

2.0 MCAS MIRAMAR LAND-USE

2.1 Location and Environmental Setting

MCAS Miramar is located approximately 13 miles north of downtown San Diego and 4 miles east of the Pacific Ocean (Figure 2.1a). The MCAS Miramar property is about 12 miles long from east to west and about 4 miles from north to south encompassing 23,065 acres³. State Route 52 and Interstate 805 (I-805) form the approximate southern and western borders of the installation, respectively, although the Station continues south of State Route 52. I-15, State Route 163, and Kearny Villa Road bisect the Station into east and west. I-15 and Miramar Road are the main access roads to the Station. Several nearby communities continue to grow in the vicinity of MCAS Miramar including the City of Poway, City of Santee, Mira Mesa, Scripps Ranch, Clairemont, Kearny Mesa, and others (Figure 2.1b).

The western portion of MCAS Miramar is located on a marine terrace, or mesa, on the coastal plain that rises gradually from the Pacific Ocean. Western Miramar is relatively flat with deeply incised canyons. East Miramar is made up of coastal foothills and canyons with moderate to steep slopes. Elevations range from 240 feet in the west to 1,178 feet in eastern areas of the Station. Major vegetation types on MCAS Miramar include chaparral (including ceanothus chaparral, chamise chaparral, scrub oak chaparral, and other chaparral), scrub (including buckwheat scrub, riparian scrub, and other upland scrub), grassland, and riparian vegetation (including riparian woodland).

2.2 Overview

The Marine Corps is assigned the unique defense mission among the nation's armed services of being able to field, on virtually immediate notice, a self-sufficient air and ground combat force trained to fight as an integrated team under a single command. To prepare for this mission, the Marine Corps must maintain training facilities that offer diversity and flexibility to train its units, so they are prepared for the challenges they may face in combat. MCAS Miramar is an important facility for satisfying these training, deployment, and personnel support requirements.

MCAS Miramar is generally bisected by Kearny Villa Road. The area west of Kearny Villa Road (the Main Station and South/West Miramar) supports the military need for commercial, administrative, flight operations, and residential facilities. The area east of Kearny Villa Road (East Miramar) is primarily undeveloped, is used for military training and operational exercises and warehousing, and supports the military need for encroachment and access control. Land-use controls for lands underlying flight paths prevent certain types of land-uses that would be incompatible because of noise levels and safety considerations associated with aircraft operations. In addition, undeveloped lands of East Miramar are used for land navigation training, troop maneuvers, bivouacking/over-night camping, aircraft/communication/personnel support exercises, tactical vehicle driver training, and weapons instruction training.

Military land-uses at MCAS Miramar include operational (*e.g.*, aircraft operations) and non-operational (*e.g.*, community support) uses and functions. Land-uses not directly related to or supportive of the military mission also take place within MCAS Miramar. These non-military uses primarily include outleases and easements for public highways, roadways, utilities, and landfills, encompassing about 2,900 acres.

³Acreages within this INRMP may not be completely consistent with each other, primarily due to land transfers, different geospatial data system (GIS) software, or time of data collection. This total acreage for MCAS Miramar is considered official (MI.MI>dod_rpi_site_area).

Figure 2.1a. Regional Location of MCAS Miramar

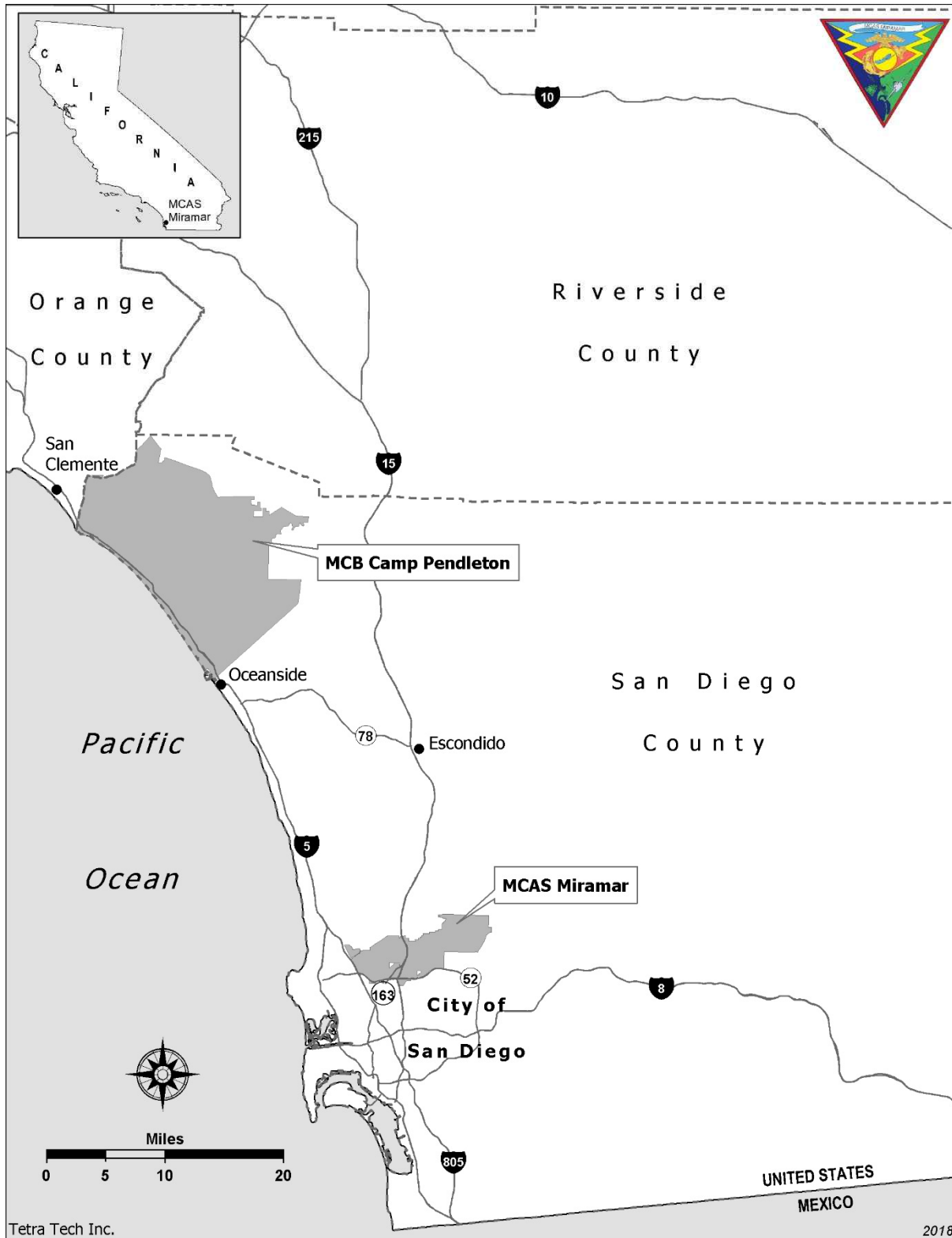
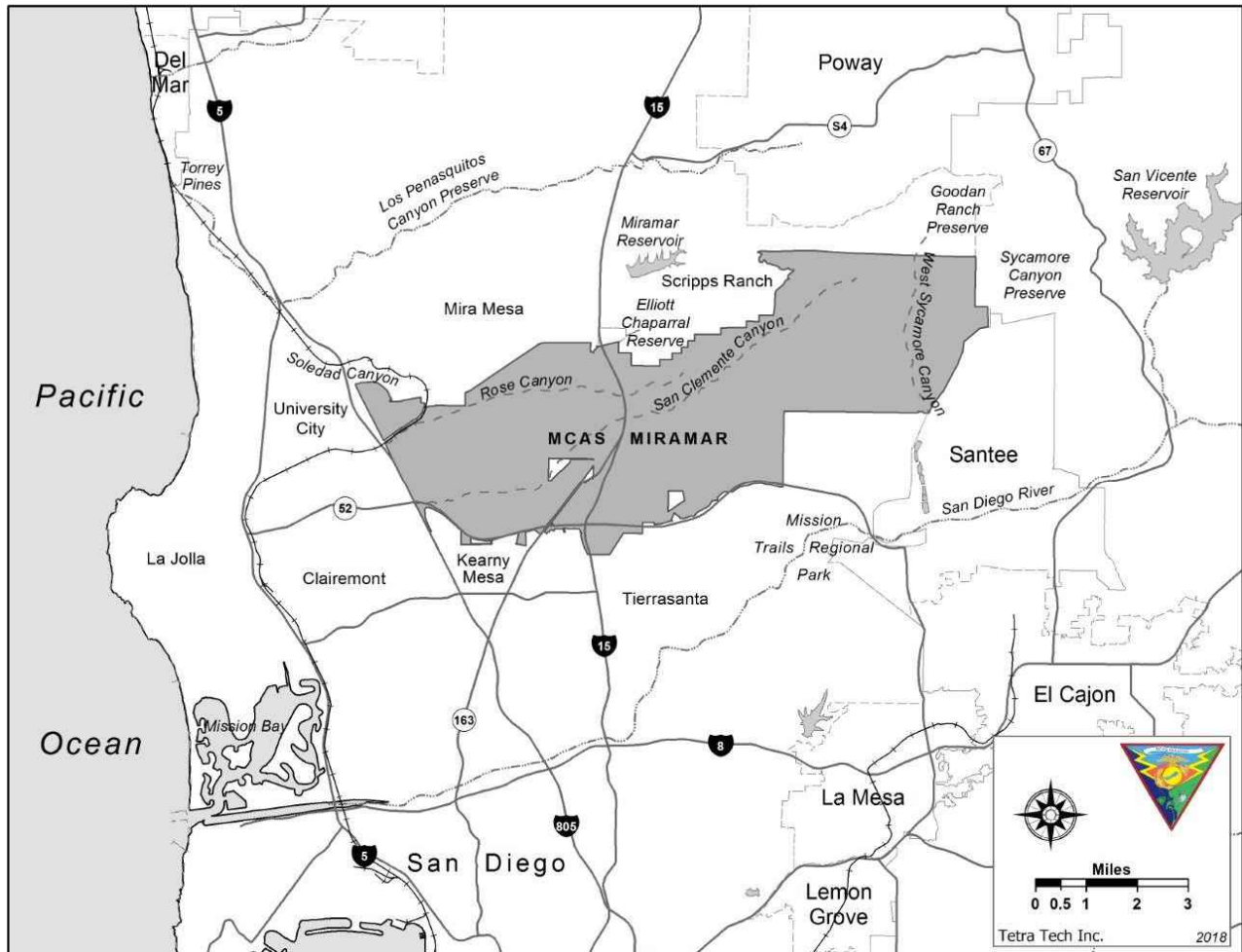


