

## 3.8 Fire Hazards and Emergency Services

This section addresses potential Project impacts associated with fire and police protection and other emergency services, including paramedic services. The Project would not result in increased population as discussed in Section 3.16.5, Population/Housing, and Section 6.5, Growth-inducing Impacts. Therefore, population-based impacts to service ratios for fire and emergency services would not occur, and service ratios are not discussed further in this section.

### 3.8.1 Existing Conditions

#### 3.8.1.1 Fire Hazards

The Lompoc Wind Energy Facility (LWEF) site and portions of the 115-kilovolt power line corridor are located within an Extreme Fire Hazard Area. High winds and brush in the Project area make it particularly susceptible to wildfires. Previous fires in the vicinity of the Project include the Sudden Fire in 2002, which burned approximately 7,500 acres and was caused by downed power lines resulting from high winds; the Oak Mountain Fire in 1981, which burned approximately 7,800 acres and was caused by a spark or ember flame from equipment; and the Honda Canyon fire in 1977, which burned approximately 9,040 acres and was caused by power lines (D. Neels, Personal Communication). Lightning strikes can cause fires but are relatively rare in the Project area. As shown in the flash density map in Figure 3.8-1, the Project area is a low lightning-prone area, but lightning strikes of power lines and equipment can occur (Santa Maria Times, 2006).

Controlled burns have been conducted on the Larsen Ranch and on surrounding properties (such as Cojo-Jalama Ranch) as a fire prevention measure in the past (D. Campbell, Personal Communication). The local residences and ranches have access to stored water and groundwater in the LWEF area, but existing water service or fire protection infrastructure is limited.

#### 3.8.1.2 Fire and Ambulance Services

##### Departments and Stations

The Santa Barbara County Fire Department (SBCFD) provides fire protection and paramedic services to the unincorporated portions of the Project area. The SBCFD staffs a total of 15 fire stations throughout the unincorporated portions of the County and selected incorporated areas. The SBCFD maintains mutual aid agreements with the City of Lompoc Fire Department and the Vandenberg Air Force Base (VAFB) Fire Department. These agreements enable the fire departments to share resources and respond to emergencies in a timely manner. The SBCFD would be designated as the first responder for all Project-related incidents in unincorporated areas. Emergency calls would be directed to SBCFD, but may also be routed to VAFB or the City of Lompoc depending on the location and severity of the incident; either one of these agencies could be first on the scene (G. Fidler, Personal Communication).

Station No. 51 is the SBCFD fire station nearest to the Project area, located approximately 10 miles north of the Larsen property at 749 Burton Mesa Boulevard in Vandenberg Village (Figure 3.8-2). SBCFD Station No. 51 has the following fire-fighting and emergency

equipment and personnel: one engine, one reserve engine, one captain, two engineers and two firefighters/paramedics. The station includes a paramedic unit as well as a four-wheel drive brush truck used to fight brush fires.

The City of Lompoc Fire Department provides fire protection services within city limits, but the SBCFD also responds to all structure fires (C. Hahn, Personal Communication). Two fire stations are located within the city, at 115 South G Street (Station No. 1) and 1100 North D Street (Station No. 2) (Figure 3.8-2). Station No. 1 is closest to the Project area (approximately 5 miles north of the Larsen property) and would likely be the first responder to an incident, although the SBCFD would also respond. Fire Station No. 1 includes the following equipment and personnel: one engine, aerial ladder truck in reserve, four personnel, and one chief, although the staffing fluctuates with three or four personnel on duty.

The City of Lompoc Fire Department does not employ paramedics, relying instead on a private ambulance company (American Medical Response [AMR]) and the SBCFD for emergency paramedic services. The AMR station that serves the city is and is located at 701 E. North Avenue in the City of Lompoc (Figure 3.8-2). The two ambulances assigned to the AMR station are not used exclusively within the City of Lompoc and respond to calls throughout the County. One unit is typically based out of the Lompoc AMR station, and the second is a "roamer" in the City until an emergency call is received. The goal is to maintain at least one unit within the city limits (R. Kovach, Personal Communication). In addition, AMR has an additional 14 units at various locations that are accessible to the City of Lompoc and the County depending upon fluctuations in need and call volume (J. Eaglesham, Personal Communication).

