FINAL

INTEGRATED WILDLAND FIRE MANAGEMENT PLAN
CHOCOLATE MOUNTAIN AERIAL GUNNERY RANGE

Marine Corps Air Station Yuma
Yuma, Arizona

Contract Number N62473-14-D-1424
Contract Task Order N6247317F4047

Hercules JV Project No. 1455404047

November 2018

Submitted to:

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San Diego, California 92132-5190

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November 2018

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INTEGRATED WILDLAND FIRE MANAGEMENT PLAN

Chocolate Mountain Aerial Gunnery Range

Imperial and Riverside Counties, California

APPROVAL

This Integrated Wildland Fire Management Plan (IWFMP) meets the requirements of the Integrated Natural Resources Management Plan, Fiscal Years 2017-2022. The plan complies with Department of Defense Instruction (DoDI) 6055.06, MCO 5090.2, and the Sikes Act (16 USC 670a-670o, 74 Stat. 1052, As Amended through P.L. 113–291, Enacted December 19, 2014).

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12 Dec 2018
Date

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ACRONYMS AND ABBREVIATIONS

ACEC	Area of Critical Environmental Concern
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CDWR	California Department of Water Resources
CMAGR	Chocolate Mountain Aerial Gunnery Range
CLEO	Conservation Law Enforcement Officer
CM	Conservation Manager
CO	Commanding Officer
CPR	Cardio-Pulmonary Resuscitation
DoD	Department of Defense
DoDI	Department of Defense Instruction
EPA	Environmental Protection Agency
FMD	Facilities Maintenance Division
HQMC	Marine Corps Headquarters
IC	Incident Commander
ICFD	Imperial County Fire Department
INRMP	Integrated Natural Resource Management Plan
ISDRA	Imperial Sand Dunes Recreational Area
IWFMP	Integrated Wildland Fire Management Plan
JDOMS	Joint Directorate of Military Support
LBS	Pounds
MCAS	Marine Corps Air Station
MCIWest	Marine Corps Installations West
MCO	Marine Corps Order
MIST	Minimum Impact Suppression Tactics
MLWA	Military Lands Withdraw Act
NAVFAC SW	Naval Facilities Engineering Command Southwest
NFIRS	National Fire Incident Reporting System
NEPA	National Environmental Policy Act
NFPA	National Protection Association
NIFC	National Fire Interagency Fire Center
NRCS	Natural Resources Conservation Service
NWCG	National Wildfire Coordinating Group
ROI	Region of Influence
SSAB	Salton Sea Air Basin
UPRR	Union Pacific Railroad
WFMP	Wildland Fire Management Plan
WRCC	Western Regional Climate Center

EXECUTIVE SUMMARY

This Integrated Wildland Fire Management Plan (IWFMP) provides the justification and foundation of a fire management program for the Chocolate Mountain Aerial Gunnery Range (CMAGR) in southeastern California. The plan's focus is to provide recommendations for minimizing the threat of wildfire on the approximately 457,760 acres that comprise the CMAGR while following management objectives, and to outline a methodology for the implementation of these recommendations.

This IWFMP analyzes the level of risk posed by wildland fire in order to provide recommendations regarding fire suppression. It also addresses wildfire occurrences in the range training areas, necessary pre-fire preparations, wildfire control methods, and coordination among multiple fire-fighting entities.

Wildland fires on military lands are a risk to human lives, natural resources, military assets, and the military mission. However, wildfires have not been and do not present a significant concern on this range. More than seventy-five percent of the range is classified as unburnable; no fires are expected to burn with flames longer than eight feet. There has been meager history of wildfire in the records for the range. In case of a wildfire, firefighting personnel are provided by a Mutual Aid Agreement between the Imperial County Fire Department (ICFD) and the Marine Corps Air Station (MCAS) Yuma.

The IWFMP describes the actions to be taken and defines the responsibilities of all offices, departments, and agencies involved. It includes information about land use and current biotic and abiotic conditions, fuels, weather, values at risk, relevant policies, organization, and specifics on pre-suppression and maintenance actions.

This IWFMP satisfies the requirement for a wildland fire management plan as established in the Federal Wildland Fire Management Policy. The plan complies with Department of Defense Instruction (DoDI) 6055.06, MCO 5090.2, and the Sikes Act (16 USC 670a-670o, 74 Stat. 1052, As Amended Through P.L. 113–291, Enacted December 19, 2014).

The IWFMP recommends the establishment and strengthening of cooperative agreements for wildland fire response. It also recommends that wildland fuels be monitored after years where exceptional rainfall has occurred.

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1.0 INTRODUCTION

The purpose of this Integrated Wildland Fire Management Plan (IWFMP) for the Chocolate Mountain Aerial Gunnery Range (CMAGR) is to provide a foundation for wildfire suppression options. Public Land Order 7861 transferred jurisdiction of the public lands within the CMAGR to the Department of Navy, effective May 2nd, 2017. As a result, the entire CMAGR is a range managed by Marine Corps Air Station (MCAS) Yuma, Arizona. Wildland fires on military lands are a risk to human lives, natural resources, military assets, and military mission. With that said, wildfires have not been and do not present a significant concern on this range.

This IWFMP analyzes the level of risk posed by wildland fire in order to provide recommendations regarding fire suppression. It also addresses wildfire occurrences in the range training areas, wildfire control methods, and coordination among multiple fire-fighting entities.

Another purpose of this IWFMP is to satisfy the requirement for a wildland fire management plan as established in the Federal Wildland Fire Management Policy by the statement, "Every area with burnable vegetation must have an approved Fire Management Plan. Fire Management Plans are strategic plans that define a program to manage wildland fires based on the area's approved land management plan" (National Wildfire Coordinating Group (NWCG) 2009). This plan was developed to comply with Department of Defense Instruction (DODI) 6055.06, MCO 5090.2, and the Sikes Act, as amended.

The goal of this IWFMP is to provide for firefighter and public safety and to maximize military training operations, prior to and during wildland fire events. It provides specific guidance, procedures, and protocols for the management of wildland fires on all CMAGR lands. This plan defines the responsibilities of the offices, departments, and agencies involved, and describes fire pre-suppression and suppression actions to be taken on a strategic as well as tactical basis.

1.1 Planning Considerations and Authority

The Federal Wildland Fire Management Policy sets forth the guiding principle that, "Fire Management Plans, programs, and activities support land and resource management plans and their implementation (NWCG, 2009)." The CMAGR Integrated Natural Resources Management Plan (INRMP) is the plan that this IWFMP supports.

The Final INRMP (dated February 2017) states, "In accordance with DoDI 6055.06, MCO 5090.2, and the Sikes Act, a Wildland Fire Management Plan (WFMP) will be developed for the CMAGR to assess the risks to natural resources and military training." The INRMP states that the objective is to conduct wildland fire management on the CMAGR, with a metric to reduce wildfire potential, protect military assets, and protect and enhance natural resources.

The INRMP provides one action, which is to "Develop and implement a WFMP that identifies regional fire attributes and guidance for managing wildfires. The WFMP development will be a collaborative effort with local firefighting agencies, a fire ecologist, and MCAS Yuma Conservation Program. It will incorporate new and historical aerial photography of fuel loads, historic burns,

vegetation recovery, and vegetation type (noting potential vulnerability of type conversion or invasion of nonnative vegetation)."
Recommendations will be implemented under the INRMP and the associated Environmental Assessment, and in accordance with the National Environmental Policy Act (NEPA). The INRMP prescribes natural resource conservation/management on the CMAGR that is: 1) sustainable; 2) in accordance with laws and regulations; and 3) integrated with existing military installation plans and mission requirements. The INRMP will ensure that lands remain available and in good condition to support the CMAGR's military mission with "no net loss" of military training capability. This IWFMP is consistent with the direction of the INRMP.

In addition, this plan is being conducted in accordance with the National Environmental Policy Act of 1969, the Sikes Act Improvement Act as Amended through 2003 and the National Defense Authorization Act of Fiscal Year 2014. Also applicable is MCAS Yuma, Range and Training Areas Standard Operating Procedures (Station Order 3710.6J Chapter 2 Environmental Procedures).

The ultimate drivers for this Wildfire Management Plan are:

- The Sikes Act – legally mandates no net loss in the capability of military installation lands to support its mission;
- Executive Order 13112 – which directs federal agencies to prevent the introduction of invasive species; and
- The Endangered Species Act – directs federal agencies to conserve endangered and threatened species.

Wildfires can remove land from training both during a fire and afterwards, due to allowances for habitat recovery. Wildfires also cause disturbances that allow invasive species to become established, threaten plant communities, and damage habitat causing wildlife to be negatively affected. The effects of wildfires demand a comprehensive plan to be used to minimize the impacts from a wildfire, and ensure CMAGR operates within legal requirements.

1.2 Compliance with Department of Defense Policy

This Fire Management Plan is in compliance with:

- DoD Instruction (DoDI) 6055.06, *DoD Fire and Emergency Service Program,* 21 December 2006,
- Marine Corps Order (MCO) 11000.11A Marine Corps Fire Protection and Emergency Services Program (August 2017),
- Marine Corps Order 5090.2, Environmental Compliance and Protection Program,
- CMAGR Integrated Natural Resources Management Plan (INRMP), February 2017,
- Federal Wildland Fire Management Policy and Program Review, 2009,
- Sikes Act, as amended.

2.0 AFFECTED AREA

The CMAGR consists of 457,760 acres located in north-central Imperial County and south-central Riverside County, California (Figure 1). The range is bounded on the west by the Salton Sea Basin and on the east by the Chuckwalla and Palo Verde mountains. The range is used for a variety of military training activities (e.g. live fire, artillery, inert, laser, troop movements, etc.). CMAGR is withdrawn from public use and reserved for military training.

2.1 Location

The CMAGR lies on a northwest-southeast axis and falls across two counties (Figure 2): Riverside County and Imperial County. The range is bordered on the west by the small community of Niland, California and the Salton Sea Basin. To the east, the range abuts the Chuckwalla Mountains and Smoke Tree Valley. The northern border is separated from the Orocopia Mountains by Salt Creek and includes part of the Chuckwalla Bench. The range extends south almost to Highway 78 near Glamis, California.

The range has limited access as a result of its relatively remote location in a desert region. Roads in the range include the Bradshaw Trail, which is located along the northernmost boundary of the CMAGR, the rural road network associated with Camp Billy Machen and Slab City, California southwest of the range. The Gas Line and Niland-Blythe roads on the western portion of the range are support the operation and maintenance of the gas line and overhead electric transmission lines that cross the range.

2.2 Topography

The CMAGR is located in the Sonoran Desert, encompassing much of the Chocolate Mountain Range. Its terrain is characterized by alternating rocky uplands with slopes up to 90 percent, and low valleys with broad alluvial plains, washes, and dry lakebeds. Ancient lava fields are significant features of some training areas. The range lies between -54 and 3,220 feet above mean sea level.

The CMAGR is in the Sonoran Desert and Salton Sea geomorphic provinces of California, which are situated in the southwestern portion of the Basin and Range physiographic province. This area is characterized by generally steep, subparallel, discontinuous mountain ranges that trend northwest to southeast separated by broad, gently sloping to nearly flat, deep alluvial basins. The CMAGR is characterized by the rugged Chocolate Mountains, a range that rises abruptly from broad alluvium-filled desert basins. Other landforms are typically rounded hills and plains that form a rolling topography.

2.3 Geology/Soils

Late Pliocene, Pleistocene, and Holocene alluvial deposits overlie most of the older formations in the Chocolate Mountains and form dissected piedmont slopes around the range (Norris and Webb, 1990). The older alluvium consists of poorly consolidated deposits of sand, silt, and breccia that overlie the Chocolate Mountains. Conglomerate and other rocks and forms dissected aprons and high-standing terraces.

The surfaces of these fans and terraces usually have a well-developed coat of desert pavement and desert varnish.

An intermediate alluvium overlies the older alluvium and consists of locally derived unconsolidated conglomerate, breccia, and sand that form dissected fans, low terraces, and abandoned channel features. The surfaces of the intermediate alluvium also have poorly developed desert pavement and varnish.

The youngest alluvium consists of sands and gravels occurring as channel fill in the present-day washes, as sheet wash deposits on the alluvial plains, and as wind-blown sands of the Sand Hills that overlie the intermediate alluvium (Dillon 1975). The unconformable relationships between the various alluvial deposits suggest that the base level of erosion has been intermittently lowered by continued subsidence and rifting beneath the Imperial Valley.

