



A Brief History of Air Force Fire & Emergency Services

“Why” We Are Civil Engineers Who Happen to Fight Fire

Developed by SMSgt Damean Moore

Sources:

AFIT 570 CE Superintendent's Course

CE History Full Video

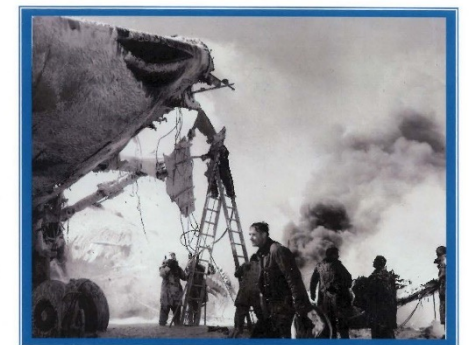
<https://www.youtube.com/watch?v=Ck2GFLkqmOQ>

Leading The Way: The History of AF Civil Engineers 1907-2012

Pioneers With Intent: Memoirs Of An Air Force Fire Fighter



The History of
**Air Force
Civil Engineers**
1907-2012



PIONEERS WITH INTENT
MEMOIRS OF AN AIR FORCE FIRE FIGHTER
Douglas E. Courchene

History Office
Air Force Civil Engineer Support Agency
Tyndall AFB, Florida

The Why



Air bases are a determining factor in the success of air operations. The two-legged stool of men and planes would topple over without this equally important third leg.

-- Gen Henry H. "Hap" Arnold



DID YOU KNOW



The longest serving Air Force Warrant Officer was a Fire Guy?

Who was it?

- a. CWO Louis F. Garland
- b. CWO Bob Barrow**
- c. CWO Val Allen Jr.
- d. CWO Carl Baker

Origins 1930's – 1946

- From existing records, it appears that firefighters were largely a civilian force and worked directly for the post commander.
- During World War II, fire protection services were assigned to the post engineer.
 - AARF 20-42 dated 18 July 1944 assigned all things structural firefighting and fire prevention to the Post Engineer and designated the position as the Base Fire Marshal.
 - Structural Firefighting was managed by the Post Engineer while Aircraft Firefighting was managed by the Aircraft Mx Officer

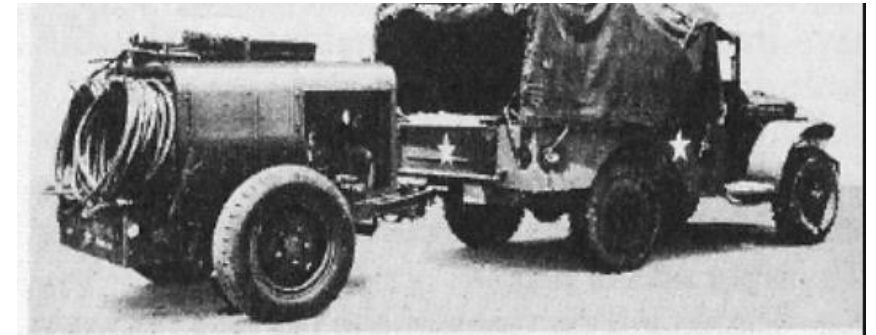
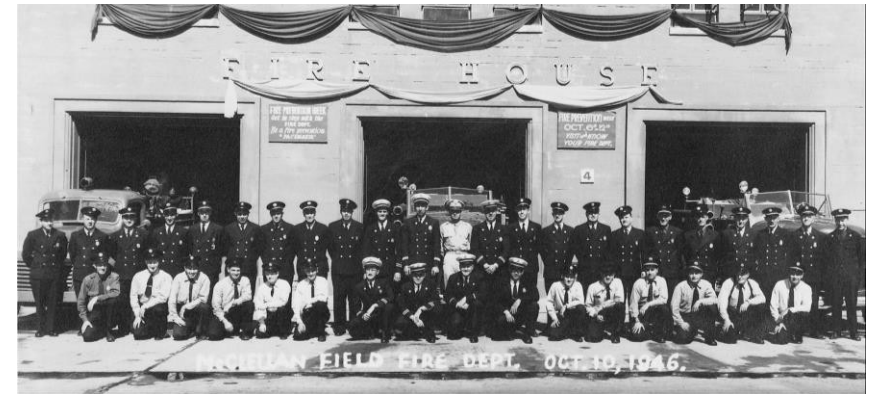