Figure 2.1b. MCAS Miramar and Surrounding Areas



The 2013 Department of Defense Manual for INRMP Implementation, Enclosure 2, requires that the MCAS Miramar INRMP address resource management on “lands occupied by tenants or lessees or being used by others pursuant to a permit, license, right of way, or any other form of permission.”

Developed areas within MCAS Miramar, defined as areas under active management for mission/administrative use, cover about 4,894 acres and include aircraft operation and maintenance facilities, administrative and residential buildings, storage and supply facilities, recreation areas, and civilian outleasings. Facilities at MCAS Miramar include 450 buildings with more than 6,559,543 square feet (151 acres) of building area and other structures and facilities, such as runways, utilities, roadways, and fuel storage. The Station Master Plan (Southwest Division, Naval Facilities Engineering Command, in preparation) defines land-use strategies for MCAS Miramar (*e.g.*, development areas, training areas).

Five military training areas have been designated for field training within the boundaries of the Station (Figure 2.2). In addition, many other facilities provide important military readiness training. During the Base Realignment and Closure (BRAC) process, the Marine Corps indicated that it intended to use training areas consistent with guidelines and procedures established by NAS Miramar (NAS Miramar Instruction 7050.2D). The Marine Corps developed MCAS Miramar Station Order P3500.2, which includes specific instructions for use of these training areas. However, as new mission requirements are identified, ground training areas may be modified.

Undeveloped land makes up the remainder of the area within MCAS Miramar. Most of these lands remain undeveloped to support the military need for encroachment and access control by segregating land-uses that may be incompatible because of noise levels and safety considerations associated with military activities. Undeveloped lands within MCAS Miramar form one of the largest parcels of contiguous natural area in the rapidly developing San Diego area.

2.3 Land-use History

An appendix of the MCAS Miramar Integrated Cultural Resources Management Plan (MCAS Miramar Integrated Cultural Resources Management Plan 2011) has a detailed description of the history of the land comprising MCAS Miramar. A detailed history can also be found on MCAS Miramar’s cultural resources web page. Native Americans were the first recorded users of the area in the vicinity of MCAS Miramar. The area was likely used as an inland hunting and collecting area for coastal tidepool gatherers.

The area then became part of a Spanish land grant owned by Don Santiago Arguello and was grazed. He divided and sold portions of the land grant after the Civil War. During the mid- to late-1800s, the land was grazed and used for non-irrigated agriculture. In the late 1800s and early 1900s, the farming community of Linda Vista was situated in an area east of what is now I-15 and another community, Miramar, was in the vicinity of I-15 at Miramar Road.

During World War I, an Army infantry training center called Camp Kearny was established on the location of present day MCAS Miramar. In 1917 the Army leased about 8,000 acres for Camp Kearny and soon added an adjacent 5,000 acres for training and maneuvering activities. Approximately 30,000 men and 10,000 horses and mules were housed at Camp Kearny by mid-November 1917. An estimated 1,162 buildings were constructed over a five-year period, most of which were demolished when Camp Kearny was closed in 1922. By the time the war ended, the strategic importance of aviation for the military and the Miramar area as an aircraft launching site was secured. Between the two World Wars, the property was operated briefly as a dirigible base and was known as Army Infantry Training Center Camp Kearny.

