

## 2.6 Hazards/Hazardous Materials

The Proposed Project was reviewed for potential hazards related to fire safety and hazardous materials that may be present on the property.

A Fire Protection Plan for the Shadow Run Ranch TM 5223RPL2 project was prepared by David C. Bacon of FIREWISE2000, Inc., a consultant listed on the County's CEQA Consultant List approved to prepare fire protection plans. The report is entitled, "Fire Protection Plan Shadow Run Ranch TM 5223 RPL Environmental Log # 00-02-035," dated June 10, 2013, and is provided as Appendix E of the technical appendices of this DEIR.

Phase I and Phase II Environmental Assessments (ESA) were conducted for the subject property by Jonathan Cain of Petra Geotechnical, who is on the County of San Diego's list of approved consultants for this area of expertise. The reports, "Phase I Environmental Site Assessment, Shadow Run Ranch," date April 30, 2012, and "Limited Phase II Environmental Site Assessment, Shadow Run Ranch," dated March 18, 2013, are provided as Appendices F and G of the technical Appendices of this DEIR.

A Vector Management Plan was prepared for the project by Jayhawk Consulting. The plan "Vector Management Plan, Shadow Run Ranch, Pauma Valley," dated November 18, 2009 is provided as Appendix G of the technical appendices of this DEIR.

### 2.6.1 Existing Conditions

#### 2.6.1.1 Fire Hazards

The Shadow Run Ranch project is located in a rural area of San Diego County in the unincorporated area of Pauma Valley on the north side of State Route 76/Pala Road (SR76).

The project site is undeveloped and consists of hilly terrain in a very high fire-hazard zone approximately 27 miles inland from the Pacific Ocean. The slopes on and adjacent to the site range between 10 and 25 percent as viewed from the SR76 looking north. The average slope within the area to be developed is 10 percent with a slope of 38 percent at the northern end of the property. Onsite elevations range from 729 feet above mean sea level (MSL) to 1415 feet MSL.

#### Climate

The project area's Mediterranean climate is mild in the winter (an average of 13.5 inches of rain per year), with the bulk of the annual precipitation falling between January and March. Long, hot and very dry summer seasons frequently occur with occasional multi-year droughts.

The wind-pattern most critical to the project area is an off-shore wind from the north and northeast, typically referred to as the Santa Ana wind. Santa Ana wind conditions

are usually associated with strong (more than 60-mile-per-hour) hot, dry winds with very low (five to nine percent) relative humidity. These winds generally occur in the late fall, from approximately September through November, when non-irrigated vegetation is at its lowest moisture content.

The typical prevailing summertime wind pattern is from the south or southwest, is at a much lower velocity (5 to 19 MPH with occasion 30 MPH gusts), and is associated with higher humidity due to the moist on-shore air flow.

All other wind directions (northwest, south, west) may be occasionally strong and gusty, but are generally associated with cooler moist air and often have high relative humidity (upwards of 40 percent). They are considered a serious wildland fire weather condition when wind speeds reach above 20 MPH.

### Vegetation

The majority of the central portion of the site is used for active agricultural operations, with several distinct native plant communities to the west within the Frey Creek drainage and to the east in the designated Open Space easement. This 'blue-line' stream runs through the property in a north-to-south direction parallel to the western boundary. It has several biological classifications: South Coast Live Oak Riparian Forest intermixed with Coastal Sage Scrub and areas of South Sycamore and Riparian Woodland. A distinct lack of ground vegetation is noted in this channel, as it is mostly rock with oak trees located on approaches. An existing Coast Live Oak Woodland is located in the lower central portion of the site that is considered disturbed habitat as little or no ground vegetation remains in these areas.

The onsite groves are maintained using best practices such as no ground litter or trimming and good separation between rows. A distinct lack of ground-fuel is noted within these areas as well.

Land uses in the vicinity consist of the Pauma Indian Reservation to the north and east, Pala Indian Reservation to the south and west, and scattered estate residential development and agricultural operations to the northwest and southeast.

### Fire History

The available data suggests that small fires increased in frequency in the second half of the 20<sup>th</sup> Century in Southern California while their average size decreased. In San Diego County, this has resulted in an increased rate of burning in low-elevation coastal scrub land, especially coastal sage scrub near urban development areas. Over 600 fires occurred in the foothills and mountains between 1910 and 1999. However, several recent years of drought have contributed to major fires in San Diego County, resulting in property loss and damage to watersheds.

### 2.6.1.2 Hazardous Materials

Historically, the property has been predominantly vacant undeveloped land, with groves in the southwest portion of the site dating back to at least 1939. From approximately 1946 through the 1970s, different portions of the land were brought into cultivation and planted with groves. Visible structures were not present prior to the late 1970s.

The Phase I analysis included an inventory of existing items and conditions on the property which might present potential environmental concerns:

- Regulatory Action: no known current regulatory action against the subject property is known to be pending.
- Adjacent/Nearby Property: no information was obtained which would indicate the presence of environmental concerns on adjacent or nearby properties which could impact the project site
- Polychlorinated Bipheynyls (PCBs): PCBs are dielectric and coolant fluids used in some equipment. Several pole-mounted transformers, which are known to use PCBs, were located onsite, and it was noted that fluorescent light-fixture ballasts present throughout the workshop building could also contain PCBs. It was further noted that the fluorescent lights themselves contain trace amounts of mercury.
- Underground Storage Tanks (USTs): No USTs were detected or known to exist on the subject site, nor was any indication present of any having existed in the past.
- Above Ground Storage Tanks (ASTs): Several ASTs were observed onsite. Two steel fuel storage tanks are located in the main operation center, and five red diesel tanks are located northeast of the operation center. One water storage tank is located within a concrete structure at the upper pump station north of the reservoir, and one plastic water tank is located at a well station along the eastern side of the creek within the open biological area.
- Storm Water/Waste Water Discharge: storm water and waste water discharge from the site includes storm water runoff and water from onsite water wells and irrigation pipes. No septic tanks or leach fields are known to be present.
- Pesticide Residues: Site specific information regarding pesticide use could not be obtained during the investigation.
- Asbestos-containing Materials: no asbestos-containing materials are known to be present on the site.

- Lead-based Paints: no lead-based paints are known to be present in the structures on the site.
- Landfills: no known landfills are located within the search radius used for the Phase I analysis.
- Water Supplies: Several water wells were observed within the subject site.
- Waste Generation and Storage: debris was observed on the site, including: scrap metal; containers of gas, oil, solvent and chemicals; paint cans; old tires; and smudge pots.