Figure 13-91. Class 1010 Crash Trailer



Origins 1930's – 1946 cont'd

- Rescue crew concept established 1942
 - Fire fighters competed to earn a seat on that elite four-man crew. Both written examination and demonstrated performance qualified fire fighters
- 1943 1st Army Air Forces Fire School at Geiger Field, Washington established
- 2nd fire school was established at Buckley Field, Denver, Colorado, in 1944
 - Subsequently relocated 2 years later to Lowry Field

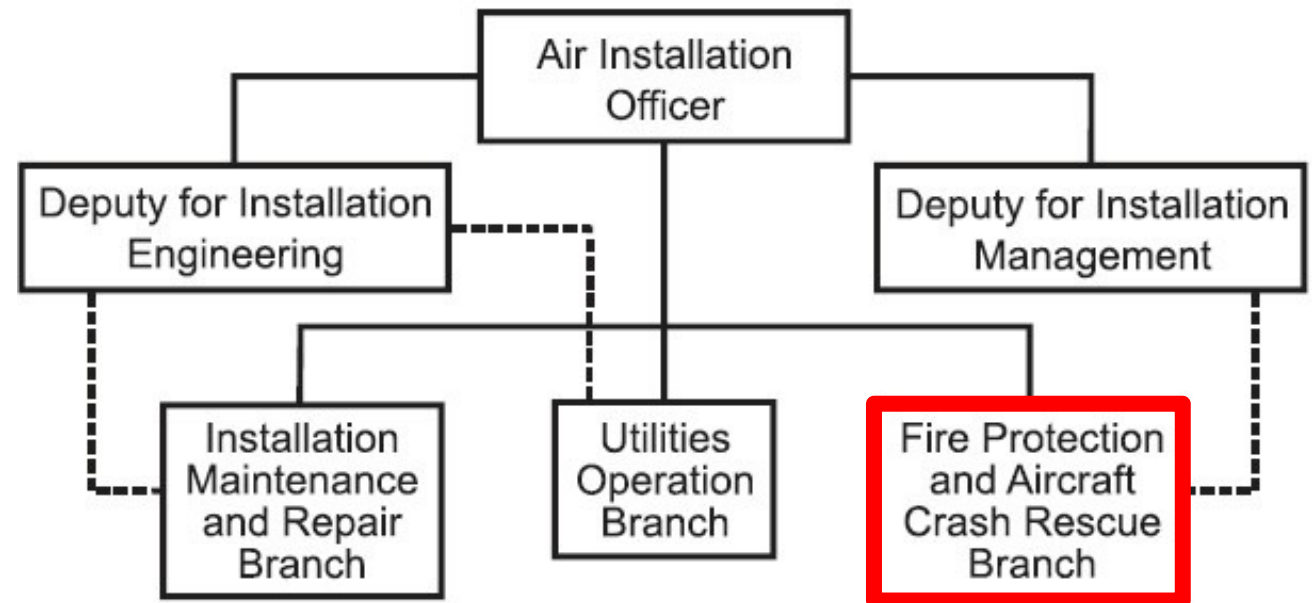


*The Army Air Forces Crash Fire Fighting and Rescue School, Lowry Field, Denver, Colorado.
(Photo courtesy of Frances Simmons)*

Independence – 1947

- In 1947 fire protection duties were retained by the Air Force, the Post Engineer became the Air Installation Officer (AIO) and all Fire Protection Services were managed by the AIO.

Figure 2.2 Air Installation Officer Organizational Chart, 1948



Development & Training

- 1947 – 1950's
 - Heavy investment F&ES programs – FY48 \$2.1M
- Difficulties w/military recruitments & retention
- OJT vs. Tech Trng @ Lowry AFB Denver, CO

