MCAS Miramar Fire Department

Standards of Cover 2017

INTRODUCTION

The following report serves as the Miramar Fire Department's "Integrated Risk Management Plan: Standards of Cover" document following the CFAI Standards of Cover 6th Edition guidelines. The CFAI defines the process, known as "deployment analysis," as written procedure which determines the distribution and concentration of fixed and mobile resources of an organization. The purpose for completing such a document is to assist the agency in ensuring a safe and effective response force for fire suppression, emergency medical services, and specialty response situations in addition to homeland security issues.

Creating an "Integrated Response Management Plan" Standards of Cover requires that a number of areas be researched, studied, and evaluated. The following report will begin with an overview of both the community and the department. Following this overview, the department will discuss areas such as risk assessment, critical task analysis, agency service level objectives, and distribution and concentration measures. Through charts and graphs illustration; the agency will provide documentation of reliable studies and historical performance.

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Executive Summary

The Miramar Fire Department is an all risk emergency agency that provides protection to life, property and environment on Marine Corps Air Station Miramar. The department responds to emergencies and provides public assistance to the residents of MCAS Miramar and the surrounding communities. The department is located in San Diego, CA and provides mutual and automatic aid with neighboring and cooperating cities and agencies. The department is responsible for all hazards response on MCAS Miramar. The department provides numerous services to the community to include; fire suppression, fire prevention, emergency medical services, rescue operations, hazmat and response to disasters natural or man-made.

The department is constantly striving to improve services to the local community. Service is based on responding to the needs of the community, arriving in a timely manner and providing quality service. These needs are evaluated in accordance with the National Fire Protection Association standards and Marine Corps Order 11000.11, *Marine Corps Fire Protection and Emergency Services Program*.

To meet the needs of the community the department is organized into five sections: Operations, Fire Prevention, Fire Dispatch, Training Division and Administration. The operations section is divided into 7 groups and is supervised by 2 Assistant Chiefs of Operations. Each group consists of a lead firefighter, engineer, firefighter (basic life support) and 1 to 2 firefighter/paramedics. The operations section is responsible to respond to all emergency needs and public assistance calls.

Fire prevention consists of 1 Assistant Chief of Fire Prevention and 4 fire inspectors. The Fire Prevention Division is responsible for fire inspections of buildings, providing public displays, and education the public on fire safety on the installation.

The Fire Dispatch Center consists of 1 dispatch supervisor and 11 dispatchers and is responsible for receiving emergency and public assistance calls and disseminating the information to the proper resources in a timely manner so units can respond. The Fire Dispatch Center is an official State of California Public Safety Answering Point (PSAP).

The Training Division has one Assistant Chief of Training that is responsible for the training of the department and is also the designated department safety officer. The Administration section consists of the Fire Chief and a service support specialist that are responsible for numerous duties to include budgetary items and personnel records.

The accreditation process consists of the Fire and Emergency Services Self-Assessment Manual, Standards of Cover document and Strategic Planning document. These pillars of the accreditation process benefit the department by providing data that is important for continuous quality improvement. In completing this process; the department has realized numerous strengths as well as deficiencies. The department will use this information collected in the process to continue improving its services to the community of Marine Corps Air Station Miramar and the surrounding communities.

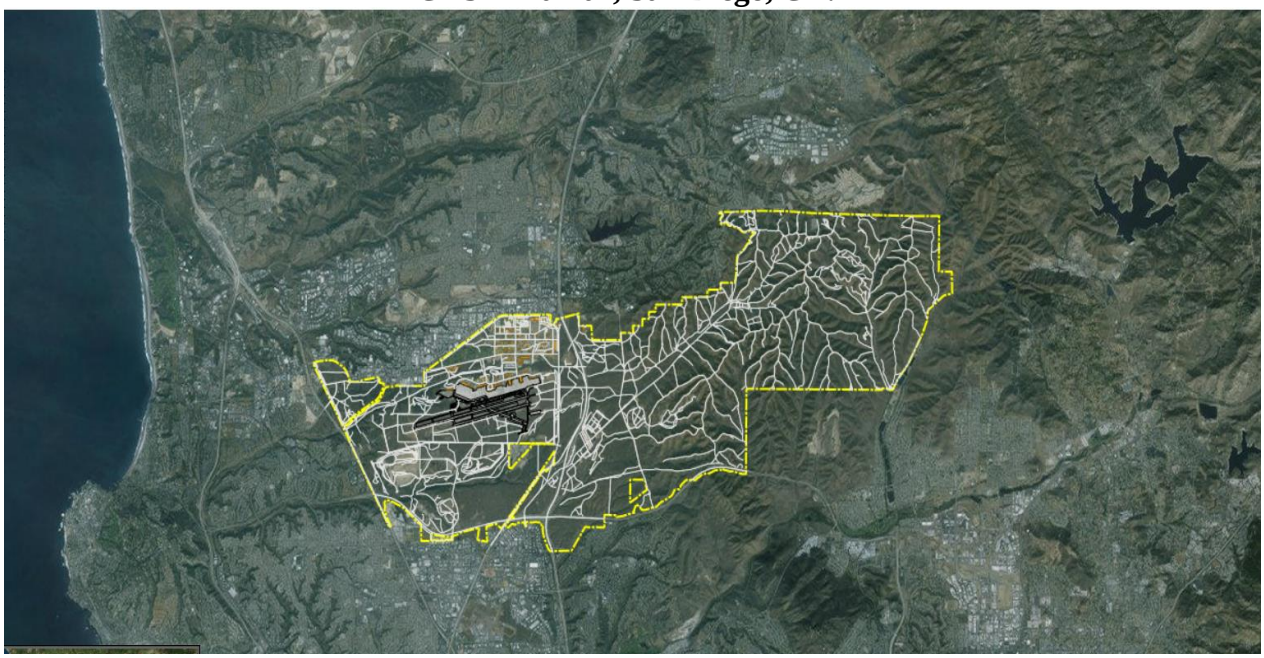
Community Served

The Miramar Fire Department protects and preserves life, the environment and property from fire and other emergencies at Marine Corps Air Station Miramar. MCAS Miramar is located in San Diego, California. The installation covers 23,015 acres and located approximately thirteen miles north of downtown San Diego and four miles east of the Pacific Ocean.

MCAS Miramar is the home of the 3D Marine Aircraft Wing (MAW), Marine Aircraft Group 46 and Combat Logistics Company. The installation is located to support naval commands and other Marine Corps installations in the Southwest Region. It is the home of West Coast Marine Helicopter Squadrons, fighter attack squadrons and aerial refueling squadrons in direct support of the I Marine Expeditionary Force.

An infrastructure of logistical support, military barracks, aircraft facilities and aviation training facilities are located on the installation to support the prime mission of the MCAS Miramar. MCAS Miramar employs approximately 12,500 marines, sailors and civilians.

MCAS Miramar, San Diego, CA.



The Base Realignment and Closure Committee (BRAC) actions of 1993 transferred Naval Air Station Miramar (NAS Miramar) to the United States Marine Corps (USMC). On October 1, 1997, the transfer was completed and the installation became MCAS Miramar. Prior to October of 1997, the Federal Fire Department San Diego (FFDSD) was the fire agency identified to provide the structure, wildland, aircraft and fire protection and fire prevention services for NAS Miramar.

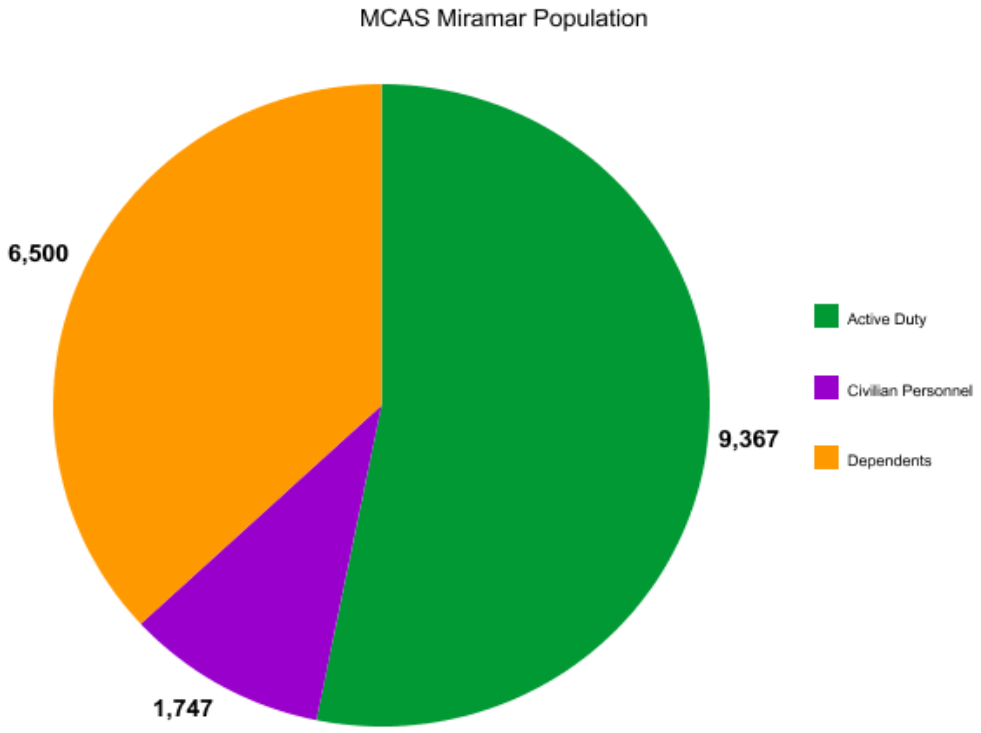
Population

The estimated total daily population of MCAS Miramar, Monday through Friday, is approximately 21,550. On weekends and holidays the estimated daily population is 9,800. Employed to support the mission of the 3D MAW are 12,500 military, civilian, and contract personnel.

An estimated three hundred contractors and vendors work daily at MCAS Miramar. They are hired by private companies to support aviation-training facilities, maintain aircraft, and provide technical services and to deliver supplies to the installation.

An estimated 6,000 active duty and retired military personnel, and their dependents, which do not work or reside at MCAS Miramar visit the installation daily. They use the recreational facilities, commissary stores, Marine Corps exchange stores, family support services, medical services and lodging on a daily basis.

Population: 9,367 active duty; 6,500 family members; 1,747 civilians



Mission Statement

The members of the Miramar Fire Department are dedicated to providing for the safety and welfare of the community through preservation of life, property and the environment. We value the faith and trust of the military and civilian communities we serve, and continually work to deserve that confidence through our honesty, integrity, and professionalism.

Vision Statement

The safety of our community is enhanced through the exceptional service provided by the Miramar Fire Department. Through strong leadership, training and continuing education we protect our community from fire, injury and preventable emergencies. As we accommodate our expanding mission we have become a role model among the Department of Defense Fire and Emergency Services. We will continue to set high standards through our dedication**.** Providing the highest level of professional service to the communities we serve.

Principle Values

The Miramar Fire Department is composed of family oriented personnel with high value principles. The current and future principle values of the department are based on the importance of our families and the community that we serve. Our principle values are derived from the department's core value words of *family, team, professionalism, honesty, dependable, positive attitude, motivation, dedication, knowledgeable, loyalty, respect, friendliness and responsibility*. Serving the community with **P.R.I.D.E** is our principle value statement.

Department Profile

The Miramar Fire Department was legally established on October 1, 1997 as identified in Marine Corps Order 11000.11, *Fire Protection and Emergency Services Program*. The department provides staffing for 2 fire stations which cover 2 fire districts broken into 14 fire demand zones.

The department is headed by a fire chief; operations are supported 24-hours a day, 7 days a week, with a minimum of 17 operational personnel on duty at all times which includes 16 firefighters and/or firefighter/paramedics and 1 assistant fire chief.

Altogether, the Fire Chief is supported by the following personnel: 5 assistant fire chiefs, 2 assigned to operations, 1 each assigned to training, fire prevention and emergency medical services (EMS); 7 non-supervisory captains; 7 engineers, 21 firefighters, 10 firefighter/paramedics, 4 fire inspectors, 1 dispatch supervisor, 11 dispatchers and 1 service support specialist.

FIRE DEPARTMENT

DATE: 4/28/2016

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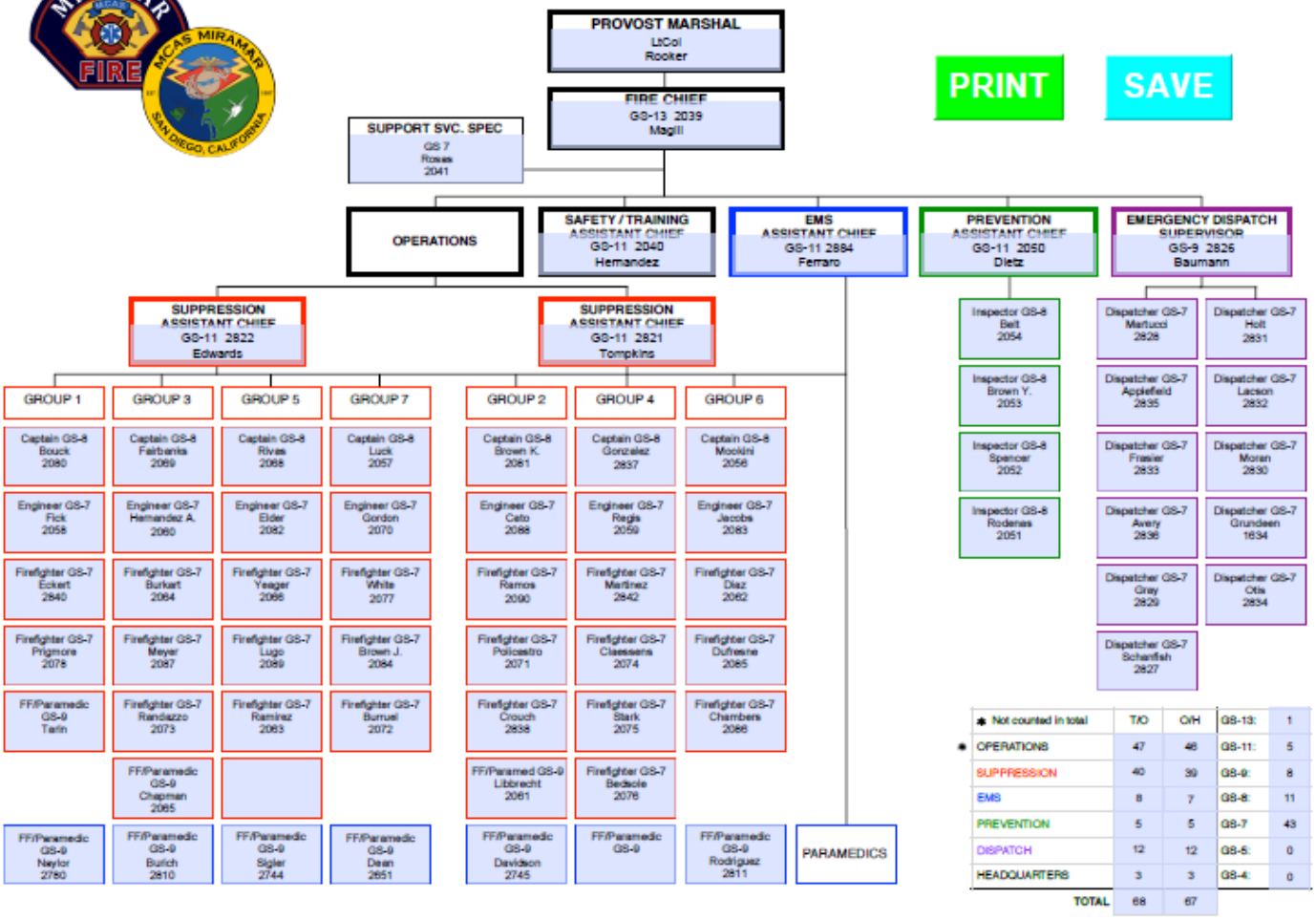


