

---

## 5.7 - Hazards and Hazardous Materials

---

### 5.7.1 - Introduction

This section addresses the potential for various hazards to health and safety to exist on the site thereby exposing new population to those hazards, or alternately that construction of the project would create hazards. This section was prepared using the following document which is included as Appendix E, Geology/Hazards:

- Revised Phase I Environmental Site Assessment-2,000 Acre Proposed Development, Millerton Lake, Madera County, CA. Krazen & Associates, Inc., September 2004.

### Rio Mesa Area Plan and EIR

The RMAP included policies to minimize threats to life and property from wildland fires, and meet mandatory fire protection standards, including circulation standards for emergency vehicle access in open space and rural mountainous areas. The RMAP EIR included mitigation measures to promote fire protection in areas subject to wildland fires. Neither the RMAP or RMAP EIR specifically addressed issues or policies associated with hazardous materials or wastes.

### 5.7.2 - Existing Conditions

#### Hazardous Materials and Waste

The site of the proposed project has been used recently for cattle grazing and chicken raising, and past uses include mining/quarry activity. Aerial photos indicate the site has not been used for agriculture since at least 1950. The site contains structures, evidence of previous structures (foundations, debris, etc.) containers of petroleum products, above ground storage tanks, potential polychlorinated biphenyl (PCB) containing equipment, pits/ponds/lagoons, water wells, and septic systems. Each of these is potentially hazardous materials that, by their nature and properties, have the capacity to cause harm or create a health hazard during normal exposure or an accidental release. They are characterized as toxic, corrosive, flammable, reactive, an irritant, or a strong sensitizer. Hazardous wastes require special handling and disposal because of their potential to damage public health and the environment.

The presence of suspected or known hazardous waste contamination sites within the project site and immediate vicinity was determined through the Phase I Environmental Site Assessment (ESA) performed by Krazen & Associates. This analysis included searching computerized databases of various governmental agency lists, onsite investigations and study of aerial photographs. The State CEQA Guidelines require a lead agency to consult the lists of hazardous waste sites compiled by various state agencies (Cal EPA, the Department of Health Services, the State Water Resources Control Board, and the California Integrated Waste Management Board) pursuant to Governmental Code § 65962.5 (California Public Resources § 21092.6). The database searches included review of all of the required state lists and a search of various federal (U.S. EPA) and local (Madera County Fire Department) hazardous waste site lists.

Activities and operations that use or manage hazardous or potentially hazardous substances could create a hazardous situation if these substances are released. Circumstantial conditions, including the type of substance, quantity used or managed, and the nature of the activities and operations, affect the probability, frequency, and severity of consequences that could result from hazardous materials. The environmental investigations conducted as part of the process included a search of databases documenting sites known to be associated with hazardous or toxic materials. None of the identified sites occur on the subject site. In support of this finding, the extensive excavation activities associated with the geological and geotechnical investigations throughout the subject site revealed no evidence of stained or discolored soils, odiferous soils, or buried containers.

The following environmental issues were discussed within the Phase I ESA for the project site:

- The potential for asbestos in onsite structures built before the early 1970s.
- The potential for lead-based paint on structures that were built before 1978.
- Miscellaneous debris (e.g. trash, 55 gallon drums, paint cans, agriculture-related debris) that had been abandoned on site.
- Pole-mounted transformers that may contain polychlorinated biphenyls (PCBs).
- The potential for onsite septic systems.
- Above ground storage tanks for petroleum and water were noted on the project site.
- The project site was evaluated for the potential presence of radon gas.
- The potential for hazardous wastes, such as petroleum waste.

### **Wildfires**

The danger of damage to land and structure from wildfire is high in California due to a generally dry climate and a preponderance of highly flammable vegetation over much of the state. From 1999 to 2003, wildfires within the jurisdiction of the California Department of Forestry and Fire Protection (CDF) numbered an average of 6,081 per year and burned an average of 217,908 acres per year. The number of structures damaged during that 5-year span averaged about 1,560 per year. Average annual monetary damages are estimated to be about \$275.6 million. In 2003 alone, the damage from wildfires, which burned 527,753 acres within the CDF jurisdiction, was estimated at about \$950 million.

The combination of central California's arid climate, with its winter chill and fog, hot dry summers, and occasional high winds, create optimal conditions for wildfires. The NFV-1 site consists of non-native grasslands and oak woodland habitat. The site supports dense understory vegetation, such as grasses, adjacent to slower and hotter burning fuels, such as trees. Without maintenance, this readily combustible material can be easily ignited and will burn hot and fast, especially during high wind conditions.