The Natural Resources Conservation Service (NRCS) has identified 20 soil series and seven soil associations (i.e., groups of soil series) within the CMAGR. These soils are described in the State Soil Geographic Database (STATSGO2) developed by the NRCS (2011). Most of the seven soil associations exhibit a slight to moderate water and wind erosion hazard.

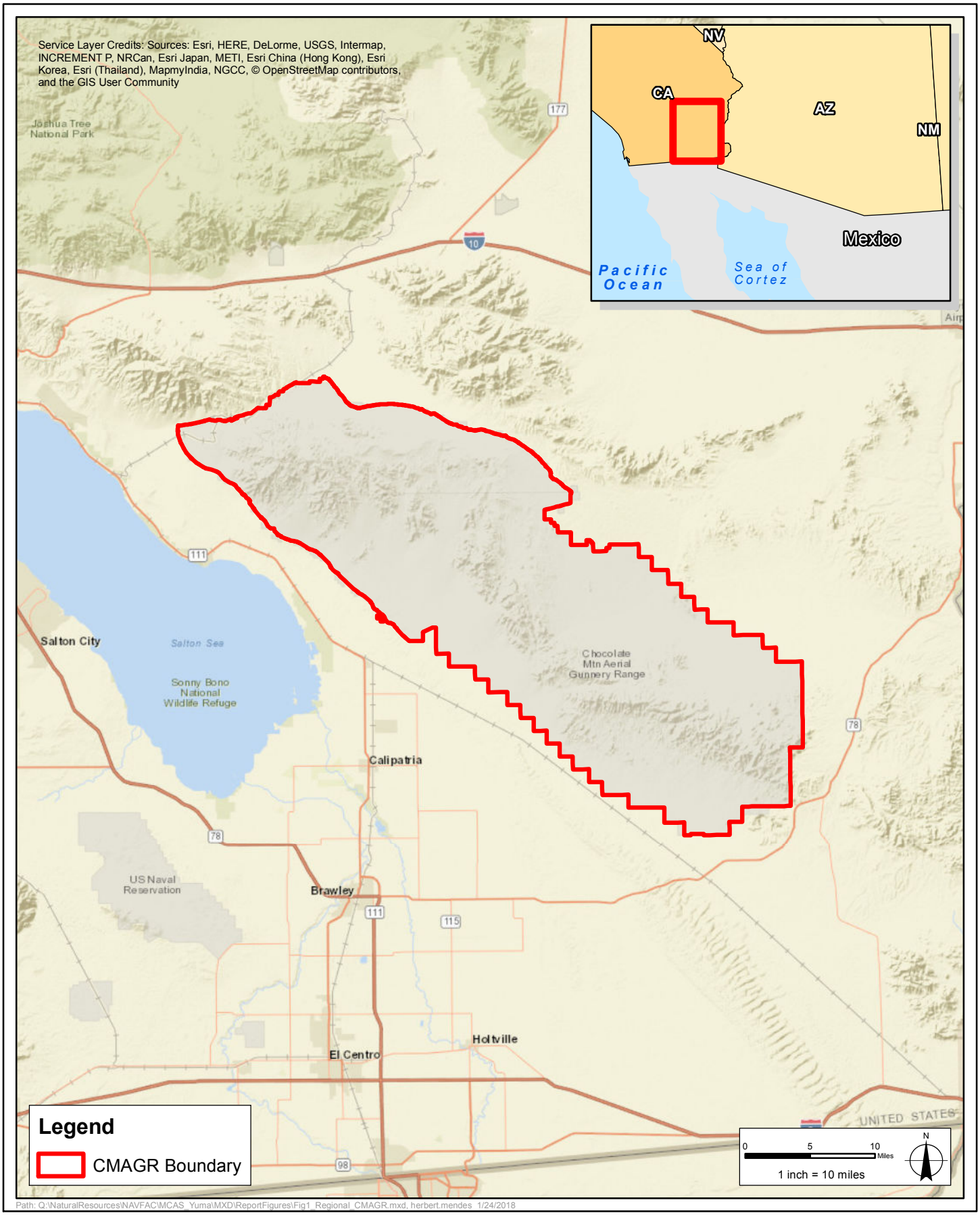
However, the Rillito-Gunsight soil association, typically described as old alluvial fan soils found on dissected older alluvial fans, in valleys, and on pediments, is considered high to extremely high for water and wind erosion. This soil association consists of very deep soils on dissected older fans, soils on ancient fans with preserved surfaces, and young to ancient fan soil complexes. All soils on the CMAGR are well drained to excessively well drained and primarily consist of sandy and rocky loams derived from igneous and metamorphic rocks.

2.4 Natural Resources

2.4.1 Climate

The CMAGR is located within the Salton Sea Air Basin (SSAB), an area including all of Imperial County and the southwest third of Riverside County. The climate of the CMAGR is best characterized as desert: low humidity, high summer temperatures, and moderate winter temperatures.

Data from the Western Regional Climate Center (WRCC) are available for Eagle Mountain, California, which is located to the west of the CMAGR near Joshua Tree National Park. Data from this location indicate that July is the hottest month (average maximum temperature of 104.9 degrees Fahrenheit (°F) (40.5 °C)). January is the coolest month (average maximum temperature of 64.4°F (18°C)) (DoN 2010) (WRCC 2011). Average precipitation measured at the Eagle Mountain meteorological station is 3.67 inches per year. The driest months are from April through June. August is the wettest month due to the influence of the summer monsoon rain pattern (DoN 2010).



CMAGR Regional Map
MCAS Yuma
Yuma, Arizona

FIGURE
1

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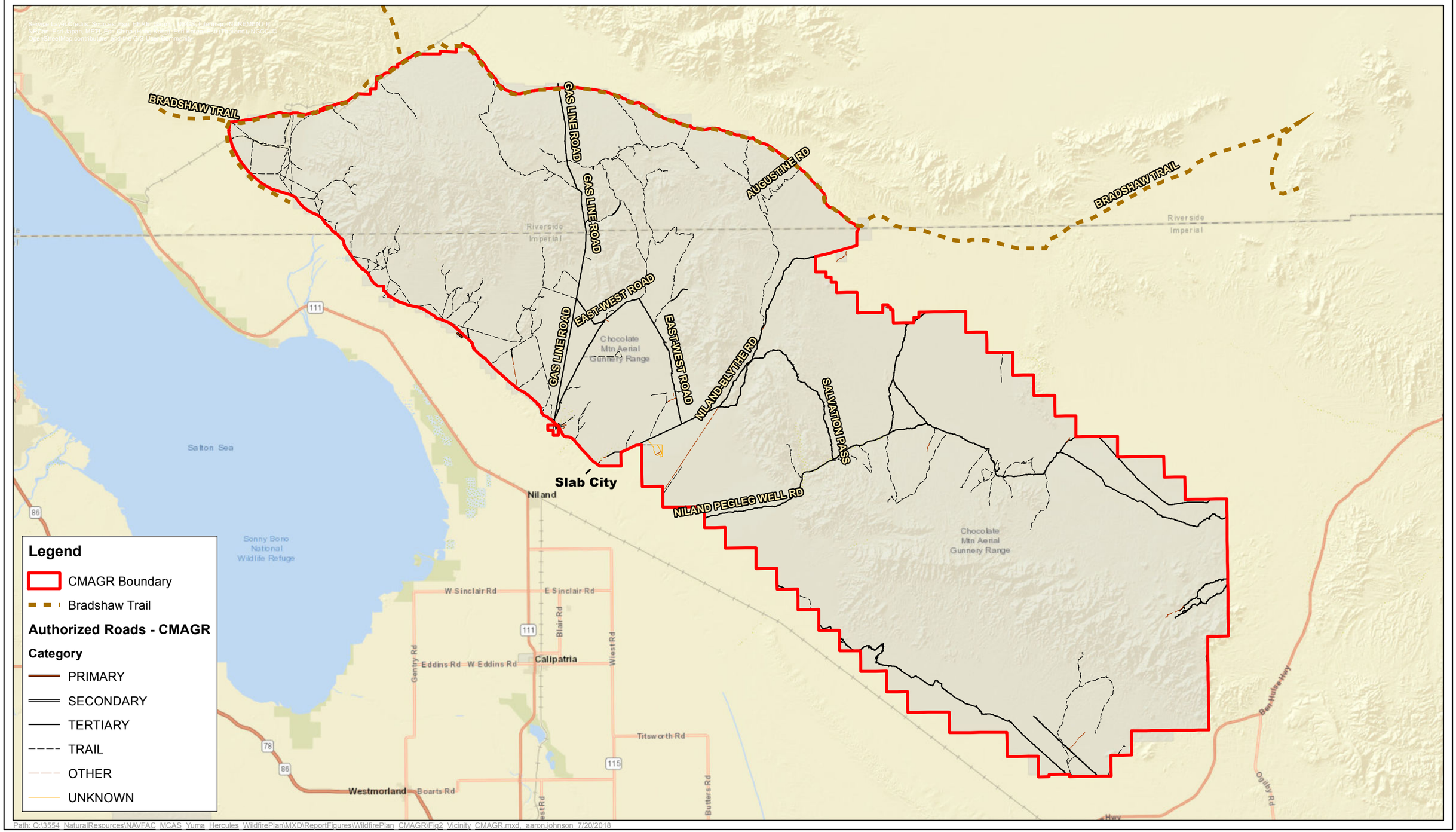

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Hercules JOINT VENTURE

CMAGR Vicinity Map
MCAS Yuma
Yuma, Arizona

1 inch = 4 miles
0 2 4 Miles

N

FIGURE
2

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2.4.2 Water Resources

2.4.2.1 Surface Water

Water resources are defined as sources of water available for use by humans, flora, or fauna, and include surface water, groundwater, near-shore waters, and wetlands. Surface water resources include stormwater, lakes, streams, rivers, and springs. Groundwater is defined as any source of water beneath the ground surface. Surface water and groundwater may be used for potable water, agricultural irrigation, industrial, and recreational purposes.

Surface water at the CMAGR is derived from infrequent rainfall events that produce localized flash-flooding and temporary surface water runoff, especially during thunderstorms in the monsoon seasons. Rainfall averages less than 5 inches per year and the pan evaporation rate is 100 inches per year, resulting in a net water loss of up to 95 inches. The combination of low precipitation and high evaporation prevents surface water from infiltrating deeply into CMAGR soils. Thus, most of the year, the desert washes on the CMAGR are dry. During heavy rainstorms, these washes drain surface water runoff from the surrounding landscape. This runoff can be captured in natural catchments such as tinajas (natural bedrock depressions), sand tanks, charcos (mud holes), and playa lakes.

Surface water drainages are divided by the Chocolate Mountains. On the western and some of the eastern slopes, runoff drains toward the Salton Sea. Runoff from the east slope of the northern Chocolate Mountains drains to Salt Creek Wash which, in turn, drains to the Salton Sea. Runoff from the east slope of the central portion of the Chocolate Mountains drains to the Salton Sea by way of several mountain passes, the largest of which is Iris Wash. Runoff from the eastern slope of the southern portion of the Chocolate Mountains drains northeastward into Arroyo Seco and Milpitas Washes and then southeastward to the Colorado River.

Artificial tanks, wildlife water sources (guzzlers), and tinajas (surface pockets or depressions formed in bedrock that occur below waterfalls, are carved out by spring flow or seepage, or are caused by sand and gravel scouring in intermittent streams, or arroyos) are the only open water sources within the CMAGR available to wildlife. The artificial water sources largely have been constructed by Desert Wildlife Unlimited in cooperation with the California Department of Fish and Wildlife (CDFW), the Navy, and the Marine Corps and are designed to collect rainwater using concrete basins and/or natural topography to support on-range wildlife populations. The CDFW manages 27 existing guzzlers within the CMAGR that provide supplemental source of water for Nelson's desert bighorn sheep (*Ovis Canadensis nelsoni*) and mule deer (*Odocoileus hemionus*) and numerous other wildlife species in the Chocolate Mountains (BLM, 2009). In 2009, the BLM and CDFW approved the installation of eight additional guzzlers, of which four have been installed, bringing the total in use to 27 (BLM, 2009). Water in Beal Well and Salvation Well, is supplied directly from rainwater. The storage capacity of the tanks and guzzlers ranges from 1,000 to 24,000 gallons. Water can be retained in these systems for a time period of several months to more than one year, depending on weather and wildlife use.