* Not counted in total	T/O	O/H	GS-13:	1
* OPERATIONS	47	46	GS-11:	5
SUPPRESSION	40	39	GS-9:	8
EMS	8	7	GS-8:	11
PREVENTION	5	5	GS-7	43
DISPATCH	12	12	GS-5:	0
HEADQUARTERS	3	3	GS-4:	0
TOTAL	68	67		

Fire Department Headquarters

The Fire Prevention Division, Assistant Fire Chief of EMS, and Administrative Support Specialist are located at 7908 Gonzalves Ave. This building was built in 1952 and serves as a multi-use facility. The Fire Chief's Office and Fire Dispatch Center are located across the street at 7007 and 7117 Gonzalves Ave.

Fire Station 61

Fire Station 61 was built in 1952 and provides emergency services for Fire District 61. The station is located at 7224 Mitscher Ave. Daily staffing covers 2 engine companies and 1 ALS ambulance. Cross staffing covers 1 wildland fire apparatus, 1 water tender, and 1 rescue apparatus. The Operation Chief's and Training Chief are both located at Fire Station 61.

Fire Station 62

Fire Station 62 was converted in 1999 into a "Temporary Fire Station" and provides emergency services for Fire District 62. Daily staffing covers 1 engine company and 1 medic-ambulance. Cross staffing covers 1 wildland fire apparatus and a decon squad. Station 62 is located at 21434 H Ave.

Fire Department Training Facility

The department's training facility known as "Swede Town" is located in Fire District 62. Swede Town hosts a variety of training options for the department. Live fire training is conducted utilizing SWEDE fire training simulators to include flashover and firefighter survival training.

Apparatus and Support Vehicles

The department employs both Type I (structural) and Type III (wildland) fire apparatus. Station 61 houses Engine 60, Engine 61, and Engine 163 in reserve. In addition, Brush 61, reserve Brush 163, Rescue 61, and Water Tender 61 are assigned to Station 61 as well. Station 62 houses Engine 62 and Brush 62. The department staffs two paramedic ALS ambulances, Miramar 1 at Station 61 and Miramar 2 at Station 62 and 1 ambulance unit in reserve, Miramar 3. The department's support vehicles and a hazardous material decon support trailer is housed among both fire stations.

Station 61 Fire Apparatus

Unit Designation	Apparatus Type	Function	
Engine 60	Type I - Fire Suppression. 1250 GPM	Frontline staffed with crew of 4, BLS	
Engine 61	Type I - Fire Suppression. 1250 GPM	Frontline staffed with crew of 4, BLS	
Engine 163	Type I - Fire Suppression. 1250 GPM	Reserve	
Brush 61	Type III - Wildland Fire Suppression. 500 GPM	Frontline crossed staffed with crew of 4, initial attack	
Brush 163	Type III - Wildland Fire Suppression 500 GPM	Reserve	
Water Tender 61	Type III - Support 1800 GAL 500 GPM	Frontline crossed staffed with crew of 2	
Rescue 61	Light Rescue	Frontline crossed staffed with crew of 4	

Station 62 Fire Apparatus

Unit Designation	Apparatus Type	Function	
Engine 62	Type I – Fire Suppression 1250 GPM	Frontline staffed with crew of 4, BLS	
Brush 62	Type III – Wildland Fire Suppression 500 GPM	Frontline crossed staffed with crew of 4, initial attack	

Paramedic ALS Ambulances

Unit Designation	Unit Type	Function	
Miramar 1	Paramedic Ambulance	Frontline staffed with1Paramedic and 1 EMT, transport	
Miramar 2	Paramedic Ambulance	Frontline staffed with1Paramedic and 1 EMT, transport	
Miramar 3	Paramedic Ambulance	Reserve	

Support Vehicles

Unit Designation	Unit Type	Function	
Chief 1	Command Vehicle	Fire Chief	
Division 61	Command Vehicle	Operations Chief	
Division 63	Command vehicle	Training Chief	
Decon 62	Support Vehicle	Hazmat Decon	
Hazmat Trailer	Support Trailer	Hazmat Decon	

Emergency Services Provided

Emergency Medical Services

The department provides advanced and basic life support for patients within the borders of the installation. The standard EMS response for a single patient requires 1 engine company and 1 advanced life support (ALS) paramedic ambulance and is identified as a **Low** hazard. All members of each engine company are San Diego County certified emergency medical technicians (EMT's). In the event of a multi-casualty incident (MCI), additional apparatus will be requested as required for a **Moderate** to **High** hazard. Advanced life support and transportation to the treatment facility (as directed by the assigned county base hospital) is provided by the department, or additionally requested mutual-aid partners. Personnel responding from the fire station on the initial dispatch have the ability to activate mutual aid agreements for additional resources as needed.

Structure Fires Reponses

Structural fire responses include automatic fire alarms, smell of smoke and reported fires. The standard is to provide a sufficient initial attack response as described by Department of Defense Instruction 6055.06, *Fire and Emergency Services Program*. Initial attack shall prevent or minimize the risk of loss of life and property damage.

An implementation of mitigation actions to contain, control and extinguish the fire is expected. The department is directed by DoDI 6055.06 to initiate evacuation and primary rescue, as necessary, to protect life. The department classifies the severity of each incident as **Low, Moderate, High, and Extreme.**

Hazardous Material Incidents

MCAS Miramar uses, stores, and transports hazardous materials that are related to airfield operations and logistical support of the military community. Aviation fuel, liquid oxygen (LOX), liquid nitrogen, carbon dioxide, hydraulic fluids, gasoline, diesel fuel, and aviation painting products are the primary hazardous materials located on the installation.

Large quantities of aviation fuel (JP-5) are used and stored on the installation. The MCAS Miramar fuel farm has the capacity to store a half million gallons of JP-5 in underground tanks and over three million gallons above ground. Aviation fuel is delivered to the installation by an underground-pressurized pipeline. Gasoline and diesel fuel used by military and government vehicles is transported to the installation by fuel tankers.

Hazardous material incidents occur infrequently at MCAS Miramar with the majority of calls occurring in Fire District 61.

They generally involve minor fuel spills and fuel leaks and are normally handled by a single engine company. Hazardous material incidents are classified in accordance with the department's SOG 226, *Hazardous Materials Response* Plan as Level I **(Low)**, Level II **(Mod)**, and Level III **(High).**

Wildland Fire Responses

Wildland fires are an infrequent event within MCAS Miramar. The highest probability of occurrence is the summer and fall months. Fires that start on installation property are primarily caused by human factors. Wildland fires that originate off installation property may threaten and spread to MCAS Miramar.

MCAS Miramar has approximately 17,500 acres of undeveloped land covered with vegetation. The vast majority of the open space is located in Fire District 62. Undeveloped areas include the Miramar Mounds National Natural Landmark that is southeast of the airfield and north of State Highway 52, East Miramar, southwest Miramar, northwest Miramar and the "Tea Cup" south of State Highway 52.

The key to the success of an initial attack for wildland fires is dependent on location, weather, topography and fuels. The department will continue to use the regionally accepted response plans. These are: **Low/Moderate, High, and Very High/Extreme**.

Preparedness level decision factors include incident activity, resource commitment and predicted fire weather. The department's wildland fire preparedness plan facilitates our ability to predetermine response measures defined from Preparedness Level(s) 1-5 as outlined in further detail within our wildland fire response guideline.

Rescue Operations

The department operates at the operations level and relies upon mutual aid agreements to provide technical rescue operations. The work force and population of MCAS Miramar combined with the mission indicates a vulnerable risk for accidents.

The department has the ability to establish incident command and assist in all technical operations. Airfield operations, aviation training exercises, remote military training, and construction projects express a requirement for rescue operations. The department also conducts rescue operations off the installation through a mutual aid agreement with the City of San Diego.

Community Risk Assessment

The first step in hazard and emergency mitigation is a thorough risk analysis. An organization focused on excellence must define a consistent methodology to develop fact-based risk analysis in order to build an effective response strategy to mitigate the risk. The department's Community Risk Analysis Plan establishes the methodology for developing an all-hazards risk analysis for MCAS Miramar.

Elements of the CRA

The department's Community Risk Assessment is based upon its core service deliveries to include: Structural Fire Suppression, Wildland Fire Suppression, Emergency Medical Services, Rescue Operations, and Hazardous Material Responses.

Methodology in Assessing Fire and Non-Fire Risk

The methodology in assessing fire and non-fire risk is based upon several factors. The department utilizes a fire risk assessment database that factors an occupancy vulnerability assessment profile (OVAP). Structural fire risks are in part categorized based upon their OVAP score. A high risk facility is identified with a score higher than 40, moderate risk with a score between 30-39, and a low risk facility will have a score below 30. Wildland fire is a highly dynamic environment that encompasses a multitude of high level risks. The Installations Wildland Fire Management Plan has been integrated into the department's fire risk assessment mythology. This methodology encompasses both fuels management and fire suppression activities. Non-fire risk is assessed and can be categorized as hazardous materials incidents, EMS responses, rescue, and other non-fire emergencies. The department's non-fire risk methodology is based upon elements associated with each specific incident type. Additional factors assessed include incident location, population density, critical infrastructure, and potential compromise to the installations mission.

Considerations in Assessing Severity of Risk

The department has taken the following factors and sources of information into consideration when assessing the severity of risk; Historical records of loss vs save, community demographics, critical infrastructure, occupancy vulnerability assessment profile (OVAP), water flow requirements, size and complexity of the incident, organizational mission and impact, Department of Defense Instruction (DoDI) 6055.06, *Fire and Emergency Services Program*, Marine Corps Order (MCO)11000.11, *Fire Protection and Emergency Services Program*, and National Fire Protection Association (NFPA) standards.

Location Factors

Fire Demand Zones (FDZs) include factors that are impacted by location and mission grouping. Factors to be considered include; Geographic, topographic, transportation, and population density. Additional factors considered are mission similarities which include the functional grouping of the FDZs such as the flight line, air operation support facilities, industrial, warehousing, and residential.

Gap Analysis

A gap analysis shall be conducted for each risk in each FDZ. The department will conduct an annual analysis by following the guidance established within the departments Performance Analysis Plan. Identified gaps will be assessed and closed when possible. If gaps cannot be closed, applicable guidelines within DoDI 6055.06 and MCO 11000.11 will be addressed.

Critical Infrastructure

Critical infrastructure within the installation is classified in relation to command mission and national security which differs than that of a municipality. Classification levels vary from Level I to Level III and are based upon their unique mission essential characteristics. The department has assessed all critical infrastructure within the installation and factored in life, property, and environment into the risk assessment process.

Frequency of Events

The department assessed frequency of events based upon 5 years (2012-2016) of actual emergency responses per service type.

Consequence Factors

Consequence factors shall be based upon Marine Corps Order 3500.27C, *Risk Management*. Risk Management is an integral component of the decision making process for both Marine Corps military and civilian personnel.

Consequence factors are based upon the following model.

Risk Assessment Matrix				**Probability**			
				High	**Moderate**	**Low**	**Very Low**
Severity	**Effect of Hazard**	**Catastrophic** Death or loss of life. Severe impact to installation	**Extreme**	**1**	**1**	**2**	**3**
		Critical Severe injury or damage. Significant impact to installation	**High**	**1**	**2**	**3**	**4**
		Moderate Minor injury or damage. Degraded mission capability.	**Moderate**	**2**	**3**	**4**	**5**
		Negligible Minimal injury or damage. Little to no impact to installation.	**Low**	**3**	**4**	**5**	**5**
Risk Assessment Code **1 – Extreme 2 – High 3 – Moderate 4 – Low 5 – Very Low**							

Boundaries and Fire Demand Zones

Boundaries and Fire Demand Zones (FDZs) have been determined by assessing Historical Response Data. The effectiveness will be based on compliance with response time standards as set forth by the Department of Defense and the Marine Corps. Boundaries and FDZs will be assessed annually to determine compliance. If in the event that the department is found to be non-compliant, FDZs will be reassessed to determine if standards can be met by re-districting the FDZ.