Current fire management strategies focus on fire prevention, fire suppression, and fuels management. Fire prevention includes law enforcement, fire closures, measures to ensure safety, or special use activities and programs to educate the public on causes and effects of wildfire (USDA Forest Service 2004).

Parts of the foothill areas with steep-sloping topography are also very hazardous, as fires burn hotter and move faster in these areas. The NFV-1 project site includes areas with steep grassland slopes that represent a potential fire hazard (Exhibit 5.7-1).

### **Electromagnetic Frequency Issues**

Electromagnetic frequencies (EMFs) are part of the larger electromagnetic spectrum. Other components of the spectrum are X-rays, ultraviolet light, visible light, infrared light, microwaves, and radio waves. The electromagnetic spectrum is characterized by the frequency and wavelength of the different bands. The frequency refers to the number of oscillations of a wave in a given amount of time, customarily expressed in hertz (Hz), with one Hz unit equivalent to one cycle per second. Frequency and wavelength are related. As the frequency increases, the wavelength decreases.

Power lines in the United States operate at 60 Hz and have a wavelength of 5,000 kilometers (3,000 miles). In comparison, AM radio has a frequency of about 1 million Hz and a wavelength of 300 meters; microwave ovens have a frequency of 2.5 billion Hz and a wavelength of about 12 centimeters; and X-rays have a frequency of about 1,015 Hz and a wavelength of less than 100 nanometers, or one-billionth of a meter. The electrical fields associated with power transmission are also referred to as extremely low-frequency fields. This name is defined in general use as fields up to 3,000 Hz, although engineers define “extremely low frequency” as ranging from 30 to 300 Hz.

In 1991, the California Public Utilities Commission (CPUC) began an investigation into possible health effects of EMFs. A consensus group comprising citizens, utility representatives, union representatives, and public officials was established to define near-term research objectives and to develop interim procedures to guide electric utilities in educating their customers, reducing EMF levels, and responding to potential health concerns. At the conclusion of the Consensus Group Study, written testimony, and evidentiary hearings, the CPUC issued Decision 93-11-013 in November 1993. The conclusions and findings included the following:

We find that the body of scientific evidence continues to evolve. However, it is recognized that public concern and scientific uncertainty remain regarding the potential health effects of EMF exposure. We do not find it appropriate to adopt any specific numerical standards in association with EMF until we have a firm scientific basis for adopting any particular value.

This continues to be the stance of the CPUC with regard to establishing standards for EMF exposure. Currently, the State has no adopted policies or regulations that establish a safe or unsafe distance for residential structures from power transmission lines.