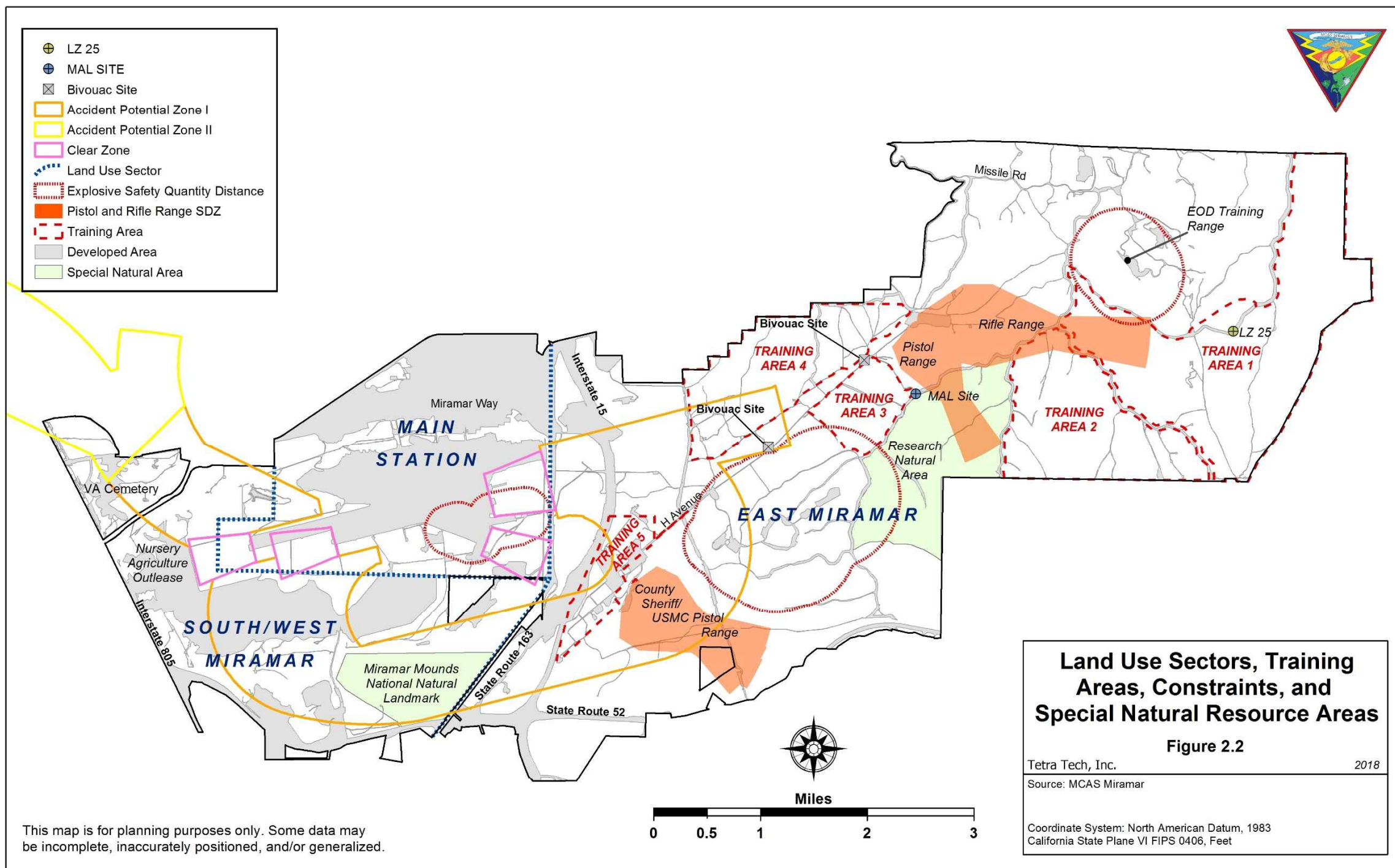


Camp Kearny

San Diego Historical Society

At the start of World War II, the Station was expanded and reorganized into two activities. The southern half became an auxiliary field for NAS North Island, and the northern portion became Marine Corps Air Depot. In 1941, the U.S. Government completed acquisition of nearly 32,000 acres of land east of the Air Depot for a Fleet Marine Force facility, designated Camp Elliott. The Camp was located east of I-15 and included all of present-day East Miramar.

Figure 2.2. Land-use Sectors, Training Areas, Constraints, and Special Natural Resource Areas



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In 1946, the Station was designated MCAS Miramar, until the Marine air units were moved to El Toro in 1947. The Station was re-designated NAS Miramar on 1 April 1952, when it became the Master Jet Station for the Pacific Fleet.

The easternmost portion of present-day MCAS Miramar, referred to in the past as the Sycamore Canyon Annex, was transferred to the U.S. Air Force in 1960 and later to the National Aeronautics and Space Administration for missile testing. In 1977, much of Camp Elliott and the National Aeronautics and Space Administration testing site were transferred back to NAS Miramar.

NAS Miramar remained relatively unchanged until 1993, when MCAS El Toro and MCAS Tustin were selected for closure as a result of the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510) that was accepted by Congress in September 1993 and September 1995. As a result of this selection, Marine Corps units were realigned to NAS Miramar; NAS Miramar officially became MCAS Miramar on 1 October 1997.

2.4 Military Operational Requirements



MV-22, Osprey

*MCAS Miramar
Combat Camera Division*

All Marines must annually satisfy mandatory training requirements designed to ensure that all personnel are prepared for immediate deployment and combat operations. These training operations can be classified as Marine Corps Common Combat Skills Training, vehicle operations, Marine Wing Service Support, and Air Operations Training. This training consists of open area classes, fieldwork (including land navigation and equipment set up), weapons qualifications, and overnight bivouac activities. Of the approximately 23,065 acres that comprise MCAS Miramar, approximately 4,698 acres in five specified training areas, have been designated specifically for ground training operations. Training in East Miramar is performed in compliance with the Range and Training Area Regulations (Station Order 3500.2A). These training areas are utilized for field training operations by ground and aviation units of the Marine Corps, other active duty and reserve components of the DoD, and nonmilitary federal, state, and local law enforcement agencies. There are also two designated bivouac sites, an Explosive Ordnance Disposal (EOD) training range, and two small arms range complexes adjacent to, but outside of, the training areas. Although other undeveloped areas within East Miramar are not presently identified for current ground training, they serve as part of the Marine Corps inventory for

potential future use as training area. Additionally, other developed sites on the Station may also be used to support operational training requirements. Impacts associated with training activities may result from foot traffic, tracked and wheeled motor vehicle operations, combat engineering support operations, temporary encampments, and fixed and rotary wing aviation operations that are conducted during day and night.

Types, frequency, intensity, and duration of training activities vary by location and training requirements. Each of the five dedicated training areas experiences a level of activity and frequency of use that is based on specific training requirements that may require unique physical attributes and/or Station assets in that

area. This results in some areas of the Station experiencing most, if not all of the various activities listed above, while others may experience little or no activity. All Station training activities affect natural resources to some degree, but in many cases, these effects are temporary, of a short duration, and have a low to minimal impact.