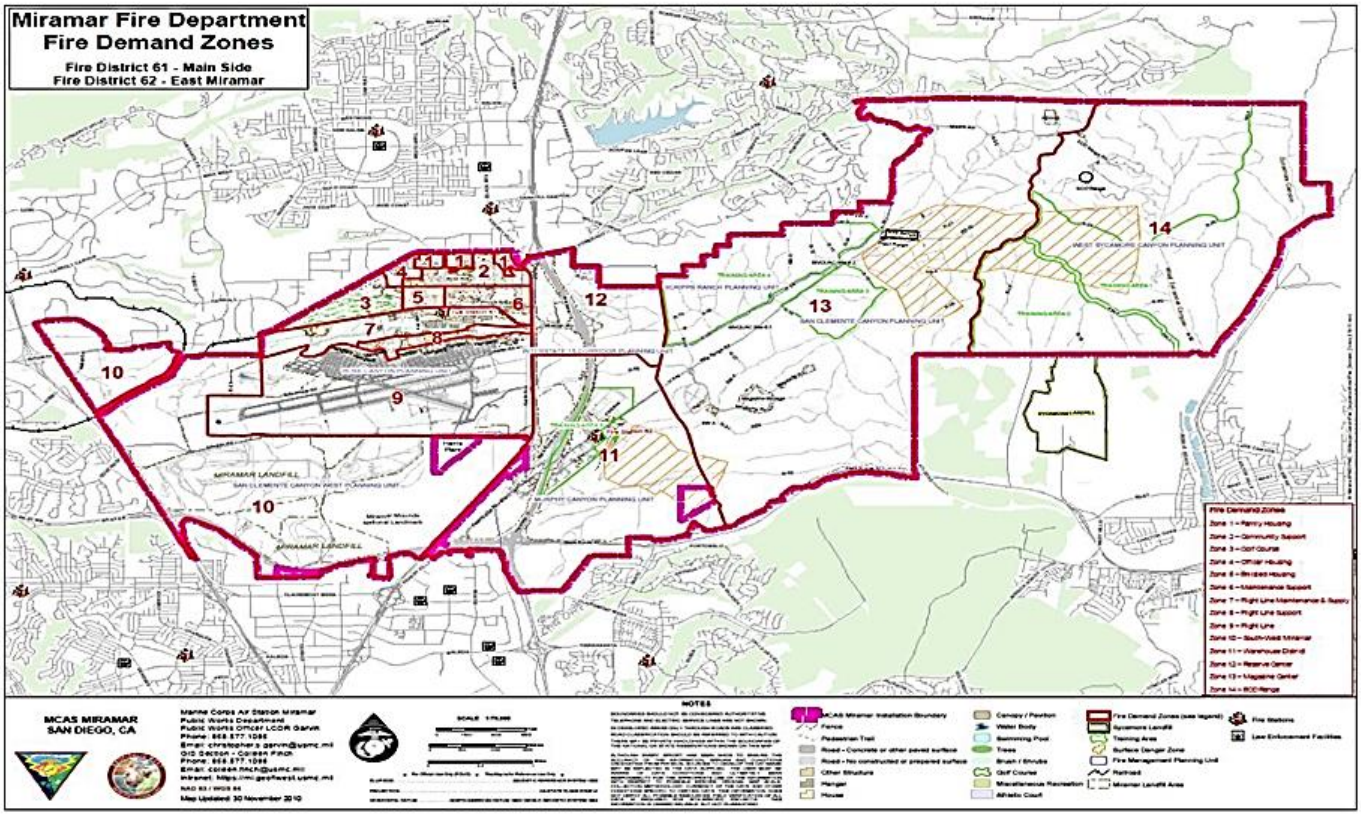
The department has established 14 FDZs to ensure effective distribution of resources. MCAS Miramar is comprised of over 23,000 acres that are broken down to ensure effective response coverage management.

Fire District 61

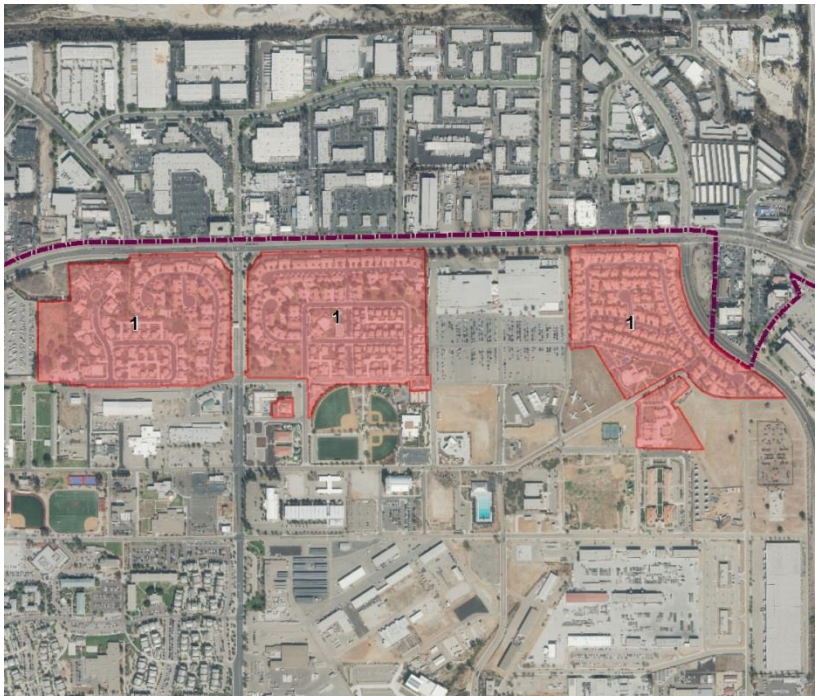
FDZ 1 – Family Housing
FDZ 2 – Community Support
FDZ 3 – Golf Course
FDZ 4 – Bachelor Officer Quarters
FDZ 5 – Bachelor Enlisted Quarters
FDZ 6 – Maintenance Support
FDZ 7 – Aviation Support
FDZ 8 –Operations and Training
FDZ 9 – Flight Line
FDZ 10 – South West Miramar
FDZ 12 – Reserve Center

Fire District 62

FDZ 11 – Warehouse District
FDZ 13 – Magazines
FDZ 14 – EOD Range



Fire Demand Zone 1



Critical Infrastructure

- Family Housing
- 446 Units, 154 Structures
- 1,350 Family Members

Highest Service Demands

- EMS
- Structure

Fire Demand Zone 1				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	Moderate	Moderate	Moderate	18
EMS	Moderate	Moderate	Moderate	298
HAZMAT	Moderate	Very Low	Very Low	0
Rescue	Low	Very Low	Very Low	1
Wildland	Low	Very Low	Very Low	0

2012-2016 Emergency Response Statistical Data - All Call Types – 90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
01:57	02:17	04:21	07:01	08:03

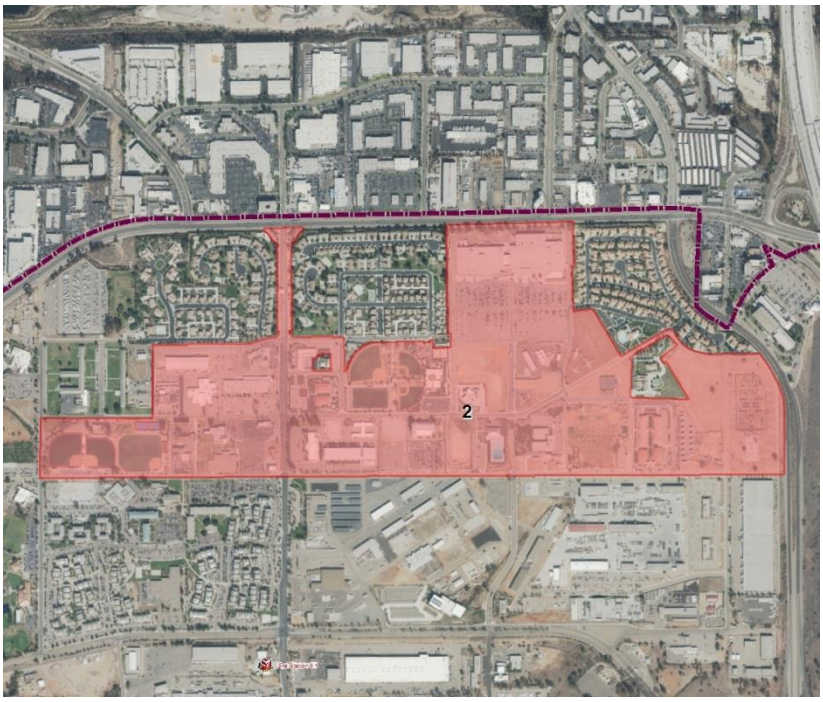
HIGHEST RISK FICILITY

Highest Risk – BLDG 1531B **OVAP SCORE – 28.60** **Water Demand – 299 GPM**

MODERATE RISK FACILITES

BLDG – 1544B	**OVAP SCORE – 25.30**	**Water Demand – 199 GPM**
BLDG – 1686	**OVAP SCORE – 17.97**	**Water Demand – 113 GPM**
BLDG – 1531A	**OVAP SCORE – 16.99**	**Water Demand – 193 GPM**

Fire Demand Zone 2



Critical Infrastructure

- Community Support Facilities
- Marine Corps Exchange and Commissary
- Medical Clinic
- Hotel
- Gas Station
- Installation's North Entrance

Highest Service Demands

- EMS
- Structure

Fire Demand Zone 2				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	Moderate	Moderate	Moderate	60
EMS	Moderate	High	High	564
HAZMAT	Low	Moderate	Low	4
Rescue	Low	Moderate	Low	5
Wildland	Low	Very Low	Very Low	0

2012-2016 Statistical Data - All Call Types – 90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
01:50	01:49	03:23	05:40	07:20

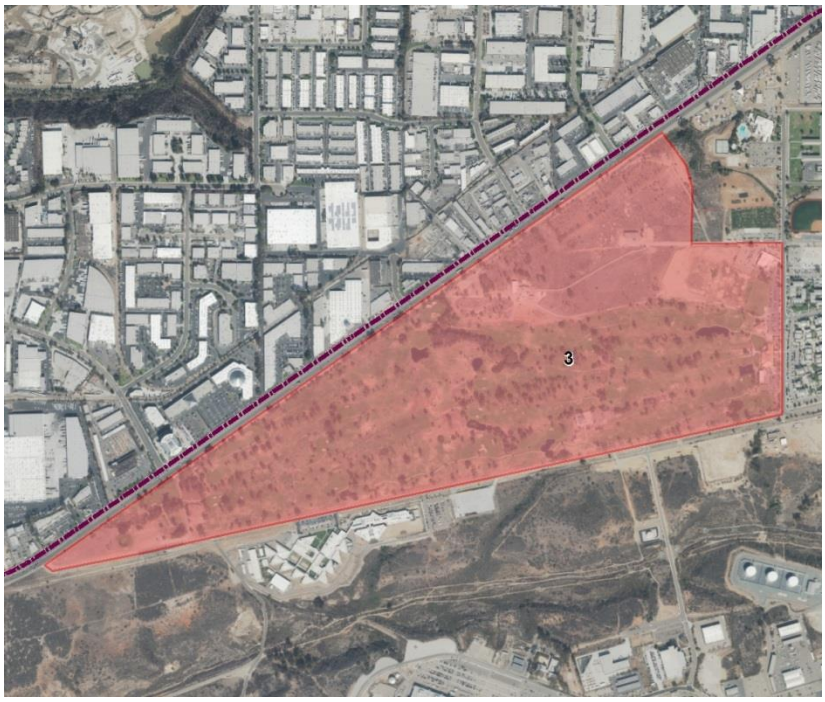
HIGHEST RISK FACILITY

Highest Risk – BLDG 2132 **OVAP SCORE – 32.39** **Water Demand – 585 GPM**

MODERATE RISK FACILITES

BLDG – 2513	**OVAP SCORE – 30.80**	**Water Demand – 1392 GPM**
BLDG – 2664	**OVAP SCORE – 29.70**	**Water Demand – 1411 GPM**
BLDG – 2661	**OVAP SCORE – 29.46**	**Water Demand – 2461 GPM**

Fire Demand Zone 3



Critical Infrastructure

- Golf Course
- Ground Care Facilities
- Restaurant
- Non Commissioned Officers Club

Highest Service Demands

- EMS
- Structure

Fire Demand Zone 3				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	Low	Low	Low	5
EMS	Low	Low	Low	29
HAZMAT	Moderate	Very Low	Very Low	0
Rescue	Very Low	Very Low	Very Low	0
Wildland	Low	Very Low	Very Low	0

2012-2016 Statistical Data - All Call Types – 90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
01:55	01:46	04:48	06:23	07:01

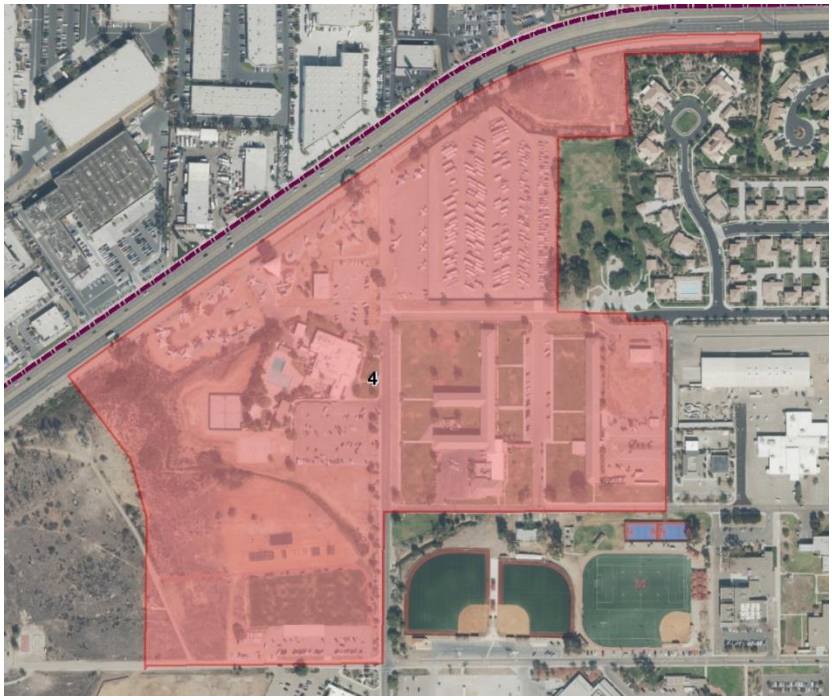
HIGH RISK FACILITY

Highest Risk – BLDG 3756 **OVAP SCORE – 26.4** **Water Demand – 911 GPM**

MODERATE RISK FACILITIES

BLDG – 3333	**OVAP SCORE – 26.40**	**Water Demand – 347 GPM**
BLDG – 3755	**OVAP SCORE – 26.03**	**Water Demand – 797 GPM**
BLDG – 3323	**OVAP SCORE – 25.79**	**Water Demand – 285 GPM**