## Diseases and Disease Vectors

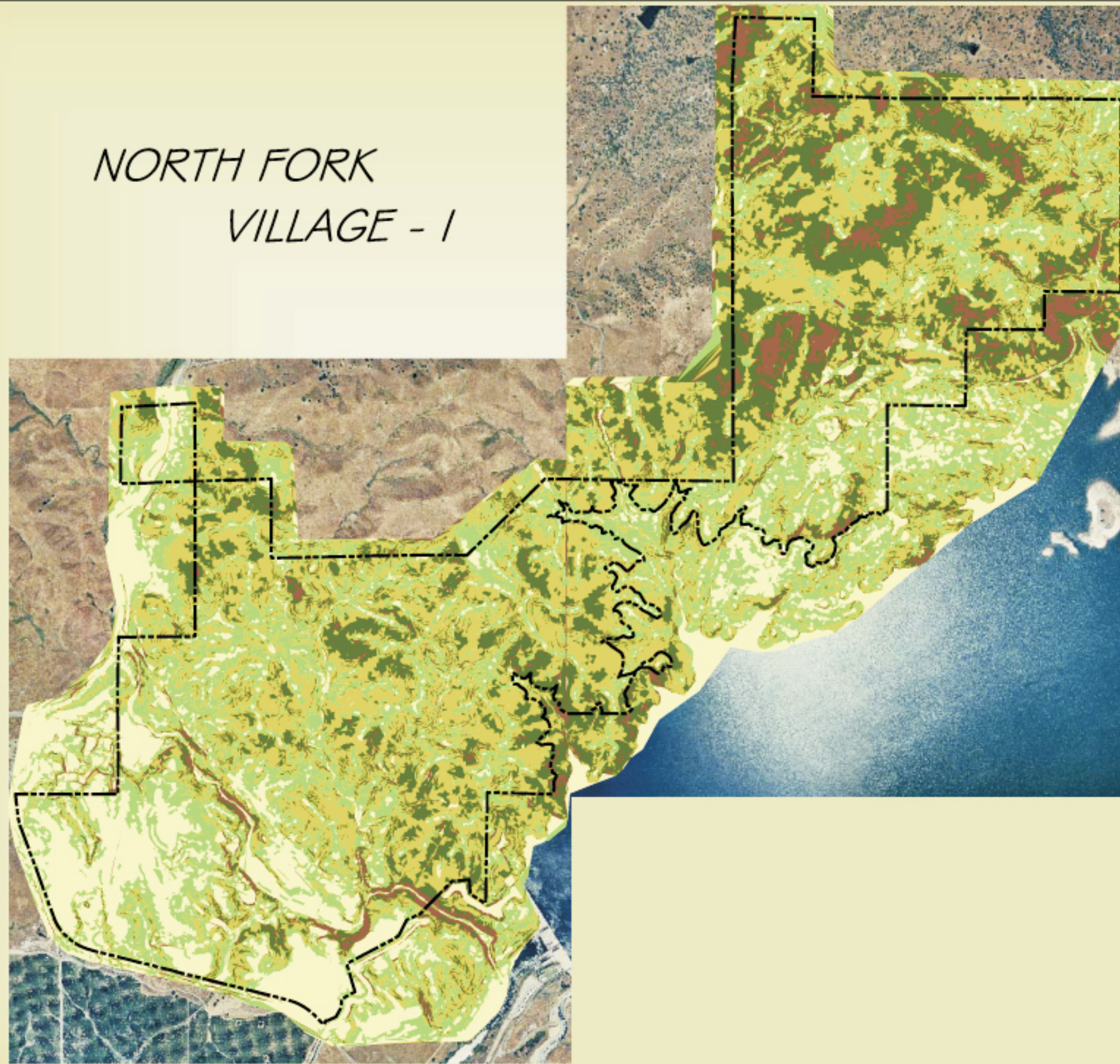
An organism, such as a mosquito or tick that carries disease-causing microorganisms from one host to another is known as a disease vector. Mosquitoes are of particular concern because of their breeding. In particular, the mosquito's water requirement during breeding makes areas with quantities of standing water prolific breeding grounds for mosquitoes. Areas with natural and induced standing water (e.g., highly urban areas where rain and activities such as landscape irrigation create water pools) are susceptible. Although 12 mosquito-borne viruses are known to occur in California, only West Nile virus, western equine encephalomyelitis virus, and St. Louis encephalitis virus are significant causes of human disease in California. Infection in the former and latter tends to be most serious for elderly people, whereas infection by western equine encephalomyelitis is most serious in the very young. Vaccines are not available for public use for any of these viruses. West Nile virus is the best known of these in the public consciousness at present, and is anticipated to have serious impacts upon the health of humans, horses, wild birds, and zoo collections as it spreads and becomes established statewide. Consequently, the California Arbovirus Surveillance Program emphasizes forecasting and monitoring the temporal and spatial activity of the three viruses specifically enumerated above. Mosquito control is the only practical method of protecting people and animals (California Department of Health Services, Mosquito and Vector Control Association of California, and University of California 2004).

**Vector Control District performs vector control in Madera County.** Fungus *Coccidioides immitis* is thought to grow naturally in soil in the southwestern US and in parts of Central and South America. The spores of this fungus are believed to cause a sometimes deadly infection called coccidioidomycosis, more commonly known as Valley Fever. This disease is spread through the air via the spores of the fungus when the soil it inhabits is disturbed and dust is created. The central valley of Southern California had a 4-year epidemic of valley fever in the early 1990s after a severe drought. Cases of Valley Fever also increased in persons exposed to billowing dust released by the January 1994 earthquake in Northridge, California. Valley Fever has not been shown to be passed directly from person to person. There is no current vaccine for this infectious disease and the only known method to reduce cases of Valley Fever is to reduce a person's exposure to dry airborne dust.







## Mine Shafts

There are no existing mineshafts on the project site, although several mineshafts exist near the proposed property site. The state and condition of these mines varies from abandoned and derelict to active. Mines present both physical and chemical dangers. The physical dangers include improper closure of the mineshafts, abandoned equipment in disrepair, asphyxiation due to a lack of oxygen and cave-ins due to aging support structures. Chemical hazards include water contamination due to residual chemicals used in the processing of the ore, explosive materials left behind, buildup of methane gases and chemicals and minerals found naturally in the surrounding geology.

