
5.5 HAZARDS

ENVIRONMENTAL SETTING

Certain natural conditions and human activities in Moreno Valley create risks to individuals and properties within the community. Hazards of potential concern in the planning area include hazardous materials, flooding, fires, and air crash potential near the joint civilian and military use March Air Reserve Base. Seismic and other geologic hazards are addressed in *Section 5.6, Geology/Soils* of this EIR.

Hazardous Materials

Hazardous materials are used in Moreno Valley for a variety of purposes including maintenance and operations at March Air Reserve Base, manufacturing, service industries, various small businesses, agriculture, medical uses, schools, and households. Accidents can occur in the production, use, transport and disposal of these hazardous materials. The probability of accidental spills is accentuated by the fact that the region is susceptible to earthquakes.

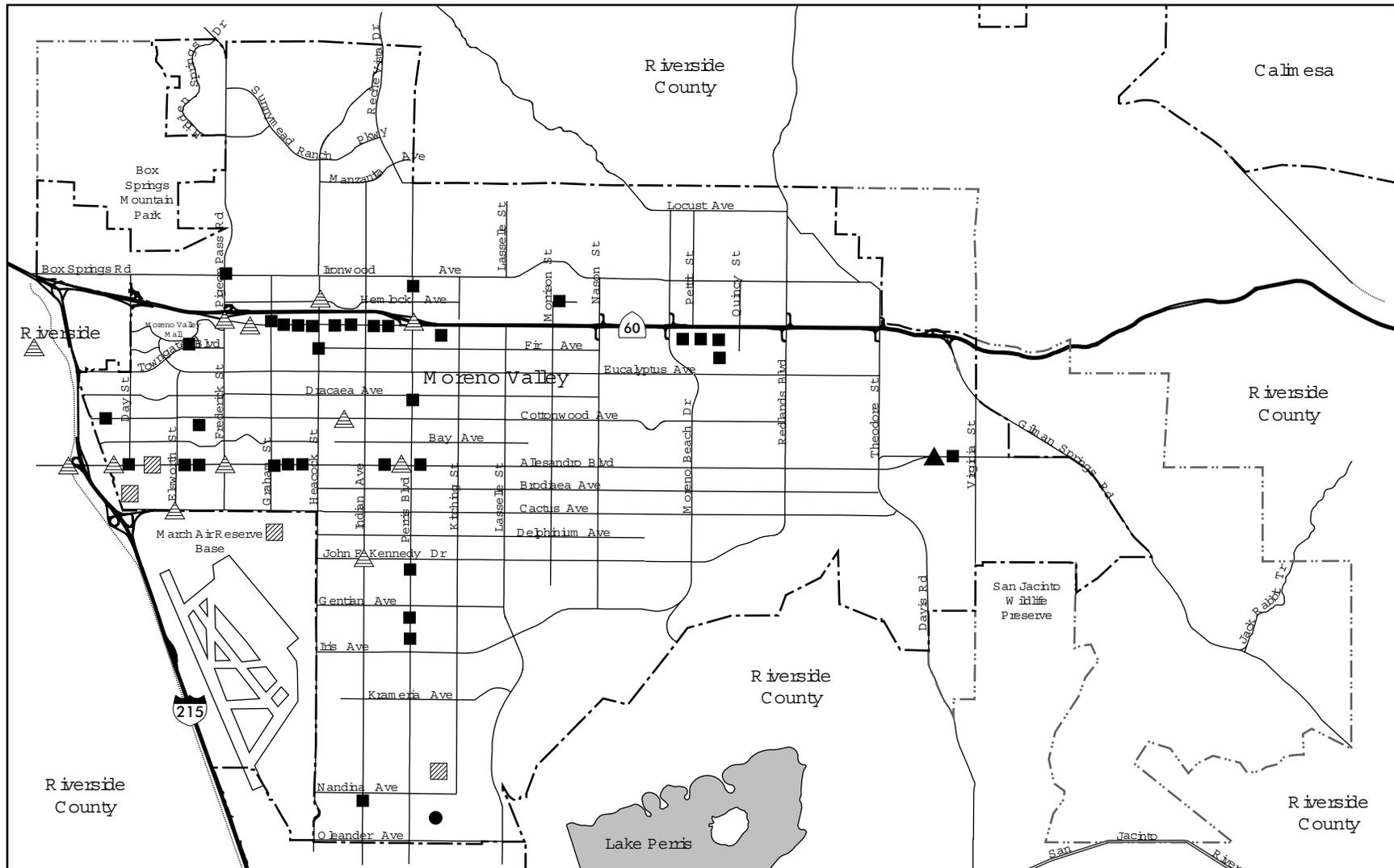
Hazardous Materials Handlers/Generators

Many chemicals used in household cleaning, construction, dry cleaning, film processing, landscaping, and automotive maintenance and repair are considered hazardous. There are more than 40 businesses that handle/generate hazardous waste within the City of Moreno Valley that is monitored by the U.S. Environmental Protection Agency (EPA). Small quantity hazardous waste generators include facilities such as automotive repair, dry cleaners, and medical offices. **Figure 5.5-1** depicts the location of these EPA registered sites.

Riverside County Area Plan

The County of Riverside, Health Services Agency, Department of Environmental Health, Hazardous Materials Division (DEH) established the Area Plan based on requirements of Chapter 6.95 of the California Health and Safety Code, Title 19 of the California Code of Regulations and the U.S. Environmental Protection Agency Superfund Amendments and Reauthorization Act (SARA) Title III for emergency response to a release or threatened release of a hazardous material within the County. The Hazardous Materials Program and Response Plan contained in the Area Plan serves the majority of the cities in Riverside County, including Moreno Valley.

As part of the Area Plan, the Federal Risk Management Plan (RMP), as incorporated and modified by the State of California Accidental Release Prevention (CalARP) Program, is designed to prevent harm to people and the surrounding environment by the use of various organized systems to identify and manage hazards. The goal of the CalARP



Source: U.S. EPA (Envirofacts) and State Water Resource Control Board (LUSTS)

Note: Locations of hazards are approximate.

 City Boundary
  Sphere of Influence

 Leaking Underground Storage Tanks

 Multiple Hazards (includes hazardous waste handlers, toxic releases, and air releases)

 Air Toxic Releases

 Hazardous Waste Handlers

 Toxic Releases

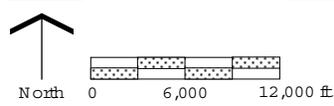


Figure 5.5-1
Hazardous Materials Sites