Fire Demand Zone 4



Critical Infrastructure

- Bachelors Officer Quarters
- Officers Club
- Museum
- RV Storage Lot

Highest Service Demands

- EMS
- Structure

Fire Demand Zone 4				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	Moderate	Low	Low	7
EMS	Low	Low	Low	35
HAZMAT	Moderate	Very Low	Very Low	0
Rescue	Low	Very Low	Very Low	0
Wildland	Low	Very Low	Very Low	0

2012-2016 Statistical Data - All Call Types – 90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
02:50	02:17	03:33	07:43	09:12

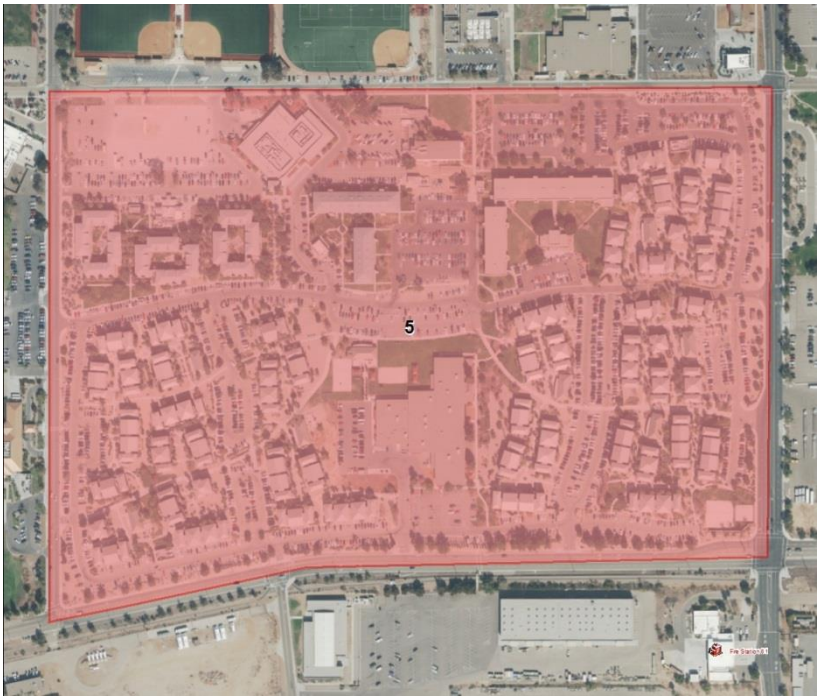
HIGH RISK FACILITY

Highest Risk – BLDG 4325 **OVAP SCORE – 29.11** **Water Demand - 1357 GPM**

MODERATE RISK FACILITIES

BLDG – 4312	**OVAP SCORE – 28.72**	**Water Demand – 1804 GPM**
BLDG – 4203	**OVAP SCORE – 28.60**	**Water Demand – 1358 GPM**
BLDG – 4472	**OVAP SCORE – 28.23**	**Water Demand – 2070 GPM**

Fire Demand Zone 5



Critical Infrastructure

- Bachelor Enlisted Quarters
- Cafeteria
- Recreational Facility
- Restaurant
- Library

Highest Service Demands

- EMS
- Structure

Fire Demand Zone 5				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	Moderate	High	High	133
EMS	Moderate	Moderate	Moderate	168
HAZMAT	Moderate	Very Low	Very Low	0
Rescue	Low	Very Low	Very Low	0
Wildland	Low	Very Low	Very Low	0

2012-2016 Statistical Data - All Call Types – 90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
02:10	02:53	03:11	06:26	08:02

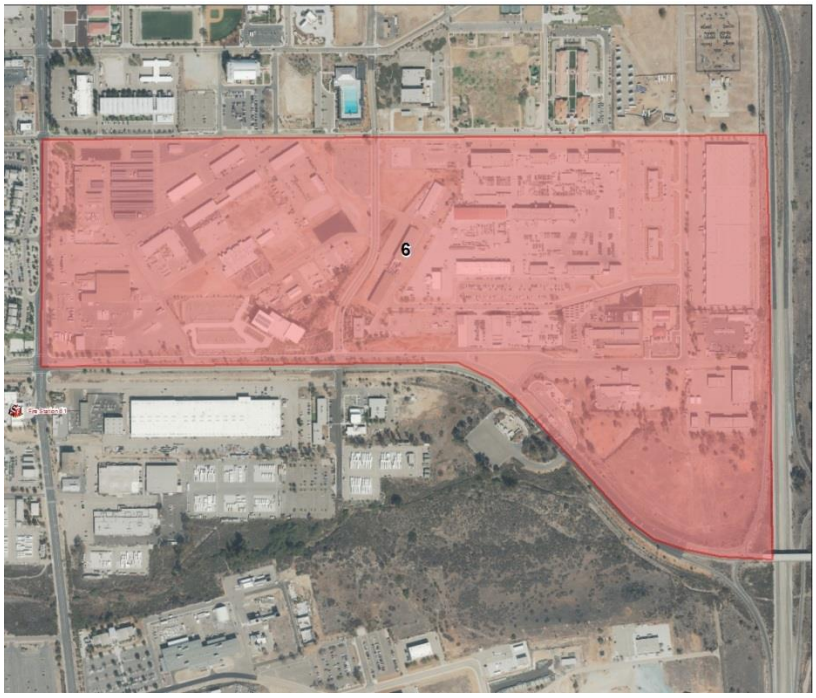
HIGH RISK FACILITY

Highest Risk – BLDG 5305 **OVAP SCORE – 32.5** **Water Demand – 2179 GPM**

MODERATE RISK FACILITIES

BLDG – 5500	**OVAP SCORE – 29.20**	**Water Demand – 858 GPM**
BLDG – 5115	**OVAP SCORE – 28.13**	**Water Demand – 544 GPM**
BLDG – 5201	**OVAP SCORE – 26.93**	**Water Demand – 242 GPM**

Fire Demand Zone 6



Critical Infrastructure

- Maintenance Support
- Warehouses
- Equipment Maintenance Facilities
- Public Works Facility
- Installation's East Entrance
- Gas Station
- GME Fleet Maintenance Facility
- SWRFT
- Auto Hobby Shop
- Recycling Center

Highest Service Demands

- EMS
- Structure

Fire Demand Zone 6				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	Moderate	Moderate	Moderate	45
EMS	Moderate	Low	Low	95
HAZMAT	Low	Very Low	Very Low	0
Rescue	Low	Very Low	Very Low	0
Wildland	Low	Very Low	Very Low	0

2012-2016 Statistical Data - All Call Types – 90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
01:42	02:07	03:26	05:50	06:36

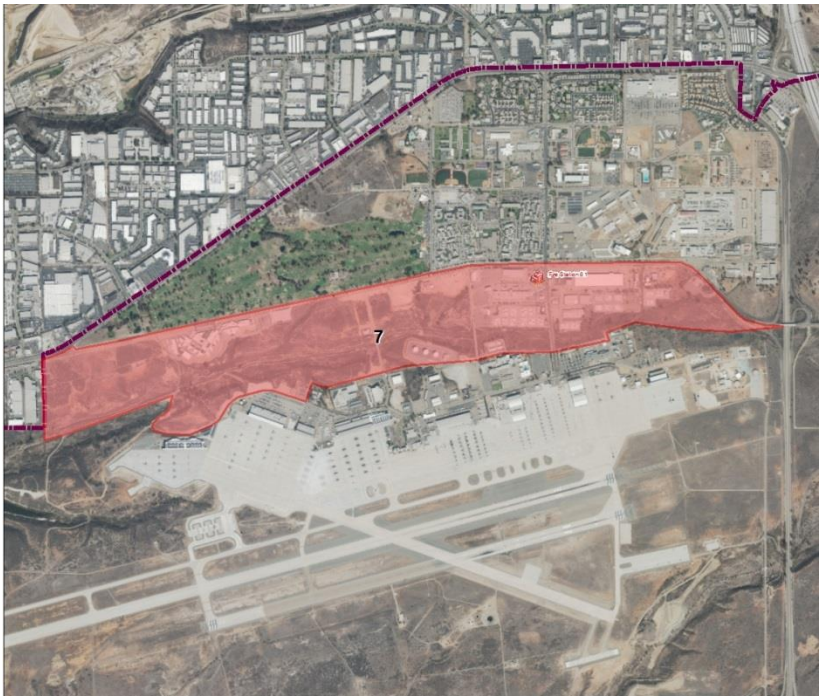
HIGHIST RISK FACILITY

Highest Risk – BLDG 6292 **OVAP SCORE – 33.86** **Water Demand – 618 GPM**

MODERATE RISK FACILITES

BLDG – 6001	**OVAP SCORE – 32.88**	**Water Demand – 2715 GPM**
BLDG – 6240	**OVAP SCORE – 30.56**	**Water Demand – 2019 GPM**
BLDG – 6214	**OVAP SCORE – 29.70**	**Water Demand – 1728 GPM**

Fire Demand Zone 7



Critical Infrastructure

- Aviation Support Facilities
- Consolidated Navy Brig
- Fire Station 61
- Fire Department HQ and Prevention Offices
- Communication and Electronics Facilities
- Aviation Fuel Storage Facilities
- Provost Marshall and Station Security Offices
- Emergency Communication Center Facility
- Armory

Highest Service Demands

- EMS
- Structure

Fire Demand Zone 7				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	High	Moderate	High	47
EMS	Moderate	Moderate	Moderate	124
HAZMAT	Low	Very Low	Very Low	2
Rescue	Low	Very Low	Very Low	0
Wildland	Moderate	Very Low	Very Low	0

2012-2016 Statistical Data - All Call Types – 90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
01:29	02:10	04:16	06:25	08:10

HIGHEST RISK FACILITY

Highest Risk – BLDG 7209 **OVAP SCORE – 40.30** **Water Demand – 2641 GPM**

MODERATE RISK FACILITIES

BLDG – 7759	**OVAP SCORE – 35.20**	**Water Demand – 588 GPM**
BLDG – 7120	**OVAP SCORE – 33.00**	**Water Demand – 350 GPM**
BLDG – 7550	**OVAP SCORE – 32.50**	**Water Demand – 1254 GPM**

Fire Demand Zone 8

Critical Infrastructure

- Aircraft Maintenance and Repair Facilities
- MCAS Miramar and 3rd MAW Headquarters
- Aviation Logistic Facilities
- Flight Line Fire Suppression Supporting Systems
- Aircraft Engine Testing Cells
- Financial and Budgetary Facilities
- Hazmat Facilities

Highest Service Demands

- Structure
- EMS

Fire Demand Zone 8				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	High	Moderate	High	36
EMS	Moderate	Low	Low	45
HAZMAT	Moderate	Very Low	Very Low	2
Rescue	Low	Very Low	Very Low	1
Wildland	Moderate	Very Low	Very Low	2

2012-2016 Statistical Data - All Call Types – 90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
01:50	02:02	03:52	06:15	07:16

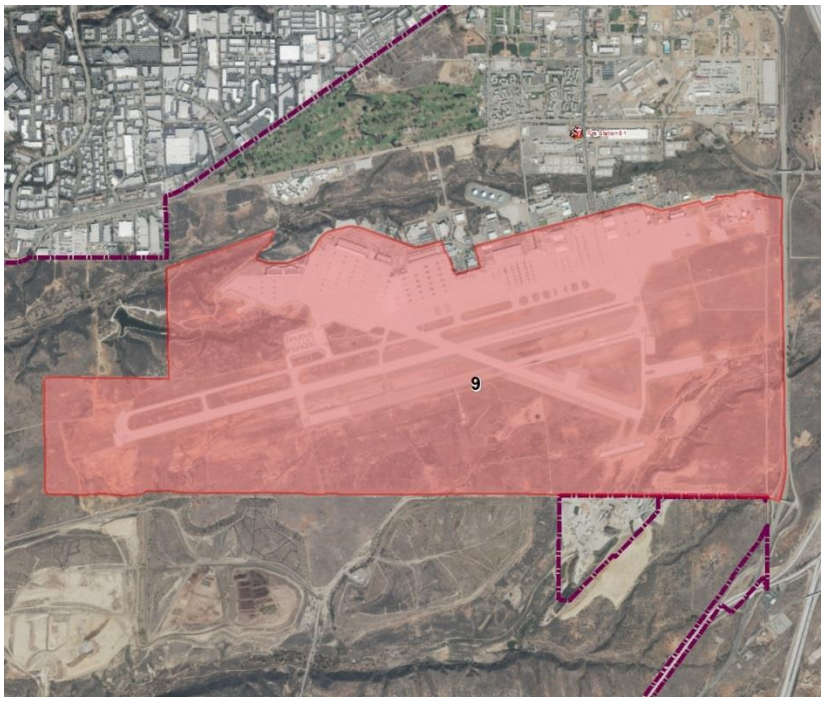
HIGHEST RISK FACILITY

Highest Risk – BLDG 8114 **OVAP SCORE – 37.40** **Water Demand – 622 GPM**

MODERATE RISK FACILITIES

BLDG – 8656	**OVAP SCORE – 34.07**	**Water Demand – 1619 GPM**
BLDG – 8200	**OVAP SCORE – 33.80**	**Water Demand – 696 GPM**
BLDG – 8672	**OVAP SCORE – 33.44**	**Water Demand – 753 GPM**

Fire Demand Zone 9



Critical Infrastructure

- Fixed Wing and Rotary Aircraft
- Flight Operations and Training
- Flight Line, Weapons Staging Area, Primary and Secondary CALA
- Eight Aircraft Hangers
- Aircraft Maintenance and Repair Facilities
- Aircraft Engine Testing Cells
- ARFF Fire Station
- Flight Control Tower
- Transceiver and Receiver Facilities

Highest Service Demands

- EMS
- Structure

Fire Demand Zone 9				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	High	High	High	97
EMS	High	Moderate	High	133
HAZMAT	Moderate	Low	Low	5
Rescue	Moderate	Very Low	Very Low	3
Wildland	Moderate	Very Low	Very Low	2

2012-2016 Statistical Data - All Call Types – 90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
01:52	02:20	05:19	07:37	09:17