2.4.2.2 Ground Water

Due to high evaporation rates, low rainfall, and rapid runoff, the CMAGR's groundwater resources are extremely limited. Bedrock areas of the Chocolate Mountains have limited groundwater potential and are classified by the California Department of Water Resources (CDWR, 2003) as non-water-bearing. Recharge to the groundwater basins is derived chiefly from infiltration of runoff along the base of the Chocolate Mountains. The amount and quality of groundwater stored in the groundwater basins underlying the CMAGR are not known because very few wells have been drilled on the range. Regardless, natural springs or seeps are found in some locations on the CMAGR; however, for most of the year, they are dry. Groundwater discharges from bedrock joints and fractures within the Chocolate Mountains are also ephemeral and short lived, occurring only after a rainfall event.

2.4.3 Vegetation

Vegetation in the CMAGR is largely defined by the physiography of the area, with broad desert bajadas (a broad slope of alluvial material at the foot of an escarpment or mountain) cut by washes and arroyos, coming off largely bare, Rocky Mountains, with catchments, basins and valleys below. This is also tied to the availability of water in these different environments. The area is a part of the Colorado Desert, the northwestern-most portion of the Sonoran Desert (Burk, 1988), though it is also close to the vague southern boundary of the Mojave Desert. The Sonoran Desert is warmer and wetter generally than the Mojave, with a bimodal pattern of winter and summer precipitation, although summer precipitation in the Colorado Desert is highly variable and generally far less than that in the Sonoran Desert as a whole (Burk, 1988).

The CMAGR INRMP (MCAS and NAVFAC SW, 2017) presents vegetation in four broad categories, based upon Vegetation Classification and Mapping Program (VegCAMP) classifications: Lower Bajada and Fan Mojavean-Sonoran Desert Scrub, Madrean Warm Semi-desert Wash Woodland/Scrub, North American Warm Desert Bedrock Cliff and Outcrop, and Shadscale-Saltbush Cool Semi-desert Scrub (California Energy Commission, 2014).

The bajada/alluvial fan and wash systems together comprise about 64% of the CMAGR in approximately equal proportions (INRMP), with wash systems lacing the sloping bajadas. In between washes, the Lower Bajada and Fan Mojavean-Sonoran Desert Scrub is typically a form of creosote bush scrub, a vegetation community primarily dominated by creosote bush (*Larrea tridentata*). White bursage (*Ambrosia dumosa*) may often be the dominant species as well, but much more commonly, creosote and white bursage are co-dominant. The spreading wand-like canes of ocotillo (*Fouquieria splendens*) are also a notable in these open communities of widely spaced shrubs. Community composition can be relatively simple (i.e., with only creosote present) or in varying degrees of complexity (e.g., creosote co-dominant with white bursage, or creosote dominant in a high diversity mixed shrub community). High diversity communities, may transition into a yucca woodland at higher parts of the fan, and include stem succulents like cacti (chollas, prickly pears, barrel cactus, etc.). These communities may share some species overlap with the intimately associated washes.

The great number of washes dissecting the broad bajadas can present the illusion of a near continuous stand of riparian species (Shreve and Wiggins, 1964), particularly in lower gradient areas where sheet

flow can occur across a broad area. Physically, wash systems in the CAMGR can range from a simple, shallow single channel (a stringer wash) supporting a notably higher density of shrubs along its course, to broad, well-developed relatively diverse arroyos with several to many braided channels. Madrean Warm Semi-desert Wash Woodland/Scrub includes alliances of Mojavean semi-desert wash scrubs (e.g., alliances such as *Ambrosia salsola* [cheesebush] or *Bebbia juncea* [sweetbush]), or more typical of the CMAGR, Sonoran-Coloradan semi desert was woodland/scrub alliances. Woodlands of the latter group are very common on the CMAGR, and include trees like ironwood (*Olneya tesota*), smoketree (*Psorothamnus spinosus*), desert willow (*Chilopsis linearis*) and blue palo verde (*Parkinsonia florida*), often accompanied by shrubs such as sweetbush, cheesebush, cat claw acacia (*Acacia greggii*), broomsage (*Lepidospartum squamatum*), desert lavender (*Hyptis emoryi*), and Mexican bladdersage (*Salazaria mexicana*). In sandier locations, the presence of native grasses such as big galleta (*Pleuraphis rigida*) may be common, if not dominant, wash vegetation, as well.

North American Warm Desert Bedrock Cliff and Outcrop communities in the CMAGR represent the sparsely vegetated rocky slopes of mountains and ridges, generally with 5 percent or less vegetative cover. These communities account for about 36 percent of the range area. Extensive rock exposures with limited soil development provide little opportunity for vegetation to become established, with the often widely spaced or patchy shrubs being usually representative of the more populated bajadas below (i.e., creosote bush), though somewhat reduced in density and stature or vigor. Other species such as white bursage, desert holly (*Atriplex hymenelytra*) or brittlebrush (*Encelia farinosa*) may be dominant, and more xeric species, such as cacti, yuccas, agaves, and warm season grasses may be more common especially on southern exposures.

In wet years, the bajada, wash and mountain communities can host a carpet of forbs and grasses, which will typically dry off and die back fairly quickly. Non-native annual grasses and non-native forbs can also take advantage of these wet pulses, but in portions of the CMAGR seen in the preparation of this report, the CMAGR does not seem to support great infestations of invasive non-natives. In some places, the relatively unobtrusive, low-growing annual grass schismus (*Schismus* spp.) can form more or less continuous patches, but other invasive grasses such as the bromes (*Bromus* spp.) do not seem to be common. A few individuals of the highly invasive Sahara mustard (*Brassica tournefortii*) were observed; this species in particular may be more of a problem in the future.

Shadscale-Saltbush Cool Semi-desert Scrub, a desert saltbush community, is associated with valley bottoms, basins or depressions, such as playas, dunes or washes, where water may be more available due to ponding or a higher water table. These communities are not common on the CMAGR, with an estimated extent of less than 0.5 percent, and are probably represented in the CMAGR mostly by four-wing saltbush (*Atriplex canescens*). This is likely to be encountered along higher-alkalinity washes and at least ephemerally ponded alkali features. Saltbush communities have higher densities of individuals than creosote bush scrub, and are generally quite distinct from creosote communities. Salt or alkaline tolerant species are the dominants. Shadscale (*A. confertifolia*) is more common in the Mojave and Great Basin deserts where it forms extensive, often mixed saltbush communities; however, it is unlikely to be common in the CMAGR. Cattle saltbush (*A. polycarpa*) could form similar kinds of stands on alkali bajadas or flats in the Colorado Desert.

2.5 Site-wide and Adjacent Values at Risk

Because of the remote nature of the CMAGR, there exists few values at risk within and adjacent to the range. Below is a list of the most significant values identified:

2.5.1 Camp Billy Machen

The most developed value at risk is Camp Billy Machen, a training camp operated by Naval Special Warfare Command located in the Special Warfare Training Area near the southwestern boundary of the CMAGR. The camp provides living quarters, fuel storage (of 87 octane and diesel fuel), munition storage, offices, and a training facility. Camp Billy Machen personnel would respond to fires other than wildland fires. In the unprecedented event of a wildfire that would require response, firefighting staff from the Imperial County Fire Department (ICFD) would be called upon.

Portable living quarters, SWA Huts Building #6001 and #6009, both fixed facilities, each have working smoking detectors, per E7.1.3 (2006 Edition) of DoDI 6055.06 Fire and Emergency Services Program. In addition, Buildings #6001 and #6009 have emergency fire sprinkler systems. Four fire hydrants within the fenced compound are supplied from storage tanks using a fire pump system. If necessary, this fixed system supports the fire sprinkler systems in Building #6001 and #6009 as well. The entire building complex is surrounded by at least 100 feet of a combination of pavement and bare ground, which would deter surface fire spread to the structures.

2.5.2 Other Developed Sites/Structures

Because of the nature of the range, few developed sites exist. However, there is a metal recycling center north of Camp Billy Machen. The recycling center is surrounded by an area free of vegetation. Another temporary development site is a bivouac unit located at Camp Burt.

There are no internal fences within the CMAGR. A natural gas pipeline and two electric power transmission lines traverse CMAGR. The transmission lines are located within Training Area 2507 North: one runs parallel to the gas pipeline along Gas-Line Road and the other runs along Niland/Blythe Road. Repeaters are currently located in the mountains themselves; more may be positioned at Spring Hill.

2.5.3 Road Access

The CMAGR is accessed from all sides, through a variety of roads; five roads span boundaries of the range, while a few have internal loops. A network of roads provides access within the range to support infrastructure construction and maintenance, to conduct range operational clearances, training, and to manage natural and cultural resources. Though there are many access points into the CMAGR, we have identified two direct access points to review here: the Bradshaw Trail and the rural road network associated with Camp Billy Machen and Slab City. The Bradshaw Trail is located along the northernmost boundary of the CMAGR and is managed by the BLM. The Coachella Canal Road leads to the Niland-Pegleg Road, which does enter the CMAGR. Approximately 95 percent of the range is classified as roadless (USMCAS 2017).

2.5.4 Off-site Values

Bounded on the west by the Salton Sea Basin and on the east by the Chuckwalla and Palo Verde mountains, the range is surrounded by mostly undeveloped desert. The northern border is separated from the Orocopia Mountains by Salt Creek and includes part of the Chuckwalla Bench. The range extends south to Highway 78 near Glamis, California (a small unincorporated community over 3 miles from the southern border). The highway roughly parallels the western border on its southern half.

The only developed value at risk is Slab City which is adjacent CMAGR's south-western border in Imperial County. Slab City consists of several thousand temporary and a few hundred permanent residences in a community that lacks electrical, water, and sewage infrastructure. Residents of this community rely on generators or solar panels for electricity.

The closest permanent community to the CMAGR is Niland, which is located just over 3 miles from south-western border. Niland is not considered a value at risk because of its distance from the range.

Land adjacent to the northern section of the CMAGR is within the planning boundaries of the BLM's Palm Springs-South Coast Field Office and Riverside County. The vast majority of the land in this area is administered by the BLM as an Area of Critical Environmental Concern (ACEC). This land is generally undeveloped and used primarily as open space for conservation with some recreational uses such as hiking, camping, bird watching, hunting, and rock hounding.

The BLM El Centro Field Office manages the area east of CMAGR south of the county divide. The existing land use in this area is heavily associated with renewable natural resources and utility infrastructure. Lands are both publicly and privately owned. Structures are scattered in this area, many may be abandoned or seldom used.

The United States Bureau of Reclamation (USBR) maintains a series of scattered dikes along the western boundary of the range. The dikes protect the Coachella Canal and the inactive Eagle Mountain Railroad from surface runoff. Combined, these nonmilitary surface features encompass approximately 100 acres.

The land use pattern associated with the area south of the CMAGR is generally industrial, with some recreational uses. The Mesquite Gold Mine, an open-pit mine with leaching pads for processing, abuts the CMAGR. It is considered one of the largest active gold mines in the country. The approximately 4,245 acres Mesquite Regional Landfill is adjacent to the mine site. A 5-mile-long rail spur connects the landfill to the Union Pacific Railroad (UPRR) main line, near the destinations of Glamis, Algodones Dunes, and the Imperial Sand Dunes Recreational Area (ISDRA).

The existing land use patterns southwest of the CMAGR are diverse and include several regionally significant destinations and culturally relevant attractions. The UPRR and the Coachella Canal act as physical barriers for land use transition. Land use along the CMAGR Region of Influence is primarily uninhabited and transitions from generally recreational in nature to agricultural near the UPRR-Coachella Canal junction.

3.0 GOALS AND OBJECTIVES

The CMAGR's INRMP states that the overall goal of the CMAGR training range is to provide "…quality training that provides a realistic approximation of the conditions that Marines, Sailors, Airmen, and Soldiers will face in combat as individuals and in small or large units…"

This IWFMP seeks to balance several goals: maximizing land use for CMAGR's primary mission stated above, compliance with applicable laws and regulations, maximizing personnel safety, and maintaining native habitats.

Pertinent goals and objectives specific to the prevention and suppression of wildfires include:

Goal 1 Protect human life and property within and adjacent to CMAGR through the implementation of a comprehensive wildfire management program.

Objective 1. Minimize natural resource damage from wildfires with a minimum cost consistent with values at risk, and minimize the impacts from suppression activities.

Objective 2. Assess all wildfires with regards to unexploded ordnance risks to responding personnel, and risks to natural and cultural resources.