2.4.1 Marine Corps Common Combat Skills Training

Basic Marine Corps Common Combat Skills Training is required of every Marine, regardless of his/her military occupational specialty. Battle skills training primarily consists of ground combat training conducted to teach or refresh field skills that include infantry; small arms weapons qualifications; Chemical, Biological, Radiological and Nuclear Defense training; and individual and unit training operations. These activities may vary from small groups (2 -13 Marines) to several hundred Marines participating in patrol and land navigation exercises or in organized marches on established roads. Training may occur within any one or a combination of training areas across the Station. Field training also includes training in offensive and defensive maneuvers, patrolling, land navigation, communications, and other associated field activities for engineering support operations. Most training operations last from several hours up to a full day or more, with some activities being scheduled for up to several weeks with bivouacking/overnight camping. Most activities are conducted either on foot or by vehicle, being limited by established range scheduling, training scenario, scheme of exercise maneuver, slope of terrain, and vegetative cover. The following activities are representative of the scope of ongoing Marine Corps Common Combat Skills Training at MCAS Miramar:

- Chemical, Biological, Radiological and Nuclear Defense training in the practical application of decontamination and/or neutralizing agents on personnel, unit field equipment, the use of the M-40 gas mask with exposure to a CS (tear gas) in a confined gas chamber training facility, protective suits to protect individuals from biological or chemical agents, and first aid measures for individuals exposed to such agents. This training also addresses first aid treatments in a field environment and field sanitation for eating utensils, individual water purification, personnel hygiene, and human waste removal/disposal.
- Land navigation training instruction in the use of standard issue 1:25,000 maps and compass and plotting and practical application in the movement from location to location utilizing maps, compass, and terrain association.
- Instruction in the setup and use of mobile field communications equipment that include radios, telecommunications satellite up and down links, computer equipment, and power generation equipment in a field environment.
- Individual training consisting of instruction and testing of individual personnel in basic conditioning and survival skills, which includes physical fitness, swim qualification, and motor vehicle drivers improvement.

2.4.2 Firing Ranges

All Marines require marksmanship training on established ranges for the firing and handling of the M16A2/A4 or M4 service rifle on a known distance course of fire 25, 200, 300, and 500 yards. Many Marines require training for firing and handling the M9 service pistol on a known distance course of fire 7, 15, and 25 yards. The Navy had established a marksmanship range on the former Camp Elliott. This range did not have a long enough surface danger zone to accommodate the M16A2 rifle.

A state-of-the-art, electronically scored rifle range with 40 firing points was constructed in the north-central portion of East Miramar on the site of the former Green Farms Electric Gun Research and Development Facility. This range uses a Location of Miss and Hit system for scoring. A 25-firing point, pistol range has been added to this complex to replace a pistol range at the former Camp Elliott.



Small Arms Training

An EOD range is located in the east-central portion of East Miramar. This range was constructed on a portion of the former Sycamore Canyon Atlas Missile Facility. This demolition range is used to train EOD personnel and is also used for emergency destruction of hazardous explosive items, including items found on the Station and in the local community.

The San Diego County Sheriff's Department small arms range is also used by the Provost Marshal's Office military police, local law enforcement agencies, and Special Operations personnel.

2.4.3 Vehicle Operations

Typically, selected Marines are trained in the operation of numerous types of vehicles that can include High Mobility Multipurpose Wheeled Vehicles (HMMWVs), 7-ton six-wheel drive trucks, Light Armored Vehicles, and commercial all-terrain vehicles. Vehicle operations include the movement on primary and secondary roads by both individual and convoys of vehicles within designated training areas, as well as on established roadways. Typically, motor vehicle training operations consist of vehicle handling, patrolling, screening maneuvers, counter-mechanized ambush, offensive and defensive combat maneuvers, land navigation, and transport of personnel and equipment to and from training areas.

Primary vehicle training operations are conducted on established roads and jeep trails in designated operations areas during day or night hours and occur as the training scenario dictates. In accordance with Station Range and Training regulations, wheeled vehicle traffic is permitted within all training areas and access roads based on vehicle capabilities and the slope of the terrain in the training area⁴. Station regulations require that all personnel use secondary roads within the training areas to the maximum extent practicable and limit vehicle speed to a maximum of 35 miles per hour on improved roads and 15 miles per hour on unimproved roads and jeep trails.

2.4.4 Marine Wing Support Squadron Operations

Marine Wing Support Squadron training operations are developed and conducted to provide training support for medical services, messing, laundry, command posts, supply, transportation, communications, forward air traffic control, and forward air defense systems. These operations also include engineering support for heavy equipment operations, waste water disposal, bivouac sites, field showers, simulated decontamination operations and potable water production, and battle skills training. Marine Wing Support Squadron units provide transport support for material, units, material-handling equipment, and personnel with wheeled transport vehicles. They also facilitate receipt, storage, and further shipment of material and personnel. Engineering support includes reconnaissance, construction of temporary camps, forward field bases to refuel and rearm vehicles and aircraft (including laying down temporary matting, connecting fuel bladders, and utilizing power generation equipment), and removal of landing obstacles.

⁴Training activities in areas occupied by sensitive plant or animal species are coordinated to provide required protection for these species, as detailed in chapters 5 and 6.

Typically, combat engineers employ bulldozers, graders, backhoes, 5-ton six wheel drive trucks, HMMWVs, bulk refueling equipment, reverse osmosis water purification units, and all-terrain forklifts of varying tonnage to move supplies and equipment within training areas. This equipment can also include road graders, forklifts, loaders, bulldozers, small cranes, and light and heavy trucks. Typically, engineering operations involves training 12-20 Marines in the use of a variety of heavy equipment used for earth moving and logistics operations. Engineering training operations are also conducted station-wide in support of road and drainage system maintenance, minor projects (*e.g.*, Fish Pond restoration), and range grading and maintenance operations.

Marine Wing Support Squadron training is usually restricted to relatively flat areas lacking significant vegetation. Most, if not all of these training sites have been highly disturbed during previous training operations or also serve as fuelbreaks, and no new sites are created due to a lack of time, equipment, and financial resources. There is a need for a dedicated engineer training site that could be heavily disturbed. One site used for some training is behind the former Camp Elliott known-distance rifle range.

2.4.5 Aviation Operations

Aviation operations, fixed and rotary wing, occur year-round and consist of training exercises involving landings, takeoff, field carrier landing practice, ordnance loading/unloading, and the transport of personnel or material. This training is either flight operations of fixed-wing or rotary-wing aircraft or aircraft rescue/fire fighting training operations.

All fixed-wing aircraft confine take off and landing operations to runways at the Station. Rotary-wing flight operations are conducted over all training areas of Miramar. Takeoffs and landings are conducted from established landing zones, confined area landing sites, and any other location not specifically prohibited to aircraft. Local rotary wing flight operations are typically conducted 100 to 200 feet above ground level, depending on the training scenario and the numbers of aircraft. Training in rotary-wing aircraft also includes the following:



CH 53 lifting HMMWV

- external load practice, which is the application of lifting, by a helicopter, a load of materials or equipment slung under a helicopter. This also includes slinging a water bucket unit utilized for fire fighting.
- mountainous and/or confined area landings, which includes instruction and training in use of a helicopter landing zone in a mountainous area or one with limited clearance obstacles in close proximity to the landing zone.
- shipboard landing practice on a simulated landing helicopter dock ship deck next to the heavy lift pad located just south of Runway 6R/24L.
- flight operations using light intensifying equipment (night vision) while flying a helicopter in night or low-light situations.

Typically aircraft rescue/firefighting training operations include:

- removing aircrew members from a downed or crashed aircraft,
- extinguishing fires associated with aircraft at an airfield or in remote locations,

- the use of rescue equipment,
- use and operation of firefighting and rescue vehicles, and
- emergency first aid for injured aircrew members.

These training operations are generally conducted in close proximity to the existing runways. Aircraft rescue/fire fighting training uses a burn pit located south of the runways to simulate burning aircraft and/or fuel.

Eight squadrons of the MV-22 Osprey replaced CH-46 helicopter squadrons at MCAS Miramar. This action required the construction of an in-line fueling facility for helicopters and Ospreys at MCAS Miramar, which added developed land.