Phase II Environmental Site Assessment soil sampling was conducted to determine whether past activities at the site have resulted in the release or threatened release of hazardous substances which pose a threat to public health or the environment. The overall objective of the investigation was to evaluate potential impacts from pesticides used in past agricultural use of the site; potential burn ash in the soil; possible impact of hydrocarbons from on-site fuel storage areas, smudge pots, and diesel-powered wind machines; and Polychlorinated Biphenyls (PCBs) from pole-mounted transformers.

### **2.6.1.3 Vectors**

An irrigation reservoir with a surface area of approximately three acres is located northeast of the proposed residential lots. The reservoir has steep interior sloping sides. Water levels are regularly raised and lowered by a routine irrigation schedule. Constant water elevation changes and prevailing winds result in disturbances to the water surface.

The area adjacent to the project site is rural with mixed avocado, citrus groves, and horticultural activities. The area also features native trees, shrubs, chaparral and sage. Non-native trees exist in random areas such as the residential portions of properties. A twenty lot mobile home park and a 100-lot recreational vehicle park are located south of the subdivision, across State Route 76.

## **2.6.2 Analysis of Project Effects and Determination as to Significance**

### **2.6.2.1 Guidelines for the Determination of Significance – Fire Hazards**

The following guidelines for the determination of significance are from the *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements Wildland Fire and Fire Protection* (August 2010). An affirmative response to or confirmation of any one of the following guidelines will generally be considered a significant impact related to Wildland Fire and Fire Protection as a result of the project, in the absence of evidence to the contrary:

1. The project cannot demonstrate compliance with all applicable fire codes.
2. A comprehensive Fire Protection Plan has been accepted, and the project is inconsistent with its recommendations.

The project does not meet the emergency response objectives identified in the Public Facilities Element of the County General Plan or offer feasible alternatives that achieve comparable emergency response objectives.

#### **2.6.2.2 Analysis – Fire Hazards**

The purpose of the FPP is to assess the potential impacts resulting from wildland fire hazards and identify the measures necessary to adequately mitigate those impacts, if any. As part of the assessment, the plan considers the property location, topography, geology, combustible vegetation (fuel types), climatic conditions, and fire history. The plan also addresses water supply, access, structural ignitability and fire resistive building features, fire protection systems and equipment, impacts to existing emergency services, defensible space, and vegetation management. The FPP identifies and prioritizes areas for hazardous fuel reduction treatments, and also recommends measures that property owners will take to reduce the probability of ignitions of structures throughout the area addressed by the plan.

*Guideline 1: The project cannot demonstrate compliance with all applicable fire codes.*

Determining the risks for wildfires requires analysis of the adequacy, pursuant the requirements of the San Diego Consolidated Fire Code and the Public Facilities Element of the County General Plan, for the project’s proposed emergency services, access roads and gates, water supply, ignition-resistant construction and fire-protection systems, and defensible space and vegetation management.

#### Emergency Services

The project meets the emergency response objectives identified in the Public Facilities Element of the County General Plan.

The project site is located within the CAL FIRE Rincon Station’s jurisdiction, which is staffed year-round by agreement with the Yuima Municipal Water District, Mootamai Municipal Water District, and the Pauma Municipal Water District, with arrangements for a higher level of service made through contract with the County of San Diego. CAL FIRE Rincon Station is approximately 4.8 miles from the project site, and meets the 10-minute Estate Response requirements.

#### Access Roads and Gates

The proposed access and egress to the project site is from two locations. One from Haas Grove Lane to SR-76 and the other is from Haas View Way to Adams Drive All

access points will be improved to meet County fire safety design requirements and will require 20 feet of roadside fuel treatment. Access points will not be gated.

All interior roadways shall comply with San Diego County Private Road standards. The private subdivision interior access roads on the tentative map shall be a minimum of 24 feet of unobstructed improved width with an unobstructed vertical clearance of not less than 13 feet and 6 inches. Single family residential driveways shall have a minimum of 16 feet of improved width. Unobstructed radius width for cul-de-sacs and turn around locations shall be a minimum of 36 feet.

All roads within the development as well as the access roads shall have all-weather, paved surfaces capable of supporting fire apparatus weighing up to 50,000 pounds. All dead-end roadways exceeding 150 feet in length shall be provided with approved means for the turning around of emergency apparatuses. All roads and streets shall meet the minimum 28-foot-minimum turning radius as measured from the inside edge of the improvement width. The minimum radius width for all cul-de-sacs shall be 36 feet.

#### Water Supply

The project will be annexed to the Yuima Municipal Water District, and will install appropriate pipelines and hydrants to serve the area. The required flow for the project is 2,500 gallons per minute (gpm). In addition to this standard, the required flow and pressure must meet the demands required for residential sprinkler systems.

Hydrants shall be located at intersections, at the beginning-radius of cul-de-sacs, and at intervals identified in the Code and approved by the Fire Marshal. Hydrants located across heavily traveled roadways shall not be considered as serving the property.

#### Ignition Resistant Construction and Fire Protection Systems

All structures will be required to meet the standards set in the San Diego County Building Code. Specific requirements include, but are not limited to:

- All structures will be built with a Class A Roof Assembly, including a Class A roof covering, and attic or foundation ventilation louvers or ventilation openings in vertical walls shall not exceed 144 square inches per opening and shall be covered with 1/8th-inch mesh corrosion-resistant metal screening or other approved material that offers equivalent protection. Attic ventilation shall also comply with the requirements of the Uniform Building Code (U.B.C.). Ventilation louvers and openings may be incorporated as part of access assemblies.
- Where the roof profile allows a space between the roof covering and roof decking, the spaces shall be constructed to prevent the intrusion of flames and

embers, be firestopped with approved materials or have one layer of No. 72 ASTM cap sheet installed over the combustible decking.