program is to make all facilities that handle regulated substances free of catastrophic incidents

Any stationary source (business) that exceeds the threshold quantities of regulated substances shall submit a RMP under the CalARP Program. A Business Emergency Plan (BEP) must be submitted by all businesses that handle hazardous materials over a designated threshold quantity. Upon completion of a BEP, the BEP is submitted to Moreno Valley's local Certified Unified Program Agency (CUPA). The CUPA with responsibility for the City of Moreno Valley is the County of Riverside Health Department, Environmental Health Division. A BEP contains vital information that may be utilized to minimize the effects and extent of a threatened release of hazardous materials. In addition, this information allows emergency response personnel to determine potential risks and hazards while developing a strategy for handling an emergency involving hazardous materials. Annually submitted RMPs are currently reviewed by the County Environmental Health Division.

If a hazardous materials emergency occurred within the City of Moreno Valley, the first response would be the Moreno Valley Fire Department and from the California Department of Forestry (CDF)/Riverside County Fire Department Hazardous Materials Response Team (HMERT). The HMERT, is stationed at the Beaumont CDF Station 20.

Leaking Underground Storage Tanks

According to the State Water Resources Control Board's (SWRCB) Leaking Underground Storage Tank (LUST) database (LUSTIS, 1999), 27 leaking underground storage tanks have been identified within the planning area. The majority of these tanks have leaked gasoline, and the remaining have leaked diesel and/or waste oil. Of the 27 reported cases, 15 cases have been assessed, remediated and closed. Twelve leaking underground storage tank cases remain open and are currently being assessed. **Figure 5.5-1** depicts the approximate location of the leaking underground storage tank cases currently being assessed.

Transportation of Hazardous Materials

Hazardous materials pass through the City via the freeway, rail and surface street system. Interstate 215 (I-215) is near the City's western boundary. The nearest railway is the Burlington Northern and Santa Fe railway which runs parallel to I-215. While train derailment can occur at anytime, it is during an earthquake that a derailment and hazardous materials release would pose the greatest risk. The major automotive transportation routes through the City include Interstate 60, Alessandro Boulevard, Perris Boulevard, and Cactus Avenue.

The City has no direct authority to regulate the transport of hazardous materials on State highways or rail lines. Transportation of hazardous materials by truck and rail is regulated by the U.S. Department of Transportation (DOT). DOT regulations establish criteria for safe handling procedures. Federal safety standards are also included in the California Administrative Code. The California Health Services Department regulates the haulers of hazardous waste.