MCAS Miramar has been made a site for stationing the Joint Strike Fighter F-35 aircraft. This action will replace F/A-18A/C/D Hornets at MCAS Miramar over the next decade with the first F-35 aircraft scheduled to arrive in January 2020.

2.5 MCAS Miramar Military Land-use

2.5.1 Operational Military Uses of MCAS Miramar

MCAS Miramar can be divided into three general geographic and functional sectors: 1) Main Station, 2) South/West Miramar, and 3) East Miramar (Figure 2.2). Marine Corps land-use needs and requirements within each of these areas are described in this section.

Main Station

The Main Station is largely developed and contains facilities that support primary military functions of MCAS Miramar. Military land-uses include the airfield and aircraft operation areas and maintenance, supply, community support, recreation, and residential facilities.



South/West Miramar

South/West Miramar includes the area west of Kearny Villa Road and south and west of the Main Station. There are several non-military and non-operational developments in the area, but currently there are few operational uses. Constraints to land-use in this area include the airfield clear zone, accident potential zones, noise zones, horizontal planes and transitional surfaces, areas of electromagnetic interference, and large concentrations of vernal pool habitat.

East Miramar

East Miramar is located east of Kearny Villa Road (Figure 2.2). Primary military land-uses in this area include field training, ordnance storage and assembly, small arms ranges, and warehousing. Land-use constraints in this area include accident potential zones, noise zones, small arms and EOD range surface danger zones, areas of electromagnetic interference, and Explosive Safety Quantity Distance arcs that surround ordnance magazines.

Five training areas in East Miramar total about 5,000 acres: Training Area 1 (2,132 acres), Training Area 2 (1,021 acres), Training Area 3 (304 acres), Training Area 4 (928 acres), and Training Area 5 (298 acres). Two bivouac sites are outside of, but adjacent to, Training Areas 3 and 4. Encompassed within or adjacent to Training Area 5 is an inactive rifle range. Adjacent to Training Area 5 are the San Diego County Sheriff's

Department small arms range and range operation center, and three military small arms ranges.

Other facilities include firing ranges and explosive ordnance training facilities, Mountainous Area Landing sites (Training Areas 1 and 3); a Confined Area Landing/External Load site (Training Area 1); and a Chemical, Biological, Radiological and Nuclear Defense training site (Training Area 5).

2.5.2 Non-operational Military Uses of MCAS Miramar

Non-operational military uses are land-uses that indirectly support primary military functions of MCAS Miramar. Non-operational uses include housing, community support, and recreation. Most are within the Main Station, although some non-operational uses occur or are proposed in more remote locations of the Station. Non-operational military land-uses associated with the Marine Corps Community Service (MCCS) Department facilities include a recreational vehicle storage lot, a recreational fishing pond, and a golf course. An outdoor adventure park is being considered by MCCS for an area previously occupied by the horse stables between I-15 and Kearny Villa Road at Miramar Way.

The Department of the Navy planned to develop military family housing in an area of south-central East Miramar north of State Route 52. The availability of affordable housing to military personnel and their families in proximity to San Diego area military installations is important to quality of life and retention of personnel. Environmental planning was completed in December 2008. However, more recent changes in force structure and the local housing market have reduced the need for additional military housing, and for now, this large housing project is not needed. It is possible that areas of MCAS Miramar may once again be considered for military housing in the future.

The nursery agriculture outlease is located on the western edge of MCAS Miramar at the Governor Drive off-ramp to I-805. Due to the unique nature of agricultural outleases, they are considered in this document as non-operational military land-uses because receipts from lease payments provide significant funding that supports implementation of this INRMP. Outlease contracts may not exceed 10 years, and all proceeds beyond lease management costs may only be expended for natural resource management, including implementation of planned actions in this INRMP. The nursery agriculture outlease was executed in 2012 and will remain in effect until July 2022.

2.6 MCAS Miramar Non-military Land-use

This section describes existing, planned or proposed civilian or other agency land-use developments that have been identified within or immediately adjacent to MCAS Miramar (Figure 2.6).

Non-military land-use of MCAS Miramar occurs primarily as a result of private inholdings, lease and land-use agreements, and easements, as shown in Figure 2.6. Non-military use of the Station is subject to constraints of military activities supporting the overriding military mission and environmental considerations. Primary constraints include areas managed for resource conservation and areas affected by accident potential zones, areas of high noise exposure levels, surface danger zones, and Explosive Safety Quantity Distance arcs. Due to the relatively small or linear nature of leases and easements on MCAS Miramar, natural resource management is executed on all Station property based on the resources present with minimal, or no, modification due to associated boundaries. Station personnel work in coordination with applicable tenants, as necessary, to assure natural resource management access and encourage their efforts toward furthering the goals of this plan.

As surrounding areas have become more urbanized, there has been increasing demand from the public to access MCAS Miramar for recreational purposes. Select locations of the Station are accessible to the public; however, military constraints limit the amount of land available for recreation. Public access for recreation also must be limited due to 1) military operational and security needs; 2) safety hazards such as explosive

safety distances, firing range surface danger zones, and aircraft operation compatible use/clear zones; 3) staffing limitations; and 4) resources conservation needs. Recreational access to undeveloped areas is extremely limited to a few activities individually approved by the Commanding Officer and managed by Marine Corps Community Services (e.g., Miramar Fish Pond). Occasional natural resource-related field tours are also conducted on MCAS Miramar. Non-military land-uses not related to recreation or natural resources are described below.

San Diego Gas & Electric (SDG&E) Facilities and Maintenance Activities

Numerous SDG&E facilities are located on MCAS Miramar (Figure 2.6). These include:

- a substation in the northern portion of East Miramar;
- 14 electricity transmission lines, 4 gas transmission lines, and a communications line; and
- multiple overhead 12 kV electric distribution lines, located primarily west of I-15.

Additionally, on November 24, 2015, SDG&E submitted a Tier 1 Application for installation of a 36-inch natural gas pipeline that would tie into an existing 20-inch natural gas pipeline that crosses East Miramar. The application is pending and project planning and development is ongoing.

Construction activities associated with SDG&E facilities may include new overhead electric transmission, distribution, and communications lines within existing easements and/or licenses, natural gas transmission, natural gas distribution, and/or communications line in existing easements and/or licenses (access provided by existing roads).

Regular access, reconstruction, repair, replacement, maintenance, and emergency maintenance activities associated with SDG&E facilities include maintenance of electric distribution, electric transmission, and gas transmission corridors. These facilities consist of power and other poles and/or above-ground facilities associated with underground pipelines located in the easement and/or license. These facilities and access routes must be regularly cleaned and maintained and in emergencies repaired. This may require some brush clearing and grading. SDG&E biologists regularly coordinate maintenance and repair projects with the Miramar Natural Resources Division using a Pre-Activity Survey Report (PSR) developed for resource agency coordination. The PSRs are shared via e-mail or ftp site uploads, and Miramar staff reviews them providing resource information and comments on conservation.

There are instances when SDG&E may perform activities requiring excavation that could affect sensitive habitat. SDG&E performs these activities in conformance with guidelines and procedures of the company's Habitat Conservation Plan and Subregional Natural Community Conservation Plan. When permanent or temporary loss of habitat occurs, these impacted areas are re-vegetated or mitigated off-Station, in accordance with these plans and coordination with the Station and, as applicable, the CDFW and USFWS.

South/West Miramar

The area south of Main Station and west of I-15 receives most of the non-military use on MCAS Miramar.