- When provided, exposed valley flashings shall be not less than 0.019-inch (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide underlayment consisting of one layer of No. 72 ASTM cap sheet running the full length of the valley.
- Paper-faced insulation shall be prohibited in attics or ventilated spaces.
- All glass or other transparent, translucent or opaque glazing materials including skylights shall be constructed multi-layered glazed panels one layer of which must be tempered glass. No skylights will be allowed on the roof assembly facing hazardous vegetation.
- Exterior windows, window walls, glazed doors, and glazed openings within exterior doors shall be insulating-glass units with a minimum of one tempered pane, or glass block units, or have a fire resistance rating of not less than 20 minutes, when tested according to ASTM E 2010, or conform to the performance requirements of SFM 12-7A-2.
- All windows shall be provided with 1/8 inch mesh metal or similar non-combustible screens to prevent embers from entering the structure during high wind conditions.
- The exterior walls surface materials shall be non-combustible or an approve alternate. In all construction, exterior walls are required to be protected with 2-inch nominal solid blocking between rafters at all roof overhangs.
- Combustible eaves, fascias and soffits shall be enclosed. Eaves of heavy timber construction are not required to be enclosed as long as attic venting is not installed in the eaves. For the purposes of this section heavy timber construction shall consist of a minimum of 4x6 rafter ties and 2x decking.
- No attic ventilation openings or ventilation louvers shall be permitted in soffits, in eave overhangs, between rafters at eaves, or in other overhanging areas.
- All projections (exterior balconies, decks, patio covers, unenclosed roofs and floors, and similar architectural appendages and projections) or structures less than five feet from a building shall be of non-combustible material, one-hour fire resistive construction on the underside, heavy timber construction or pressure-treated exterior fire-retardant wood. When such appendages and projections are attached to exterior fire-resistive walls, they shall be constructed to maintain same fire-resistant standards as the exterior walls of the structure.

- Exterior doors shall be approved non-combustible construction, solid core wood and shall conform to the performance requirements of standard SFM 12-7A-1 or shall be of approved noncombustible construction, or solid core wood having stiles and rails not less than 1<sup>3</sup>/<sub>8</sub> inches thick with interior field panel thickness no less than 1<sup>1</sup>/<sub>4</sub> inches thick, or shall have a fire-resistance rating of not less than 20 minutes when tested according to ASTM E2074.
- Roof vents, dormer vents, gable vents, foundation ventilation openings, ventilation openings in vertical walls, or other similar ventilation openings shall be louvered and covered with 1/8-inch, noncombustible, corrosion-resistant metal mesh or other approved material that offers equivalent protection. Turbine attic vents shall be equipped to allow, one-way direction rotation only; they shall not free spin in both directions.
- All chimney, flue or stovepipe openings will have an approved spark arrester. An approved spark arrester is defined as a device constructed of nonflammable materials, 12 gauge minimum thicknesses or other material found satisfactory by the Fire Protection District, having 1/2-inch perforations for arresting burning carbon or sparks. It shall be installed to be visible for the purposes of inspection and maintenance.
- All rain gutters, down spouts and gutter hardware shall be constructed from metal or other noncombustible material to prevent wildfire ignition along eave assemblies.
- Gutters shall be provided with the means to prevent the accumulation of leaf litter and debris that contribute to roof edge ignition.
- All side yard fence and gate assemblies (fences, gate and gate posts) when attached to the home shall be of non-combustible material. The first five feet of fences and other items attached to a structure shall be of non-combustible material.
- All homes shall be sprinklered. The Interior Sprinkler System shall meet National Fire Protection Standard NFPA13 *Installation of Sprinkler Systems in Residential Occupancies*.

#### Defensible Space and Vegetation Management

The proposed development area is located in a very high fire hazard severity zone. Off-site fire hazards and risk are based upon adjacent uses and vegetation. The project is bordered to the north by undeveloped private land, to the east by scattered estate residential, by the SR76 to the south, and open space to the west where Frey Creek is located. The Frey Creek drainage is proposed to be placed in open space along the western perimeter of the project site. The native and non-native vegetation to the

north and the northeast of the proposed development presents a notable wildland fire threat, most notably from firebrands carried long distances by fire drafts or strong winds. An additional wildfire threat is possible from the west under typical or extreme prevailing southwest wind conditions.

Onsite vegetation consists chiefly of the agricultural groves. An oak woodland in the southern portion of the project offers minimal risk due to the absence of ground fuel. The analysis found no evidence of any fires having taken place onsite historically. The Frey Creek Fire of 1984 came close to the southwest boundary of the project site.

The existing mixed chaparral is of the most concern for the project area during a worst-case, Santa Ana wind condition scenario. These conditions would be similar to those experienced in recent extreme fire events. This vegetation type provides an abundance of dead, combustible material. Normally these plant communities are adapted to the intense wildfires that they need for species regeneration. However, when fires occur at too frequent intervals, the composition of the plant communities transforms to less-desirable short-lived and more flammable annual grasses with little wildlife value and poor ability to protect the soil. The on-site wildland fire threat from this vegetation can be mitigated with required fuel modification and the use of fire-wise landscaping criteria.

The BehavePlus Fire Modeling System was used to predict rate of spread, fireline intensity, and flame length for the onsite vegetation. This fire model describes a wildfire spreading through surface fuels, which are burnable materials within six feet of the ground. The FPP's Appendix C contains the calculations from that study. The projections are based on four separate 'worst case' scenarios for San Diego County fire assumptions, and one fire scenario which assume 'typical' fire weather projections for comparison. Results of the fire modeling produced flame lengths from 6.5 feet to up to 60.2 feet depending on the location of the project area.

Projects located in Hazardous Fire Areas shall include Fuel Management Zones (FMZ) surrounding all structures. San Diego County Code stipulates that the FMZ is a minimum of 100-foot area surrounding and extending in all directions from all structures, in which flammable vegetation or other combustible growth is cleared away or modified, except for:

- Single specimens of trees or other vegetation which are well-pruned and maintained.
- Grass and other vegetation located more than 50 feet from the structure and less than 18 inches in height above the ground.
- All ornamental landscaping that is consistent with County Wildland Interface plant list (See Appendix A of the Fire Protection Plan (Appendix E)).

- The proposed intention is to treat the entire parcel. It will remain irrigated and maintained as a producing grove. Figure 2-6-1 “Fire Safety Design” presents the fuel management approach for the project.

Three FMZs are proposed as part of the project design. Zone 1 is the defensible space zone and encompasses the pads and surrounding grove on each lot, as well as the recreation area. Zone 1 will be irrigated. Setback for vegetation will be 25 feet from the building pad. The area will be cleared of existing vegetation. When replanted, drought tolerant and irrigated lawn, ground covers, and shrubs will be used. Plantings will be maintained to a maximum of 18 inches, although isolated fire resistant trees and single fire-resistant shrubs may be used. The recreation area, which currently supports a grass lawn, oaks, and a reservoir, will be reviewed for conformance with the FPP and existing vegetation consistent with the FPP will be retained. The existing grove will be allowed within Zone 1 provided it remains irrigated, is kept free of all combustible materials, and is well maintained free of trimmings and dead wood with leaf litter kept to a minimum. Detailed requirements for Zone 1 are provided in the FPP. The parcel owner is responsible for maintaining Zone 1.