Moreno Valley General Plan

In the proposed General Plan Safety Element, Objective 6.10 and its associated Policies promote safe handling of hazardous materials within the planning area.

Flooding

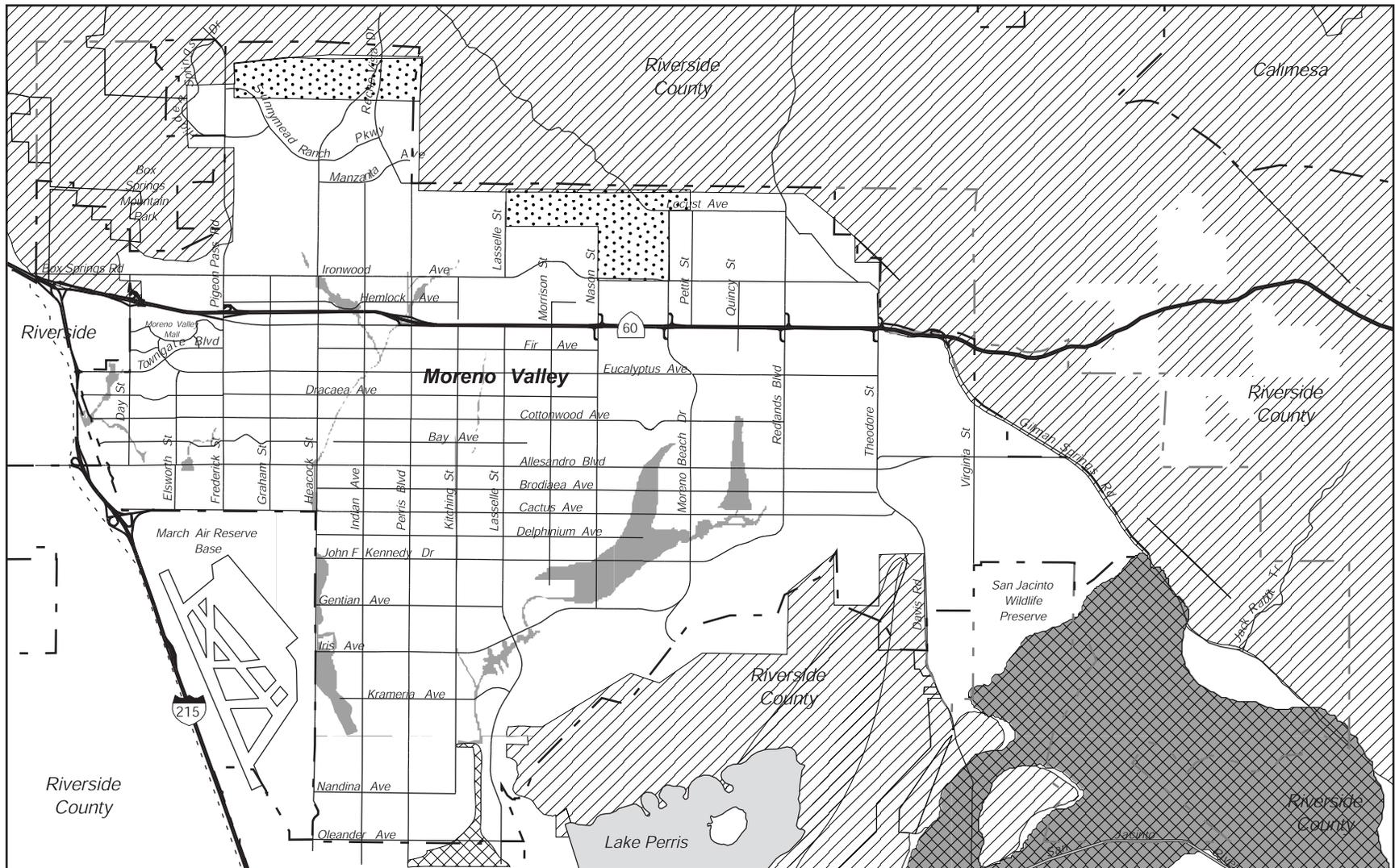
The Riverside County Flood Control and Water Conservation District has responsibility for planning and construction of regional flood control facilities. The City retains the responsibility for designing, construction, and maintenance of local drainage facilities.