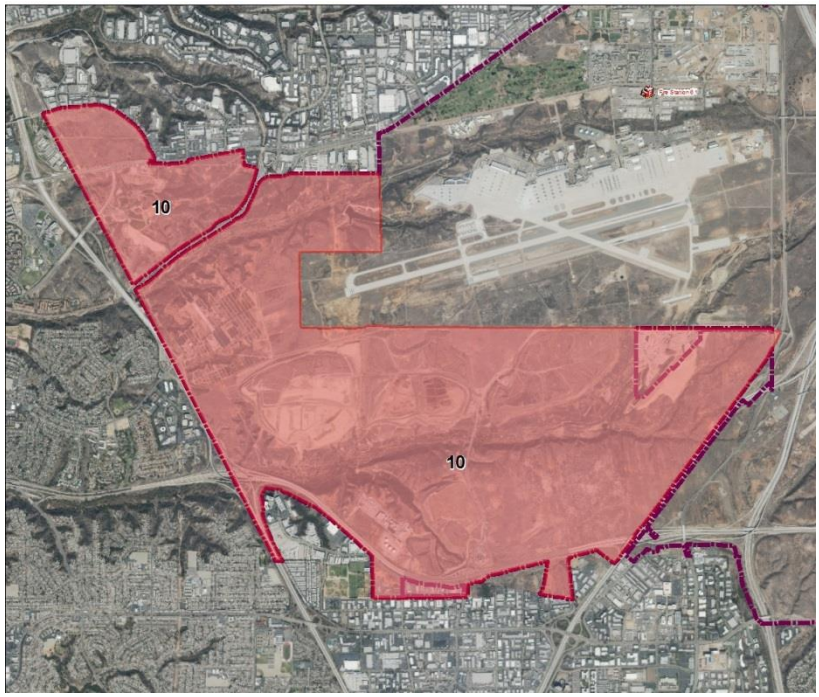
HIGHEST RISK FACILITY

Highest Risk – BLDG 9277 **OVAP SCORE – 44.80** **Water Demand – 3242 GPM**

MODERATE RISK FACILITIES

BLDG – 9500	**OVAP SCORE – 39.00**	**Water Demand – 3360 GPM**
BLDG – 9470	**OVAP SCORE – 37.80**	**Water Demand – 2983 GPM**
BLDG – 9215	**OVAP SCORE – 37.70**	**Water Demand – 2540 GPM**

Fire Demand Zone 10



Critical Infrastructure

- San Diego City Landfill (leased)
- Quarry (leased)
- Nursery (leased)
- National Cemetery (Veterns Affairs)
- Passenger and Freight Rail System
- Interstate 8 and State Route 52
- Rose and San Clemente Canyon Watersheds

Note – Very low frequency for all service types. Majority of FDZ 10 is federal leased property.

Fire Demand Zone 10				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	Low	Very Low	Very Low	0
EMS	Moderate	Very Low	Very Low	2
HAZMAT	Low	Very Low	Very Low	0
Rescue	Low	Very Low	Very Low	0
Wildland	High	Very Low	Low	1

2012-2016 Statistical Data - All Call Types – 90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
00:29	02:50	04:20	06:54	06:54

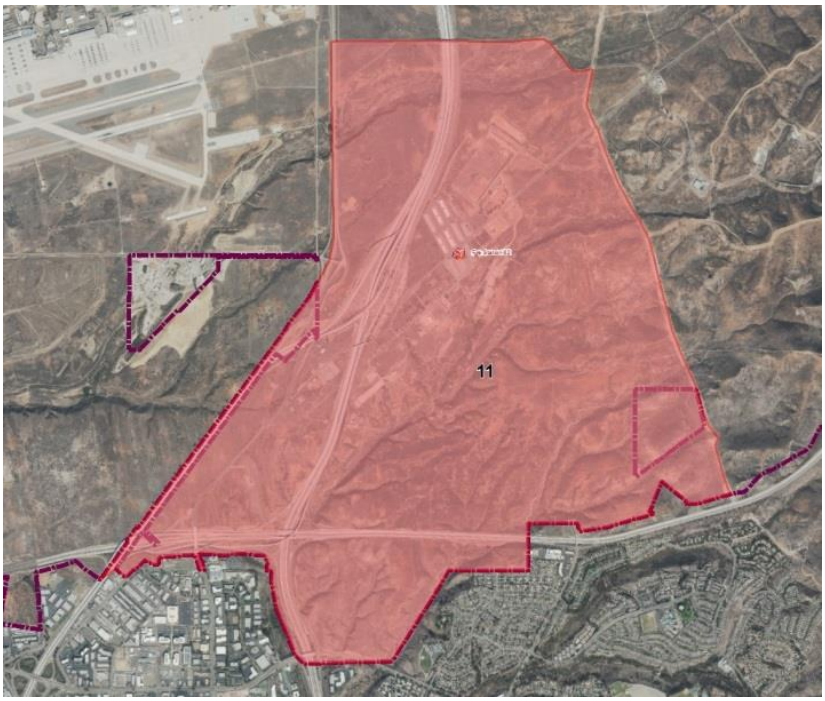
HIGHEST RISK FACILITY

Highest Risk – BLDG 19550 **OVAP SCORE – 38.50** **Water Demand – 1733 GPM**

MODERATE RISK FACILITIES

BLDG - 19547	**OVAP SCORE – 36.30**	**Water Demand – 1733 GPM**
BLDG - 19714	**OVAP SCORE – 36.18**	**Water Demand – 911 GPM**

Fire Demand Zone 11



Critical Infrastructure

- Fire Station 62
- Fire Department Training Facility
- Logistical Support Warehouses
- Unit Training Facilities
- San Diego County Sheriff Training Facilities
- EOD Facilities
- Murphy Canyon Watershed
- Interstate 15 and 163
- State Route 52

Highest Service Demands

- EMS

Fire Demand Zone 11				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	High	Very Low	Low	2
EMS	Moderate	Moderate	Moderate	32
HAZMAT	Low	Very Low	Very Low	0
Rescue	Low	Very Low	Very Low	0
Wildland	High	Very Low	Low	2

2012-2016 Statistical Data - All Call Types – 90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
01:39	01:52	06:56	08:27	10:29

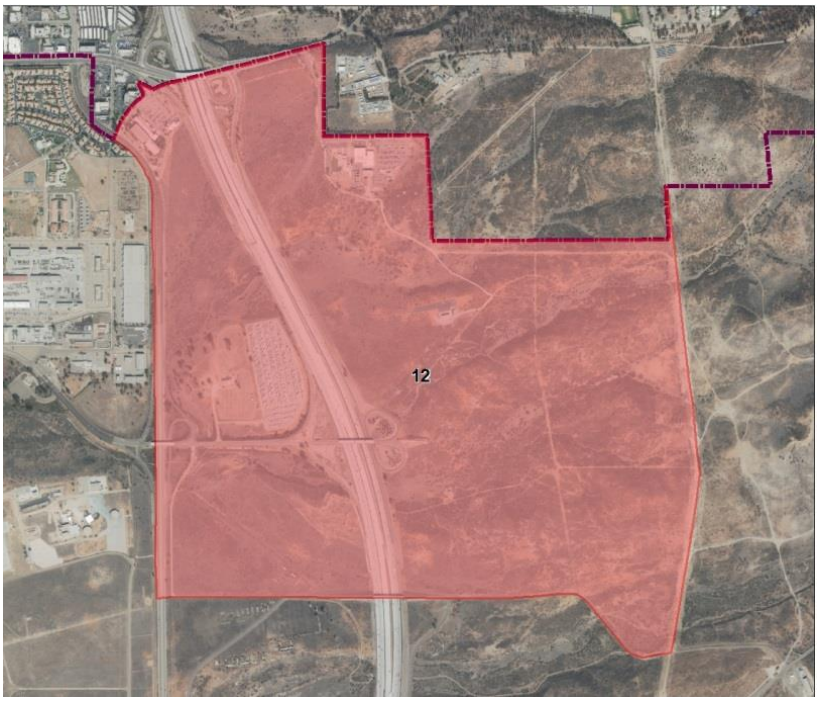
HIGHEST RISK FACILITY

Highest Risk – BLDG 21734 **OVAP SCORE – 33.37** **Water Demand – 824 GPM**

MODERATE RISK FACILITIES

BLDG – 21133	**OVAP SCORE – 33.00**	**Water Demand – 2806 GPM**
BLDG – 21134A	**OVAP SCORE – 32.63**	**Water Demand – 1973 GPM**
BLDG – 21733	**OVAP SCORE – 32.27**	**Water Demand – 839 GPM**

Fire Demand Zone 12



Critical Infrastructure

- FAA Facility
- Navy Reserve Center
- RV Storage Lot
- Interstate 15

Note - Very low frequency for all service types. 5 years of histrical data reflects insuffecient response data to accurately assess baseline and benchmark objectives.

Fire Demand Zone 12				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	Low	Low	Low	4
EMS	Moderate	Low	Low	7
HAZMAT	Low	Very Low	Very Low	0
Rescue	Low	Very Low	Very Low	0
Wildland	High	Very Low	Low	0

2012-2016 Statistical Data - All Call Types – 90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
00:38	01:43	06:18	07:35	10:42

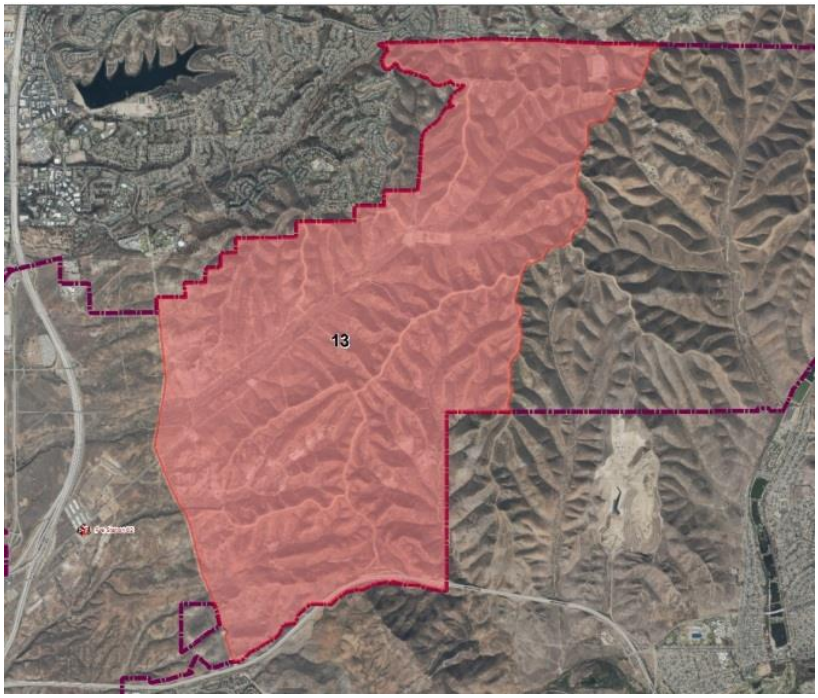
HIGHEST RISK FACILITY

Highest Risk – BLDG 20305 **OVAP SCORE – 31.9** **Water Demand – 963 GPM**

MODERATE RISK FACILITIES

BLDG – 20300	**OVAP SCORE – 29.33**	**Water Demand – 3114 GPM**
BLDG – 20301	**OVAP SCORE – 27.50**	**Water Demand – 811 GPM**
BLDG – 20309	**OVAP SCORE – 25.79**	**Water Demand – 412 GPM**

Fire Demand Zone 13



Critical Infrastructure

- Station Ordnance
- Magazine Storage
- San Diego Aqueduct
- Rifle Range

Note - Very low frequency for all service types. 5 years of histrical data reflects insuffecient response data to accurately assess baseline and benchmark objectives.

Fire Demand Zone 13				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	Low	Very Low	Very Low	1
EMS	Moderate	Very Low	Very Low	2
HAZMAT	Very Low	Very Low	Very Low	0
Rescue	Low	Very Low	Very Low	0
Wildland	High	Very Low	Low	0

2012-2016 Statistical Data - All Call Types –90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
00:44	00:42	06:12	06:40	04:36

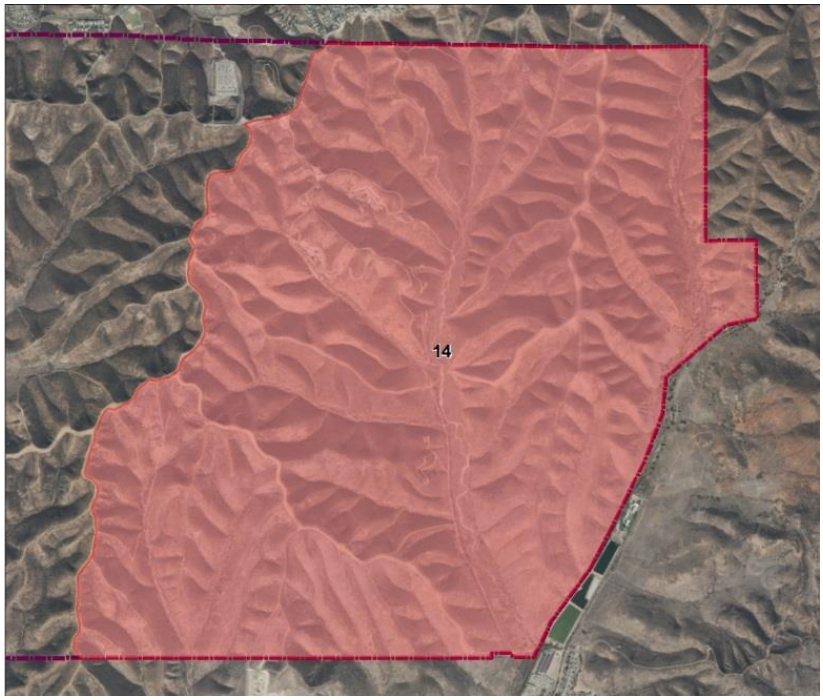
HIGHEST RISK FAICILITY

Highest Risk – BLDG 22244 **OVAP SCORE – 34.22** **Water Demand – 382 GPM**

ADDITIONAL MODERATE RISK FACILITIES

BLDG – 22108	**OVAP SCORE – 30.04**	**Water Demand – 465 GPM**
BLDG – 22596	**OVAP SCORE – 29.82**	**Water Demand – 150 GPM**
BLDG – 22245	**OVAP SCORE – 28.74**	**Water Demand – 382 GPM**

Fire Demand Zone 14



Critical Infrastructure

- EOD Inerting Facility
- Sycamore Canyon Watershed
- Oak Canyon Watershed

Note - Very low frequency for all service types. Insuffecient response data to accurately assess baseline and benchmark objectives.