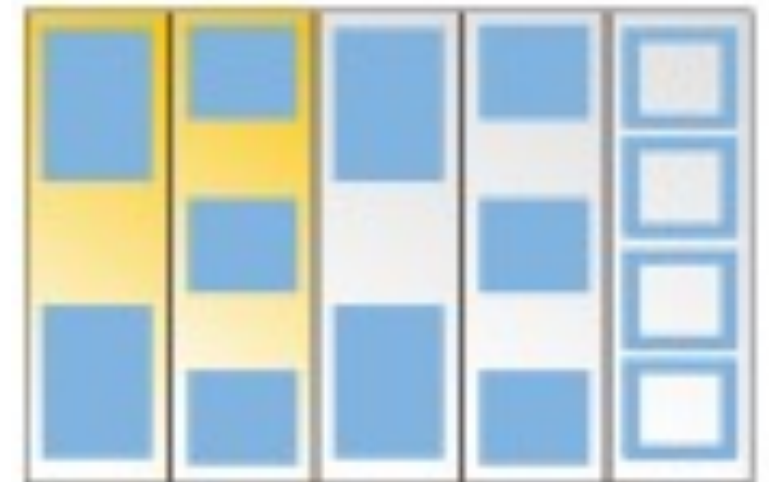


Development & Training

- 1947 – 1950's cont'd
 - 1957 – The “Chopper”
 - Used for on & off base incidents
 - 78.5 gallons agent/150-ft hose line
 - Vietnam Ops
- 1958 – Birth of Super Grades = Death of Warrant Officers



HH-43B Helicopter



CW01 CW02 CW03 CW04 CW05



*Fire Chief Frank Joseph VI, MacDill AFB,
Florida, the pioneer who developed the first Air
Force aircraft crash rescue truck*

PIONEER HIGHLIGHT

- 1931 – Started Fire Service Career w/FDNY
- 1940 – Joined the Army Air Corps
 - Tasked by SecDef organize all the military fire departments from Waycross, Georgia to Avon Park, Florida
- 1942 – Produced 1st USAAF Rescue Truck
 - Fire fighters competed to earn a seat on that elite four-man crew. Both written examination and demonstrated performance qualified fire fighters
 - Served as Fire Chief at MacDill AFB until his passing in 1966
- 2013 – Lifetime Achievement Awd Recipient





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DID YOU KNOW

A cartoon illustration of Sparky the Fire Dog, a Dalmatian wearing a red fireman's hat with a "SPARKY" badge and a white fire jacket. He is standing next to a red fire truck. In the background, a boy in a blue hat and a girl in a red plaid shirt are looking at Sparky. The title "SPARKY THE FIRE DOG" is written in large, stylized letters at the top. A small cartoon character is visible in the top left corner.

SPARKY

THE FIRE DOG

Sparky's Birthday is March 18th?

How Old is Sparky?

- a. 70**
- b. 51
- c. 21
- d. 45

Development & Training

- 1960's
 - Engineers called upon for better Fire Prevention
 - New aircraft/weapons demanded new training
 - Introduced AFFF/continued F&ES program investments
 - Fire School relocated to Greenville, MS then Chanute AFB, IL
 - 1966 - Project 100,000



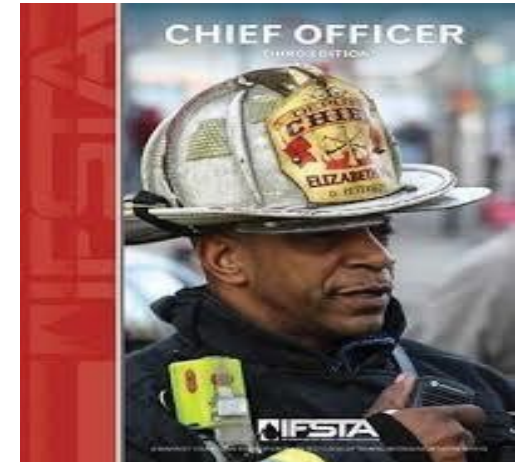
Maj. Gen. Augustus M. Minton acknowledged the importance of fire prevention when he wrote: It is the Air Force Civil Engineer's prime duty to educate the other members of the Air Force as to the chemistry of fire and to instill in them the idea that fire prevention is akin to cleanliness and godliness in the survival of mankind. Let it be said that **fire prevention is the human thing to do!**

In FY63 F&ES responded to 2,014 calls. 331 were aircraft fires. They recorded 59 saves but lost 152 lives and \$162M in assets



Development & Training

- 1970's
 - 1970 - Distinctive badges authorized f/F&ES personnel
- 1972 - OSU Int'l Fire Service Trng Assn Manuals adopted
- Arrival of P-15
- 1978 - Tech Trng became joint and thrived at Chanute AFB



Tom Kelly's photo of the 1979 Oshkosh P-15 at Seymour Johnson AFB near Goldsboro, N.C. With a gross weight of 130,860 lbs, the P-15 is 542 inches in length, 163½ inches high, and 122 inches wide. Foam or water discharge capacity is 2,400 gpm.