Goal 2 Monitor hazardous fuel accumulations in areas that could be susceptible to wildfire damage in order to determine if the suppression strategy needs to be changed in the future IWFMP.

Objective 1. Monitor and evaluate the effects of fire management on the ecosystem in order to refine program objectives.

Objective 2. Facilitate scientific investigation and research to refine vegetative fuel characteristics (volume, continuity, moisture) in order to better assess risk, determine natural fire regimes, and assist in implementing the fire management program's goal.

4.0 ORGANIZATIONAL STRUCTURE

The CMAGR falls under the jurisdiction and control of the Commanding Officer (CO) of the MCAS Yuma, Arizona, who reports to the Commanding General of Marine Corps Installations West (MCIW) at Marine Corps Base Camp Pendleton, California, for administrative and facilities support. The CO administers the Installation while other departments provide support to users, including tenants and other transient personnel and activities. Because there is little to no staff permanently stationed on the CMAGR, firefighting personnel would be provided by the ICFD per a Mutual Aid Agreement (Imperial County Fire Department and Marine Corps Air Station Yuma 2016.).

4.1 Staffing

The following formal positions have direct responsibility for the implementation of the wildfire management program at CMAGR.

Commanding Officer, MCAS Yuma*:* Authority for the approval of this plan and responsible for the implementation of this plan. He/she will define the roles and responsibilities for personnel who implement wildland fire management on the installation, and program resources needed to implement the plan.

Range Management Department: Advises the CO, MCAS Yuma with regard to natural resource management, range safety, range operations, as well as the overall military mission of the CMAGR.

Conservation Manager: With the assistance of the Natural Resources Specialist, the Conservation Manager is responsible for assuring that a risk assessment for natural and cultural resources is performed before actions are taken.

Natural Resource Specialist: Will serve as Resource Advisor on all wildfires. Additionally, the Natural Resource Specialist will oversee the monitoring of fire effects of wildfires. He/she will develop rehabilitation and restoration plans following a wildland fire.

All wildfires on the CMAGR must be reported to Range Control (Leg Iron) (range radio or telephone). If a fire is reported to Range Control, Range Control will notify the MCAS Yuma Dispatch Center immediately. In the event of a wildland fire, firefighting will be coordinated with the ICFD in conjunction with the MCAS Yuma Fire Department who are ultimately responsible for all suppression activities in the CMAGR. Fires may be reported by calling 911 as well, however, this option may result in a longer response time than calling range control directly. The ICFD will also notify MCAS Yuma Dispatch Center of any responses on the range. The ICFD will utilize needed resources based on the 2016 Mutual Aid Agreements with surrounding agencies. The decision to use military personnel will be determined by the CO. The CO will also decide upon the use of military aircraft for suppression activities as necessary to prevent the spread of fire onto or off the installation. The CO of MCAS Yuma will cooperate with neighboring landowners during wildfire suppression.

5.0 WILDLAND FIRE PROGRAM COMPONENTS

All fires that burn natural vegetation in the CMAGR are defined as wildland fires. However, these fires do not receive immediate fire suppression actions to minimize the area burned because the vegetative fuels generally do not sustain fire spread. Wildfires are too infrequent and limited in extent to pose a significant threat to the sensitive ecosystems, cultural sites, and testing/training lands of CMAGR. The vast majority of CMAGR is unburnable except under extreme vegetation growth conditions. Even during unusual periods of excessive rainfall, such as the rainfall which occurred in 2005, very large and destructive wildfires were not possible due to the low vegetative fuel volume and discontinuous arrangement of fuels. As such, wildfires are not considered to be a hindrance to operations.

Modified suppression is an appropriate strategy when also considering the safety of firefighters in light of the unexploded ordnances. Even without action, the specific suppression objectives for individual fires is met because of the condition of the fuels (discontinuous and of low volume).

In addition to fire response, a crucial wildland fire management strategy will be to emphasize pre-fire actions such as ignition prevention and attentive monitoring of fuel conditions that may warrant suppression.

5.1 Wildland Fire Suppression

5.1.1 Initial Attack

All wildfires on the CMAGR must be reported to Range Control (Leg Iron) (range radio or telephone). If a fire is reported to Range Control, Range Control will notify the ICFD immediately. All fires and medical calls are handled through 911 as the immediate-responding fire crew may not be present due to training or other calls. Reference DoDI 6055.06 and the Wildland/WUI Operations Fire and Emergency Services SOP (2016) for current wildfire response protocols at the CMAGR.

Per the 2016 Mutual Aid agreement, response to wildland fires will be by the ICFD. ICFD Station 7 will be the first engine to respond. The station houses a Type 1 Engine and is staffed 24/7 with one Captain, a driver/operator and a Reserve Firefighter. As per wildland training, ICFD annually updates their Red Card certifications based on the requirements outlined by the NWCG and California OES. The ICFD integrates wildland training as part of their continued trainings. The engine assigned to Station 7 is a 2-wheel drive apparatus (1000 gal water capacity) and does have some access limitation. All wildfires will be reported to the CMAGR Natural Resources Specialist so that he/she can serve as Resource Advisor to the Incident Commander (IC). The IC will ensure no firefighter will be placed in the vicinity of unexploded ordnance. Ground-based initial attack will be delayed until the site has been confirmed clear of explosives.

After a wildland fire incident, it is suggested that the ICFD report the incident to NFIRS. For all other incidents, ICFD will complete a report and make those available within ten (10) days from the date of the incident.

Fire losses caused by wildland fires shall be investigated by MCAS Yuma to determine point of origin and fire cause before initiating other safety or legal investigations (DoDI 6055.06, 6.14.2). In addition, point of origin and fire cause shall be provided for subsequent safety and legal investigation (DoDI 6055.06, 6.14.3). Lastly, an independent fire investigation and report for fire losses meeting the Class A accident threshold defined by DoDI 6055.07 Reference (p) will be completed.

5.1.2 Extended Suppression

Because of the patchy arrangement and low fuel volumes, wildfires will not require suppression assistance; extended suppression is not required, nor addressed, in this IWFMP.

5.1.3 Minimum Impact Suppression Tactics (MIST) Requirements

The most minimum impact suppression tactic will be followed. No suppression is expected because the fires are self-extinguishing.

5.1.4 Other Fire Suppression Considerations

In addition to concerns regarding protection of special status species, fire suppression can affect several other types of values at risk, such as cultural resources, and the protected habitats themselves. The presence of special hazards, and major utilities and easements should be taken into account when suppression action is considered.

Because wildfires are expected to be typically rare and non-damaging, natural and cultural resources would not be affected by the limited fire suppression activities and the associated negative impacts that result.

All ground-based wildland fire suppression activities will be delayed until the site has been confirmed clear of explosives. Air-based wildland fire suppression would be necessary until ground-based travel can be deemed safe. It is most likely fires would be self-extinguished by that time.

5.2 Wildland Fire Preparedness

Camp Billy Machen personnel do not respond to wildland fires. In the unprecedented event of a wildfire that would require response, firefighting staff from the ICFD would be called upon.

5.2.1 Fire Prevention, Community Education, Other Community Assistance Activities

Because of the paucity of damaging wildfires, there are no ignition prevention requirements established by this IWFMP. Per Enclosure 3.8 of DoDI 6055.06 Fire and Emergency Services Program, the minimum fire prevention staffing is based on thousands of square feet, with the minimum for any fire staff is 250,000 - 1,000,000 sq. ft. The facility at Camp Billy Machen is smaller than the minimum and no fire prevention staff is required in CMAGR. Regardless, the MCAS Yuma Fire Department performs quarterly fire safety and fire protection system inspections of all facilities/buildings at Camp Billy Machen. Any hot work processes that occur within that compound must be permitted by the MCAS Yuma Fire Department. Additionally, designated permanent

personnel assigned to Camp Billy Machen are trained to perform monthly fire safety inspections of all facilities/buildings at the camp.

There is no Fire Danger Rating System (FDRS) specific to the CMAGR to manage wildfire ignitions. There are no weather stations in the CMAGR that could inform decisions regarding Special Orders and Closures.

As part of its 5-year action plan, Action Step 4.16-4 of the INRMP sets forth a requirement to install and maintain weather stations, including rain gauges at specific study locations, starting 2019. These weather stations will allow decisions regarding fire prevention (i.e. Special Orders and Closure) to be made, if warranted, based on on-site conditions.

E3.8 of DoDI 6055.06 notes that Public Fire Education Programs shall be developed, however, public access and all recreational activities are precluded by safety and security requirements related to the aerial gunnery mission and potential for unexploded ordnance at the range. This restricted access reduces fire prevention challenges due to lack of human-caused ignitions.

Action Step 4.21-1 of the INRMP requires that the CMAGR establish and maintain adequate control measures (signs, gates, fences, etc.) to provide for security, safety, and protection of natural resources. This Action Step was aimed at law enforcement, but will aid fire prevention as well.

Even though wildfires do not spread in the vegetation at this time, several practices that limit ignitions are being followed:

- Targets are made of non-combustible material; this practice should continue
- Vehicles may not venture off road
- No camping is allowed
- Structures in Camp Billy Machen are made of ignition-resistant construction; the main buildings (#6001 and #6009) are equipped with fixed fire suppression systems.

Significant fire spread potential is low at the CMAGR, a direct result of natural fuel gaps and discontinuity. As a result, CMAGR does not have nor does any military personnel maintain any constructed firebreaks, fuel breaks, or fuels management areas throughout its landholdings, nor is there an intent to create any. During the course of military training and operations within the CMAGR, however, military personnel do groom some areas to meet various mission requirements which may reduce fuels on specific impact areas.

5.3 Annual Fire Training Activities

Because the staff at the MCAS are not expected to respond to wildfires on the range, this IWFMP does not require annual training activities. However, the MCAS trains maintenance personnel to the Fire Warden level to perform monthly general fire safety and fire protection system inspections. It is recommended the MCAS Explosive Ordnance Division hold annual joint training with the ICFD regarding unexploded ordnance.

5.4 Wildland Fire Season Readiness (testing, inspection and annual review)

The Fire Department at the MCAS in Yuma does not have a wildland firefighting mission. They will depend heavily on local, mutual aid agreements with the ICFD for any wildland fire suppression activity. Because the MCAS Yuma does not have staff for wildland firefighting, no testing or inspection is necessary.

An annual inspection of fuel conditions is the only pre-season activity that could be performed by MCAS staff. If rainfall is exceptionally plentiful, an assessment to determine volume and continuity of fuels would be warranted so that the Range Management Department will contact the ICFD in preparation for the exceptional event.

5.5 Pre-Incident Plan

Because a wildfire of consequence is not anticipated, this IWFMP does not require preparation of a Pre-Incident Plan.

6.0 CERTIFICATION, TRAINING, AND FITNESS STANDARDS FOR WILDLAND FIRE MANAGEMENT PERSONNEL

6.1 Certification Standards

All civilian, contractor and emergency services personnel involved in wildland fire management must possess certifications appropriate for their expected level of involvement in the wildland fire organization. Personnel in the ICFD are all "red card" certified per NWCG standards. In addition, the ICFD integrates wildland fire into their ongoing training.

DoD personnel in the fire protection and prevention job series, GS-0081, and Fire & Emergency Services contractors will meet the certification standards specified in NFPA 1051 - Standard for Wildland Fire Fighter Professional Qualifications and NFPA 1002 - Standard for Fire Apparatus Driver/Operator Professional Qualifications. Personnel who have learned skills from outside wildfire suppression, such as agency specific training programs or training and work in prescribed fire, structural fire, law enforcement, search and rescue, may not be required to complete specific courses to qualify in a wildland fire position. However, position task books must be completed for documentation of certification. Personnel in the natural resources job series (GS-0401 thru GS-0499), cultural resources (GS-0193), and natural/cultural resources contractors with jobs requiring wildland fire responsibilities, must meet either the NFPA 1051 and NFPA 1002 certifications or the equivalent certifications in NWCG Wildland Fire Qualification System Guide (Publication Management System 310-l/National Fire Equipment Catalogue 1414).

DoD personnel mobilized to participate in wildland fire management activities on federal properties not under DoD jurisdiction, either through mutual aid agreement or other means, must be certified for the expected level of involvement under NWCG standards. GS-0081 job series and DoD contractor personnel that seek wildland fire certifications must comply with the appropriate NWCG criteria.