Zone 2 begins at the outer edge of Zone 1 is the area between 50 and 100 feet from the edge of the buildable pad. Within this zone, all flammable native plants will be removed. It may be replanted with low growing (maximum 18 inches in height) and low fuel volume “ground cover” vegetation or native grasses and occasional well-spaced low growing fire resistant shrubs. Low growing plants and ground covers are to be maintained to a height of 18 inches or less. Retained native shrubs will be trimmed and maintained to 48 inches, with occasional interior thinning. It is most important that plantings are thinned and maintained in a mosaic. Maintenance will be on-going throughout the year as needed. Native annual and perennial grasses will be allowed to grow and produce seed during the winter and spring. As grasses begin to cure (dry out), they will be cut to four (4) inches or less in height. This usually occurs prior to June 1st of each year. The parcel owner is responsible for maintaining Zone 2.

Zone 3 will require a 30 foot thinning zone along project roadways. Site access roads will receive Fuel Modification to a total of 20 feet. Interior roadways treatment will be 20 ft. off the edge of the road bed. Access areas may be irrigated, and planted to Zone 1 criteria. Within Zone 3, all flammable native plants shall be removed and may be replanted with low growing (maximum 18 inches in height) and low fuel volume ‘ground cover’ vegetation or native grasses and occasional well-spaced, low-growing, fire resistant shrubs. Low growing plants and ‘ground covers’ are to be maintained to a height of 18 inches or less. Retained native shrubs will be trimmed and maintained to 48 inches, with occasional interior thinning. It is most important that plantings are thinned and maintained in a mosaic. Maintenance will be on-going throughout the

year as needed. Native annual and perennial grasses will be allowed to grow and produce seed during the winter and spring. As grasses begin to cure (dry out), they will be cut to four (4) inches or less in height. This usually occurs prior to June 1st of each year. The HOA is responsible for maintaining Zone 3.

*Guideline 2: A comprehensive Fire Protection Plan has been accepted, and the project is inconsistent with its recommendations.*

The Proposed Project has been designed in consultation with fire experts on the list of approved consultants with the County of San Diego, as well as in consultation with County Fire officials and the local Fire authority. The FPP for the project adequately analyses potential for fire hazards and provides the design requirements for different aspects of fire safety planned for the project, including adequacy of emergency services, response times, defensible space zones, access and fire clearing along roadways, and water supply. The Proposed Project will comply and be consistent with the FPP.

Guideline 2 is not exceeded, and impacts are less than significant. No mitigation is necessary.

*Guideline 3: The project does not meet the emergency response objectives identified in the Public Facilities Element of the County General Plan or offer feasible alternatives that achieve comparable emergency response objectives.*

As described in response to Guideline 1, above, the project site is located within the CAL FIRE Rincon Station's jurisdiction, which is staffed year-round by agreement with the Yuima Municipal Water District, Mootamai Municipal Water District, and the Pauma Municipal Water District, with arrangements for a higher level of service made through contract with the County of San Diego. CAL FIRE Rincon Station is approximately 4.8 miles from the project site, and meets the 10-minute Estate Response requirements. Guideline 3 is not exceeded, impacts are less than significant, and no mitigation is required.

### **2.6.2.3 Guidelines for the Determination of Significance – Hazardous Materials**

Guidelines for the project were determined using the *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements Hazardous Materials and Existing Contamination* (July 30, 2007). The project will have a significant impact related to hazards if:

- a. The project is a business, operation, or facility that proposes to handle hazardous substances in excess of the threshold quantities listed in Chapter 6.95 of the H&SC, generate hazardous waste regulated under Chapter 6.5 of the H&SC, and/or store hazardous substances in underground storage tanks

regulated under Chapter 7 of the H&SC and the project will not be able to comply with applicable hazardous substance regulations.

- b. The project is a business, operation, or facility that would handle regulated substances subject to CalARP RMP requirements that in the event of a release could adversely affect children's health due to the presence of a school or day care within one-quarter mile of the facility.
- c. The project is located on or within one-quarter mile from a site identified in one of the regulatory databases compiled pursuant to Government Code Section 65962.5<sup>19</sup> or is otherwise known to have been the subject of a release of hazardous substances, and as a result the project may result in a significant hazard to the public or the environment.
- d. The project proposes structure(s) for human occupancy and/or significant linear excavation within 1,000 feet of an open, abandoned, or closed landfill (excluding burnsites) and as a result, the project would create a significant hazard to the public or environment.
- e. The project is proposed on or within 250 feet of the boundary of a parcel identified as containing burn ash (from the historic burning of trash); and as a result, the project would create a significant hazards to the public or the environment.
- f. The project is proposed on or within 1,000 feet of a FUDS and it has been determined that it is probable that munitions or other hazards are located onsite that could represent a significant hazard to the public or the environment.
- g. The project would result in human or environmental exposure to soils or groundwater that exceeded EPA Region 9 PRG's, Cal/EPA CHHSL's, or Primary State or Federal Maximum Contaminant Levels (MCLs) for applicable contaminants and the exposure would represent a hazard to the public or environment.
- h. The project will involve the demolition of commercial, industrial or residential structures that may have asbestos containing material (ACM), lead based pain (LBP) and/or other hazardous materials and as a result, the project would represent a significant hazard to the public or environment.

#### **2.6.2.4 Analysis – Hazardous Materials**

Recognized environmental conditions are defined by the American Society of Testing and Materials (ASTM) as any hazardous substance or petroleum product under conditions that indicate an existing, past, or material future threat of release into the

structures, ground, groundwater, or surface water at the subject site. If the presence of recognized environmental conditions are identified on a subject site, it may warrant additional research, site investigation, and/or action.