PIONEER HIGHLIGHT

- 1942 – Started Army/Air Force Career
- 1965 – Led Chanute Fire School
 - Developed blueprint for career field/trng
 - Created the Fire Protection Badge
- 1967 – Demo'd "Mass Application" Concept
- 1975 – Retired
- 1995 – Louis F. Garland Fire Academy
- 2013 – Lifetime Achievement Awd Recipient



Questions?



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DID YOU KNOW?



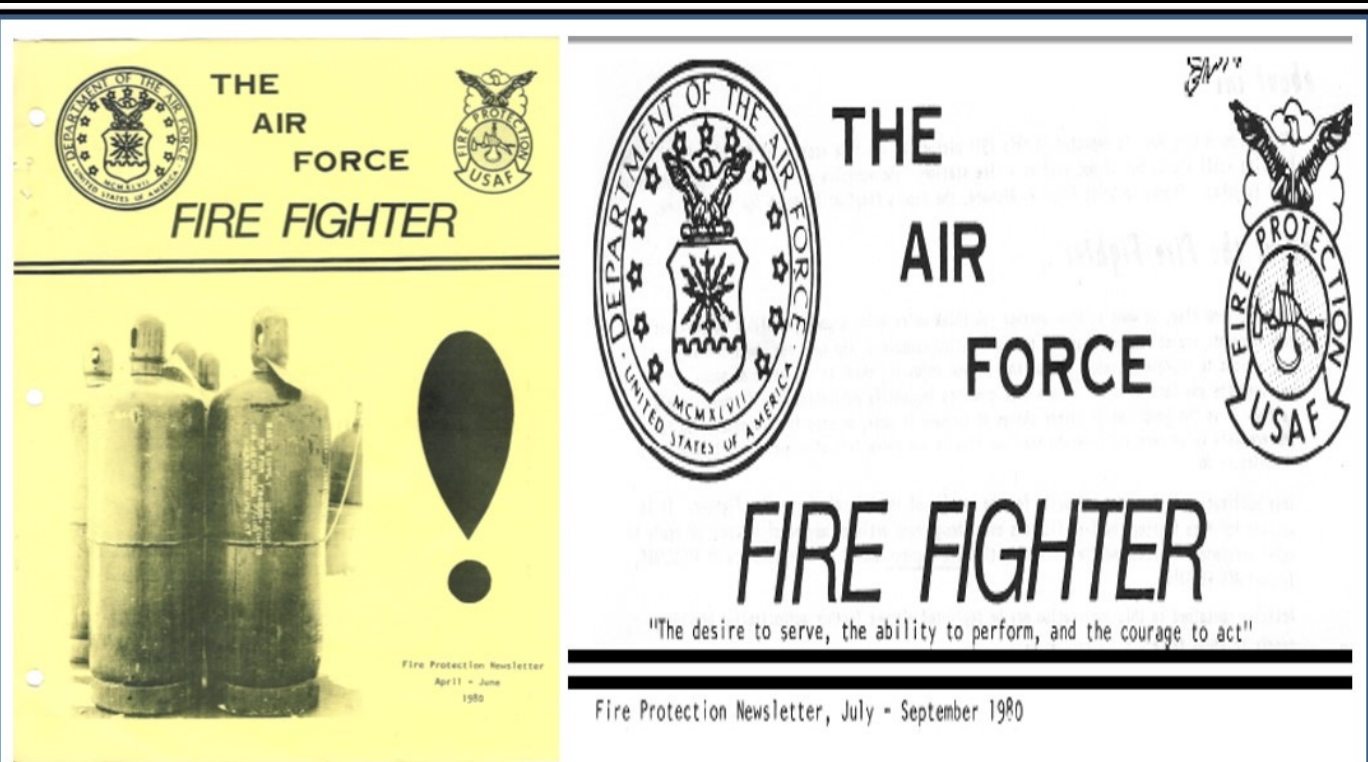
In 1937, the standard nozzle for Air Force crash trucks was the Bean nozzle, a high-pressure nozzle used by Florida Citrus growers.

How heavy was it?