Position descriptions for new employees who will participate in wildland fire activities will reflect the expected level of involvement and required certifications. Position descriptions for natural/cultural resources personnel with wildland fire management duties must state if the position qualifies the position holder as a primary or secondary wildland firefighter, as described in Chapter 46 of the Office of Personnel Management Civil Service Retirement System and Federal Employees Retirement Services Handbook for Personnel and Payroll Offices. Natural resources personnel not classified as a primary or secondary wildland firefighter may perform collateral duty in wildland fire management activities as qualified.

DoD personnel holding positions as primary and secondary wildland firefighters will be certified, as a minimum requirement, in Cardio-Pulmonary Resuscitation (CPR) and Standard First Aid, by the American Red Cross or comparable certification authority.

The Headquarters Air Force Civil Engineering Support Agency/Civil Engineering Fire Protection is the executive agent for the DoD Fire Fighter Certification Program (FFCP) and will be responsible for issuing, maintaining, and tracking of NFPA wildland firefighter certifications. The installation Wildland Fire Program Manager is responsible for issuing, signing and tracking of NWCG Qualification Card/Incident Command System (also known as "red cards") for installation personnel.

7.0 INTERAGENCY COOPERATION AND MUTUAL AID AGREEMENTS

Cooperative agreements are best made prior to a need for cooperation. Per E2.5I of DoDI 6055.06, the DoD Components, under Chapter 15A, of 42 U.S.C. are encouraged to enter into reciprocal agreements with local fire protection agencies for mutual fire response. In addition, municipalities can be compensated for direct costs and losses sustained while fighting fire on Federal property, should the need arise (DoDI 6055.06 E5.1.4.3). These agreements include cross-boundary agreements whereby the different agencies could enter property that would otherwise be closed. Agreements can address cost apportionment, whereby, for example, the local fire department can be compensated for providing fire suppression services for the time they spent on the CMAGR. Another tool for mutual benefit are Memorandum of Agreement and Emergency Response Contracts which are broadly written and offer a framework for more specific agreements.

Installations are encouraged to develop regional partnerships for wildland fire management support, by means of reciprocal agreements with other federal, state, local and private entities, to share human, logistical, and operational resources. Emergency assistance and mutual aid agreements will conform to the guidelines stated in DODI 6055.06 - DoD Fire and Emergency Services Program (December 21, 2006), and MCO 11000.11A Marine Corps Fire Protection and Emergency Services Program (August 16, 2017).

There are several local, state and federal fire management agencies that could assist in response, monitoring, and rehabilitation should a wildfire ever spread on the CMAGR. These include the ICFD, CAL FIRE, National Park Service (NPS), BLM, and US Fish and Wildlife Service (USFWS).

This is especially appropriate for CMAGR as the MCAS Yuma Fire Department is several hours from the site. The closest fire department is the ICFD Station 7. However, these personnel are not qualified to respond in areas of unexploded ordnance. CAL FIRE does not have a station in Imperial County, however, it provides fire protection for all private lands in Riverside County (in conjunction with partner cities). MCAS Yuma currently has a Mutual Aid Agreement (MAA) with the ICFD to respond to medical and fire calls at Camp Billy Machen and within the CMAGR in general.

Other federal agencies with wildland fire management capabilities are more nearby. Nearby federal lands include, Joshua Tree National Park (located just north of Interstate 10), USFWS National Wildlife Refuges (located northwest of Niland) and BLM (located north of the CMAGR). These federal agencies can offer assistance and can engage in cooperative agreements if presented with the opportunity.

Following proper coordination with the Office of the Secretary of Defense through NORTHCOM and Joint Directorate of Military Support (JDOMS), military assistance (both military and civilian personnel) may be furnished to the National Interagency Fire Center (NIFC) in national fire emergencies, pursuant to the Interagency Agreement for the Provision of Temporary Support During Wildland Firefighting Operations among the Departments of Defense, Interior, and Agriculture (2005) and subsequent modifications. Support to NIFC is reimbursable under the Economy Act. Local area assistance included in existing agreements may be authorized by the installation/garrison commander. Immediate response requests will be handled per DODD 3025.18 Defense of Civil Authorities (DSCA).

A mutual-aid agreement exists with the ICFD and is included in this document as an appendix. The mutual aid agreement establishes automatic aid by ICFD to Camp Billy Machen and authorizes reciprocal response in the event of an extraordinary emergency. The nature and extent of aid to be furnished will be decided by the Fire Chief of the requested party and is dependent on availability of personnel and equipment.

Further interagency cooperation is possible. The NPS could provide base personnel with Wildland Firefighter training. The BLM could give 'Red Card' certification to enable biological monitoring of fire site resources by office staff. The CMAGR is encouraged to take advantage of these opportunities as they arise.

7.1 Interagency Contacts

The following are the Interagency Contacts:

1. The Imperial County Fire Department, Station 1, Headquarters is located at 2514 La Brucherie Rd, Imperial, CA 92251; The Department phone number for the On-Duty Battalion Chief is (442) 265-3010 and the On-Duty Captain can be reached at (442) 265-3011.

2. ICFD Station 7, Niland is located at 8071 Luxor Ave, Niland, California 92257 and can be reached at (760) 359-0410 (business line). For emergencies, call 911. Note: all stations mailings/correspondence go to ICFD Station 1, Headquarters.

3. The BLM has assisted with fire suppression in other DoD ranges; the nearest office would be either the El Centro Field Office (760-337-4400), or the Palm Springs-South Coast Field Office 760-833-7100. NPS can be contacted at Twenty-nine Palms, at (760) 367-5500 to develop pre-fire cooperative agreements.

8.0 SMOKE MANAGEMENT AND AIR QUALITY

Given the small size of fires, their rarity, and the relatively remote location of CMAGR, smoke management is not a major priority for CMAGR resource managers. Smaller fires may affect Highway 111 (to the west) or Highway 78 (to the south), but are unlikely to affect any other sensitive resources due to the distance to them and dispersion in between. Within five miles outside of the CMAGR boundary, there are no population centers of greater than 500 people, no hospitals, no schools, no nursing homes, and no airports, all of which are primary concerns for smoke management.

Regardless, the fire management program at CMAGR must be sensitive to the objective of maintaining clean air standards. Regional haze and unhealthful air quality have become common for much of the Southern California area during summer months which are dominated by high pressure systems.

A portion of the CMAGR lies within Imperial County and a portion lies within Riverside County. The Environmental Protection Agency (EPA) considered both counties as non-attainment for Respirable Particulate Matter (PM_{10} and PM 2.5), Nitrogen Oxides (NO_x), and Ozone precursors (O_3). The thresholds for the Imperial County portion of the CMAGR are 100 tons per year for O_3 precursors, including NOX and Reactive Organic Gases (ROG), 70 tons per year for PM_{10} and 12 tons/year for $PM_{2.5}$. The thresholds for the Riverside County portion of the CMAGR are 25 tons per year for O_3 precursors and 70 tons per year for PM_{10}. The California Air Resources Board (CARB) is responsible for enforcing both the federal and state air pollution standards (DoN 2010).

Because of the generally poor air quality in these air basins, the range is encouraged to work closely with CARB in the event a wildfire occurs within the range that has the potential to add particulate matter into the air basins.

9.0 SAFETY AND EMERGENCY OPERATIONS

Personnel safety is paramount on CMAGR. Firefighters will not be sent onto live fire ranges to fight wildfires because there is a great probability of unexploded ordinance in the training areas. This poses a tremendous risk to firefighter safety. Protection of structures is the next priority. The buildings will be protected, to the best ability of the responding ICFD firefighting crew, with the available resources. Equipment will also be protected where possible.

9.1 Personal Protective Equipment

The IWFMP requires all personnel involved in wildland fire activities to be outfitted with protective clothing and equipment that meets NFPA 1977 - Standard on Protective Clothing and Equipment for Wildland Fire Fighting which establishes the requirements for protective clothing. Minimum gear includes: Nomex shirt, Nomex pants, helmet, leather gloves, eye protection, and work boots with Vibram© soles.

10.0 WILDLAND FIRE BEHAVIOR FACTORS

10.1 Range of Potential Fire Behavior

Within the CMAGR, land cover is predominantly unburnable, with bare ground accounting for over 75% of the range. The remainder 25% is classified as low to moderate grass and shrub with some timber with low shrub for a small portion of the range. Table 10.1 shows acres for each mapped fuel model along with its percent cover within CMAGR. Fire behavior fuel models (Scott and Burgan, 2006) are denoted by their fire carrying fuel type (i.e., grass – G, grass / shrub – GS, timber – litter, TL) and a numerical identifier (e.g. 'GR2').

TABLE 10.1. FUEL MODEL ACRES TABLE (AS DEFINED BY LANDFIRE v1.4)

ID	Expected Fire Behavior	Acres	Percent
NB1 – Urban (91)	Un-burnable (within model)	6.89	0.00%
NB3 – Agricultural (93)	Un-burnable (within model)	0.22	0.00%
NB8 – Open Water (98)	Un-burnable	1.78	0.00%
NB9 – Bare Ground (99)	Un-burnable	346,770.52	75.41%
GR1 – Short Grass (101)	Short, sparse dry climate grass is short, naturally or heavy grazing, predicted rate of fire spread and flame length low	3,782.72	0.82%
GR2 – Moderate Grass (102)	Low load, dry climate grass primarily grass with some small amounts of fine, dead fuel, any shrubs do not affect fire behavior	5,629.93	1.22%
GS1 – Low Grass/Shrub (121)	Low load, dry climate grass-shrub shrub about 1 foot high, grass load low, spread rate moderate and flame length low	1.55	0.00%
GS2 – Moderate Grass/Shrub (122)	Moderate load, dry climate grass-shrub, shrubs are 1-3 feet high, grass load moderate, spread rate high, and flame length is moderate	72,851.93	15.84%
SH2 – Moderate Shrub (142)	Moderate load dry climate shrub, woody shrubs and shrub litter, fuel-bed depth about 1 foot, no grass, spread rate and flame low	5,902.59	1.28%
TU1 – Low Timber/Shrub (161)	Low load dry climate timber grass shrub, low load of grass and/or shrub with litter, spread rate and flame low	24,904.68	5.42%

Alone, these fuel models represent the potential range of fire behavior one can expect given the vegetation on the ground.

10.2 Expected Fire Behavior

FlamMap (Finney, 2006) was used to determine likely fire behavior under typical fall (September - November) weather conditions. This model was constructed to determine the worst-case scenario wildland fire behavior across the entire range. This model does not determine whether a fire will spread from a single (or multiple) ignition points. Rather, this model only predicts whether any given location will burn given specific inputs (i.e. slope, elevation, aspect, fuel moisture, fuel type, etc.).

The area modeled was bounded by the following coordinates (GCS NAD83):

- North: 33.6 degrees latitude
- South: 33 degrees latitude
- West: -116 degrees longitude
- East: -114.6 degrees longitude

Six data layers were downloaded from the LANDFIRE website. The following list details the version and attribute definitions for each layer:

1. Existing Vegetation –or EVT is a data layer representing the current distribution of the terrestrial ecological systems classification developed by NatureServe for the western hemisphere. It is defined as a group of plant community types (associations) that tend to co-occur within landscapes with similar ecological processes, substrates, and/or environmental gradients. EVTs are mapped in LANDFIRE using decision tree models, field reference data, Landsat imagery, digital elevation model data, and biophysical gradient data.
2. Fuel Models – FBFM40 (LANDFIRE version 1.40). Initially, thirteen typical surface fuel arrangements or "collections of fuel properties" (Anderson, 1982) were described to serve as input for Rothermel's mathematical surface fire behavior and spread model (Rothermel, 1972). Since 2005, these initial models were refined to 40 additional models. These represent a more refined version of the basic 13 fuel models.
3. Canopy Cover – Described by percent cover of tree canopy in a stand.
4. Canopy Height – Described as the average height of the top of the canopy for a stand. Reported in meters * 10.
5. Canopy Base Height – Described by the lowest point in a stand where there is sufficient available fuel (0.25 in dia.) to propagate fire vertically through the canopy. Reported in meters * 10.
6. Canopy Base Density – Defined as the mass of available canopy fuel per unit canopy volume that would burn in a crown fire. Reported in kg/m^3*100.

The following parameters were used in the fire behavior run in FlamMap:

Though specific daily weather and wind data was used to condition the fuel moistures, 20-foot wind speed was set to 12 mph. Direction was set to 270. Foliar Moisture Content was set to 100%. To condition the fuels, weather and wind files derived from weather data gathered by a RAWS weather station located south-west of the CMAGR (QCAC1 CAHUILLA). In addition, fuel moistures were set for all fuel models to the corresponding amounts shown in Table 10.2.