The Phase I ESA identified several areas which represent potential recognized environmental conditions with regard to the subject site:

- Workshop: staining of the concrete and the contents within and surrounding area.
- Fuel tank building and pump station: for hydrocarbon spills.
- Two smudge-pot storage areas: for hydrocarbon spills.
- Chemical storage building and washout area: for pesticides.
- Covered storage area: for pesticides and oil spills.
- Area with four diesel tanks and pump station: for hydrocarbon spills.
- All well pump locations: for pesticides, due to potential mixing area.
- Burn site area along Frey Creek: for metals and pesticides.
- Diesel windmill sites: for hydrocarbons due to soil staining.
- Grove areas and drainage channels: for pesticides.

Further, the following observations, while not considered recognized environmental conditions in accordance with ASTM, may warrant consideration in conjunction with any planned development activities:

- In the event that existing onsite wells are not intended for future use, it is recommended that they be abandoned in accordance with the California Well Standards as published by the California Department of Water Resources (Bulletin 74-81 and 74-90), with oversight provided by the appropriate agencies.
- If the transformers are to be removed, it is recommended that the removal be completed by a licensed contractor or the utility company responsible for the transformers.
- It is unknown if there are any septic tanks or leach fields on the site. If any are encountered during site development, it is recommended that they be removed in accordance with current regulations.
- It is unknown if asbestos-containing materials or lead-based paints are present in the residences located on the site. If the residences are to be demolished, it is recommended that they be assessed for asbestos-containing materials and

lead-based paints. If present, these materials should be abated prior to demolition in accordance with current regulations.

- It is recommended that all trash and debris observed on the site be removed and disposed in accordance with current regulations.

The Phase II analysis called for soil testing in the locations with the highest likelihood of pesticide, herbicide, PAHs, and metals/Dioxin contamination (such as around pesticide storage mixing, general use areas, and drainage courses). One burn site was identified on the property. In addition, soil testing was completed in the locations with the highest likelihood of hydrocarbon and PCB contamination (such as around petroleum storage, dispensing areas, and pole-mounted transformers). Figure 2-6-2, “Boring and Hand-Auger Location Map”, shows the locations of the samples onsite.

*Guideline 1: The project is a business, operation, or facility that proposes to handle hazardous substances in excess of the threshold quantities listed in Chapter 6.95 of the H&SC, generate hazardous waste regulated under Chapter 6.5 of the H&SC, and/or store hazardous substances in underground storage tanks regulated under Chapter 7 of the H&SC and the project will not be able to comply with applicable hazardous substance regulations.*

The project complies with Chapter 6.95 of the H&SC because it has a Health and Safety Plan in place as presented in Appendix A of the Phase II study. The project does not store hazardous materials in underground storage tanks (per Chapter 7 of the H&SC), as discussed in Appendix A of the Phase II study. Chapter 6.5 therefore does not apply. The project does comply and will continue to comply with all applicable hazardous substance regulations. Guideline 1 is not exceeded, impacts are less than significant, and no mitigation is required.

*Guideline 2: The project is a business, operation, or facility that would handle regulated substances subject to CalARP RMP requirements that in the event of a release could adversely affect children’s health due to the presence of a school or day care within one-quarter mile of the facility.*

No schools or daycare centers are located within one-quarter mile of the facility. The nearest school and licensed daycare center are both located on the same campus approximately 1.93 miles from the project site. Guideline 2 is not exceeded, impacts are not significant, and no mitigation is required.

*Guideline 3: The project is located on or within one-quarter mile from a site identified in one of the regulatory databases compiled pursuant to Government Code Section 65962.5 or is otherwise known to have been the subject of a release of hazardous substances, and as a result the project may result in a significant hazard to the public or the environment.*

The Phase I analysis, Section 7.3, examined properties in the Federal, State, and local government databases related to toxic substance releases. Ten properties, including the project, were identified within the required search radius. None of the properties have reported releases or violations related to toxic substances. No known current regulatory action against the subject property is known to be pending. Guideline 3 is not exceeded, and impacts are less than significant. No mitigation is required.

*Guideline 4: The project proposes structure(s) for human occupancy and/or significant linear excavation within 1,000 feet of an open, abandoned, or closed landfill (excluding burnsites) and as a result, the project would create a significant hazard to the public or environment.*

The site is not located on or within 1,000 feet of any existing, closed, or abandoned landfills according to a Phase I search of the Environmental Data Resources data bank and a search of State and tribal landfill and/or solid waste disposal site lists. Guideline 4 is not exceeded, and impacts are less than significant. No mitigation is required.

*Guideline 5: The project is proposed on or within 250 feet of the boundary of a parcel identified as containing burn ash (from the historic burning of trash); and as a result, the project would create a significant hazard to the public or the environment.*

A burn site was observed along the western side of the main branch of Frey Creek, on the Proposed Project's northwestern boundary. The burn site is approximately 110 feet by 125 feet in size. According to the Phase I ESA, the burnsite was strictly used for burning of vegetation from groves only. As part of the Phase II analysis, soil samples collected within the area of possible impact by burn ash residue were analyzed for dioxins, Polynuclear Aromatic Hydrocarbons (PAHs), and metals in general accordance with modified EPA methods 8290, 8310, and 6010B/7471A respectively. One sample contained concentrations of Total Chromium.

The location of the identified burn ash residue area is within a proposed biological open space easement which is outside the area of proposed grading and development. Based on the laboratory results shown above and the depth of the one sample with a high chromium result which is outside the proposed area of development there should be no adverse effect to the proposed residential improvements. Impacts are not significant and no mitigation is required.

No other burnsites are reported. Guideline 5 is not exceeded and impacts are less than significant. No mitigation is required.

*Guideline 6: The project is proposed on or within 1,000 feet of a FUDS and it has been determined that it is probable that munitions or other hazards are located onsite that could represent a significant hazard to the public or the environment.*

The Proposed Project is not within 1,000 feet of a Formerly Used Defence Site (FUDS), as noted in the technical report for the project. Guideline 6 is not exceeded and impacts are less than significant. No mitigation is required.

*Guideline 7: The project would result in human or environmental exposure to soils or groundwater that exceeded EPA Region 9 PRG's, Cal/EPA CHHSL's, or Primary State or Federal Maximum Contaminant Levels (MCLs) for applicable contaminants and the exposure would represent a hazard to the public or environment.*

Based upon the Phase I ESA prepared for the project site, there is no evidence of documented or undocumented site contamination that would present a potentially significant impact to the public or the environment. The Phase II ESA included the collection and testing of soil samples from points where exposure to hazardous substances was suspected. No detectable level of toxic chemicals was found in any samples, as described in the Phase II study, pages 14-15. Guideline 7 is not exceeded and impacts are less than significant. No mitigation is required.