### Response Times

The SBCFD strives to meet a 5-minute response time to fires and paramedic calls within its coverage area (G. Fidler and M. Johnson, Personal Communication). Response time refers to the time needed for a unit to arrive at the scene and set up the initial equipment. No response time has been established for rural areas like the LWEF site. In such areas, onsite fire protection systems such as sprinklers, water storage facilities, and fire hydrants are considered as important as a first response to a fire (G. Fidler, Personal Communication). The SBCFD response time to the closest portion of the LWEF (the Larsen property) is estimated to be 20 minutes (M. Johnson, Personal Communication), and the response time to the operations and maintenance (O&M) facility would be approximately 6 to 10 minutes longer. The response time would be longer in the farther reaches of the LWEF site and shorter along the power line corridor.

The City of Lompoc Fire Department strives to meet a 5-minute response time within the city limits (R. Kovach and S. Hart, Personal Communication). The response time for AMR equipment is about 8 minutes 90 percent of time for urban areas and about 20 minutes 90 percent of the time for rural areas such as the LWEF site (J. Eaglesham, Personal Communication). The estimated response time to the nearest portion of the LWEF site is estimated to be approximately 10 minutes for fire services (S. Hart, Personal Communication) and 12 to 17 minutes for paramedic services (J. Eaglesham, Personal Communication). Response time to the more distant portions of the LWEF would be longer, and the response time to the power line would be shorter.

### 3.8.1.3 Police Services

The Project area historically has had a relatively low level of calls for service. They have included alcohol and drug-related calls in the area of Miguelito County Park and infrequent calls related to trespassing on the local ranches (D. Allen, Personal Communication).

#### Departments and Stations

The Santa Barbara County Sheriff's Department (SBCSD) has jurisdiction over an area of 2,744 square miles including 118 miles of coastline that includes approximately half of the total County population (189,000 residents). The Sheriff's Department is staffed with nearly 300 sworn deputy sheriffs, over 175 sworn corrections officers, and nearly 200 civilian employees (SBCSD, 2006).

Although the SBCSD does not maintain formalized mutual aid agreements with other law enforcement agencies, it may rely on other agencies to assist in responding to a call as needed. For major public disasters, the process is more formalized, and the Santa Barbara County Office of Emergency Services (SBC OES), would be involved to coordinate a large-scale, multiagency response (D. Allen, Personal Communication).

The Project areas located within the unincorporated portion of the county would be served by the SBCSD Lompoc Station located at 751 E. Burton Mesa Boulevard. The station is located approximately 10 miles north of the Larsen property (Figure 3.8-2) and includes the following equipment and personnel: five black and white units including a four-wheel drive truck and a sport utility vehicle supervisor's unit; and 13 law enforcement personnel including eight patrol deputies, four supervisors (two senior deputies and two sergeants), and one detective (D. Allen, Personal Communication).

The City of Lompoc Police Department is located at 107 Civic Center Plaza (Figure 3.8-2). The station includes the following personnel and equipment: 50 sworn officers, 11 black and white units, and one DARE Jeep (D. Clement, Personal Communication).

#### Response Times

No response times have been established for rural areas.

## 3.8.2 Regulatory Framework

### 3.8.2.1 Federal

The National Fire Protection Agency (NFPA) provides codes and standards (including the National Electric Code [NEC]), research, training and education for fire protection.

### 3.8.2.2 State

The Project would be required to comply with the relevant portions of the California Fire Code (CFC).

### 3.8.2.3 Local

A Fire Protection Certificate would be required by the SBCFD. All Project components would need to comply with the relevant SBCFD Standards and Codes such as Santa Barbara County Code, Chapter 15, Fire Prevention. The Fire Protection Certificate would be issued with the Project building permits and would ensure compliance with fire code requirements

(such as building sprinklers and water storage requirements). In addition, the County Comprehensive Plan and Land Use & Development Code include relevant policies and requirements related to fire protection and emergency services. These are discussed in Section 3.10, Land Use.

### 3.8.3 Project Impacts, Mitigation, and Residual Impacts

#### 3.8.3.1 Impact Assessment Methodology

Project impacts were assessed based on review of the Project components, including standard requirements, and input from the agencies responsible for fire and emergency services.