TABLE 10.2. FUEL MOISTURE PERCENTAGES USED

Class size	Percent
1hr fuels	3
10hr fuels	4
100hr fuels	5
Live herbaceous	70
Live woody	70

Outputs included Rate of Spread, Flame Length, and Crown Fire Activity using the Scott/Reinhardt (2001) option under the Crown Fire Calculation Method. We used the default for the 'Options' parameter (Relative Spread Direction from Maximum).

Results are presented below.

10.2.1 Flame Length

Flame length (measured in feet) is the length of the flame at the head of the fire measured from the middle of the combustion zone to the average position of the flame tip (Andrews and Rothermel, 1981).

Flame length is important because it is a fire behavior characteristic we most often associate with a wildfire. The height (or length) of flames is what is seen first and it can determine how a fire will be suppressed. The lower the flame length, the more approachable it is by hand crews.

The model predicted no fire for 75 percent of the CMAGR (Table 10.3). Where modeled fire did occur, flame lengths were lower than eight feet and occurred on all slopes in the higher elevations where sparse vegetation exists.

TABLE 10.3. PREDICTED FLAME LENGTH ACRES

Value	Acres	Percent
No Fire	343,700	75%
Less than 4 feet	37,876	8%
4.1 - 8	74,444	16%
Greater than 8 feet	0.44	0%

Fires with flame lengths of four feet or lower can be suppressed by people on the ground using hand tools. A simple 'hand line' of 12 to 24 inches wide should hold the fire. Once over four feet, the fire is too intense for confrontation with people and a handline is not reliable. Wider 'fire lines' can be employed using heavy equipment.

Only 16% of the range may experience a fire with flame lengths between four and eight feet. The vegetation and slopes that support this potential fire behavior is scattered throughout the range in isolated clumps.

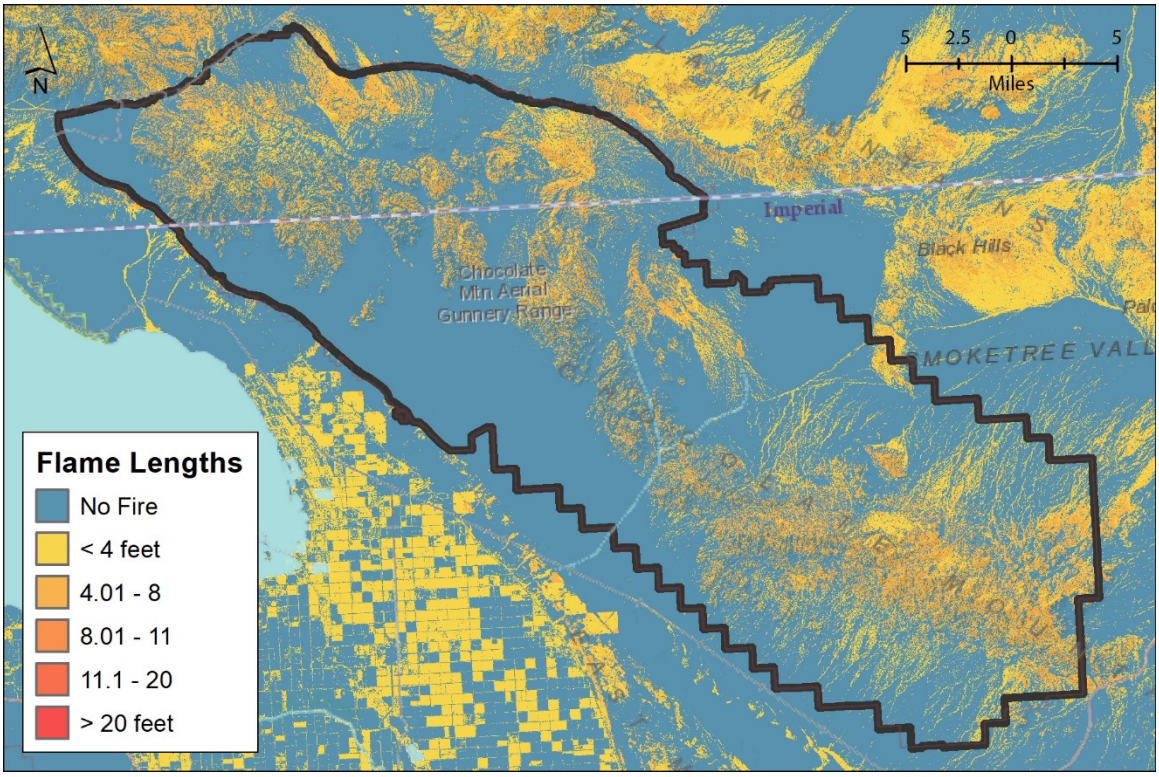

Figure 3. Map of flame length results for CMAGR

10.2.2 Rate of Spread

Rate of spread (measured in chains/hour) is the forward rate of spread at the head of a surface fire. Like the predicted flame lengths, 75% of the CMAGR experiences no fire at all (Table 10.4).

TABLE 10.4. ACRES OF RATE OF SPREAD CLASSIFICATION

Value	Acres	Percent
No Fire	343,702	75%
Less than 1.1 ch/hr	374	0%
1.1 – 5	28,315	6%
5.1 – 10	5,330	1%
10.1 - 20	8,318	2%
Greater than 20 ch/hr	69,982	15%

Fifteen percent of what is predicted to burn, experiences rate of spreads greater than 20 chains/hour (one chain equals 66 feet). This relatively fast fire spread is predominately through fuel model GS2 – a grass-shrub fuel model that typically experiences a high spread rate. While a fast rate of spread does not necessarily mean a problematic fire, coupled with high flame lengths, a fast-moving fire cannot be suppressed with a hand-crew. However, the spatial discontinuity of the burnable vegetation would indicate the fire would burn itself out quickly.

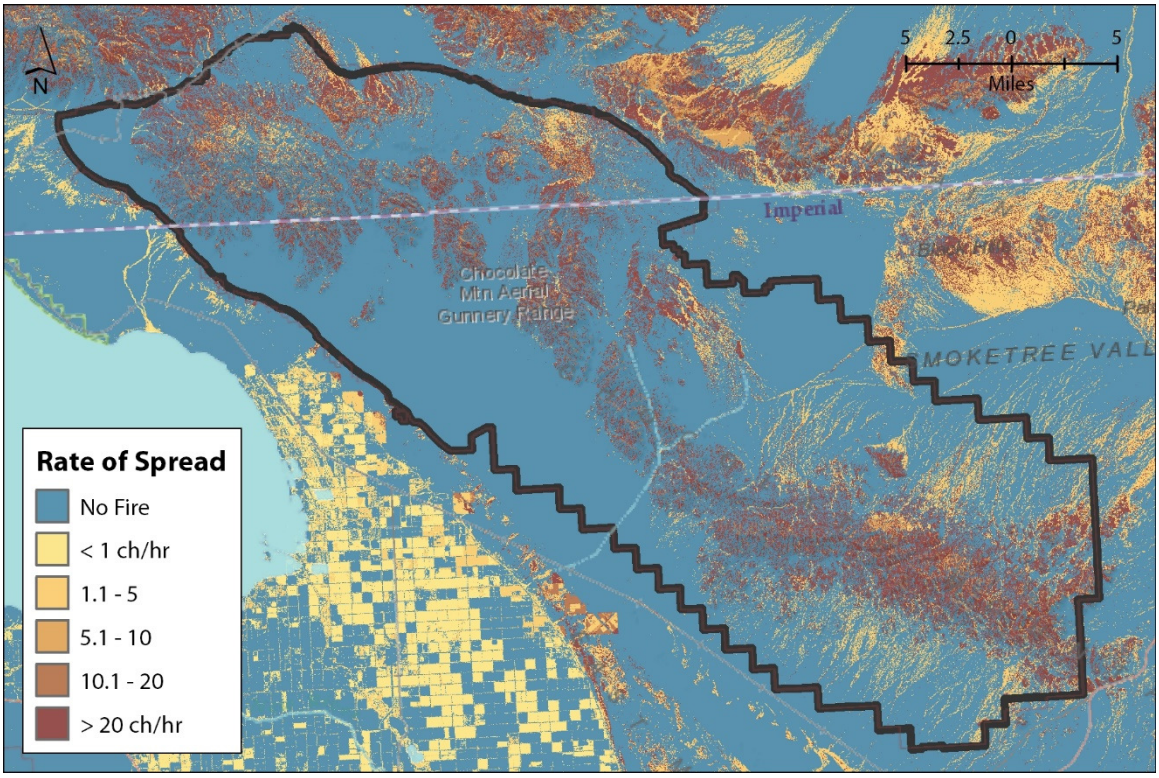

Figure 4. Predicted rate of spread for the existing conditions scenario

10.2.3 Crown Fire Activity

A surface fire that makes the transition to some form of crown fire is modeled from canopy base height, stand height, canopy bulk density, and foliar moisture content. It is important to keep in mind that crown fire activity only pertains to timber fuel model types. While shrub types may "crown", they are not modeled in FlamMap. There is only one timber type within the CMAGR and it accounts for only 5% of the CMAGR. Regardless of dry and windy conditions, no crown activity is predicted (Table 10.5). No torching or crown fire is expected within the CMAGR.

TABLE 10.5. ACRES OF CROWN FIRE ACTIVITY RESULTS FROM FLAMMAP

Value	Acres	Percent
No Fire	343,666	75%
Surface Fire	112,356	25%
Torching Fire	0	0%

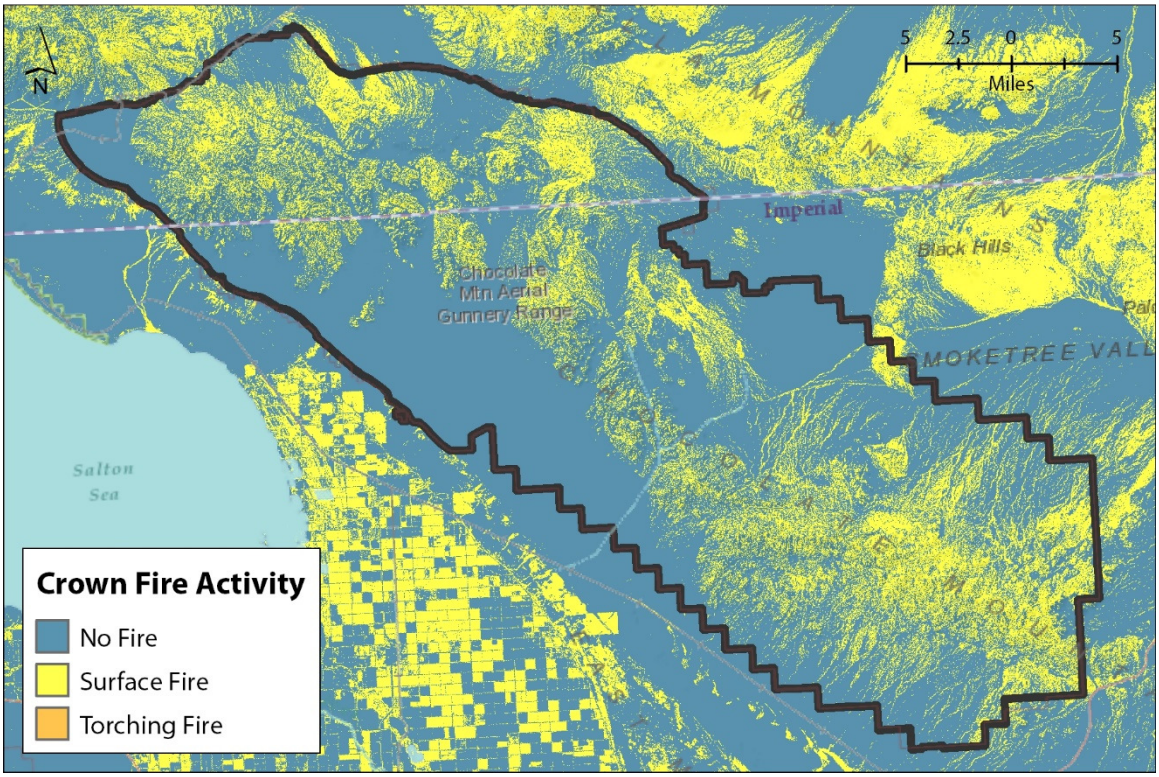

Figure 5. Predicted crown fire activity for the CMAGR

10.3 Wildland Fuels

The Sonoran Desert has a very low fuel load. The distance between individual plants suffices to hinder fire proliferation. When fires do occur, they are limited to very small areas. Traditional fuel loads in the Mojave Desert range from <50 pounds (lbs)/acre to <250 lbs/acre, depending on the habitat type. With the increase of invasive species, the fuel load has grown to ~750 to ~2500lbs/acre (Brooks et al. 2001). The historic fire regime is being altered as invasive grasses and other aggressive non-native species colonize new areas of the desert landscape. These plants increase wildfire frequency and severity by adding to the amount of fast burning fuel and creating dense areas of vegetation. As plants dry out in the summer, these prolific grasses and shrubs form areas where a fire can spread rapidly over large areas. The aggressive, non-native species establish themselves in disturbed areas quicker than the less fire-tolerant, native shrubs, creating vast areas dominated by non-native species. These areas become more prone to fire, exacerbating the problem.