Four types of flooding conditions could occur in Moreno Valley: flooding in defined watercourses; ponding; sheet flow; and dam inundation flooding. Flood levels within defined watercourses vary along many of the drainage ways and floodplains. Ponding occurs when water flow is obstructed due to manmade obstacles. Within the planning area, these obstructions include the embankments of State Route 60 and other roadways crossing defined watercourses. Sheet flows occur when capacities of existing drainage channels are exceeded and water flow diverts from its originally defined path over a generally broad and undefined area. As depicted in **Figure 5.5-2**, portions of the City are also subject to potential dam inundation due to failure of the Pigeon Pass Dam and Lake Perris Dam. The potential for significant damage to occur within the planning area as a result of failure of Lake Perris Dam is considered remote. The flood potential due to failure of Pigeon Pass Dam is even more remote because it does not retain water throughout the year.

The City of Moreno Valley is required by Section 8589.5 of the California Government Code to have in place emergency procedures for the evacuation and control of populated areas within the limits of inundation below dams. In addition, real estate disclosure upon sale or transfer of property in the inundation area is required under AB 1195 Chapter 65 passed on June 9, 1998.

Figure 5.5-2 depicts the flood prone areas within the City as mapped by the County of Riverside and the Federal Emergency Management Agency (FEMA). This figure depicts the inundation areas for a 100-year flood; a flood of this size has a one percent chance of occurring in a given year.

An extensive flood prone area exists along the Quincy Channel between Cottonwood Avenue and Cactus Avenue. An extensive floodplain also extends along Oliver Street from a point north of Alessandro Boulevard and extending in a southwesterly direction as far as the northeast corner of Morrison Street and Filaree Avenue and the northeast corner of Nason Street and Iris Avenue. Another extensive flood prone area exists east of Heacock Street and Lateral A of the Perris Valley Channel next to March Air Reserve Base.



Source: Merkel Associates, 2002

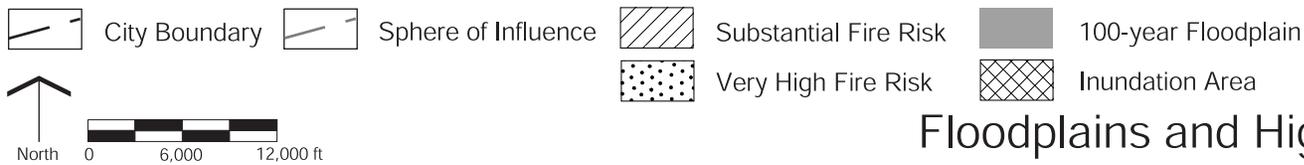


Figure 5.5-2
Floodplains and High Fire Hazard Areas

A portion of the floodplain of the San Jacinto River covers a wide area in the southeast corner of the planning area. There is a depression in that area that contains the ephemeral Mystic Lake.

Dam inundation is a potential, albeit remote, flood hazard through several portions of the planning area. This condition is based on the assumption of instantaneous failure of a dam with the reservoir at or near its full capacity. Two locations of concern exist within the planning area: Poorman Reservoir (Pigeon Pass Reservoir) and Lake Perris. Failure of the dam at Poorman Reservoir could result in extensive flooding along the downstream watercourse. The risk of flooding due to dam failure is limited to the period during and immediately after major storms. The reservoir does not retain water throughout the year. Failure of the dam at Lake Perris would only affect a very small area south of Nandina Avenue along the Perris Valley Storm Drain and the Mystic Lake area in the southeast corner of the planning area.

Master Drainage Plans

The Riverside County Flood Control and Water Conservation District (RCFCWCD) has prepared Master Drainage Plans for watershed areas in western Riverside County generally at the request of cities or in unincorporated areas where drainage infrastructure is necessary for existing or planned development. These documents analyze drainage flows and make recommendations for improvements. When fully implemented, MDP facilities will provide adequate drainage outlets and will relieve those areas within the MDP boundaries of the most serious flooding problems.

A flood control system has been constructed within much of Moreno Valley to direct runoff from developed areas and prevent flooding. Flood control deficiencies have been identified and improvements have been proposed in the Master Drainage Plans (West End, Sunnymead Area, Perris Valley and the Moreno Valley Master Drainage Plan). A master drainage plan has not been adopted for the area generally located east of Theodore Street.

Moreno Valley General Plan

The proposed General Plan Safety Element, Objective 6.2 and its associated policies seek to reduce the potential for flooding.