*NORTH FORK  
VILLAGE - 1*



Percent Slope

-  0.00 - 10.00
-  10.00 - 20.00
-  20.00 - 35.00
-  35.00 - 50.00
-  50.00 +
-  Project Boundary

Source: Forma.



Michael Brandman Associates

16330008 • 10/2006 | 5.7-1\_slope.cdr

Exhibit 5.7-1  
Slope Analysis

NORTH FORK VILLAGE-1 SPECIFIC PLAN  
ENVIRONMENTAL IMPACT REPORT



A variety of local, state, and federal laws, regulations, and/or policies pertain to protection of public safety from hazardous materials and waste, wildfire risk, EMF risks, diseases and disease vectors and mineshafts. These are described below, in the Regulatory Setting discussion.

## **Regulatory Setting**

### ***Madera County***

The Madera County Department of Environmental Health regulates and monitors the generation, handling, and disposal of hazardous wastes. It provides permitting, inspection and enforcement of various regulations related to the identification, removal, and disposition of hazardous materials or facilities that may be located on the project site. The Madera County Fire Department provides fire suppression and prevention services including subdivision and building plan checking.

The Rio Mesa Area Plan and accompanying EIR did not address hazards.

## **State of California**

### ***California Division of Forestry***

California Division of Forestry (CDF) is dedicated to the fire protection and stewardship of over 31 million acres of California's privately owned wildlands. In addition, CDF provides varied emergency services in 36 of the state's 58 counties via contracts with local governments. CDF's firefighters, fire engines, and aircraft respond to an average of more than 5,700 wildland fires each year. Those fires burn nearly 170,000 acres annually.

### ***Hazardous Materials and Waste***

The management of hazardous materials and waste within the State of California falls within the jurisdiction of the California Environmental Protection Agency (CalEPA), a subdivision of EPA, and the California Department of Toxic Substances Control (DTSC). DTSC regulates hazardous waste, leans existing contamination, and looks for ways to reduce hazardous waste produced in California. DTSC's authority to regulate hazardous waste in California stems from EPA authorization to carry out the federal Resource Conservation Recovery Act of 1976. Additional authority is given to DTSC by the California Health and Safety Code. DTSC also oversees the implementation of the hazardous waste generator and onsite treatment program, which is one of six environmental programs implemented at the local level within the Certified Unified Program. There are 72 Certified Unified Program Agencies, which are generally part of the local fire department or environmental health department, that have authority to enforce regulations, conduct inspections, administer penalties, and hold hearings (DTSC 2004).

Caltrans, the California Highway Patrol (CHP), and the Madera County Fire Department (MCFD) regulate transportation of hazardous materials. Drivers must have a hazardous materials endorsement to operate a commercial vehicle carrying hazardous materials, including explosives. During the transporting of materials, a route map must be maintained that indicates safe routing and safe stopping places along the route. At a local level, California Fire Code Article 77 states that a permit from the local fire department must be obtained for both the storage and use of explosive materials.

In addition, the responsible party must file a \$100,000 corporate surety bond or have public liability insurance for the same amount. Section 7703 of the California Fire Code describes requirements for use, handling, and transportation of explosive materials. Assembly Bill 2948 (Tanner Bill) established the process by which California counties develop hazardous waste management plans.

### **Federal**

Federal agencies with regulation governing the hazards as described in this EIR section include the Environmental Protection Agency (EPA), US Bureau of Land Management (BLM), Occupational Safety & Health Administration (OSHA), Mine Safety and Health Administration (MSHA), and Center for Disease Control (CDC). All federal regulations must be adopted on the state level, by the corresponding agencies, with as strict a requirements as stated in the federal regulations.

Federal laws regulate the use and management of hazardous or potentially hazardous substances. EPA classifies a material as hazardous if it has one or more of the following properties:

- **Ignitability** - oxidizers, compressed gasses, and extremely flammable liquids and solids;
- **Corrosivity** - strong acids and bases;
- **Reactivity** - explosives or compounds that generate toxic fumes when exposed to air or water;  
or
- **Toxicity** - materials listed by EPA as capable of inducing systematic damage in humans or animals.