- a. 3 pounds**
- b. 6 pounds**
- c. 9 pounds**
- d. 5 pounds**

HISTORY OF THE UNITED STATES AIR FORCE FIRE PROTECTION MOTTO

- 1980
 - USAF Fire Protection Motto Born
 - Announced as a Competition
 - Solicitations from Every Dept
 - (No Individual Submissions)
 - Only 10% Presented for Voting
 - Decided Later to Present All
 - 5 Points Awarded for 1st Choice, 4 Points for 2nd ...etc. Total Multiplied by Number of Members Voting
 - Winner was 435th Civil Engineering Squadron, Rhein Main AB, Germany
 - Originator was SSgt William J. Sawyers



THE
AIR
FORCE
FIRE FIGHTER

DEPARTMENT OF THE AIR FORCE
UNITED STATES OF AMERICA
MCMXLVII

FIRE PROTECTION
USAF

THE
AIR
FORCE
FIRE FIGHTER

"The desire to serve, the ability to perform, and the courage to act"

Fire Protection Newsletter
April - June
1980

Fire Protection Newsletter, July - September 1980

the Motto

The Motto for Air Force Fire Protection has been selected! By a wide margin, "The desire to serve, the ability to perform, and the courage to act" was chosen. Here's how the voting went:

1. The desire to serve, the ability to perform, and the courage to act. (4142)
2. Guardians of life and property. (3260)
3. Protection is our profession. (3188)
4. Prepared for the challenge. (1834)
5. Fire Prevention - life's extension. (1332)
6. We serve to save. (1149)
7. To serve and protect. (1056)
8. Fighters for life. (975)
9. Support your fire fighters, we can't do the job alone. (798)
10. Readiness is our profession. (794)

We only listed the top 10. Nearly all nominated mottoes received some votes. The winning entry was submitted by the 435th Civil Engineering Squadron, Fire Department, APO NY 09057 (Rhein-Main). The originator of the motto is SSgt William J. Sawyers.

The motto signifies that the first prerequisite of a fire fighter is "the desire to serve." The fire fighter must understand that he is "serving" the public and there is no compensation which is adequate to reward the fire fighter for what they may ultimately give - their life.

The second part of the motto is absolutely necessary if the fire fighter is to do the job and do it safely. "The ability to perform" signifies not only a physical and mental ability but also that knowledge is possessed which enables the fire fighter to accomplish the task.

The final segment of the motto indicates that fire fighters must have an underlying "courage to act" even when they know what's at stake. To enter a smoke filled building not knowing what's in it or where the fire is, or whether the building is about to collapse requires "courage." To fight an aircraft fire involving munitions, pressure cylinders, volatile fuels, fuel tanks, and just about anything else imaginable requires "courage."

Development & Training

- 1980's
 - Launched P-19 Models
- 1982 – Lighter, Smaller SCBA w/Chem capes
- 1985 – Salty Demo
 - reduce the magnitude of the attack
 - minimize impact on sortie generation
 - recover from attack in minimum time
- 1986 – Gold-Waters-Nichols Act
- 1987 – Firefighters join AF Readiness Challenge



Development & Training – 1990's

“it represented the first time I can recall that we ever went back and took apart the crash fire rescue business, brick by brick, to see what our standards really ought to be. There are several sets of standards. FAA [Federal Aviation Administration] has a set of standards. The National Fire Protection Association (NFPA) has a set of standards. Then the Air Force standard was above and beyond that. Our standards have always been higher. So there was an effort to try to settle on what the standards should be when you balance things like cost effectiveness, operational risk, and so forth, and see what we should really have. We ended up taking NFPA standards and adopting them as our crash fire rescue standards, which paid off in that we were able to go to a national standard that’s recognized”



1993



2003

Development & Training – 1990's cont'd

- 1990's
 - 1994 – Sanborn Award
 - Began as SAC award
 - Named for CMSgt. Ralph E. Sanborn, a long-time fire chief at SAC who began his career in World War II and had a 44-year career in Air Force Fire Protection. The Air Force also presented “Firefighter of the Year” awards to one military and one civilian
 - 1995 – Manning Redux Pressure
 - Reliance on Mutual Aid
 - Oklahoma City Bombing
 - Anthrax scare Wichita City



War and MOOTW

- 1990's
 - 1992 – Operations Desert Shield/Storm
 - Reliance on Host Nation Support Challenging
 - In only two months at King Khalid Military City, fire personnel responded to 1,076 emergencies and logged 4,120.5 hours
 - 1992 – Mogadishu, Somalia
 - 1995 – Balkans/Kosovo
 - 1996 – Khobar Towers

KKMC Fire Department Response Report

Purpose: -Document in a concise table form the intensity of operations.
 -Inform commanders, supervisors, and lateral functions (ie SRC, Crash Recovery, ect.)
 -Identify trends for future training and resource allocation.