Existing Practices

Moreno Valley participates in the National Flood Insurance Program (NFIP), which is administered by the FEMA. The NFIP program provides federal flood insurance and federally financed loans for property owners in flood prone areas. To qualify for federal flood insurance, the City must identify flood hazard areas and implement a system of protective controls. In addition, all development is required to comply with RCFCWCD requirements for construction of master drainage plan facilities.

Wildland and Urban Fires

The City of Moreno Valley is subject to both wildland and urban fires. The natural vegetation in the area is highly prone to fire. As depicted in **Figure 5.5-2**, a portion of the northern and eastern portions of the City and the planning area is within a High Fire Hazard Area. This could create a potential public safety hazard for residents in the event of a wildland fire. The urbanized portions of the City are subject to structural fires.

Moreno Valley General Plan

In the proposed General Plan Safety Element, Objectives 6.13 through 6.16 and their associated policies promote wildland and urban fire prevention.

Emergency Preparedness

Local Emergency Operations Plans are intended to help local jurisdictions respond to emergency situations with a coordinated system of emergency service providers and facilities. Moreno Valley is currently in the process of revising its Emergency Operations Plan (Multi-Hazard Functional Plan, November 14, 1995). The plan identifies resources available for emergency response and establishes coordinated action plans for specific emergency situations including earthquake, fire, major rail and roadway accidents, flooding, hazardous materials incidents, terrorism and civil disturbances.

The City of Moreno Valley uses the Standardized Emergency Management System (SEMS) when responding to emergencies. The system was established to provide an organized systematic approach in responding to disaster events. The system includes the following phases: preparedness, response, recovery, and mitigation.

The preparedness phase involves activities undertaken in advance of an emergency or disaster. Emphasis is on planning, training, disaster drills and public education and awareness programs.

Moreno Valley places a high priority on public disaster education. Citizens are provided a range of emergency management training, including Federal Emergency Management Agency (FEMA) Community Emergency Response Team (CERT) training, emergency preparedness workshops, disaster presentations at schools, CPR, first aid training, HAM radio classes and terrorism awareness training.

As of 2003, several emergency volunteer teams were in operation. The Emergency Response Force (ERF) and the Community Emergency Response Team (CERT) are volunteers who are trained to assist during times of emergency. The Moreno Valley Radio Amateur Civil Emergency Services (RACES) is a volunteer team of HAM Radio Operators who are trained to provide back up emergency communications.

The response phase includes increased readiness, initial response and extended response activities. During an extended response, the City would generally activate its Emergency

Operations Center (EOC). The EOC would normally be manned 24-hours a day by both public safety and other City personnel to coordinate emergency response activities. As of 2002, the EOC was located at City Hall and the alternate EOC was in the Public Safety Building.

Recovery activities involve restoration of services and returning the affected area to pre-emergency conditions as soon as practical. Recovery activities could range from restoring water and power to providing information to the public regarding state and federal disaster assistance programs.

Mitigation efforts occur both before and after emergencies or disasters. Mitigation includes eliminating or reducing the likelihood of future emergencies.