*Guideline 8: The project will involve the demolition of commercial, industrial or residential structures that may contain ACM, LBP and/or other hazardous materials and as a result, the project would represent a significant hazard to the public or environment.*

The Phase I study was not able to determine the presence or absence of asbestos or lead based paint. It is unknown if asbestos-containing materials or lead paint are present in the structures located on the site. One existing residence and several outbuildings are expected to be demolished as part of the project. Prior to structures being renovated or demolished, it is recommended that they be assessed for asbestos-containing materials and lead paint. If present, asbestos-containing materials or lead paint should be abated prior to demolition in accordance with current regulations.

This represents a potentially significant impact (**Impact HAZ-1**). Mitigation is required.

#### **2.6.2.5 Guidelines for the Determination of Significance – Vector Control**

Guidelines for the project were determined using the *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements, Vectors* (January 15, 2009). The project will have significant impacts if:

1. The project proposes a Best Management Practice (BMP) for stormwater that could create sources of standing water for more than 72 hours, and as a result, could substantially increase human exposure to vectors, such as mosquitoes, that are capable of transmitting significant public health diseases or creating nuisances.

2. The project proposes a use that involves the production, use and/or storage of manure or proposes a composting operation or facility and as a result, could substantially increase human exposure to vectors that are capable of transmitting significant public health diseases or creating nuisances.
3. The project would result in a substantial increase in the number of residents located within one-quarter mile of a significant offsite vector breeding source; including but not limited to, standing water (e.g. agricultural ponds, reservoirs) and sources of manure generation or management activities (e.g. confined animal facilities, horse keeping operations, composting operations).

#### **2.6.2.6 Analysis – Vector Control**

*Guideline 1: The project proposes a Best Management Practice (BMP) for stormwater that could create sources of standing water for more than 72 hours, and as a result, could substantially increase human exposure to vectors, such as mosquitoes, that are capable of transmitting significant public health diseases or creating nuisances.*

The project uses an Integrated Management Practice (IMP) approach to meet hydromodification and water quality requirements for stormwater for the project. The IMPs include 18 bioretention areas which will temporarily collect stormwater. Based upon the technical memorandum prepared by Tory R. Walker Engineering, titled “Design of IMPs for Hydromodification and Water Quality Purposes for the Shadow Ranch Development,” dated May 1, 2012, drain times for the 18 water quality features range are all less than 72 hours.

Guideline 1 is not exceeded, impacts are less than significant, and no mitigation is required.

*Guideline 2: The project proposes a use that involves the production, use and/or storage of manure or proposes a composting operation or facility and as a result, could substantially increase human exposure to vectors that are capable of transmitting significant public health diseases or creating nuisances.*

The Proposed Project does not propose a use that involves the production, use and/or storage of manure, nor does it propose a composting operation facility. Guideline 2 is not exceeded and impacts are less than significant. No mitigation is required.

*Guideline 3: The project would result in a substantial increase in the number of residents located within one-quarter mile of a significant offsite vector breeding source; including but not limited to, standing water (e.g. agricultural ponds, reservoirs) and sources of manure generation or management activities (e.g. confined animal facilities, horse keeping operations, composting operations).*

The project proposes 44 residences in proximity to the existing onsite reservoir. Standing water can be a source for human exposure to vectors.

A Vector Control Plan has been prepared for the project which includes BMPs related to vector control. Many vector control measures are already in place. The owner of the property regularly raises and lowers the reservoir surface water level during routine irrigation schedules. The sides are steeply sloped, and the water was reported to have ‘good wave action’, which is important in inhibiting egg-laying and the survival of larvae. Regular maintenance inhibits the establishment of emergent vegetation. The owner is informed about the San Diego County vector control website and is aware of resources and information, including the dangers of mosquito breeding relative to West Nile virus infection and *Equine Encephalomyelitis*. In addition to these existing measures, the vector control plan recommends the following design considerations:

- A daily reconnaissance of the site so as to confirm the operation of the water level flux.
- Continued removal of invasive vegetation growth that provides protection and quiescent conditions for mosquito larvae.
- Reporting any discovery of dead birds (especially crows, magpies, ravens, and blue-jays) to the San Diego County Vector Control Program.
- Chemical controls are not a part of the vector control plan unless recommended by the Department of Environmental Health (DEH) due to an unusual event during which species have been identified with a potential risk of disease. It is expected that the day to day controls against vectors would eliminate the potential for any such event.
- Use of mosquito fish (*Gambusia affinis*) where habitat is sustainable for survival. This would be in consultation with DEH. The purpose of the reservoir is for storage and use of large amounts of water for agricultural irrigation cycles. The fill and withdrawal cycle of the irrigation water does not provide a predictable natural food source for mosquito fish.

With the existing mosquito control measures in place, along with the design considerations provided in the vector control plan, the Proposed Project will not increase human exposure to vectors that are capable of transmitting significant public health diseases or nuisances. Guideline 3 is not exceeded and impacts are less than significant. No mitigation is required.

## 2.6.3 Cumulative Impact Analysis

### 2.6.3.1 Fire Hazards

The cumulative impact study for fire hazards includes an area from the eastern boundary of the Yuima Municipal Water District (YMWD) to the I-15 freeway on the west. This area includes the service boundary of the YMWD. This area was chosen because the project will annex into the YMWD for fire protection purposes. It also includes areas on the north side of the San Luis Rey River from the project to I-15 approximately 10 miles away because of the potential for uncontrolled fires to encompass substantial areas. All 27 of the cumulative projects identified in Table 1-1 and on Figure 1-6 are located within the study area. The Warner Ranch project (GPA 06-009, map location #27) was the only project specifically identified as having potential fire safety impacts. Mitigation included a fire protection plan and construction of a fire station. Strict fire regulations have been adopted by the County of San Diego in the wake of major fires that have swept through the County in recent years. As a result, all projects are reviewed for potential fire safety impacts. Fire safety regulations have been adopted that require “fire safe” design for project that includes features such as fire clearing, irrigation zones, fire resistant building materials, and fire safe building designs. Effective travel times from fire stations to new projects are routinely evaluated. Additionally all areas of the study area are within a fire protection district or jurisdiction that provides fire safety service. In the study area these are YMWD, the North County Fire Protection District, Tribal reservation fire service departments, and CALFIRE.

