and fire outcome are directly dependent on timely dispatch. As seen in the chart below, TFD Communications has decreased our call processing time while the quantity of dispatches continually climbs. We attribute this success to our dispatchers making a conscious effort to improve call processing times, along with continually improving practices. We are still working to achieve the ultimate goal of meeting NFPA standards of a 90 second call processing time.

911 90% Response Time

Month	Seconds	911 90% PM	Calls in Hundreds
13-Aug	169	2:49	100
13-Sep	160	2:40	96
13-Oct	153	2:33	92
13-Nov	160	2:40	88
13-Dec	177	2:57	83
14-Jan	178	2:58	97
14-Feb	175	2:55	93
14-Mar	174	2:54	97
14-Apr	168	2:48	89
14-May	164	2:44	89
14-Jun	160	2:40	91
14-Jul	156	2:36	97
14-Aug	143	2:23	101
14-Sep	141	2:21	105
14-Oct	146	2:26	115
14-Nov	151	2:31	108
14-Dec	151	2:31	114
15-Jan	146	2:26	119
15-Feb	146	2:26	105
15-Mar	144	2:24	121
15-Apr	142	2:22	123
15-May	131	2:11	127
15-Jun	129	2:09	122
15-Jul	121	2:01	116



Our newly renovated City of Tucson Emergency Communications Center opened in May of 2015. This \$9.2 million renovation is part of a larger \$100 million Pima County Wireless Integrated Network project. This renovation was made possible by citizen support for a Pima County Bond passed in 2004, as well as City of Tucson funds. This project provides the City of Tucson with a new 800 MHz radio system for police and fire, as well as the renovation of our Dispatch center. This project allows the City of Tucson to provide Pima County with a backup dispatch facility in the event of a major event at the Pima County Emergency Communications Center.



Training

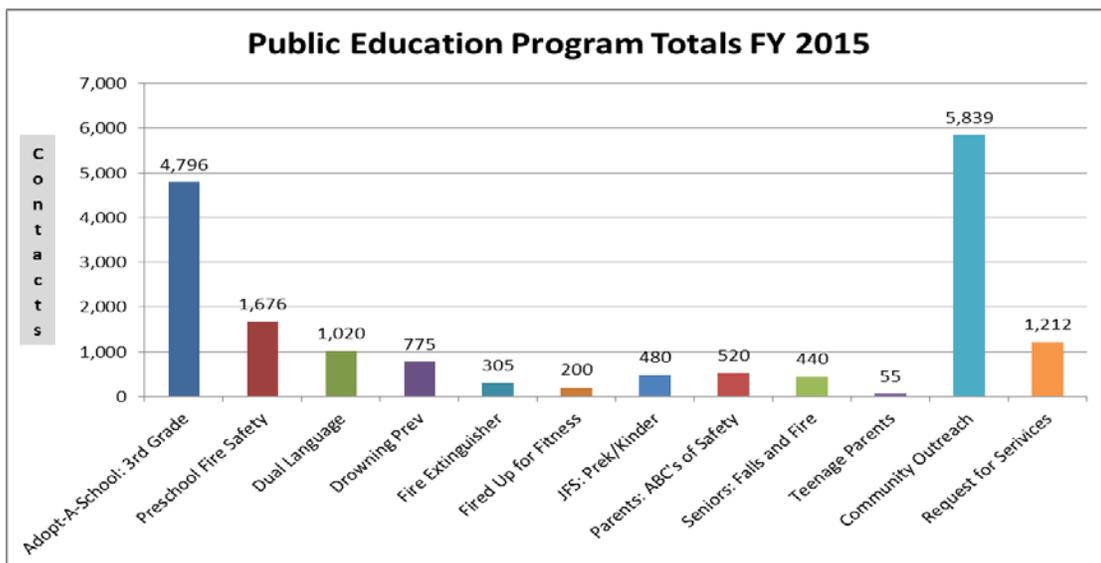
Training is responsible for incumbent and new firefighter training, promotional processes and medical continuing education and certifications. In order to keep the members of TFD current in trends throughout the firefighting venue our training officers must be willing to look outside our department for improved/increased capabilities. We feel this training along with our continued focus on EMT and firefighting activities will improve the overall knowledge and skills of each TFD member.

The Training mission is to provide and support highly qualified, well-trained public servants to the community.