Fire Demand Zone 14				
Incident Type	**Severity**	**Probability**	**Risk**	**Frequency**
Structure	Very Low	Very Low	Very Low	0
EMS	Moderate	Very Low	Very Low	2
HAZMAT	Very Low	Very Low	Very Low	0
Rescue	Low	Very Low	Very Low	0
Wildland	High	Very Low	Low	3

2012-2016 Statistical Data - All Call Types – 90th Percentile				
Call Processing	**Turn Out**	**Travel**	**First Due**	**ERF**
02:58	02:19	19:38	19:15	19:54

HIGHEST RISK FACILITY

Highest Risk – BLDG 21303 **OVAP SCORE – 34.47** **Water Demand – 3830 GPM**

MODERATE RISK FACILITIES

BLDG – 21308	**OVAP SCORE – 32.27**	**Water Demand – 1866 GPM**
BLDG – 21034	**OVAP SCORE – 31.17**	**Water Demand – 885 GPM**
BLDG – 21020	**OVAP SCORE – 26.40**	**Water Demand – 1138 GPM**

Distribution

The criterion used by the Miramar Fire Department to determine the distribution of fire stations and resources is Department of Defense Instruction 6055.06, *Fire and Emergency Services Program*. The distribution is the arrangement of fire stations and resources to achieve the standards. Fire stations and available resources are located to assure a rapid deployment when necessary to minimize the loss of life and property.

Building Density

The department considers building and population density a critical factor when determining the distribution of resources. Fire District 61 has a building density of 177 buildings per square mile. It is a district of 2.75 square miles with 487 buildings. Fire District 62 has a building density of 0.25 buildings per square mile. The majority of the buildings in Fire District 62 are located at Camp Elliot. Camp Elliot has a building density of 22.75 buildings per square mile. Camp Elliot is an area of 4 square miles with 91 buildings.

Population Density

The highest population density is concentrated on the main installation within Fire District 61, north of the airfield, south of Miramar Road and east of the golf course. High population density is considered over 1000 people. Approximately 95 percent of the daily population is located within Fire District 61's FDZs 1 and 5.

Fire District 62 (East Miramar) has a low population density. Low population density is considered less than 1000 people. The majority of East Miramar's population is located at Camp Elliot and the Naval Marine Corps Reserve Center. The acreage of East Miramar is sparsely occupied.

Water Demand

Water demand is an assessment of water supply needed once a structure has become fully involved. Water demand must be addressed when considering risk factors. Department of Defense agencies use a specific method for computing water demand for facilities that is outlined in Unified Facilities Criteria 3-600-1, *Fire Protection Engineering for Facilities*. Minimum fire flow requirements are separated into two different elements; facilities with installed suppression systems and those without. Naval Public Works Center (PWC) maintains the water supply and hydrant system aboard MCAS Miramar.

Fire Flow

Fire flow is indicate as the *available* water flow for 100% fire involvement for the first floor only, in gallons per minute (GPM). The end calculation is the total amount of water that can be delivered to the building. Various factors are taken into account such as available fire hydrants and/or other water delivery method such as water tenders. The Unified Facilities Code 3-600-1, *Fire Protection Design for Facilities,* requires fire flow calculations to be included in all plan review documents.

The department utilizes the following National Fire Protection Association 1410, *Standard for Training of Emergency Scene Operations*, standards in establishing minimum fire flow requirements for offensive operations and initial fire attack:

- Initial attack line shall provide a minimum flow of 150 GPM from the nozzle
- The required flow from the backup line shall meet or exceed that of the attack line
- The total flow of the required hose streams shall be a minimum of 300 GPM

For defensive operations such as master stream deployment and supporting existing fire protection systems such as sprinkler systems and stand pipes. The department will utilize the following:

- Total master stream flow shall be a minimum of 500 GPM
- Total sprinkler system support shall be a minimum of 250 GPM

The basic elements that the department considers when computing water demand for facilities without installed fire suppression systems are: identifying occupancy risk, determining a risk value using 6 weighted factors, fire department response time, building construction type, number of stories, separation distance, square footage, access, fire flow and required duration. For sprinkled facilities water demand is calculated by first identifying occupancy risk than multiplying the design area for the type of risk by the design density and last, adding the hose demand.

Compliance Methodology

90th Percentile Performance Analysis Methodology

Microsoft Excel's percentile formula was utilized to analyze performance for both in zone and per-service type response data. The percentile formula produced lower values than Microsoft's other available formulas and was recommended CFAI as being more consistent.

Time Point and Time Intervals

Emergency responses follow a specific series of events. Emergency systems primarily intercede or engage after the "point of awareness" of the event has been made aware. An emergency "total response time" or Aggregate Response Time (ART) is composed of the following time points and intervals for all emergency response types. *Dispatch Time, Turn-Out Time* and *Travel Time* combine to define an emergency responses "Total Response Time."

Event Initiation

This occurs when factors combine ultimately resulting in the activation of the emergency response system. These factors can occur seconds, minutes, hours or days before a point of awareness is reached. Examples include a smoke detector activating during normal business hours of a highly populated office building. This example includes identification being made quickly by way of by-standard(s) reporting that smoke is present within the structure and an immediate activation of the 911 reporting system takes place. It is sometimes difficult to quantify the point at which this event initiation type truly begins to occur.

Alarm

An alarm begins when the emergency response system is activated. An example is when the 911 system is initiated by someone in need or when a local or central alarm is transmitted to a receiving agency.

Notification

Notification begins when the fire department dispatcher receives the call or alarm.

Alarm Processing

Alarm processing is defined as the interval of time between the notification of alarm to the fire department dispatcher and the receipt of the alarm by the emergency responders. This is the first point at which the actual recording of time begins in the "total emergency response time."

Elements of Response Time

The requirement for response time is outlined in Department of Defense Instruction 6055.06, *Fire and Emergency Services Program*. This time is critical to intervention prior to deterioration of an incident. DoDI 6055.06 defines seven minutes as the minimum level of service objective measurement. Aggregate Response Time (ART) is comprised of the following:

One minute dispatch time, one minute turn-out time, five minutes travel time **= 7 minutes total response time**

Dispatch Time

Defined as one minute from the point of receipt of the emergency alarm at the dispatch center to the point where sufficient information is known to the dispatcher and applicable units are notified of the emergency.

Turnout Time

Defined as one minute from the time of dispatch through notification to travel time beginning.

Travel Time

This is the point at which the units indicate they are responding to the call until they indicate arrival at the scene of an emergency incident. Travel time is directly affected by the distribution and concentration of emergency apparatus and installation infrastructure. Factors that affect travel time also include weather, traffic, topography, and time of day.

On-Scene time

On-Scene time is the point at which the responding unit arrives at the emergency and ends the recording of the total response time.

Total Response Time

Total response time is calculated from notification point until the unit(s) arrives at scene.

Initiation of Action

May include, but is not limited to size-up, additional resource request(s), command establishment, resource deployment or when patient contact is initiated.

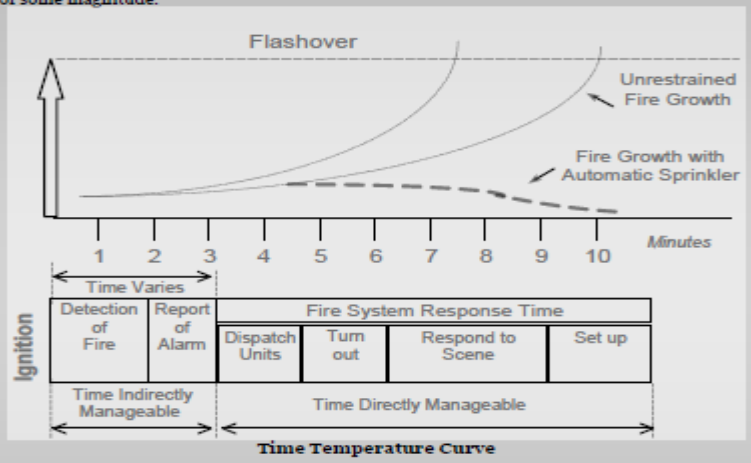
Termination of Incident

The time at which the emergency is mitigated having met all benchmarks defined by department operational procedures and or guidelines. Assigned apparatus are then placed in a position of operational readiness for future responses.

Impact

The ability of the Miramar Fire Department to intervene in an emergency event in a timely fashion is predicated on proper distribution of the first arriving apparatus and having enough resources on scene to safely mitigate the emergency event. For structure fires, this critical point is prior to the fire reaching flashover which instantly incinerates the contents of the room or structure affected by the fire. Illustrated to the right, is a visual indicator that illustrates the time/temperature curve and the importance of being able to intervene before conditions become untenable for occupants.

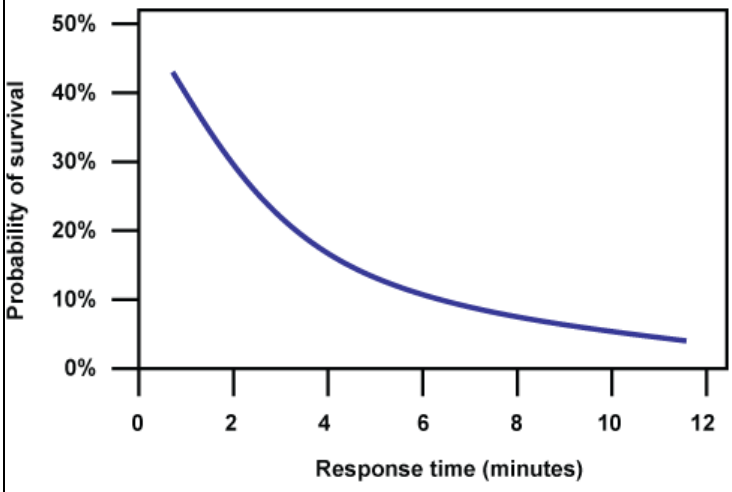
The "time-temperature curve" standard in the figure below is based on data from the National Fire Protection Association (NFPA) and the Insurance Services Organization (ISO), which have established that a typical point source of ignition in a residential house will "flash over" at some time between 5 and 10 minutes after ignition, turning a typical "room and contents" fire in to a structural fire of some magnitude.



Time Temperature Curve

The utility of the time-temperature curve for fire station placement is limited to a number of factors, including but not limited to the following:

- It does not account for the time required for the existence of a fire to be "discovered" and reported to the fire department via the 911 system.
- The time from ignition to flashover varies widely (5-30 minutes depending on building characteristics); thus it cannot provide a valid basis for the allocation of resources.
- The curve is constantly shifting, given the numerous changes in building construction, built in suppression systems, the increased use of fire resistive materials for furniture, and other items typically found in the interior of occupied buildings.



As indicated to the left, emergency medical events also have a critical window of opportunity that requires a rapid response time of 4-6 minutes. Emergency medical services (EMS), identifies brain death as a critical point in time around which to deploy resources. When breathing stops, the brain undergoes potential irreversible damage within four to 6 minutes without oxygen.

DoD Minimum Level of Service Objectives

This chart reflects the standard benchmark level of service objectives are measured against a 90% success rate as directed by Department of Defense Instruction (DoDI 6055.06) and Marine Corps Order (MCO P11000).

TABLE E3.T1. MINIMUM LEVEL OF SERVICE OBJECTIVES – OPERATIONS[1]

PROGRAM ELEMENT	ART (minutes)[2]	RATE (%)[3]	COMPANIES[4]	STAFF[4]
Structural Fire				
First Arriving Company	7	90	1	4
Initial Full Alarm Assignment	12	90	3	13
Other Fire Response/Investigative Response				
First Arriving Company	7	90	1	4
HAZMAT/CBRNE				
First Arriving Company (Defensive Operations)[5]	7	90	1	4
Full Alarm Assignment (Offensive Operations)[5]	22	90	3	15
Emergency Medical				
First Arriving Company (BLS with AED)	7	90	1	2
Transport Unit (BLS with AED)	12	90	1	2
ALS Capability	12	90	1	2
ARFF				
Unannounced First Arriving Company	5	90	1	3
Announced First Arriving Company[6]	1	90	1	3
Additional Units – should arrive at 30-second intervals	-	-	-	-
Technical Rescue				
First Arriving Company	7	90	1	4
Full Alarm Assignment	22	90	3	13
Wildfire				
As required to meet Installation Wildland Fire Management Plan	-	-	-	-
Other Response				
As required to meet NFPA standard, other consensus standard, or installation standard of cover	-	-	-	-

1. This table deviates from NFPA standards based on historical risk profile of DoD installation.
2. Consists of dispatch time, turn-out time, and travel time.
3. Factual response rate indicates the percentage of responses that are equal to or less than the ART.
4. Indicates the minimum number of companies and personnel required to safely and effectively perform initial operations for the respective program element. These minimum requirements do not provide sustainment capability and will not provide sufficient resources for major incidents.
5. See Critical Tasks

Additional – Wildland responses for first due shall arrive within 21 minutes and 30 seconds ART. Effective Response Force (ERF) depends on available resources and incident location.

Aggregate Response Time Baseline Performance

The performance data collected from 2012 through 2016 shows an effective distribution and concentration posture for our resources to meet baseline and benchmark objectives. Department of Defense Instruction 6055.06, *Fire and Emergency Services Program*, requires installations to analyze aggregate response time (ART) which is from the time of call receipt until the first arriving unit is at the scene of the reported emergency.

The department's ART baseline performance measurements are inconsistent for HAZMAT, Rescue, and Wildland responses due to their low service delivery.

The chart below reflects the department's first due and effective response force (ERF) baseline performance per DoDI 6055.06 compliance as measured in percentage.