City Landfills

The City of San Diego has been operating sanitary landfills on MCAS Miramar property since 1952. These non-hazardous, Title 14 landfills were developed in four phases. South Landfill was started in 1952 and completed in 1979. North Landfill was started under separate permit in 1979 and completed in 1985. North Landfill is now being managed and monitored as an inactive landfill. West Landfill began under an extension of the state permit for the North Miramar Landfill and is broken into Phase I and Phase II. These active landfill areas are expected to provide capacity through the year 2022. Although the inactive landfill surfaces may provide some wildlife habitat value, they are considered developed facilities as long as

monitoring and maintenance requirements remain in effect. Monitoring is required by state law for a minimum of 30 years after closure.

The Miramar Landfill General Development Plan calls for incorporation of several landfill-related projects into the existing landfill area. Phase II of this plan was a programmatic environmental impact statement completed in 1996. The principal project is the Northern Sludge Processing Facility and associated pipeline, which processes sludge from the North City Water Reclamation Project and Point Loma Sewage Treatment Facility. Other operations related to the existing landfill include a 1) cogeneration facility, which generates heat and electricity from sewer gas and landfill gas; 2) household hazardous waste recycling facility; 3) greens recycling facility, which generates mulch; 4) materials recycling facility, which will handle those parts of the waste stream that are recyclable; and 5) a revegetation nursery.

Santa Fe Pacific Pipeline Bulk Fuel Storage Tank Facility

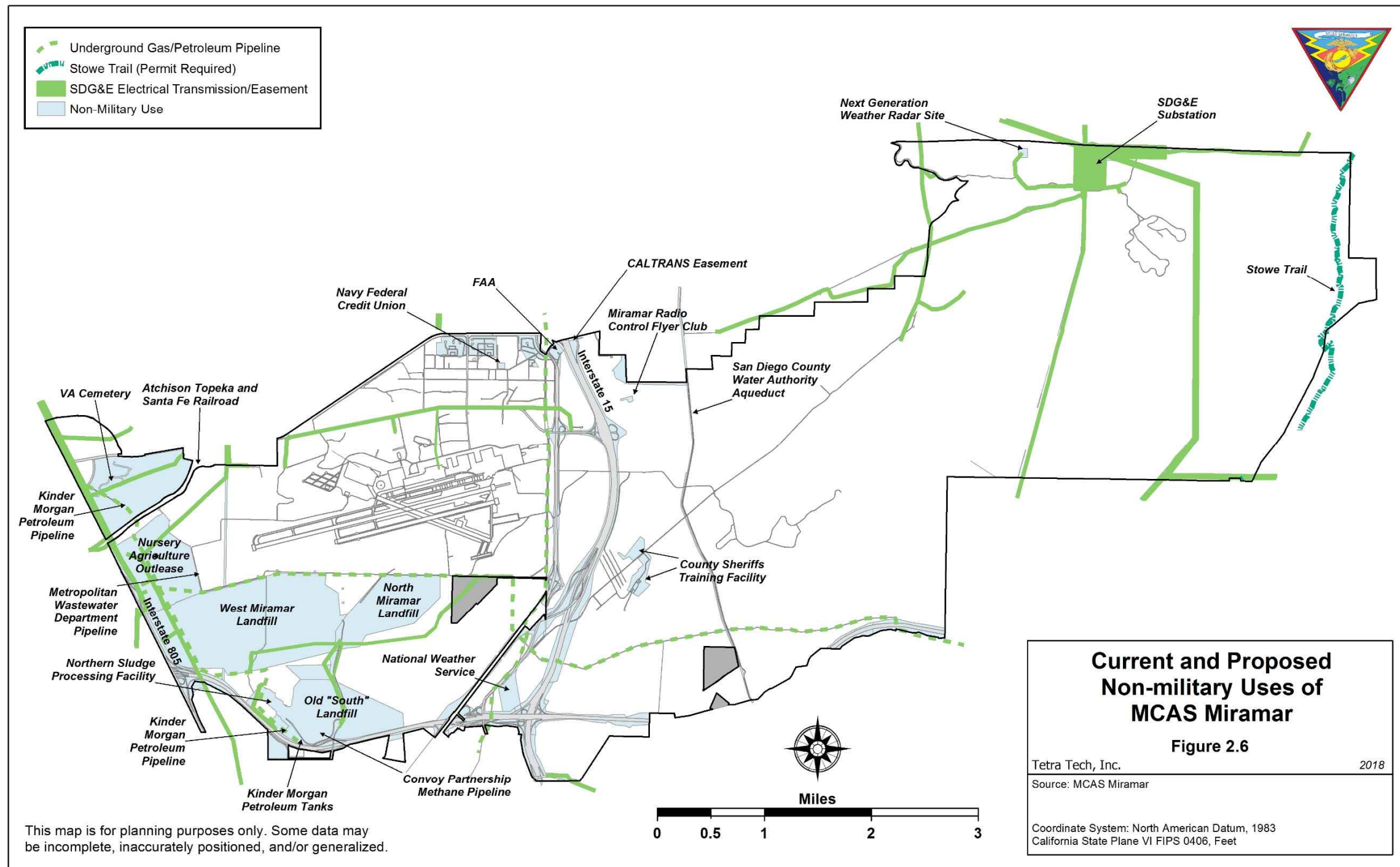
Santa Fe Pacific Pipeline Partners, L.P., an operating company of Kinder Morgan Energy Partners, L.P. operates a bulk fuel storage facility on about six acres of MCAS Miramar along their pipeline and immediately north of State Route (SR) 52 in South Miramar. This facility provides an important fuel transfer capability between the Santa Fe Pacific Pipeline and Navy fuel transport pipelines that flow to Naval Base Point Loma and MCAS Miramar.

Kinder Morgan also maintains two pipelines passing north-south along the west side of MCAS Miramar, an active 16-inch diameter refined petroleum pipeline and an inactive 10-inch pipeline. In accordance with federal regulations, Kinder Morgan performs routine monitoring and maintenance of these pipelines, including visual inspections, periodic internal inspections, and potential anomaly digs and/or repair work as needed.

Hanson Aggregates, Harris Plant

A 76-acre private inholding, located south of the Main Station, is within the boundaries of MCAS Miramar. Extraction activities at the site have ceased, and the company now imports aggregate for the production of asphalt and concrete products.

Figure 2.6. Current and Proposed Non-military Uses of MCAS Miramar



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Reclaimed Water Program Facilities and Pipeline

The City of San Diego operates a sewage treatment program and is recycling water in a secondary treatment system as part of the reclaimed water program. The North City Water Reclamation Facility, adjacent to the northwestern border of MCAS Miramar which, in conjunction with the Northern Sludge Processing Facility, is generating usable (not potable) water from sewage. The Northern Sludge Processing Facility is in the southwest portion of MCAS Miramar. Pipelines run north-south between these facilities through West Miramar. One main distribution line runs east along Miramar Road, past the golf course and housing, and then north along Black Mountain Road. The Public Utilities Department is distributing the reclaimed water, some of which is being used on MCAS Miramar for the golf course and landscaping on Main Station. Pending permitting, a Wet Weather In-Stream Discharge capability has been proposed which would release treated water into the San Clemente Canyon watershed during the wet season when reclaimed water from the recycling plant is not needed for irrigation. Coordination with state and federal wildlife agencies has been completed and MCAS Miramar will work with the City to implement the measures that resulted from the coordination. The City has proposed to monitor the willowy monardella populations in addition to the surveys being done by MCAS Miramar.