Moreno Valley General Plan

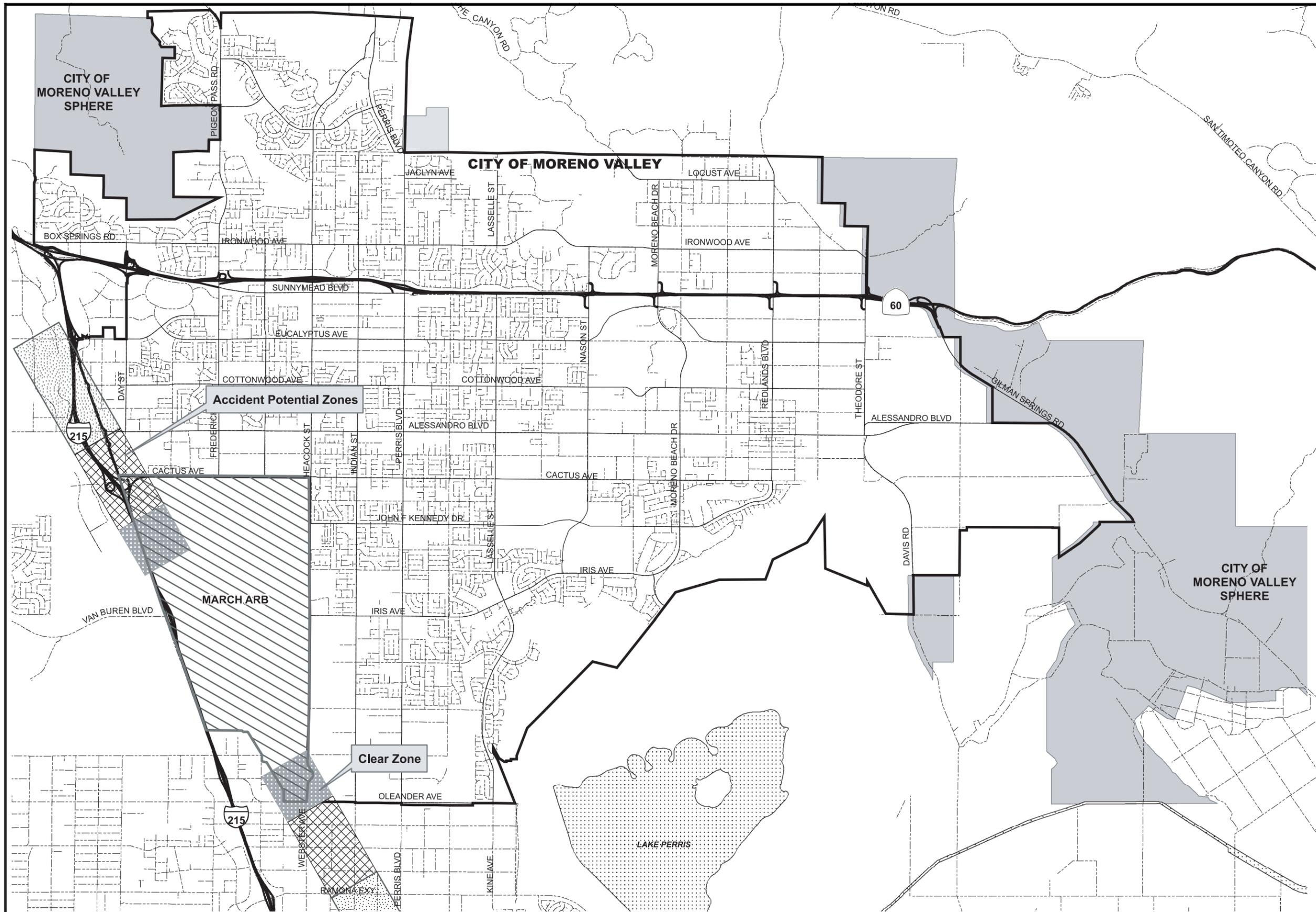
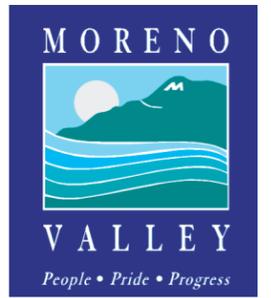
In the proposed General Plan Safety Element, Objectives 6.11 and 6.12, and their associated Policies serve to promote emergency preparedness within the planning area.

Aircraft Hazards

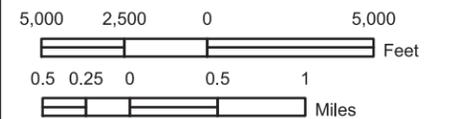
The airfield southwest of Moreno Valley is a joint-use airport, operated by the March Air Reserve Base and the March Inland Port Airport Authority. Air operations present some risk for air crashes. To promote compatible land use in areas around Air Force Installations, which are subject to aircraft noise and accident hazards, the Air Force developed the Air Installation Compatible Use Zone (AICUZ) program. The program is intended to provide information concerning aircraft accident hazards to communities surrounding Air Force installations and to prevent incompatible development in areas affected by aircraft operations.

Air crash hazards and land use compatibility associated with the airfield at March were analyzed in the Air Installation Compatibility Use Zone report prepared by the Air Force in 1998. The report mapped areas of relative potential for crashes into various categories: areas on or adjacent to the runway; areas within the clear zone; Accident Potential Zone (APZ) I; and Accident Potential Zone (APZ) II. The flight operations present a potential, albeit minor, risk for air crashes. As shown in **Figure 5.5-3**, the risk is greatest immediately under the takeoff and landing zone located at either end of the runway(s).

The area on or adjacent to the runway is within the boundaries of the joint-use airport and is outside of the planning area. The accident potential within the clear zone, which extends 3,000 feet from each end of the runway, is considered to be of such high risk that few uses are acceptable. A small area at the extreme southwest corner of the City is within the clear zone.