### **5.7.3 - Thresholds of Significance**

The CEQA Implementation Document and Madera County Environmental Checklist state that a project would have a significant impact from hazard and hazardous materials if it would:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.54 and, as a result, create a significant hazard to the public or the environment;
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;



- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands;
- i) Generate vectors (flies, mosquitoes, rodents, etc.) or have a component that may create dust and liberate dormant spores. Specifically, would the project exceed the following qualitative threshold:
  - i. The presence of domestic flies, mosquitoes, cockroaches, rodents, and/or any other vectors associated with the project is significant when the applicable enforcement agency determines that any of the vectors:
  - ii. occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; and
  - iii. are associated with design, layout, and management of project operations; and
  - iv. disseminate widely from the property; and
  - v. cause detrimental effects on the public health or well being of the majority of the surrounding population.

#### 5.7.4 - Project Impacts

---

**Impact 5.7-1                      Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (Threshold a.)**

---

In the short term, the proposed project will involve storing limited quantities of petroleum products onsite during construction-related activities. With the mandatory compliance of the County's environmental health regulations, the proposed project will not create a health hazard or use, produce, or dispose of materials that pose a hazard to human, animal, or plant populations within the project area. No impact from the temporary storage of hazardous materials during the construction phase is anticipated.

The proposed project includes the demolition removal of various structures and facilities on the site.

These include a warehouse, an office, storage sheds, pole-mounted electrical transformers, above ground water storage tanks (ASTs), water well apparatus, a ranch house, and possibly septic systems. The demolition and removal of the debris from these structures and facilities could involve the handling of potentially hazardous substances such as lead-based paint, asbestos containing building material (ACBMs) and petroleum products. While no hazardous materials were identified on the site during the Phase 1 ESA, the potential exists for a significant hazard to occur during the demolition,

transport, and disposal of these structures and facilities. Impacts are potentially significant, and mitigation is provided.

The proposed project introduces new land uses within the project area: residential, commercial, and recreation. Hazardous materials commonly associated with residential use include household cleaning and janitorial products, herbicides, insecticides, and solvents. Residential handling and disposal of hazardous materials is regulated at the federal, state, and local levels. *Impacts are less than significant.*

---

**Impact 5.7-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Threshold b.)**

---

Commercial uses that could be developed include large-scale retail commercial uses such as garden supply, furniture warehouses, discount centers, retailers, and other similar uses. Commercial development could also include professional offices, entertainment, dining, hotel, and conference facilities, supporting retail sales, product exhibition, art galleries, financial institutions, restaurants, health clubs, personal services, day-care, and professional offices. Proposed facilities also include recycling centers and a sewage treatment plant. Use and storage of hazardous materials associated with allowed uses will occur as a result of project implementation. In order to minimize risks to life and property, the proposed project will be required to demonstrate compliance with all applicable federal, state and local laws and regulations governing the handling, transport, treatment, generation and storage of hazardous materials. *Impacts would be less than significant.*

The Phase 1 ESA prepared for this project did not uncover the presence of any identified site or observe the presence of potentially hazardous materials. The demolition and removal of structures and facilities containing potentially harmful substances was addressed in the preceding section. The site demonstrates no evidence of hazardous material in the soil or in storage facilities, and no releases of hazardous emissions or substances are anticipated during the grading and construction. *Impacts would be less than significant.*

---

**Impact 5.7-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Threshold c.)**

---

The proposed project includes the development of an elementary school which will be subject to its own CEQA review process. Facilities such as a recycling center or a sewage treatment plant that have the potential to store hazardous materials or create hazardous emissions are not located within ¼ mile of the proposed school site. *Impacts would be less than significant.*

---

**Impact 5.7-4:** Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment. (Threshold d.)

---

According to the Phase I ESA conducted for this site, inquiries were made to all responsible agencies, and no sites included on such a list are located on the project site. *No impacts would occur.*

---

**Impact 5.7-5:** For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area. (Threshold e.)

---

The project site is not located within two miles of a public airport. *No impacts would occur.*

---

**Impact 5.7-6:** For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area. (Threshold f.)

---

The project site is not located within the vicinity of a private airstrip. *No impacts would occur.*

---

**Impact 5.7-7:** Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Threshold g.)

---

The project site is located in an undeveloped area and will have its own dedicated roadways that will not be located between a developed area and an emergency evacuation route. The project provides additional roadways through improvements to existing east-west thoroughfares (i.e. Road 206; Road 145), and a connection to the future extension of Rio Mesa Boulevard. *No impacts to an emergency response or evacuation plans would occur.*