10.4 Structural Fuels

The only permanent structures are at Camp Billy Machen, where the main building is constructed using ignition resistant practices, and has a sprinkler system. In addition, the facility has a non-combustible fence surrounding the facility. The only exposed combustible material observed during a site visit in September 2017 was an assemblage of wooden pallets used for special warfare training, as approved by the Fire Department at MCAS.

10.5 Wildland Fire Weather and Fire Danger

Currently there is no Fire Danger Rating System (FDRS) data specific to the CMAGR to manage wildfire ignitions. There are no weather stations in the CMAGR that could inform decisions regarding Special Orders and Closures. There are plans to install weather stations starting in 2019.

However, one RAWS station currently exists southwest of the CMAGR, located at longitude -115.1735, latitude 32.973639, 278 feet in elevation. This is near the intersection of Highway 78 and Gecko Road, over 6 miles away from the CMAGR boundary. While not entirely representative of the entire range, the weather station does record continuous weather data. In the event of future changes that may increase wildland fire risk and potential, and for preparation purposes, data from this weather station can be used to determine expected fire danger.

Because there is no FDRS specific to the CMAGR to manage wildfire ignitions, and because fire prevention and response will not be based on NFDRS indices, this section is omitted from the INFMP.

11.0 RISK ASSESSMENT / DECISION ANALYSIS PROCESSES

While the likelihood of a wildland fire burning through the range is limited, power pole lines, pump houses, water storage facilities, and related equipment can be threatened by small wildland fires.

These assets will be prioritized by the asset holder. The Facilities Maintenance Division (FMD) should assign buffer zones to areas with a high threat to equipment and infrastructure, to include the assets listed above. The risk assessment would evaluate the vulnerability of the asset along with its value and the probability of a threatening event. Because of the low fuel volume, fire intensity is predicted to be quite low.

11.1 Wildland Fire History

There have been no wildfires in the CMAGR mapped or recorded to the NFIRS.

The Sonoran Desert, historically, has had a low incidence of wildfire. Human activities have increased fire frequencies in the desert elsewhere because of increasing invasion of exotic grass and shrub species, such as *Schismus barbatus* (Mediterranean grass), *Brassica tournefortii* (Saharan mustard), and *Salsola tragus* (Russian thistle), which increase fine-fuel loads and fuel continuity. However, these invasive species were not observed by Carol Rice, the fire ecologist, in quantity during a site visit September 2017.

11.2 Likely Scenario

Recent fire history and the predictive model presented in this document show that if a wildland fire were to start on the CMAGR, it would likely burn a limited amount of vegetation before running out of fuel. The distance between burnable vegetation clusters is far enough that wildfires would not readily spread.

Because the predicted fire behavior under hot, dry conditions is low to moderate, and because the risk to human injury and equipment from unexploded ordnances is too high, in the event of a wildland fire, there will be no direct response to suppress the fire. While military training may be impeded, it is likely training operations would be affected for hours, not days, and would be limited to the immediate area of the fire.

In the event of a structural fire, the ICFD will be notified to provide CMAGR personnel assistance. All fires will be reported via radio to Imperial County Dispatch by calling 9-1-1.

11.3 Worst Case Scenario

The worst-case scenario was predicted in our model (see Section 10.2). Given the current vegetation type and distribution, the model shows that only 25% of the range is burnable. During dry, hot conditions, though a fire can move relatively quickly through vegetation on the range, little, if any, of the expected fire would exceed what a hand crew or dozer crew can handle. In addition, because the burnable vegetation distribution is scattered, with unburnable ground between clumps, a fire is unlikely to spread very far.

At worst, localized areas will experience a loss of vegetative cover that could take years to restore due to low annual precipitation, leading to a potential for some soil erosion and a possible vegetation type change (if invasive species get established). A vegetation restoration program would help quicken restoration and stabilize soils.

12.0 NATURAL AND CULTURAL RESOURCE CONSIDERATIONS CHECKLIST

Before any major action on federal lands is implemented, the NEPA requires federal agencies to consider environmental impacts of that action. NEPA applies to the approval of this plan.

The following sections briefly addresses each potential impact that implementing this plan may have on the CMAGR's environment.

12.1 Soils

Based on the fire behavior results presented in Section 10 of this document, the areas predicted to burn support vegetation types: North American Warm Desert Riparian Herbaceous, Sonoran Paloverde-Mixed Cacti Desert Scrub, and Sonora-Mojave Creosotebush-White Bursage Desert Scrub. These in turn are supported by two soil types: Tecopa-Rock Outcrop-Lithic Torriorthents and Vaiva-Rock Outcrop-Quilotosa-Laposa. According to the CMAGR's INRMP, these two soil types have a water erosion hazard of slight and slight to moderate, respectively.

Fire effects soils most when there is a high fuel buildup, leading to a longer residence time of the fire, leading to elevated heating of the soil. Also, if soil moisture is moderate to high, then that heat can permeate into the soil profile. However, desert soils typically support low fuel mass and low soil moisture, which is the case throughout the CMAGR. Because of this, during normal dry conditions, it is expected that any wildfire will not contribute significantly to subsequent soil erosion potential.

12.2 Climate

CMAGR is located in the drier part of the Sonoran Desert. The area is an arid, upland desert climate, characterized by hot days with cool nights and low humidity. As noted in Section 2.4, July is the hottest month (average maximum temperature of 104.9 degrees Fahrenheit (°F) (40.5 °C)), and January is the coolest month (average maximum temperature of 64.4°F (18°C)) (DoN, 2010) (WRCC 2011). Average precipitation measured at the Eagle Mountain meteorological station is 3.67 inches per year.

The driest months occur between the months of April through June. August is the wettest month due to the influence of the summer monsoon rain pattern (DoN, 2010).

While the hot, dry conditions support fire behavior, the arid conditions limit vegetation growth. A wildfire can contribute to vegetation-type change, especially in the presence of invasive species.

12.3 Hydrology

All of the surface drainage at CMAGR is internal; most run-off flows inward to 14 playas (sandy beach). According to the INRMP, here are two major watersheds consisting of playas, dry washes, seeps, springs and man-made water bodies. Surface water is ephemeral and flows seasonally, discharging to the Salton Sea, and Colorado River.

Nearby permanent water sources outside the CMAGR include the Salton Sea, New River, Alamo River, and Colorado River, (which includes the Coachella Canal). All except the Colorado River are largely sustained by irrigation return flows (DoN, et al., 2013).
There is no recorded fire history for the CMAGR, so it is difficult to assess how a wildfire might impact the area's hydrology. Because our predictive model indicates so little fire behavior activity within the range, it can be assumed that little to no impact on the hydrology will occur from wildland fire.

12.4 Vegetation

The four major vegetation types found on the CMAGR are: Lower Bajada and Fan Mojavean-Sonoran Desert Scrub, Madrean Warm Semi-desert Wash Woodland/Scrub, North American Warm Desert Bedrock Cliff and Outcrop, and Shadscale-Saltbush Cool Semi-desert Scrub. The vegetation found on the CMAGR is described in detail in Section 2.4.3.

12.5 Wildlife

The types of wildlife found in the CMAGR are typical fauna of the Sonora Desert. Although large vertebrates such as coyote (*Canis latrans*), kit fox (*Vulpes macrotis*), and bobcat (*Lynx rufus*), are established within the range, the greatest diversity of wildlife is found among the small vertebrate and invertebrate residents. Birds and reptiles make up the greatest amount of vertebrate wildlife species found on the range.

Wildfires in the desert are increasingly changing the ecosystem. Wildfires not only kill wildlife, they also alter their habitat by changing the structure of the vegetation, enhancing erosion, and destabilizing soils (e.g., collapsing burrows). However, fire is expected on only 25% of the range and of that, the majority is predicted at low to moderate fire behavior. It is not anticipated that wildlife habitat will be significantly altered by wildland fire.

12.6 Threatened and Endangered Species

There are several sensitive, resident species in the CMAGR. The desert tortoise (*Gopherus agassizii*), protected under the Endangered Species Act, is a "threatened" species, and was listed in 1990. Approximately half the CMAGR, largely at higher elevations, is mapped as "High" quality tortoise habitat. Couche's Spadefoot (*Scaphiopus couchii)* is a California Species of Special Concern and is considered a Sensitive Species by the BLM (although this designation does not confer federal listing status). Nelson's desert bighorn sheep (*Ovis Canadensis nelsonii*) is also considered a Sensitive Species by BLM but has no designated CDFW or USFWS status. American Badger (*Taxidea taxus*) is a California Species of Special Concern but has no federal special status.

The number of species that are protected by state and federal designations occurring within the CMAGR are several, and include three reptiles, seven birds (in addition to the protection afforded by the Migratory Bird Treaty), seven mammals (five of which are bats), and 21 plant species (US Marine Corps Air Station Yuma Range Management Department and Naval Facilities Engineering Command, Southwest. 2017).

Just as the USFWS 1996 Biological Opinion for the Desert tortoise states that CMAGR activities would not jeopardize the desert tortoise or result in significant destruction or adverse modification of its critical habitat through its activities, a possible small, low-intensity wildfire is not likely to impact its habitat, nor would the limited suppression activity associated with the wildfire.

12.7 Air Quality

Implementing Air Pollution Abatement Procedures reduces CMAGR's contribution to the overall air pollution in Southern California. Per the Environmental Protection Agency (EPA 2015), the CMAGR is considered in a nonattainment area for particulate matter (PM_{10}), and O_3 precursors (EPA 2018).

Depending on wind direction, the CMAGR can be greatly affected by the transport of emissions from the Los Angeles Air Basin, home of the South Coast Air Quality Management District (SCAQMD) and from across the national border with Mexico; thus abatement will depend heavily on emission decreases in other areas. Regardless, "reasonable controls" for non-tactical activities on the CMAGR may be required by MCAS Yuma.

No prescribed fires will be conducted, and no wildfires are expected on the CMAGR. In addition, no training exercises will use or develop smoke. The EPA and the CARB require smoke management planning to control any emitting sources. This is accomplished through issuance of 'Permits to Operate and Training Burn Requests', which control actions involving burning operations. The CMAGR is required to control emissions through various emissions reduction techniques, through proper periodic maintenance, and through permitted operations, within meteorological (weather) constraints, that restrict the operating hours and fuel use.

12.8 Cultural Resources

The same factors that have helped to preserve the natural resources of the CMAGR—exclusion of surface disturbing, non-military land uses and correspondingly limited land surface disturbance by military activities—have also helped to protect cultural resources. As a result, well-preserved cultural resources within the CMAGR provide a record that tells of thousands of years of human habitation and use of this region.

These resources include both prehistoric and historic sites and features. Prehistoric sites include petroglyphs, bone scatters, ceramic scatters, cleared areas, rock circles, rock alignments, lithic scatters, fire altered rock, trails, and cairns. Historical sites include water diversion features, military trails, military roads, quarries, can scatters, glass scatters, cairns, and a railroad.

Because many of these cultural resources are not combustible and no large fuel buildups are known within the range, any wildfire activity is not expected to impact these cultural resources. However, wildfire suppression activity, as unlikely as it may be, may accidentally disturb or damage cultural resources.

In order to minimize the effects of any unlikely fire suppression activities, it is recommended that CMAGR adopt MIST as its primary means to fight fire. There are many actions that will help protect

cultural resources from the effects of fires. However, fire suppression activities, including ground disturbance and the use of aerial retardants, can have adverse effects, including damage to or destruction of prehistoric and historical period cultural resources. The effects of fire suppression activities and protection must be weighed against the potential for loss of cultural resources due to fire.