Training Hours		
Type of Testing	# of hours	# of attendees
Recruit Testing Process	160	996
Recruit Training	880	30
Captains Cert/Paramedic Cert	376	125
CE (<i>continuing education</i>)	720	2,440
Cadet Program	72	45

Fire Prevention & Life Safety

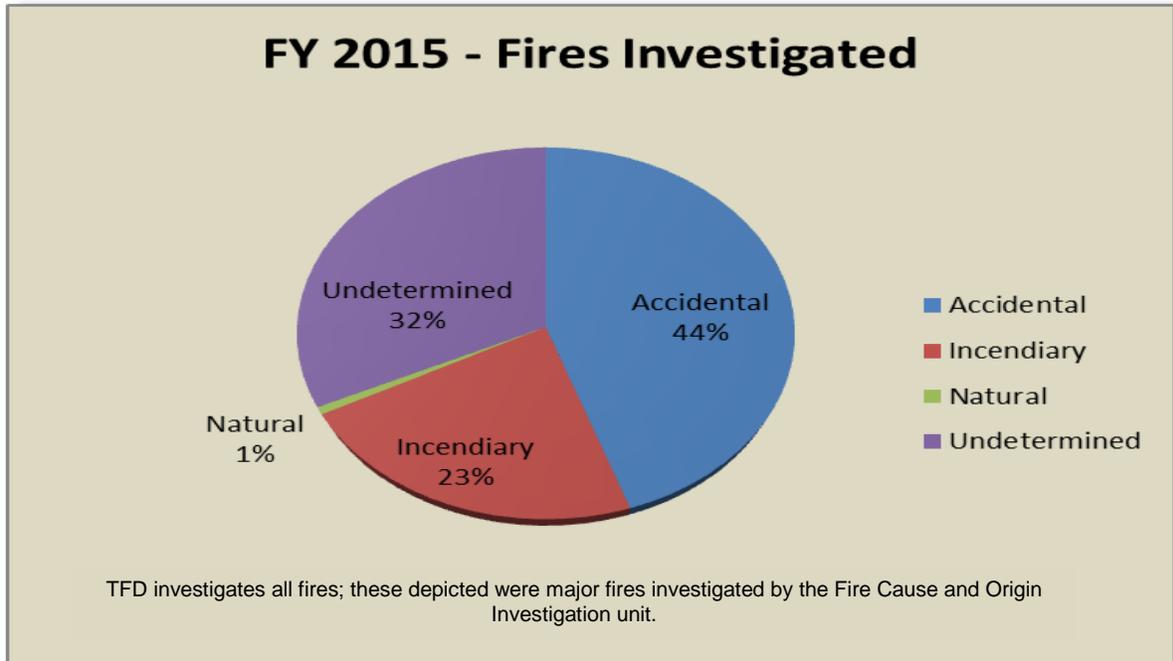
Fire Prevention is comprised of five distinct units. These units include Code Compliance, Business Assistance Unit (BAU), New Construction/Plans Review, Fire Investigations and Public Education/Community Safety. All five units work under direct supervision of the Deputy Chief/Fire Marshal. The mission of Fire Prevention is to promote public safety through education, engineering, and enforcement of the fire code.



Total # of contacts made in FY 2015 =17,318



Fire Prevention & Life Safety (cont. from page 10)



Building Inspections	
General and Haz Mat. Initial	1,983
City Buildings/MAITS	290
Health Care, Initial	51
Schools, Initial	370
Total:	2,644

Specialty Inspections	
Certificate of Occupancy	1,286
Special Events	892
Tent or Canopy	391
Sprinkler	1,436
Total:	3,232

Building Plans Review	
Sprinkler Plans Review	736
Structural Plans Review	1,621
Fire Alarm Plans Review	46
Site Plans Review	829
Total:	3,232

Hazardous Waste Disposal

Code Compliance includes management of the Hazardous Waste Program (HWP). The HWP manages hazardous waste generated as a result of city government operations. They are also tasked with clean-ups on city property or in city right of ways and orphaned waste. Other responsibilities include the Spill Program, service requests, consultations, remediation, and assistance to city residents. This includes providing materials, containers and training. The HWP manages several industrial waste water permits, aquifer protection permits and all landfills within the City of Tucson.