---

**Impact 5.7-8:** Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. (Threshold h.)

---

The project site is located in an undeveloped area with grasslands and woodlands that are susceptible to wildfires. Fire hazard conditions are magnified on the steeper grassland and woodland slopes on the project site (Exhibit 5.7-1). Residential development would be placed adjacent to these areas. *The large open space areas between the developed areas proposed in the NFV-1 Specific Plan present potentially significant impacts related to wildland fires and mitigation is provided.*

---

- 
- Impact 5.7-9:**      **Generate vectors (flies, mosquitoes, rodents, etc.) or have a component that may create dust and liberate dormant spores.**
- i.    The presence of domestic flies, mosquitoes, cockroaches, rodents, and/or any other vectors associated with the project is significant when the applicable enforcement agency determines that any of the vectors:**
  - ii.   occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; and**
  - iii.  are associated with design, layout, and management of project operations; and**
  - iv.   disseminate widely from the property; and**
  - v.    cause detrimental effects on the public health or well being of the majority of the surrounding population.**
- (Threshold i.)**
- 

Grading during construction can generate dust, release vectors, and liberate dormant spores. *Impacts are potentially significant and mitigation is proposed.*

### **5.7.5 - Cumulative Impacts**

Impacts related to exposure of population and structures to the risk of wildland fires will increase as a result of the proposed project in conjunction with other nearby related projects. Mitigation in the form of expanded fire services, water supply, and fuel management will reduce the level of cumulative impacts to less than significant.

### **5.7.6 - Mitigation Measures**

#### **Rio Mesa Area Plan and EIR**

To reduce wildland fire hazards, the RMAP EIR included the following mitigation measures:

1. Fire stations should be located in or adjacent to Community and Village Cores, apart from primary residential uses due to potential noise concerns.
2. Fire stations should be centrally located within the initial response area and adjacent to major arterials to increase access and reduce response time. Fire station locations should allow the fire department to maintain a maximum response time of 7 to 8 minutes. Current levels of service shall be maintained.
3. A Community Service District (CSD) shall ultimately assure adequate fire protection personnel and equipment in phase with Area Plan development.

The NFV-1 Specific Plan implements these measures with a commitment to construct one fire station location in the South Mesa Neighborhood in order to minimize response times. Provision of fire services through facilities district financing or special assessments is anticipated (see Section 5.13.3 Fire Services).

### Additional Project Mitigation Measures

The following measures are added to reduce the significant impacts of the project.

- HHM-1** Prior to the issuance of grading or demolition permits, a site study will be conducted to locate septic systems on the site. Closure and removal of septic systems shall be conducted in accordance with the regulations of the Environmental Health Department of Madera County and the State Department Toxics Substance Control.
- HHM-2** A site study will be conducted of the structures and facilities on the site to test for the presence of lead based paints, asbestos containing building materials and polychlorinated biphenyls (PCBs). If these substances are detected, prior to the issuance of permits by the County for any structural demolition activities on the project site, the project developer will be required to submit documentation to the County Department or Environmental Health that remediation actions will be undertaken in conformance with the regulations of the Air Quality Management District and the State of California, Division of Occupational Health and Safety.
- HHM-3** All development in high fire hazard areas shall be designed and constructed in a manner that minimizes the risk from fire hazards and meets all applicable state and county fire standards.
- HHM-4** All development shall include fire resistant vegetation, cleared firebreaks, or a comprehensive fuel management program.
- HHM-5** Water systems shall meet County fire flow requirements. Where minimum fire flow is not available to meet County standards, alternate fire protection measures, including sprinkler systems shall be incorporated if approved by the County Fire Department.
- HHM-6** All development shall have adequate access for fire and emergency vehicles and all major subdivisions shall have at least two points of ingress and egress.
- HHM-7** Prior to the issuance of grading permits, a dust control plan to include frequent watering and other measures shall be prepared and approved by the County Engineering Department and the Madera County Mosquito Abatement and Vector Control District to control the release of vectors and dormant spores.

### 5.7.7 - Level of Significance After Mitigation

Impacts due to the release of hazardous substances during the demolition and removal of structures and facilities will be reduced to less than significant levels through the imposition of regulations and monitoring by County and State agencies. Impacts related to wildland fires will be mitigated by the provision of adequate water supply, adequate fire service response and fuel management programs to

levels that are less than significant. Impacts related to the release of vectors will be mitigated to less than significant through the use of a dust control plan.