- Streets
- Major Streets
- Highways
- March ARB
- Accident Potential Zone I
- Accident Potential Zone II
- Clear Zone
- Moreno Valley
- Moreno Valley Sphere
- Waterbodies



Date: March 27, 2006
 State Plane NAD83 Zone 6
 File: G:\arcmap\planning\gen_plan_updates\air_crash.mxd
 *Air Accident Zone data provided by MARB

GEOGRAPHIC INFORMATION SYSTEMS

The information shown on this map was compiled from the Riverside County GIS and the City of Moreno Valley GIS. The land base and facility information on this map is for display purposes only and should not be relied upon without independent verification as to its accuracy. Riverside County and City of Moreno Valley will not be held responsible for any claims, losses or damages resulting from the use of this map.



Figure 5.5-3
City Areas Affected by Aircraft Hazard Zones

The accident potential within APZ I and APZ II is considered to be significant enough to warrant special attention.

The basic criteria for APZ I and APZ II land use guidelines is the prevention of uses that:

- have high residential density characteristics;
- are labor intensive;
- promote concentrations or extended duration of concentration of people, in particular, of people who are unable to respond to emergency situations such as children, elderly, handicapped;
- involve utilities and services required for the area to which disruption would have a significant adverse impact (e.g. electrical substations, telephone switching stations, etc.); or pose hazards to aircraft operations.

Precise maps of the air crash hazard areas (safety zones) in the vicinity of March were prepared to reflect the actual flight pattern for departures. Departing aircraft turn to the west shortly after takeoff. The resulting air crash hazard areas slant to the west of the accident potential zones shown in the 1998 AICUZ Report.

Tall structures are also an issue in the vicinity of airports. Federal Aviation Regulations (FAR) Part 77 recommends that local jurisdictions institute height controls to limit tall structures that might present hazards to aircraft operations. Part 77 defines the navigable airspace around airports to help local jurisdictions determine if a proposed tall structure might interfere with air operations.

General Plan

Policy 6.16.4 of the Safety Element calls for land use limitations within air crash hazard areas in accordance with the AICUZ program.

Existing Regulations

Existing city zoning regulations limit development within the air crash hazard areas in accordance with the AICUZ program.

THRESHOLD FOR DETERMINING SIGNIFICANCE

For the purposes of this EIR, a significant impact would occur if implementation of General Plan Alternatives 1, 2, or 3 would:

- *Create a hazard to the public and environment involving the production, use or transport of hazardous wastes and materials;*
- *Place housing or structures within a 100-year flood hazard area exposing people and structures to flooding hazards;*

- *Expose people or structures to a significant risk of loss, injury or death involving wildfires;*
- *Impair implementation of an adopted emergency response plan or emergency evacuation plan; or*
- *Expose substantial numbers of people to significant risk of loss, injury or death involving air crashes.*

ENVIRONMENTAL IMPACT

General Plan Land Use Alternatives 1, 2 and 3

Hazardous Materials

Hazardous Materials Generators and Leaking Underground Storage Tanks

Implementation of any of the three proposed General Plan Land Use Alternatives will result in the development of new residential, commercial, and industrial uses. As a result more hazardous materials will be used within the planning area. The hazardous materials used and stored within the planning area are likely to be common materials associated with uses such as gasoline stations, automotive repair shops, commercial uses, and industrial uses.

The General Plan Safety Element objectives, policies and implementation programs including implementation and/or compliance with the Riverside County Area Plan address the proper use, storage, collection and disposal of hazardous materials. Continued implementation of these policies and implementation programs will avoid any significant hazardous materials impact, and no mitigation is required.

Future development under any of the three proposed General Plan Alternatives could lead to an increase in the number of Underground Storage Tanks (USTs) in Moreno Valley and thus, potentially more Leaking Underground Storage Tanks (LUSTs). The Regional Water Quality Control Board (RWQCB) issues permits to operate underground storage tanks. The RWQCB is also responsible for monitoring the USTs and responding to requests to assess and remediate leaking tanks. Future commercial and industrial land uses that propose to install USTs will have to comply with all RWQCB policies. Based on continued oversight by the RWQCB for installation and operation of USTs, no significant impact is anticipated.