Veterans Administration Cemetery

About 214 acres of a 323-acre parcel in the northwestern portion of West Miramar is being developed into a Veterans Administration Cemetery under a land-use agreement (N6247308RP00049) between the Department of the Navy and the Department of Veteran Affairs (VA). The VA is responsible for operation and phased construction of the cemetery consistent with the Environmental Impact Statement (EIS). A ground-breaking ceremony was held on January 30, 2010.

The cemetery will be managed to conserve adjacent natural resources to the greatest extent possible. A Natural Resources Management Plan was prepared for management of this property, consistent with and under the overall guidance provided by this INRMP. About 109 acres of the parcel occupied by the cemetery will remain undeveloped, including areas with most of the vernal pools.

East Miramar

Located within East Miramar are the San Diego County Sheriff's Department working dog training area and small arms range, National Weather Service facilities, SDG&E substation and transmission lines, and three San Diego County Water Authority aqueducts.

San Diego County Sheriff's Department Small Arms Range

The San Diego County Sheriff's Department small arms range is a 92-acre facility within Training Area 5 in old Camp Elliott. County, state, federal, and local law enforcement agencies and military personnel use this site to conduct role-play scenarios and live-fire training exercises, as well as practice rescue training techniques. Associated with the facility is a dog-training facility, an urban disaster training facility, an obstacle course, firearms ranges, a mock town (known as Duffy's Town), and administrative buildings. The tactical training site known as Duffy's Town provides a location for realistic training scenarios, including routine patrol procedures, tactical entry into buildings, and live-fire exercises.

National Weather Service Station

The National Weather Service has a weather station in the northern portion of East Miramar. The site includes facilities that support the Next Generation Weather Radar, which analyzes storm clouds and assists in predicting tornadoes and violent thunderstorms.

San Diego County Water Authority Aqueduct

The San Diego County Water Authority (SDCWA) possesses a 78-acre easement that is about 130 feet wide running north and south through East Miramar. This easement contains one 97-inch, one 84-inch, and

one 69-inch diameter water transmission pipelines and associated surface structures (air vents at high points and blow-offs at low points) along the pipeline that require frequent inspection and periodic maintenance. Most of the easement is overlain by Aqueduct Road, which serves as access to SDCWA facilities, as well as a fuelbreak/fire road (NS-4) for the Station.

Regular maintenance activities include weekly patrol and inspection of facilities and access roads and periodic pipeline draining for internal inspections. Access road maintenance to retain existing road width includes repairs and improvements to culverts, road grading, and placement of gravel. Periodic pipeline draining and internal inspections involve discharging water from the pipeline from blow-offs into natural drainages in a manner that minimizes erosion and downstream sedimentation. Less frequently, operations may include repair/replacement of buried pipelines, internal pipeline relining, conduits, and surface structures within the existing easement.

There are some instances where construction and maintenance activities could affect federally listed threatened and endangered species. A Section 7, Endangered Species Act, Biological Opinion (1-6-93-F-28), which was issued to the Navy on July 19, 1993, during easement document modification, contemplated potential impacts to the threatened California gnatcatcher from aqueduct installation and operation. The SDCWA completed a Section 10, Endangered Species Act, Habitat Conservation Plan through the USFWS to cover effects of its activities on threatened and endangered species throughout San Diego County, including those on MCAS Miramar. The plan was approved by USFWS and CDFW in December 2011.

Special Natural Areas

Special natural areas within the boundaries of MCAS Miramar include Miramar Mounds National Natural Landmark and the Research Natural Area.

The Miramar Mounds National Natural Landmark is located on the southern boundary of MCAS Miramar (Figure 2.2). It was designated by NAS Miramar as a natural landmark overlay with the National Park Service in 1972 but remains Station property. The landmark contains approximately 400 acres of vernal pool habitat basin and associated mima mound topography. This area is believed to represent the largest and best example of vernal pool habitat with mima mound topography that remains in coastal Southern California. The Station also focuses some of its vernal pool habitat restoration and mitigation needs in this area. Conservation of this area also maintains compatible land-use with aircraft accident potential zones and preventing encroachment of incompatible land-uses.

The 991-acre Research Natural Area (RNA) contains undisturbed ceanothus chaparral, chamise chaparral, sage and sagebrush, buckwheat scrub, and grassland/herbaceous vegetation communities (Tetra Tech 2014). The RNA was designated by the Navy in 1987 (about 2,000 acres then) to assist in conserving these relatively undisturbed vegetation types to provide educational opportunities and research areas for scientists to study the ecology, successional trends, and other aspects of the natural environment. The RNA designation was viewed as a buffer zone against encroaching development on the Station's southern boundary. There were no listed threatened or endangered species in the RNA at the time of its designation. The current RNA area supports few regionally rare natural resources and no listed threatened or endangered species. Very little ecological research has been conducted in the RNA because on-site vegetation types are relatively common within the region.

Management of the RNA is similar among various federal agencies designating RNAs with the objective of protecting the educational and scientific values. The underlying emphasis in RNA management involves controlling disruptive use, encroachment, and development. Activities such as logging, grazing, and burning are generally prohibited, and many low-impact uses are also discouraged. Managing agencies do not encourage public or recreational use, and as such, the five ground training areas in East Miramar do not

overlap the RNA. Should lands of the RNA be needed for military purposes, the designation may be removed through a formal decision-making process, such as a NEPA document. In 2004, with completion of an EIS for Military Family Housing in the San Diego Region (Record of Decision, August 12, 2004), 1,009 acres of the original RNA were withdrawn for planned use as military family housing.

The Marine Corps evaluates land-use designations based on operational and other mission requirements. The RNA cannot be considered a permanent preserve due to the DoD's requirement to maintain flexibility to adapt the defense mission to political and technological developments. Portions of installations that contain natural resources that warrant special conservation efforts may be designated as special natural areas, where such conservation is consistent with the military mission. However, such areas shall be reassessed if mission requirements change or if the property becomes excess and requires disposal. The INRMP addresses special management provisions necessary for the conservation of each area. (DoD Instruction 4715.03 Enclosure 3, paragraph 9).

2.7 Adjacent Land-use

Land-use in the vicinity of MCAS Miramar is primarily open space, industrial, commercial, office, and residential. Industrial, commercial, and office land surround West Miramar. San Diego County has jurisdiction over unincorporated lands east of East Miramar. Also abutting MCAS Miramar are areas within the Multi-Habitat Planning Area (MHPA), as designated by the MSCP (Figure 5.3). The MHPA is the area within which the permanent MSCP preserve will be assembled and managed for its biological resources. The MHPA includes the majority of undeveloped public lands (excluding military lands) in the MSCP study area.

Communities in the vicinity of MCAS Miramar include Scripps Ranch, Mira Mesa, University City, Clairemont, Kearny Mesa, Tierrasanta, and the City of Santee (Figure 2.1b). Scripps Ranch is along the northern boundary of the Station east of I-15. Land-uses in the western portion of the Scripps Ranch community are primarily industrial, commercial, educational, and residential, while land-use in the eastern portion is primarily residential. Mira Mesa is directly north of Main Station; land-uses are primarily industrial and residential, with some areas of undeveloped land. University City is due west of MCAS Miramar. Land-use in University City is diverse, with the University of California San Diego, commercial, industrial, and medical centers making up the majority of the northern portion of the city and residential, recreation, and open space areas located in the southern part of the community.