The project will annex to the Yuima Municipal Water District for fire protection purposes. The project design addresses fire hazards for residential lots by placing them on the lower portions of the site, incorporating fuel management zones and calling for the use of fire-resistant building material. Cumulative impacts related to fire hazards are less than significant because all of the cumulative projects will be designed to meet the County’s fire regulations. Fire protection plans are required where fire safety is a concern. And all new projects are required to be located within a reasonable travel time of an established service provider. All areas of the study area are served by fire districts or jurisdictions. No mitigation is required.

### 2.6.3.2 Hazardous Materials

Cumulative research was conducted at the San Diego County Department of Planning and Development Services (PDS) to discover any potential past, current, or future projects that may contribute to cumulatively significant impacts. A map and listing of cumulative projects are provided in Figure 1-6 and Table 1-1, respectively. All projects in the cumulative study area have been subject to review for potential impact related to hazards and hazardous materials. Of the 27 projects considered in the

cumulative analysis, thee projects were identified as having a potential impact related to hazardous materials. During the Phase 1 ESA for the McNally Road project (TPM 21004, cumulative map location # 1), smudge pots and above ground storage tanks were identified. As mitigation, the site was enrolled in the County of San Diego DEH Voluntary Assistance Program to obtain oversight of the site remediation activities. Potential impacts were reduced to below a level of significance. For the Peterman Cell Site (MUP 08-045, map location #20) it was noted sulfuric acid contained in sealed batteries. Negative findings of no impacts were made for the project. The Warner Ranch project (GPA 06-009, map location #27) was studied for possible contamination from agricultural chemicals. A Phase II study identified the areas of potential contamination and addresses them with avoidance, and recovery/removal as needed. The Proposed Project was assessed with a Phase II and the site with the exception of a burn site was determined to be free of dangerous chemical substances. Projects are reviewed by the County DEH and PDS for potential hazardous chemical impacts. In cases where a possible hazard exists, detailed analyses that included ground sampling and lab testing are required. This was the case for two of the 27 cumulative projects. The studies determined the precise locations of potentially harmful chemicals, and recommended actions to avoid, contain, or remove them. Recommendations were reviewed by County staff and specific performance criteria are incorporated into project conditions to ensure compliance. Due to the comprehensive review process, the quality of the science involved in collecting and testing, evaluation and remediation, as needed, cumulative impacts are not significant and no mitigation is required. Cumulative projects would not result in a significant contribution to cumulative impacts for the issue of hazardous materials and impacts would be less than significant.

### **2.6.3.3 *Vector Control***

Cumulative research was conducted at the San Diego County Planning & Development Services to discover any potential past, current, or future projects that may contribute to cumulatively significant impacts. A map and listing of cumulative projects are provided in Figure 1-6 and Table 1-1 respectively. All projects in the cumulative study area have been subject to review for potential impact related to vectors and vector management. Of the 27 projects considered in the cumulative analysis, none were identified as having potential impacts related to vectors. Additionally, the San Diego County DEH has specific regulations relating to vector control, which would be applicable to all projects in the County. Therefore, the proposed project would not result in a significant contribution to cumulative impacts for the issue of vectors and impacts would be less than significant.

## 2.6.4 Significance of Impacts Prior to Mitigation

HAZ-1 Potential for hazardous materials impacts if mobile homes, residences or pole-mounted transformers are demolished and they contain ACM or LBP.

## 2.6.5 Mitigation

M-HAZ-1 Should mobile homes, residences or pole-mounted transformers be demolished as part of the project, testing for ACM and LBP shall be conducted prior to demolition. If the testing confirms the presence of ACM and LBP, the materials shall be properly abated and disposed of by a state-licensed abatement contractor prior to disturbance or demolition in accordance with all federal and state requirements.

## 2.6.6 Conclusion

### 2.6.6.1 Fire Hazards

A fire analysis was carried out by a consultant on the County's CEQA Consultant List approved to prepare fire protection plans. The project was analyzed in relation to three guidelines established for the project. The analysis concluded that the project, as designed, would have a less than significant impact related to fire safety. Design measures include a fire protection plan that specifies three fuel management zones that include irrigation and a restricted vegetation palette. Fire clearing along roads is also required. The potential for cumulative impacts was analyzed and impacts were determined to be less than significant because projects are reviewed for fire safety impacts, fire protection plans are required as needed, and all areas within the study area have fire protection services available, and the project mitigates its impacts.

### 2.6.6.2 Hazardous Materials

A hazardous materials study was carried out by a consultant on the County's CEQA Consultant List approved to prepare Phase I and Phase II ESA studies. The site was analyzed for possible contamination risks related to hazardous materials onsite. The eight County guidelines were subsequently analyzed in this DSEIR. The analysis concluded that there is a potential for ACM and LBP within the existing motor homes, residences and pole-mounted transformers on the project site. A burn site was also located, but will remain undisturbed within a biological open space area. Mitigation measure M-HAZ-1, which requires testing prior to demolition and subsequent abatement if ACM and LBP are present, will reduce the impacts to below a level of significance. Cumulative impacts were determined to be less than significant. Although hazardous materials were determined to be present at two of the 27 cumulative projects, mitigation measures will be required to avoid, contain, or remove the hazard.

### **2.6.6.3 *Vector Control***

A vector control plan was prepared by a County-approved consultant. The plan focused on the existing reservoir in the northeastern corner of the property and its potential as a source for vector (mosquito) breeding. The design of the reservoir combined with existing maintenance practices have minimized the potential for mosquito breeding. The project will implement the Vector Control Plan, which identifies design considerations related to reservoir management. With implementation of the Vector Control Plan, impacts would be less than significant. Cumulative impacts were also determined to be less than significant as none of the 27 cumulative projects were determined to have potential impacts related to vectors. No mitigation is required.