Distribution: USCENTAF, Vice-wing/CC, Airfield Manager, CES/CC, and one copy to each of the 6 bases home station fire chiefs represented here at KKMC.

1. Below is a compilation of the emergency responses and alert line line standbys completed in support of sortie generations for Desert Storm. It is inclusive of 1 Jan- 28 Feb. Because we have an ongoing mission these numbers will continue to be modified as the drawdown is implemented and can be updated upon request or monthly basis, which ever best suits the needs of those listed above.

SUMMARY OF ACTIVITIES TABLE I

ACTIVITY/RESPONSE(AR)	##	PERIOD	MANHOURS(MH)	TOTAL AR/MH
Inflight Emergency	157	1Jan-28Feb	418	157 @ 418
Ground Emergency	31		47.5	31 @ 47.5
Crash Landing	5		70.5	4 @ 70.5
Fire Emergency	3		8.	3 @ 8.
Medical Emergency	7		7.5	7 @ 7.5
Airvac Standby	50		114	50 @ 114
ICT Standby	785		3374	785 @ 3374
Fuel Spill (II/III)	6/3		13	9 @ 13
Green Engine Run	9		12	9 @ 12
Bak 12 Activity/Change	20		56	20 @ 56
				<u>1076 @ 4120</u>

** There was 1 actual engagement (F-4: hyd failure). Hours reflected are assisting maintenance, changes in active ect.. (Note efficiency improvement as training was intensified in this area.)

*** There were other standby requirements (hot cargo, protect wreckage removal crews ect..) but their numbers do not reflect significant trends.

**** Additionally, Fire fighters invested over 1600 hrs involved in training (see attachment 1 for sample of monthly training schedule.)



PIONEER HIGHLIGHT

- 1951 – Commissioned in U.S. Air Force
- 1951 – 1972 Assignments
 - During her career, she served in San Antonio, Washington, England, Taiwan, Wright-Patterson Air Force Base, Ohio; St. John's, Newfoundland; and Illinois
- 1972 – 6940th Security Wing at Goodfellow Air Force Base, San Angelo, Texas
 - 1st Female Wing Commander
- 1982 – Retired
- 1982 – Order of the Sword
- 2013 – Lifetime Achievement Awd Recipient



Questions?



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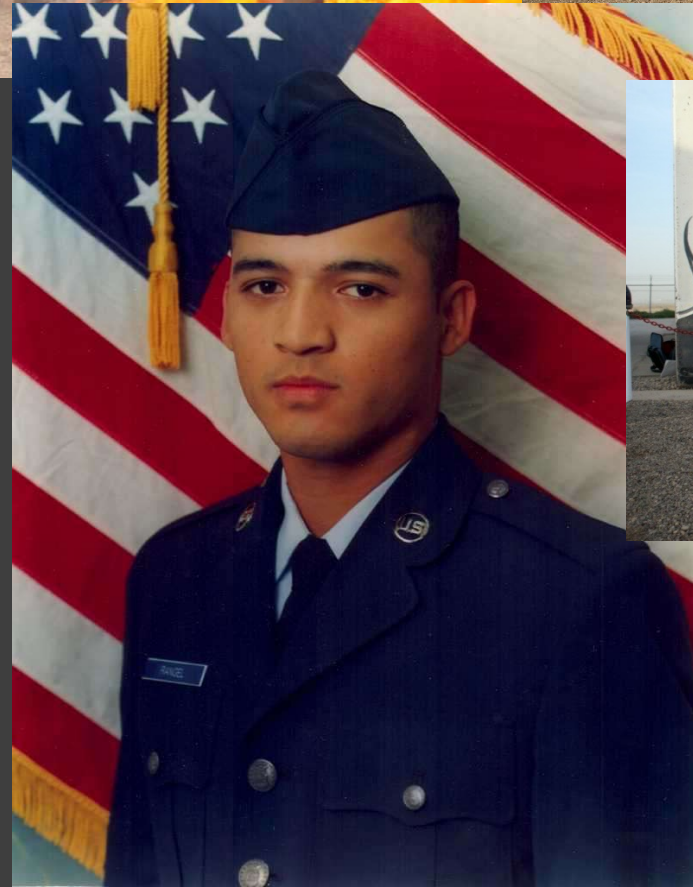