Clairemont is to the southwest of MCAS Miramar; predominant land-uses include residential, industrial, commercial, and areas of undeveloped land. Kearny Mesa is south of MCAS Miramar; primary land-uses include industrial and commercial development. Tierrasanta is a residential community south of MCAS Miramar. The City of Santee is to the southeast; predominant land-use is residential, although some large sections remain undeveloped adjacent to the Station.

Other specific land-uses adjacent to MCAS Miramar include the Goodan Ranch-Sycamore Canyon Preserve, Mission Trails Regional Park, Santee Lakes Regional Park, Marian Bear Memorial Park, Alliant International University, and the Sycamore Canyon Landfill.

Goodan Ranch-Sycamore Canyon Open Space Preserve, owned jointly by San Diego County, the Cities of Poway and Santee, and CDFW, lies immediately east of MCAS Miramar. Formerly a large ranch, this 2,272 acre preserve primarily consists of undeveloped recreational facilities and open space. This preserve includes the 325 acre historic Goodan Ranch. The 4-mile segment of Stowe Trail on MCAS Miramar, which provides permitted access for recreational use, terminates on the north end of the Station at the Goodan Ranch-Sycamore Canyon Open Space Preserve. The Goodan Ranch-Sycamore Canyon Open Space Preserve has an existing network of formalized non-motorized, multi-use trails.

Mission Trails Regional Park is operated and maintained by the City of San Diego and, with approximately 8,000 acres, is one of the largest urban parks in the country preserving natural habitat. The park attempts to be a major information resource of Native American and natural history in the region, preserve habitats of plants and animals native to San Diego, and provide appropriate recreational opportunities. An update of the park's Master Plan was initiated by the City of San Diego in 2010. In 2013, a draft of the Master Plan Update was completed and made available to the public. The acreage of the park will potentially increase to approximately 9,700 acres with the acquisition of additional property within East Elliott. Final transfer of property within West Sycamore has been completed. These two expansion areas share common boundaries with MCAS Miramar. For both expansion areas, multiple length trail loops will be a key planning concept to discourage continued recreational trespass into MCAS Miramar. Connection of the East Elliott area to the Goodan Ranch-Sycamore Canyon Open Space Preserve and West Sycamore Area of the Mission Trails Regional Park for non-motorized trail users via the Stowe Trail on the Station has been approved via a permitting process by MCAS Miramar. The Stowe trail is the only authorized trail through MCAS Miramar.

Santee Lakes Regional Park is owned and operated by the Padre Dam Municipal Water District. The approximately 200-acre site was designed as part of an innovative water reclamation system used for irrigation and recreational purposes. This park contains a campground and recreational fishing ponds.

Marian Bear Memorial Park lies to the west of the Air Station. It is a 467-acre natural park owned by the City of San Diego, which is managed and maintained to preserve the wildlife and habitat native to San Clemente Canyon.

Alliant International University is located north of the Station, adjacent to and southwest of Scripps Ranch. The University is located on about 160 acres and has about 1,700 students.

The **Sycamore Canyon Landfill**, privately operated, is located immediately south of East Miramar. The landfill occupies 354 acres of a 491-acre facility.

Fanita Ranch, a 2,640-acre property east of MCAS Miramar has been proposed for a mixed-use development, primarily residential units. If developed, there will be an extensive on-site biological preserve associated with the Fanita Ranch Project. This preserve will be directly adjacent to MCAS Miramar; the Fanita Ranch Project has specific features designated to maintain connectivity between the preserve and open spaces on MCAS Miramar. Fanita Ranch is designated for and zoned for Planned Development in the City's General Plan and Zoning Code. In August of 2017, the City received an application for development of the property by the owner, HomeFed Corporation. The current proposal clusters development areas in order to provide a large preserve system that will provide connectivity with open space on MCAS Miramar.

Readiness and Environmental Protection Integration (REPI) Project at Lakeside Downs

The REPI program supports partnerships between military Services and conservation groups to acquire easements from willing sellers to preserve compatible land uses and sustain wildlife habitat near military installations. REPI at MCAS Miramar is focused on relieving natural resource-related restrictions in ground training areas and ranges because of listed species and encroachment by incompatible development. Federally listed species within training areas restrict access and use of lands to established roads and occupied areas during the breeding season. Development up to some boundaries constrains military training and increases wildland fire management needs and risks. The USFWS has encouraged the use of offsite conservation to offset impacts to listed species on MCAS Miramar.

The desired state for MCAS Miramar is to be able to conduct necessary field training and wildland fire management in at least 4,700 acres of undeveloped land. The first land that was acquired to accomplish this goal is the Lakeside Downs property, which is 2.3 miles east of MCAS Miramar. The conservation of this land (409 acres) would reduce restrictions on MCAS Miramar's most used training ground area. The property has high quality and regionally rare coastal sage scrub habitat and is occupied by the federally threatened California gnatcatcher and federally proposed Hermes copper butterfly. Preservation of this habitat type complements the regional MSCP plans. Without the initiative of MCAS Miramar to partner for a conservation acquisition of Lakeside Downs, no focused effort would have begun to preserve this property and its regionally valuable resources. Half of the property would likely have been developed into residential housing, and MCAS Miramar would lose this opportunity for off-installation crediting.

The primary partner for the project is Endangered Habitats Conservancy, a California non-profit land trust corporation that facilitated the acquisition of the property and owns and manages the conserved land in perpetuity. DoD funding has been matched by the Endangered Habitats Conservancy through a grant from the San Diego Association of Governments (SANDAG). The Department of Navy purchased a conservation easement for the property, and is working on an agreement to provide long-term natural resource management funds. MCAS Miramar will realize Endangered Species Recovery Credits, easing seasonal restrictions in the most desirable and used field training area on the station.

Other Adjacent Lands

The Fiscal Year 2001 National Defense Authorization Act authorized the transfer of the MCAS Miramar area south of SR 52 (*i.e.*, Parcel "G", refer to Figure 2.5.1) to the USFWS for inclusion in the San Diego National Wildlife Refuge, Vernal Pools Stewardship Project. Long-term mitigation planning is an important consideration if this transfer is completed. USFWS involvement would be used to develop an agreement regarding mitigation credit for the transfer. That mitigation credit from permanent preservation would be used to help offset unavoidable impacts to other areas on MCAS Miramar for exclusive use by the Marine Corps. Concerns regarding the potential presence of munitions of explosive concern at the site have delayed all progress related to transfer of the parcel.

Parcels of land located immediately adjacent to MCAS Miramar with undetermined futures include parcels owned by California Department of Transportation (CalTrans) and the San Diego Unified School District. CalTrans owns a 12.6-acre parcel of land north of SR 52 and east of I-15. The north, west, and east sides of the parcel are directly adjacent to MCAS Miramar. The southern portion of the parcel connects to SR 52. Actions that may affect CalTrans Right of Way requires coordination, especially when sensitive resources are involved, prior to undertaking any proposed action. Ultimate use of this parcel has not been determined. The San Diego Unified School District owns a 58.5-acre parcel of undeveloped land surrounded on all four sides by MCAS Miramar. This parcel is north of SR 52 and east of I-15.

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