Hazardous Waste Disposal Activities FY15	# of Actions	Units	Pounds
Activity			
Waste Pickups	261	2,901	77,843 lbs.
Service Requests (delivering Haz Waste Supplies)	89	546	-
Waste Shipments	135	1,712	63,265 lbs.
Haz Waste Consults	38	-	-
Waste Bulking	58	3,043	6,376 lbs.
Remediation	13	-	-
Misc. Activities (Sampling, etc.)	10	-	-



Fire Logistics

Logistics supports the operational mission of the Tucson Fire Department by assuring that they are provided the best emergency and non-emergency equipment and supplies available, and that this equipment is maintained in the best operational condition possible. Additionally, Logistics works to ensure that TFD is in compliance with all local, state and federal standards. Logistics is the primary source of discretionary funds on the department. These funds have been drastically reduced to cover other unfunded mandates. Support in this area will be required in the future.

Emergency Vehicle Management

Emergency Vehicle Management supports the mission of the Tucson Fire Department by providing the best quality, most reliable emergency response vehicles possible. The maintenance section performs all apparatus and equipment maintenance for the department. The mechanics who service our emergency response fleet are highly skilled and specialized technicians.

Pumper Fleet – 38 Vehicles

Current Average Age	10.8 years
Projected Age at Retirement	16.5 years
Total Pumper Fleet Mileage	4,014,918
Average Unit Mileage	105,655.74
Units over 100K miles	50%
Units over 150K miles	13%

URGENT

URGENT

Medic Fleet – 30 Vehicles

Current Average Age	10 years
Projected Age at Retirement	15.8 years
Total Medic Fleet Mileage	4,033,690
Average Unit Mileage	134,456
Units over 100K miles	87%
Units over 150K miles	37%

URGENT

Ladder Fleet – 12 Vehicles

Current Average Age	14.3 years
Projected Age at Retirement	20.8 years
Total Ladder Fleet Mileage	961,556
Average Unit Mileage	80,130
Units over 100K miles	25%
Units over 150K miles	0

URGENT

Fleet Replacement Program

The department's fleet replacement program has not been fully funded since 2008. This lack of funding is due to the downturn in the economy. As a result of losing apparatus replacement funding, the emergency response fleet is getting older, registering higher miles and experiencing a decrease in reliability.

The replacement triggers used by the department include replacing vehicles at 100,000-125,000 miles or 12-14 years.

The projected age at retirement is based on replacing vehicles in FY16.

Unit mileage is current to date.

The department apparatus replacement budget needs are \$5.0m - \$5.8m per year. Each of our primary vehicle types have **URGENT** needs.



Moving Forward

I would like to close this report by sharing with you what we are working on for the future. As you can see, Tucson Fire Department has been very busy and doing a very good job. The community we protect did not suffer any fatalities due to fire in FY 2015. This is a direct result of our fire prevention and life safety programs as well as our rapid response to emergency calls with the best trained firefighters in the country. As we move forward we would like to add additional focus on other areas of concern. Those areas include Community Risk Reduction, fleet and facility support, employee compensation and enhancing our emergency response capability.

Community Risk Reduction is the use of data to help define the issues affecting the community at the station level. Each fire station area has its own character and challenges. The department was just awarded a federal grant to developing this program. The grant will fund tools and supplies used by the firefighters at the stations to solve the life safety issues in their response area.

The Department is in desperate need for funding to support our fleet replacement and our facility management. Being fully aware of the financial condition of the City, we continue to explore opportunities to maintain our fleet in the most efficient manner and to work with existing facilities.

Our employees are the most important commodity of our organization. The men and women of the Tucson Fire Department have always been, and continue to be, committed to the community on and off duty. In order to retain and recruit the best people possible, the Department must remain competitive in the area of employee salaries.

The Department will be working on several ways to enhance our emergency response capability. These include improving our call processing times at the communication center, utilizing technology such as the cell phone application Pulse Point to improve patient care and to continue to assess and adjust how we respond to emergency calls through the most efficient response model possible. Our goal is to improve appropriate responses by getting the right sized response with the right resource at the right time to every call for help. We will continue to review the data to improve the community's outcomes.

We will continue to work with our partners within the City, as well as outside the City. We will be financially responsible, and deploy the most efficient methods and processes we can while meeting our obligation to the community.

Chief Critchley,

"The medical unit that scooped me off the floor of Tucson Mall and took me to UMC also did me a great favor in addition to taking such good care of me...took custody and care of my poor, elderly and frightened Bassett Hound...She has fully recovered from the trauma and I'm doing fairly well, too."

Grateful
Tucson Citizen



Tucson Fire Department,

..."I cannot say enough good things about the Tucson Fire Department medics who took care of me and brought me to the ED. Certainly I would not be alive to be writing this letter to you, had it not been for their care and efficiency. They were all super quick, polite, reassuring and professional in their tasks."

Thankful
Tucson Citizen