PIONEER HIGHLIGHT

- 1952 – Enlisted, U.S. Air Force
- 1952 – 1980 Assignments
 - England, Philippines, Vietnam, Japan and many state-side bases
- Vietnam over 1,155 Combat Msns
 - Silver Star; 2 Bronze Stars; 33 Air Medals Vietnamese Medal of Honor for training Vietnamese firefighters. Credited w/saving 17 Airmen and recovering several remains of those killed in action
- 1980 – Retired/Joined Federal Civil Service
 - Columbus AFB Fire Chief until retirement in 2002. In 2005 passed due to cancer
- 2009 – McAllister Fire Station
- 2013 – Lifetime Achievement Awd Recipient

9/11 & WAR

- 2000's
 - Contract Firefighters
 - Dyess AB
 - OEF/OIF Operations
 - Bagram AB, Afghanistan
 - Ali/Tallil AB, Iraq
 - Balad AB, Iraq
 - Kirkuk AB, Iraq
 - Iraqi Ministry of the Interior
 - Developed 7-yr strategic civil defense
 - Funded Academy, 27 Fire Stations, 600 Fire Trucks
 - 2005 – SSgt Ray Rangel
 - Balad AB, Iraq



DID YOU KNOW



This Randolph Field fire station built in 1930 is still standing?

How much did it cost to build?

- a. \$69, 000
- b. \$25, 340
- c. \$5, 314
- d. \$14, 904**

Development & Training

- 2000's
 - 2005 - Program Budget Decision 720
 - 40K AD/17K ARC Mil/2K Civs
 - Force Shaping Initiative
 - 2007 - Program Action Directive 07-02
 - Acft/Bldg/Med 611/108/2.7 days
 - FES CONOPS Implemented by FY09
 - Fire prevention, early intervention, cross-manning, leverage technology
 - 14% Manpower Redux = 901 FF's
 - October 2006 and March 2007, firefighters saved 41 lives on Air Force installations and extinguished fires in 6 military family housing units.

United States Air Force

CONCEPT OF OPERATIONS FOR FIRE PREVENTION AND CONSEQUENCE MANAGEMENT



Figure 2. Matching Resources to Probabilities - Hour.

Incidents By Time Series: Hour of the Day

Report Period: 10/1/05 - 9/30/06
Incident Total: 85,404

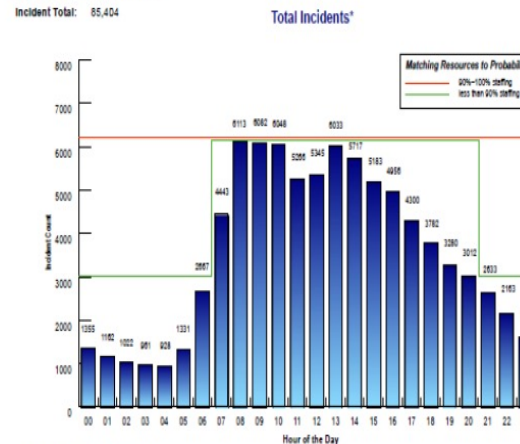
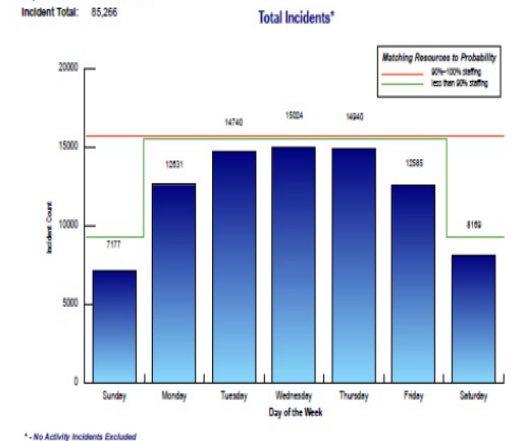


Figure 3. Matching Resources to Probabilities - Day.

Incidents By Time Series: Day of the Week

Report Period: 10/1/05 - 9/30/06
Incident Total: 85,266



Development & Training

- 2000's
 - CAFF System
- 2008 – PACAF Rescue Crse
- 2010 – Heroism Award
 - “acts of heroism above and beyond the call of duty”
- 2011 – RIV Roll Out



CLOSING THOUGHTS

“People who end up as ‘first’ don’t actually set out to be first. They set out to do something they LOVE.”



?????



PIONEER HIGHLIGHT

- 2012 –

YOUR TURN



Questions?