Ground disturbance includes construction of fire breaks (hand and mechanical construction), use and alteration of roads, establishment of the command post, fire camps, and helicopter landing pads. The use of fire trucks, bulldozers and heavy equipment on roads requires oversight to ensure that cultural resources are not adversely affected. Roads should be used as firebreaks if possible. Fire engines should be used on established roads only.

Emergency fire suppression may occur in areas where cultural resource surveys have not been completed and there is the potential for undetected cultural resources. Bulldozers or heavy equipment use and construction of fire breaks in un-surveyed areas should be coordinated with cultural resource staff. In some cases, an archaeologist may need to survey some areas ahead of fire suppression activities.

Application of fire retardants and other chemical agents, such as long-term retardants, foam, and water enhancers, have the potential to affect cultural resources. Aerial drops of any fire retardants on hot surfaces may cause effects to cultural resources due to rapid temperature change. These retardants may cause breakage or displacement of artifacts and features. Long term retardants are the most destructive, with additives that cause most materials to turn red and metal to turn blue or black. These desiccants damage rock images, rock shelters, and historical period buildings, structures, and materials. The CMAGR should specify “fugitive” retardant, which has no color. If the colored fire retardant is used, the retardant should be wiped off as soon as possible.

12.9 State and Local Considerations

No emissions from wildfire or related training activities is anticipated. Responsibility for air quality related to open burning in California has been delegated to the counties. Counties are responsible for issuing permits, defining conditions when burning will be permitted, and determining what materials may be burned. The range is situated in both Riverside County and Imperial County.

13.0 OTHER CONSIDERATIONS

13.1 Mission Impact Considerations

There are both direct and indirect effects of wildland fire on the military mission. Direct effects are the loss of military training during a wildfire. Fire carries economic costs for firefighting and loss of property. There are also direct and indirect effects on natural resources. The immediate loss of vegetation may appear to be a minor effect; however, changes in plant communities caused by alien plants and recurrent fire may alter habitat structure and composition of native animals' food plants (Brooks and Esque, 2002). The repeated loss of vegetation will also alter the landscape and intensify the magnitude of flooding events.

While these effects are real, on the CMAGR, they are also unlikely. Historical records show no significant fires have been reported on the range. In addition, predictive models confirm that 75% of the range is unburnable.

13.2 Monitoring Requirements

The main environmental concern that will be evaluated is the effect fires have on desert tortoise populations and their habitat. In addition, any burned area will be evaluated and monitored for invasive species establishment. Rehabilitation of these areas will happen on a site-specific basis. Seeding the area using native vegetation will assist with invasive species control. Site monitoring will help ensure the establishment of native species.

In years where rainfall is exceedingly plentiful, the quantity and continuity of fuels should be evaluated via an aerial/remote sensed survey. Data from weather stations should be analyzed to determine ignition and spread potential.

13.2.1 Reporting of Wildland Fires

See above for fire detection.

13.2.2 Emergency Stabilization, Rehabilitation and Restoration

This plan does not foresee a need for emergency stabilization, rehabilitation and restoration in light of the rare frequency, and insignificant areal extent of wildland fires.

13.3 Public Relations

The CMAGR is closed to the public. However, in the unlikely event of a wildland fire where public information coordination is needed, it will be reported to the Public Affairs Office (PAO) at MCAS Yuma: 928-269-2275. The PAO can assist with press, community relations, media relations, and more.

14.0 FUNDING REQUIREMENTS

The additional costs related to wildland fire management activities is negligible, due to the lack of a need for fire prevention, public education and outreach, training, inspection and preparedness, and wildland fire suppression itself. Costs to suppress wildfires are covered under the mutual aid agreement attached. A minor additional cost would be incurred for staff time to develop cooperative agreements and to analyze weather data for fire behavior analysis, and to conduct an aerial/remotely sensed survey of fuels when rainfall is particularly plentiful. Staff time will also be necessary to conduct joint training with ICFD regarding unexploded ordnance. Should funds be required, they would be requested by the Installation through the normal fiscal processes.

15.0 NATIONAL ENVIRONMENTAL POLICY ACT PROCESS FOR WFMP IMPLEMENTATION

Actions proposed in any IWFMP may constitute a major federal action as defined in 40 CFR Part 1508.18 (b) (2). Major federal actions must be evaluated for potential environmental effects. The NEPA document conducted for the installation INRMP may also include and provide analysis of the IWFMP. This IWFMP does not anticipate significant effects of the implementation of this plan.

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APPENDIX A. MUTUAL AID GREEMENT BETWEEN IMPERIAL COUNTY FIRE DEPARTMENT AND MCAS YUMA (2016)

BOS APPROVED 10-11-6
M.O. #23
M62974-20150421-301

MUTUAL AID AGREEMENT

FOR

FIRE AND RESCUE SERVICES WITHIN IMPERIAL COUNTY FOR EXTRAORDINARY EMEGENCY SERVICES

This agreement made and entered into this 1st day of January 2016 by and between the County of Imperial, California; and Marine Corps Air Station (MCAS), Yuma, Arizona; pursuant to 42 U.S.C. 1856a and DoDI 6055.06, shall serve as the agreement between the parties for mutual aid fire protection and rescue services within Imperial County for extraordinary emergency services.

WITNESSETH:

WHEREAS, the lands or districts of the parties hereto are geographically located in the County of Yuma and the County of Imperial so that mutual assistance in an emergency situation is deemed feasible and desirable; and

WHEREAS, each of the parties hereto maintains equipment and personnel for the suppression of fires, the provision of emergency medical care and rescue services, and the stabilization and containment of other emergencies within their respective jurisdictions; and

WHEREAS, it is to the mutual advantage and benefit of each of the parties hereto to render supplemental fire suppression, prevention, protection and rescue services to each other in the event of an extraordinary emergency and to take part in joint training exercises;

WHEREAS, an extraordinary emergency service is that service which is not normally required for emergency service;

WHEREAS, the California Government Code Section 6500 and 42 U.S.C. 1856a encourages reciprocal agreements for providing mutual assistance fire protection and it is the policy of the Department of the Navy and of the municipalities, or other districts, and their governing bodies to conclude such agreements wherever practicable; and

WHEREAS, it is mutually deemed sound, desirable, practical, and beneficial for the parties to this agreement to render assistance to one another in accordance with the terms; and

WHEREAS, it is the desire of the signatories hereto to enter this Mutual Aid Agreement pursuant to the above authority on the terms and conditions herein contained.

THEREFORE THE PARTIES AGREE:

I. MUTUAL AND AUTOMATIC AID RESPONSE BY THE PARTIES

1. Mutual Aid. In the event of any extraordinary emergency occurring in any one of the signatory agencies' jurisdiction which for any reason

cannot be dealt with by that agency's personnel and equipment, than the other party to this agreement shall furnish to that signatory agency such fire suppression, prevention, protection and rescue services as may be reasonably required to cope with such emergency subject to the limitations hereinafter set forth in this agreement. The nature and extent of aid to be furnished shall be as determined by the Fire Chief of the signatory party from who such aid is requested based upon that party's availability of personnel and equipment. It is further expressly agreed that the aid actually furnished may be recalled at the sole discretion of the Fire Chief of the furnishing signatory party.

2. Automatic Aid. Due to Camp Billy Machen being located in Imperial County and its remoteness to MCAS Yuma Fire Department assets, the Imperial County Fire Department agrees to provide emergency response coverage for the facilities and personnel at Camp Billy Machen. Under terms of this agreement an automatic response means first response to an alarm within a specified area.

II. TERMS AND CONDITIONS OF RESPONSE

1. Supervision. Personnel who are furnished will work, as far as possible, at the direction of their supervisors and equipment furnished will ordinarily be operated by personnel of the party furnishing the equipment. General directions relative to the work will be given by the appropriate persons of the party receiving such aid. It shall be the responsibility of the party requesting assistance to ensure appropriate fire fighter safety and rehabilitation services are provided to all personnel involved in the emergency response, to include appropriate medical care, food, water, fuel and other logistical support as necessary.

2. State Emergencies. This agreement is intended to cover day-to-day mutual aid only and the automatic aid described above and shall be of no effect at times when the California Disaster and Civil Defense Master Mutual Aid Agreement becomes operative.

3. Local Obligations. It is mutually understood and agreed that this agreement does not relieve any of the parities hereto from the necessary obligation of providing adequate fire protection within its own jurisdiction. Each party hereto agrees that is shall use reasonable diligence in keeping its firefighting equipment in its possession up to adequate standards.

III. OTHER PROVISIONS

1. Service in the Line of Duty. In connection with this mutual aid firefighting assistance agreement, any service performed by Department of Defense personnel, civilian or military, shall constitute service rendered in the line of duty. The performance of such service by any other individual shall not constitute such individual as an officer or employee of the United States.

2. Confidential Information. In addition to Protected Health Information, as defined by the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Health Information Technology

for Economic and Clinical Health Act of 2009 (HITECT Act), during the course of performing this agreement, each organization may from time to time receive confidential information about the other including but not limited to information about the party's customers, patients, patient records, practices, procedures, strategies, organization, financial and other related information. Neither organization shall use or disclose any such confidential information for any purpose other than the limited purpose of performing its obligations under this agreement, without the prior express written permission of the supplying organization. All documents and records prepared maintained, handled or otherwise related to each organization's performance of services hereunder are and shall be the property of that organization.

3. Indemnification. Where a duty exits each party agrees to indemnify and save the other party harmless from any liability arising out of or resulting from the acts or omissions of that party's fire personnel during such times said personnel are serving in the jurisdiction of the other party for assistance, pursuant to the terms of this agreement.

4. Third Parties. This agreement shall not be construed as an agreement for the benefit of any third party or parties.

5. Points of Contact. Personnel responsible for the execution of this agreement are the Fire Chiefs of each respective jurisdiction. Reviews of this agreement are performed by the executing parties or their representatives. The MCAS Yuma Point of Contact for the administration of this agreement is the Support Agreement Manager (SAM). Any modification to the contents and conditions of the agreement must be facilitated through the SAM.

MCAS Yuma Fire Department
(928) 269-2887

County of Imperial Fire Department
(442) 265-6000

MCAS Yuma Support Agreement Manager
(928) 269-2047 / 269-3637

IV. PROVISIONS OF CLAIMS AND REIMBURSEMENT

1. Injuries. Any compensation required to be paid to any fire personnel, pursuant to 42 U.S.C 1856a and California Labor Code Section 4850, by reason of their injury occurring while their services are being utilized pursuant to this agreement, shall be the sole liability and responsibility of the party regularly employing such personnel.

2. Claims. Each party waives all claims against the other party for compensation for any loss, damage, injury, or death as a consequence of the performance of this agreement except those claims authorized by paragraph 3 below.

3. Additional Expenses. Direct expenses and losses which are additional firefighting costs over and above normal operation costs incurred while fighting a fire on property which is under the jurisdiction of the United States may be reimbursed in accordance with the Federal Fire Prevention

and Control Act of 1974 (Public Law No. 93-498, 15 U.S.C. 2201 et seq.) and its implementing regulation (44 C.F.R. 151).

V. TERMS OF AGREEMENT

This agreement shall become effective upon the date hereof and shall remain in full force and effect until cancelled by mutual agreement of the parties hereto, or by giving 30 days written notice to the other party of said cancellation. On the 31st day after notice, such withdrawal is effective. This agreement will be reviewed triennially by both parties. This agreement removes the County of Imperial as a party to the previously signed Mutual Aid Agreement between MCAS Yuma, the County of Imperial with the subject *Mutual Aid Agreement for Fire and Rescue Services within Imperial County of Extraordinary Emergency Service,* File#301 and effective date of 15 August 2000.

IN WITNESS WHEREOF, the parties hereto have executed this agreement on the day and year first above written.

COUNTY OF IMPERIAL
BOARD OF SUPERVISORS

By _____
Chairman, Board of Supervisors

By _____
Clerk of the Board of Supervisors

MARINE CORPS AIR STATION
YUMA, ARIZONA

By _____
MARTINEZ.RICARDO.1129087702
Digitally signed by MARTINEZ.RICARDO.1129087702
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USMC, cn=MARTINEZ.RICARDO.1129087702
Date: 2017.04.10 10:18:56 -07'00'

Ricardo Martinez
Colonel, U.S. Marine Corps
Commanding Officer

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