Suppression Baseline Performance	**2012-2016 451**	**2016 86**	**2015 96**	**2014 115**	**2013 87**	**2012 67**
First Due -7 min ART	93%	97%	95%	93%	92%	88%
ERF - 12 min ART	91%	95%	97%	87%	88%	90%

EMS Baseline Performance	**2012-2016 1533**	**2016 210**	**2015 334**	**2014 341**	**2013 305**	**2012 343**
First Due -7 min ART	92%	94%	96%	91%	91%	89%
ERF - 12 min ART	92%	93%	96%	91%	91%	89%

HAZMAT Baseline Performance	**2012-2016 13**	**2016 2**	**2015 3**	**2014 1**	**2013 4**	**2012 3**
First Due -7 min ART	95%	100%	100%	100%	75%	100%
ERF - 22 min ART	100%	100%	100%	100%	100%	100%

Rescue Baseline Performance	**2012-2016 10**	**2016 2**	**2015 4**	**2014 2**	**2013 2**	**2012**
First Due -7 min ART	75%	100%	50%	50%	100%	No Data
ERF - 22 min ART	100%	100%	100%	100%	No Data	No Data

Wildland Baseline Performance	**2012-2016 11**	**2016**	**2015**	**2014 6**	**2013 2**	**2012 3**
First Due - 22 min ART	94%	No Data	No Data	83%	100%	100%
ERF - 22 min ART	64%	No Data	No Data	75%	50%	67%

Baseline and Benchmark Response Objectives

Suppression Response Objectives

The department's 5 year **Baseline** service level objectives are as follows:

For 90 percent of all **low risk** fire suppression responses, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer is **6 minutes and 41 seconds** in all Fire Demand Zones. The first due unit shall be capable of: establishing command, sizing up to determine if additional resources are required and if so, placing the order, and providing basic life support to any victim without endangering response personnel, advancing an attack line, establishing a uninterrupted water supply, and containing the fire

For 90 percent of all **moderate risk** suppression responses, the total response time for the arrival of the effective response force (ERF), staffed with 12 firefighters and 1 chief officer is **9 minutes** in all Fire Demand Zones. The ERF shall be capable of: establishing command, appointing an incident safety officer, providing an uninterrupted water supply, advancing an attack line and a back-up line for fire control, complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out, completing forcible entry, searching and rescuing at-risk victims, ventilating the structure; controlling utilities, and performing salvage and overhaul.

The department lacks sufficient data to support baseline response performance data for **high risk** fire suppression responses due to lack of events.

The department's baseline statements reflect actual performance for a 5 year period from 2012 to 2016. 2016 reflects incidents from 1/1 to 10/01.

Suppression Response – 90th Percentile Times Baseline Performance		**2012-2016 451 Incidents**	**2016 86 Incidents**	**2015 96 Incidents**	**2014 115 Incidents**	**2013 87 Incidents**	**2012 67 Incidents**
Alarm Handling	Pick-Up to Dispatch	01:36	01:14	01:13	02:17	02:00	01:16
Turnout Time	Turnout Time 1st Unit	02:37	02:17	02:37	02:42	02:24	03:06
Travel Time	Travel Time 1st Unit	04:14	03:56	04:31	04:34	04:19	03:49
Travel Time	Travel Time ERF	07:20	05:24	07:08	07:28	06:56	06:12
Total Response Time	Aggregate Response Time 1st Unit **Distribution**	06:41	06:26	06:30	07:06	06:59	06:22
Effective Response Time	Effective Response Force **Concentration**	09:00	07:42	09:04	10:10	10:58	08:50

The department's **Benchmark** service level objectives are as follows:

For 90 percent of all **low risk** fire suppression responses, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer, shall be: **6 minutes and 30 seconds** in all Fire Demand Zones. The first due unit shall be capable of: establishing command, sizing up to determine if additional resources are required and if so, placing the order, providing basic life support to any victim without endangering response personnel, advancing an attack line, establishing an uninterrupted water supply and containing the fire.

For 90 percent of all **moderate risk** fire suppression responses, the total response time for the arrival of the effective response force (ERF), staffed with 12 firefighters and 1 chief officer shall be: **8 minutes and 50 seconds** in all Fire Demand Zones. The ERF shall be capable of: establishing command, appointing an incident safety officer, providing an uninterrupted water supply, advancing an attack line and a back-up line for fire control, complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out, completing forcible entry, searching and rescuing at-risk victims, ventilating the structure; controlling utilities, and performing salvage and overhaul.

For 90 percent of all **high risk** fire suppression responses, the total response time for the arrival of the ERF, staffed with 12 firefighters, 1 advanced life support (ALS) unit with 1 EMT's and 1 paramedic, 1 prevention officer, and 2 chief officers, shall be: **8 minutes and 50 seconds** in all Fire Demand Zones. The ERF shall be capable of: establishing command, appointing an incident safety officer, providing an uninterrupted water supply, advancing an attack line and a backup line for fire control, complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out, completing forcible entry, searching and rescuing at-risk victims, ventilating the structure, controlling utilities, performing salvage and overhaul, providing ALS and incident rehabilitation.

EMS Response Objectives

The department's **Baseline** service level objectives are as follows:

For 90 percent of all **low risk** EMS responses, the total response time for the arrival of the first-due unit consisting of 1 paramedic and 1 EMT is **6 minutes and 30 seconds** in all Fire Demand Zones. The first-due unit shall be capable of: assessing scene safety and establishing command, sizing-up the situation, conducting an initial patient assessment, obtaining vitals and patient's medical history, initiating mitigation efforts within one minute of arrival, initiating advanced life support (ALS) and transportation services.

For 90 percent of all **medium risk** EMS responses, the arrival of the ERF, consisting of 3 firefighters and 1 company officer is **7 minutes and 35 seconds** in all Fire Demand Zones. The effective response force (ERF) shall be capable of assuming command, assisting with CPR and on-going ALS mitigation efforts, establishing radio contact with the medical base facility, and assisting with transportation to a trauma facility.

The department lacks sufficient data to support baseline response performance data for **high risk** EMS responses due to lack of events.

The department's baseline statements reflect actual performance for a 5 year period from 2012 to 2016. 2016 reflects incidents from 1/1 to 10/01.

EMS Response – 90th Percentile Times Baseline Performance		**2012-2016 1533 Incidents**	**2016 210 Incidents**	**2015 334 Incidents**	**2014 341 Incidents**	**2013 305 Incidents**	**2012 343 Incidents**
Alarm Handling	Pick-Up to Dispatch	01:50	01:21	01:22	01:56	02:09	02:21
Turnout Time	Turnout Time 1st Unit	02:01	01:56	01:56	01:54	02:02	02:19
Travel Time	Travel Time 1st Unit	03:58	03:58	04:00	04:01	03:46	04:06
Travel Time	Travel Time ERF	05:21	05:24	05:04	05:18	04:24	04:36
Total Response Time	Aggregate Response Time 1st Unit **Distribution**	06:30	06:17	06:16	06:38	06:28	06:54
Total Response Time	Effective Response Force **Concentration**	07:35	07:00	07:10	08:26	07:23	07:54

The department's **Benchmark** service level objectives are as follows:

For 90 percent of all **low risk** EMS responses, the total response time for the arrival of the first-due unit consisting of 1 paramedic and 1 EMT shall be: **6 minutes and 25 seconds** in all Fire Demand Zones. The first-due unit shall be capable of: assessing scene safety and establishing command, sizing-up the situation, conducting an initial patient assessment, obtaining vitals and patient's medical history, initiating mitigation efforts within one minute of arrival, initiating advanced life support (ALS) and transportation services.

For 90 percent of all **medium risk** EMS responses, the arrival of the effective response force (ERF), consisting of 3 firefighters and 1 company officer shall be: **7 minutes and 30 seconds** in all Fire Demand Zones. The ERF shall be capable of assuming command, assisting with CPR and on-going ALS mitigation efforts, establishing radio contact with the medical base facility, and assisting with transportation to a trauma facility.

For 90 percent of all **high risk** EMS responses, the total response time for the arrival of the ERF, staffed with 12 firefighters, 2 ALS units with 2 EMT's and 2 paramedics, 1 chief officer, and 1 EMS chief, shall be: **7 minutes and 30 seconds** in all Fire Demand Zones. The ERF shall be capable of: establishing incident command (IC), conducting an initial assessment, appointing an incident safety officer, establishing medical communications, initiating the early stages of triage, requesting additional resources, identifying primary and secondary staging locations, conduct a secondary assessment, assess on-going stages of triage and scene control.

Hazardous Material/CBRNE Response Objectives

The department's **Baseline** service level objectives are as follows:

For 90 percent of all **low risk** hazardous materials responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is **5 minutes and 48 seconds** in all Fire Demand Zones. The first-due unit shall be capable of: establishing command, sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device, determining the need for additional resources, estimating the potential harm without intervention, and begin establishing a hot, warm, and cold zone. These operations will be accomplished in accordance with department Standard Operating Guideline 226, Hazardous Materials Response Plan.

For 90 percent of all **moderate risk** hazardous materials responses, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with 16 firefighters is **9 minutes and 3 seconds** in all Fire Demand Zones.

The department lacks sufficient data to support baseline response performance data for **high risk** hazardous material responses due to lack of events.

The department's baseline statements reflect actual performance for a 5 year period from 2012 to 2016. 2016 reflects incidents from 1/1 to 10/01.

HAZMAT Response – 90th Percentile Times Baseline Performance		**2012-2016 13 Incidents**	**2016 2 Incidents**	**2015 3 Incidents**	**2014 1 Incident**	**2013 4 Incidents**	**2012 3 Incidents**
Alarm Handling	Pick-Up to Dispatch	00:56	00:40	00:30	00:54	01:40	00:55
Turnout Time	Turnout Time 1st Unit	01:59	02:49	02:35	00:19	01:59	02:14
Travel Time	Travel Time 1st Unit	03:33	02:49	04:34	02:54	03:44	01:37
Travel Time	Travel Time ERF	No Data	No Data	No Data	No Data	No Data	No Data
Total Response Time	Aggregate Response Time 1st Unit **Distribution**	05:48	05:53	07:34	04:07	06:21	05:06
Effective Response Time	Effective Response Force **Concentration**	09:03	No Data	09:25	No Data	08:40	No Data

The department's **Benchmark** service level objectives are as follows:

For 90 percent of all **low risk** hazardous materials responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be **5 minutes and 30 seconds** in all Fire Demand Zones. The first-due unit shall be capable of: establishing command, sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device, determining the need for additional resources, estimating the potential harm without intervention, and begin establishing a hot, warm, and cold zone. These operations will be accomplished in accordance with department Standard Operating Guideline 226, Hazardous Materials Response Plan.

For 90 percent of all **moderate risk** hazardous materials responses, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with 16 firefighters, shall be: **22 minutes** in all Fire Demand Zones.

For 90 percent of all **high risk** response hazardous materials responses, the total response time for the arrival of the ERF including the hazardous materials response team, staffed with 21 firefighters shall be: **22 minutes** in all Fire Demand Zones. The ERF shall be capable of: appointing incident safety officer, and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident. These operations will be done in accordance with department standard operating guidelines while providing for the safety of responders and the general public.

Rescue Response Objectives

The department's **Baseline** service level objectives are as follows:

For 90 percent of all **low risk** rescue responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is **6 minutes and 5 seconds** in all Fire Demand Zones. The first-due unit shall be capable of: establishing command, sizing up to determine if a technical rescue response is required, requesting additional resources; and providing basic life support to any victim without endangering response personnel.

There has been no **moderate risk** or **high risk** rescue responses during 2012-2016 in which to analyze the ERF. The department will follow standard operating guidelines to ensure that the minimum required resources will be available when an emergency requiring the assembly of an initial response force or an ERF takes place.

The department's baseline statements reflect actual performance for a 5 year period from 2012 to 2016. 2016 reflects incidents from 1/1 to 10/01.

Rescue Response – 90th Percentile Times Baseline Performance		**2012-2016 10 Incidents**	**2016 2 Incidents**	**2015 4 Incidents**	**2014 2 Incidents**	**2013 2 Incidents**	**2012**
Alarm Handling	Pick-Up to Dispatch	1:10	00:32	01:46	02:24	00:00	No Data
Turnout Time	Turnout Time 1st Unit	1:07	00:36	01:26	00:37	01:59	No Data
Travel Time	Travel Time 1st Unit	2:27	03:49	06:41	04:46	02:50	No Data
Travel Time	Travel Time ERF	No Data	No Data	No Data	No Data	No Data	No Data
Total Response Time	Aggregate Response Time 1st Unit **Distribution**	6:05	04:47	07:32	07:13	4:49	No Data
Effective Response Time	Effective Response Force **Concentration**	No Data	No Data	No Data	No Data	No Data	No Data

The department's **Benchmark** service level objectives are as follows:

For 90 percent of all **low risk** rescue responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: **6 minutes** in all Fire Demand Zones. The first-due unit shall be capable of: establishing command, sizing up to determine if a technical rescue response is required, requesting additional resources, and providing basic life support to any victim without endangering response personnel.

For 90 percent of all **moderate risk** rescue responses, the total response time for the arrival of the effective response force (ERF), staffed with 19 firefighters and officers including the technical response team shall be: **22 minutes** in all Fire Demand Zones.

For 90 percent of all **high risk** rescue responses, the total response time for the arrival of the ERF staffed with 23 firefighters and officers shall be **22 minutes** in all Fire Demand Zones. The ERF shall be capable of: appointing incident safety officer, establishing patient contact, staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents, and providing basic life support. These operations will be done in accordance with department standard operating guidelines while providing for the safety of responders and the general public.

Wildland Response Objectives

The department's **Baseline** service level objectives are as follows:

For 90 percent of all **low risk** wildland fire suppression responses, the total response time for arrival of the first-due units, staffed with 2 type III engines, 1 water tender, and 1 duty chief is **6 minutes and 14 seconds** in all Fire Demand Zones. First-due units shall be capable of: establishing command, providing a scene size up and report on conditions, determine the need for additional resources and radio assignments, safely anchor the fire and establish an escape route and safety zone, perform initial attack functions as needed to minimize acreage loss.

For 90 percent of all **moderate risk** wildland fire suppression responses, the total response time for arrival of the effective response force (ERF), staffed with 4 type III engines, 1 water tender, 1 ALS ambulance, 1 prevention officer, 2 duty chiefs, and 1 type II helicopter (upon request) is **17 minutes and 17 seconds** in all Fire Demand Zones. The ERF shall be capable of: establishing command, appointing an incident safety officer, providing a scene size up and report on conditions, develop a plan, determine the need for additional resources and radio assignments, initiate and utilize the Incident Command System, safely anchor the fire, establish a lookout, and identify an escape route to a safety zone, perform water shuttle operations to provide water to the attack engines, order and utilize aircraft as needed, provide incident rehabilitation with ambulance personnel.

There have been no **high risk** wildland fire suppression responses during 2012-2016 in which to analyze the ERF. The department has followed standard operating guidelines and the Wildland Dispatch Plan to ensure that the minimum required resources will be available when an emergency requiring the assembly of an initial response force or an ERF takes place.

The department's baseline statements reflect actual performance for a 5 year period from 2012 to 2016. 2016 reflects incidents from 1/1 to 10/01.