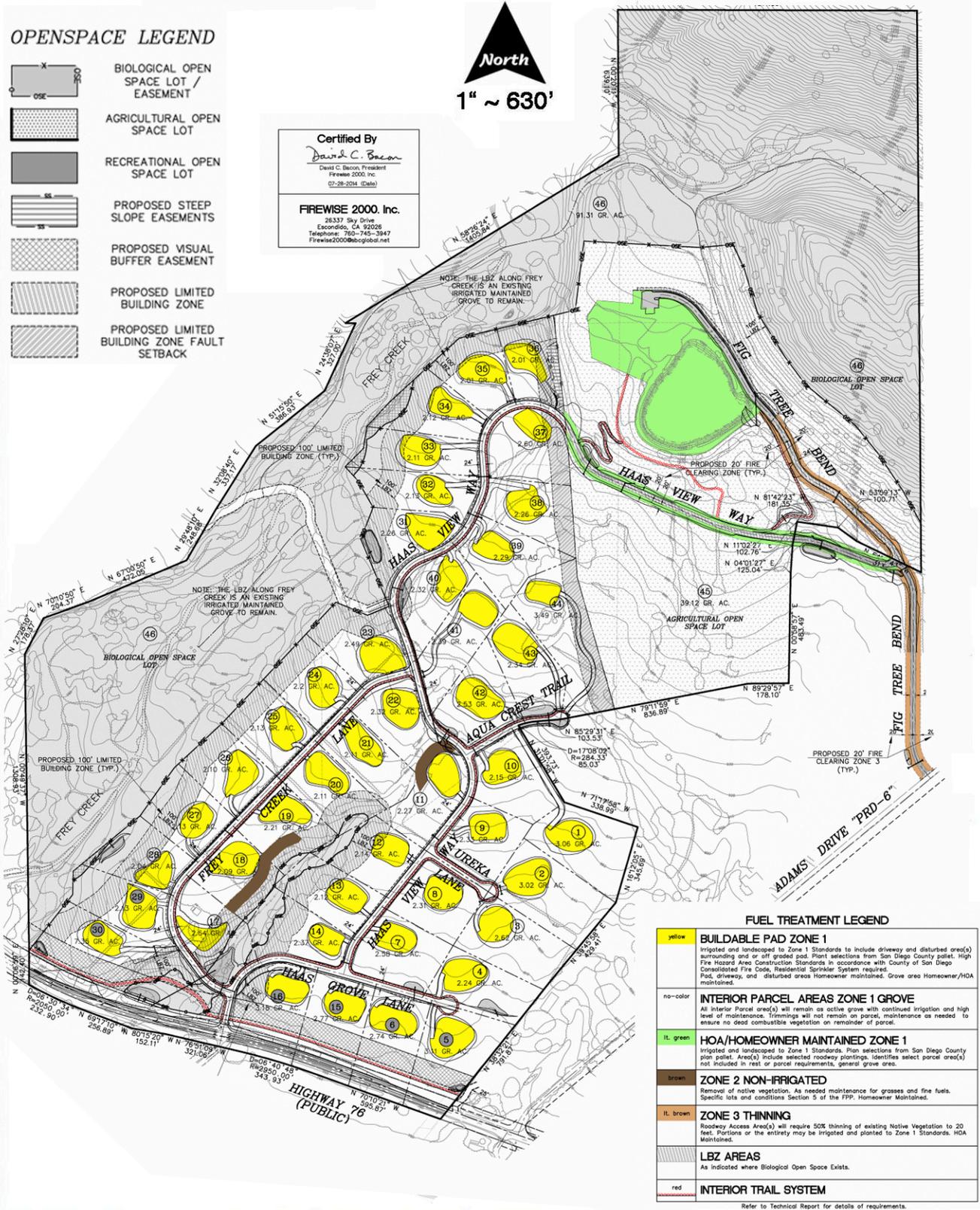
# OPENSOURCE LEGEND

-  BIOLOGICAL OPEN SPACE LOT / EASEMENT
-  AGRICULTURAL OPEN SPACE LOT
-  RECREATIONAL OPEN SPACE LOT
-  PROPOSED STEEP SLOPE EASEMENTS
-  PROPOSED VISUAL BUFFER EASEMENT
-  PROPOSED LIMITED BUILDING ZONE
-  PROPOSED LIMITED BUILDING ZONE FAULT SETBACK



**Certified By**  
*David C. Bacon*  
 David C. Bacon, President  
 Firewise 2000, Inc.  
 02-28-2004 (Date)

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## FUEL TREATMENT LEGEND

yellow	<b>BUILDABLE PAD ZONE 1</b> Irrigated and landscaped to Zone 1 Standards to include driveway and disturbed area(s) surrounding and or off graded pad. Plant selections from San Diego County pallet. High Fire Hazard Area Construction Standards in accordance with County of San Diego Consolidated Fire Code, Residential Sprinkler System required. Post, driveway, and disturbed areas Homeowner maintained. Grove area Homeowner/HOA maintained.
no-color	<b>INTERIOR PARCEL AREAS ZONE 1 GROVE</b> All Interior Parcel area(s) will remain as native grove with continued irrigation and high level of maintenance. Trimmings will not remain on parcel, maintenance as needed to ensure no dead combustible vegetation on remainder of parcel.
light green	<b>HOA/HOMEOWNER MAINTAINED ZONE 1</b> Irrigated and landscaped to Zone 1 Standards. Plant selections from San Diego County plan pallet. Area(s) include selected roadway plantings. Identifies select parcel area(s) not included in rest or parcel requirements, general grove area.
brown	<b>ZONE 2 NON-IRRIGATED</b> Removal of native vegetation. As needed maintenance for grasses and fine fuels. Specific lots and conditions Section 5 of the FPP. Homeowner Maintained.
darker brown	<b>ZONE 3 THINNING</b> Roadway Access Area(s) will require 50% thinning of existing Native Vegetation to 20 feet. Portions of the entirety may be irrigated and planted to Zone 1 Standards. HOA Maintained.
light gray	<b>LBZ AREAS</b> As indicated where Biological Open Space Exists.
red	<b>INTERIOR TRAIL SYSTEM</b>

Refer to Technical Report for details of requirements.



# Fire Safety Design

## Figure 2-6-1

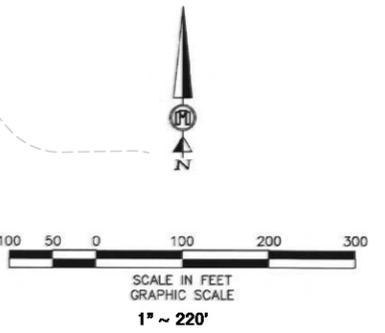


**EXPLANATION**

- Approximate Location of Pesticide Sample in Storage/Mixing Area
- Approximate Location of Pesticide Sample in Drainage/Runoff Area
- Approximate Location of Pesticide Sample in General Use Area
- Approximate Location of Hydrocarbon Sample
- Approximate Location of Sample in Burn Site Area

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**Figure 2-6-2**