Transportation of Hazardous Materials

Under any of the three proposed General Plan Land Use Alternatives, more hazardous materials will be transported through the City on major roads and on the railway (adjacent to I-215). Due to the anticipated increase in generation and transport of hazardous materials within and adjacent to the City, the probability of accidents and

environmental contamination will increase. The transport of hazardous materials by truck and rail is regulated by the U.S. Department of Transportation (DOT). Regulation by the DOT will avoid any significant impact associated with the transportation of hazardous materials.

General Plan Land Use Alternative 2 will allow more business park/industrial development which may involve the use of more hazardous materials than Land Use Alternatives 1 or 3; however, the increase in hazards/hazardous materials in the City under Land Use Alternative 2 will not be significantly greater than under Land Use Alternatives 1 or 3.

Implementation of any of the three General Plan Land Use Alternatives will not result in a significant impact associated with the generation, use, transport or disposal of hazardous materials.

Flooding

The three proposed General Plan Land Use Alternatives designate land in the planning area for various types of land uses. Open Space and Flood Plain designations are applied to some land within the 100-year flood zones, particularly in the southeastern portion of the planning area. These designations only allow natural open space, parks, and recreational facilities, prohibiting residential structures. As a result no permanent population will exist in those portions of the flood zone. However, areas within the 100-year flood zone are designated for other uses, including residential, commercial and industrial uses. The development of additional residential and business-related uses in those areas must comply with existing programs aimed to reduce flooding hazards. These programs include: 1) participation in the National Flood Insurance Program; 2) coordination with the RCFCWCD to ensure maintenance of flood control channels and completion of necessary repairs to RCFCWCD-owned facilities on an as-needed basis; and 3) maintenance of emergency procedures in accordance with Section 8589.5 of the California Government Code. The City will continue to implement these programs as described in the General Plan Safety Element.

Implementation of the City's existing floodplain management programs and the policies contained in the General Plan Safety Element will avoid any significant flooding impacts. No mitigation is required. No significant flooding impact would occur under any of the three proposed General Plan Land Use Alternatives.

Wildland and Urban Fires

Implementation of any of the General Plan Land Use Alternatives will result in new development and the expansion adjacent to the high wildland fire hazard area, thereby resulting in a greater potential for wildland and urban fires. The existing practices and General Plan objectives, policies and programs will serve to avoid any significant wildland and urban fire impact, and no mitigation is required. No significant wildland or urban fire impact will occur as a result of implementing any of the three proposed General Plan Land Use Alternatives. Under Land Use Alternative 3, less residential development would be allowed in the northeastern portion of the City which would

subject less people to impacts associated with wildland fires; although the number of people that would be affected under Land Use Alternatives 1 and 2 is not significantly greater than Land Use Alternative 3. Therefore, the potential impacts associated with wildland fires are essentially the same regardless of which proposed General Plan Land Use Alternative is implemented.

Emergency Preparedness

Implementation of any of the three General Plan Alternatives will not impair implementation of or interfere with the existing or proposed emergency operations plan. The General Plan will not result in a significant impact to the City's adopted Emergency Operations Plan and no mitigation is required.

Aircraft Hazards

The establishment of tall structures around airports and inappropriate uses in areas subject to air crash hazards could substantially increase the risk for loss of lives and property. As such, land use restrictions are needed in these areas in the interest of public safety. Such restrictions are also needed to ensure the long-term viability of the airport.

Existing zoning regulations and proposed General Plan policies prohibit incompatible development in areas most susceptible to air crashes. None of the proposed General Plan Alternatives propose to develop incompatible land uses within the APZs. Therefore, no significant aircraft hazard is associated with any of the three proposed Alternatives. This issue is not considered a significant impact.

MITIGATION MEASURES

No mitigation measure is identified as no significant hazard or hazardous materials impact has been identified.

IMPACT AFTER MITIGATION

Not significant

NOTES AND REFERENCES

1. United States Environmental Protection Agency Website.
2. State of California Water Resources Control Board Website.
3. United States Air Force, March Air Reserve Base. *Air Installation Compatible Use Zone (AICUZ) Study*. 1998.
4. Riverside County Flood Control and Water Conservation District. *Master Plan for the Sunnymead Area*. October 1978.

5. Riverside County Flood Control and Water Conservation District. *Master Drainage Plan for the City of Moreno Valley West End*. April 1991.
6. Riverside County Flood Control and Water Conservation District. *Moreno Master Drainage Plan*. April 1999.
7. Riverside County, Department of Environmental Health. *Area Plan–Hazardous Material Management and Emergency Response*. January 2000.
8. CH2MHILL Study, April 2001.

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