Wildland Response – 90th Percentile Times Baseline Performance		**2012-2016 11 Incidents**	**2016**	**2015**	**2014 6**	**2013 2**	**2012 3 Incidents**
Alarm Handling	Pick-Up to Dispatch	01:02	No Data	No Data	00:39	01:48	00:46
Turnout Time	Turnout Time 1st Unit	02:03	No Data	No Data	02:26	02:36	01:47
Travel Time	Travel Time 1st Unit	03:44	No Data	No Data	05:57	02:58	01:52
Travel Time	Travel Time ERF	10:52	No Data	No Data	No Data	13:06	08:38
Total Response Time	Aggregate Response Time 1st Unit **Distribution**	06:14	No Data	No Data	09:02	05:49	03:37
Effective Response Time	Effective Response Force **Concentration**	17:17	No Data	No Data	18:55	17:52	15:05

The department's **Benchmark** service level objectives are as follows:

For 90 percent of all **low risk** wildland fire suppression responses, the total response time for arrival of the first-due units, staffed with 2 type III engines, 1 water tender, and 1 duty chief shall be: **6 minutes and 0 seconds** in all Fire Demand Zones. First-due units shall be capable of: establishing command; providing a scene size up and report on conditions, determine the need for additional resources and radio assignments, safely anchor the fire and establish an escape route and safety zone, perform initial attack functions as needed to minimize acreage loss.

For 90 percent of all **moderate risk** wildland fire suppression responses, the total response time for arrival of the effective response force (ERF), staffed with 4 type III engines, 1 water tender, 1 ALS ambulance, 1 prevention officer, 2 duty chiefs, and 1 type II helicopter (upon request) shall be: **17 minutes and 0 seconds** in all fire demand zones. The ERF shall be capable of: establishing command, appointing an incident safety officer, providing a scene size up and report on conditions, develop a plan, determine the need for additional resources and radio assignments, initiate and utilize the Incident Command System, safely anchor the fire, establish a lookout, and identify an escape route to a safety zone, perform water shuttle operations to provide water to the attack engines, order and utilize aircraft as needed, provide incident rehabilitation with ambulance personnel.

For 90 percent of all **high risk** wildland fire suppression responses, the total response time for arrival of the ERF, staffed with 4 type III engines, 2 water tenders, 1 ALS ambulance, 1 prevention officer, 2 duty chiefs , and 2 type II helicopters (upon request) shall be: **22 minutes and 0 seconds** in all fire demand zones. The ERF shall be capable of: establishing command, appointing an incident safety officer, providing a scene size up and report of conditions, develop a plan, determine the need for additional resources and radio assignments, initiate and utilize the Incident Command System, safely anchor the fire, establish a lookout, and identify an escape route to a safety zone, perform water shuttle operations to provide water to the attack engines, order and utilize aircraft as needed, provide incident rehabilitation with ambulance personnel.

Critical Tasking

Critical tasks are those actions and activities that must be conducted in a timely manner by personnel on emergency incidents in order to control the escalation of the event. In the case of fire, it is aimed at attack prior to flashover. In the case of emergency medical situations it involves the treatment and stabilization of the patient. The department has established the functions necessary to stabilize an emergency requiring the minimum amount of personnel on scene utilizing Department of Defense Instruction 6055.06, *Fire and Emergency Services Program*, Marine Corps Order 11000.11, *Fire Protection and Emergency Program*, and department Standard Operation Guidelines (SOGs).

Low Risk – Fire Suppression *This classification consists of 1 fire apparatus responses to include vehicle fires, trash/dumpster fires, and refuse fires*	
Critical Task	**Minimum Personnel**
Command	**1**
Safety Officer	
Pump Operator	**1**
Water Supply	
Attack Line	**2**
Rapid Intervention Team	
Search and Rescue	
Ventilation	
Forcible Entry	
Back-up Line	
Total	**4**

Moderate Risk – Fire Suppression *This classification consists of 3 fire apparatus, 1 chief officer to all automatic fire alarms, confirmed residential structure, and out-building fires.*	
Critical Task	**Minimum Personnel**
Command	**1**
Safety Officer (Multi-Tasked)	
Pump Operator	**2**
Water Supply (Multi-Tasked)	
Attack Line	**2**
Rapid Intervention Team	**2**
Search and Rescue	**2**
Ventilation	**2**
Forcible Entry (Multi-Tasked)	
Back-up Line	**2**
Total	**13**

High Risk – Fire Suppression *This classification consists of 3 fire apparatus, 1chief officer, 1 prevention officer, 1 safety officer and 1 ALS ambulance to all commercial and industrial fires.*	
Critical Task	**Minimum Personnel**
Command	**2**
Safety Officer	**1**
Pump Operator	**2**
Water Supply	**1**
Attack Line	**2**
Rapid Intervention Team	**2**
Search and Rescue	**2**
Ventilation	**2**
Forcible Entry	**2**
Back-up Line	**2**
Total	**18**

Low Risk – EMS *This classification consists of 1 ALS ambulance*	
Critical Task	**Minimum Personnel**
Command/Safety/Communications	
Airway Management/ Oxygen Therapy	**1**
Patient Assessment/ Treatment	**1**
Patient Packaging/ Transportation	
Total	**2**

Moderate Risk – EMS *This classification consists of 1 ALS ambulance and 1 fire apparatus for all moderate risk incidents*	
Critical Task	**Minimum Personnel**
Command/Safety/Communications	**1**
Airway Management/ Oxygen Therapy	**1**
EKG Monitor/ Cardiac-Shock/ Medications	**1**
Chest Compressions	**1**
Patient Packaging/ Transportation	**2**
Total	**6**

High Risk – EMS *This classification consists of 2 ALS ambulances, 3 fire apparatus, 1 chief officer, and 1 EMS chief for all multi-casualty incidents.*	
Critical Task	**Minimum Personnel**
Incident Command	**2**
Medical Communications	**1**
Triage Supervisor	**1**
Patient Care/Triage	**12**
Staging Manager	**1**
Transportation Manager	**1**
Total	**18**

Low Risk – HAZMAT *This classification consists of 1 fire apparatus as identified for a Level I response in SOG 226, Hazardous Materials Response Plan*	
Critical Task	**Minimum Personnel**
Incident Command (Multi-Task)	**1**
Incident Safety Officer (Multi-Task)	
Pump Operator	**1**
Control and Contain	**2**
Total	**4**

Moderate Risk – HAZMAT *This classification consists of 2 fire apparatus, 1 ALS unit, 1 chief officer, and a HAZMAT Team consisting of 6 personnel (Mutual Aid) as identified for a Level II response in SOG 226, Hazardous Materials Response Plan*	
Critical Task	**Minimum Personnel**
Incident Command	**1**
Incident Safety Officer	**1**
Pump Operator	**1**
Decontamination Team	**2**
Information/Research Officer	**1**
Primary Entry Team	**2**
Secondary Entry Team	**2**
RIT Team	**2**
EMS/Rehab	**2**
HAZMAT Specialist	**2**
Total	**16**

High Risk – HAZMAT *This classification consists of 2 fire apparatus, 1 ALS unit, 1 chief officer, and 2 HAZMAT Teams consisting of 8 personnel (Mutual Aid) as identified for a Level III response in SOG 226, Hazardous Materials Response Plan*	
Incident Safety Officer	**1**
HAZMAT Coordinator	**1**
Pump Operator	**1**
Decontamination Team	**2**
Information/Research Officer	**1**
Primary Entry Team	**2**
Secondary Entry Team	**2**
RIT Team	**2**
EMS/Rehab	**2**
HAZMAT Specialist	**4**
Total	**18**

Low Risk – Rescue *This classification consists of 1 rescue apparatus to all vehicle extrications, low angle rescues, elevator rescues*	
Critical Task	**Minimum Personnel**
Incident Command	**1**
Pump Operator	**1**
Extrication	**2**
Total	**4**

Moderate Risk – Technical Rescue *This classification consists of 2 rescue apparatus (mutual aid), 2 fire apparatus, 1 ALS unit, 1 chief officer, 1 safety officer to all multi-casualty vehicle extrications, high angle rescues, confined space rescues, trench rescues.*	
Critical Task	**Minimum Personnel**
Incident Command	**1**
Safety Officer	**1**
Pump Operator	**1**
Air Monitors	**2**
Extrication	**2**
RIT Team	**2**
EMS/Rehab	**2**
Rigging System Team	**4**
Hauling Team	**4**
Total	**19**

High Risk – Technical Rescue *This classification consists of 2 rescue apparatus (mutual aid), 2 fire apparatus, 2 ALS units, 1 chief officer, 1 safety officer to all multi-casualty vehicle extrications, high angle rescues, confined space rescues, trench rescues. (Multiple Patients)*	
Critical Task	**Minimum Personnel**
Incident Command	**1**
Safety Officer	**1**
Pump Operator	**1**
Air Monitors	**2**
Extrication	**2**
RIT Team	**2**
EMS/Rehab	**4**
Rigging System Team	**4**
Hauling Team	**4**
Total	**21**

Low Risk – Wildland *This classification consists of 2 type III wildland fire apparatus, 1 water tender, and 1 chief officer as identified in the Wildland Dispatch Plan for a Low Wildland Response.*	
Critical Task	**Minimum Personnel**
Incident Command	**1**
Pump Operator	**2**
Water Tender Operator	**2**
Fire Attack	**6**
Total	**11**

Moderate Risk – Wildland *This classification consists of 4 type III wildland fire apparatus, 1 water tender, and 2chief officers, 1 prevention officer, 1 type II helicopter, 1air attack, and 2 air tankers as identified in the Wildland Dispatch Plan for a Moderate Wildland Response.* *(Air resource availability and personnel will vary – personnel not factored)*	
Critical Task	**Minimum Personnel**
Incident Command	**1**
Safety Officer	**1**
Fire Investigator	**1**
Pump Operator	**4**
Water Tender Operator	**2**
Fire Attack	**12**
Total	**21**

High Risk – Wildland *This classification consists of 4 type III wildland fire apparatus, 2 water tenders, and 2 chief officers, 1 prevention officer, 2 type II helicopters, 1air attack, and 2 air tankers as identified in the Wildland Dispatch Plan for a Moderate Wildland Response.* *(Air resource availability and personnel will vary – personnel not factored)*	
Critical Task	**Minimum Personnel**
Incident Command	**1**
Safety Officer	**1**
Fire Investigator	**1**
Pump Operator	**4**
Water Tender Operator	**4**
Fire Attack	**12**
Total	**23**

Engine Company Performance Standards

The department establishes service level objectives for all emergency incidents. Upon arrival of the first-due unit, engine companies must be able to deploy and initiate fire ground operations in a timely fashion. To establish a standard, each engine company is evaluated utilizing National Fire Protection Association (NFPA) 1410, *Standard on Training for Emergency Scene Operations* recommendations. The minimum company standards are performance indicators for specific offensive and defensive tactics to extinguish a fire. Each standard requires a certain type of hose evolution necessary to combat specific fire situations. Evaluations are conducted on an annual basis and each engine company is required to complete the evolution in the established time frame.

	NFPA Recommendation	Established Dept. Times
Forward lay, attack line, back-up line	3:00	2:38
Reverse lay from 1 eng to 2 eng, attack & back-up line deployed	4:00	3:45
Dual forward lays with 2 attack lines	3:30	3:15
Reverse lay from wyed to hydrant, 2 attack lines	4:00	3:38
Reverse lay from monitor to hydrant	5:00	4:50
Forward lay from hydrant, deck gun deployed	3:00	2:56

Implementation Strategy

The department has established 14 fire demand zones (FDZs) to facilitate the appropriate resources when dispatched to emergency incident. In the event that response criteria changes affecting the departments level of service, the department will reevaluate its benchmark measures to ensure that a positive performance measurement is maintained.

Incident Management

The department tasks the first on-scene unit to establish Incident Command (IC) for all incidents requiring a command structure. Command can be transferred upon the arrival of the assistant chief or other qualified fire official. Local Incident Command System (ICS) as well the National Incident Command System (NIMS) is utilized to organize and communicate at the scene of an emergency. The department's incident management system is aligned with local/regional mutual-aid agencies and integrated radio frequencies are utilized to ensure consistency when operating with units from other emergency response organizations. Each incident follows a common breakdown:

- Isolate and deny entry
- Identify hazards
- Employ resources
- Assess risk and determine course of action
- Assign a Rapid Intervention Team (RIT)
- Provide for accountability of personnel
- Assign an Incident Safety Officer
- Establish a staging area
- Provide a rehabilitation area
- Order additional resources as needed
- Provide for an effective out come

Training and Certification Levels

The department maintains personnel certifications in accordance to Department of Defense Instruction 6055.06M, *Fire and Emergency Services Certification Program*. At a minimum, firefighters maintain current certification(s) in Hazardous Materials Operations, Emergency Medical Technician and Firefighter II levels. All San Diego County certified firefighter/paramedics must maintain additional training through standard continuing education (CE) programs, required recertification or refresher training.

DoD Certification Requirements

Firefighter - FF-I/II, HazMat Ops, EMT

Firefighter/Driver-Operator – FFI/II, Hazmat Ops, EMT, Driver Pumper, Driver MWS.

Engineer - FFI/II, Hazmat Ops, EMT, Driver Pumper, Driver MWS, Fire Officer I, Fire Inspector I, Fire Instructor I.

Lead Firefighter - FF-I/II, HazMat Ops, EMT, Fire Officer II, Fire Inspector II, Fire Instructor II, HazMat IC.

Assistant Chief of Operations - Fire Officer III, Inspector II, Instructor II & HazMat IC

Assistant Chief of Training - Fire Officer III, Fire Inspector II, Instructor III & HazMat IC

Assistant Chief of Prevention - Fire Officer III, Inspector III, Instructor II & HazMat IC

Fire Chief - Fire Officer IV, Inspector II & Instructor II, HazMat IC

Overall Evaluation

The Marine Corps Fire and Emergency Services expect a high level of service from the department to preserve life, the environment and property. It expects the 911 calls to be answered, a timely response to calls and professional mitigation ability on an emergency. The installation's Commanding Officer expects the department to fulfill its mission without disrupting or causing an inconvenience to the mission of MCAS Miramar. Marine Corps Orders (MCO) provides direction for the department to support adjacent communities with fire protection through mutual aid agreements.

The Miramar Fire Department achieves all of the expectations set forth by the Marine Corps Fire and Emergency Services and the community of MCAS Miramar.