#### 3.8.3.2 Thresholds of Significance

The County Environmental Thresholds and Guidelines Manual does not include thresholds of significance for fire and police protection services. The following significance thresholds are based, in part, on Appendix G of the California Environmental Quality Act Guidelines. Impacts would be significant if the Project would:

- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, such as where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands
- Result in unsafe fire department, paramedic, or police response times
- Introduce development into an area without adequate water pressure, fire hydrants, adequate access for fire fighting, or other requirements and infrastructure to control and fight fires
- Result in development that would hamper fire prevention techniques such as controlled burns or backfiring in high fire hazard areas?
- Impair implementation of, or physically interfere with, an adopted emergency evacuation/response plan

#### 3.8.3.3 Project Impacts

Impact No.	Impact Description	Phase	Impact Classification
FPES-1	The Project could result in an increased risk of wildland fires that could spread to more developed areas. Fire risks include vehicle exhaust, sparks, welding, parking on dry grass, fuel tanks,	Construction	Class II

**Impact FPES-1: Increased Fire Risk (Construction).** The immediate Project area is sparsely developed, but the Project could result in an increased risk of wildland fires during construction and operations that could spread to more developed areas. During construction, fires could be caused by a variety of factors, including vehicle exhaust, sparks associated with grading activities, welding activities, and parking on dry grass. The fuel tanks on board some construction equipment can contain fuel volumes ranging from 100 to 500 gallons. Accidental ignition could result in a fire, which, depending on the location,

could spread. All such equipment is required to have fire suppression equipment on board or at the work site to ensure the availability of an adequate onsite supply of water with all-weather access for fire-fighting equipment and emergency vehicles. Therefore, adherence to County codes and requirements during construction would reduce the potential for significant fire hazard impacts. Location of construction equipment such as bulldozers and motor graders onsite would help in the control of any fire that may start during construction activities. Nonetheless, because much of the Project area is located within an Extreme Fire Hazard Area and the consequences of a fire could be severe, construction impacts would have a significant but mitigable impact (*Class II*).

Impact No.	Impact Description	Phase	Impact Classification
FPES-2	Although the Project contains many elements that would reduce potential for severe fires, fire risks would be increased through operation of the WTGs, Project Substation, power lines, and access roads. The O&M facility would include fire suppression infrastructure.	Operations	Class II

**Impact FPES-2: Increased Fire Risk (Operations).** Operation of the Project would increase the potential for fires, although a number of measures are proposed that would reduce risks, and the Project would comply with SBCFD requirements. In addition, fire prevention and control would be included in employee training and standard operating procedures.

#### *Wind Turbine Generators (WTGs)*

There is some potential for fire inside the WTGs, although malfunctions leading to fires in the type of WTG that is proposed are extremely rare. The Project would be controlled by an integrated, automatic control system capable of monitoring all operational parameters and starting and stopping each WTG. This system would interface with a fire detection system. In the event of a fire fault or excess vibration or temperature, the WTG would be halted immediately. An alarm condition that can send a page or message to a cell phone of the on-call operators or the local fire district (first responders), as required, would be activated in the control system. In addition, a fail-safe system would cause a shutdown in the event of power failure. The WTGs would also be equipped with an engineered lightning protection system.

#### *Project Substation*

Transformers at the Project Substation could present a potential fire risk. Because personnel would be onsite during daylight working hours and in frequent communication with central operations, any fires seen would be noted immediately and reported to local authorities. Some fire-fighting equipment would be located at the Project Substation site. Vegetation around the Project Substation would be cleared regularly.

#### *O&M Facility*

The O&M facility would not in itself be expected to increase fire risks, and it would include fire suppression facilities/infrastructure, including a 5,000 gallon fire water tank that would be hooked up to a fire hydrant and a sprinkler system in the O&M facility. The fire water

tank would not be used for anything except for fire water storage. The 5,000 gallon water tank for O&M operations also could be used for fire water. The entire system would be subject to the approval of the SBCFD and could benefit residences and other structures in the Project area, as well as the LWEF. The Fire Protection Certificate that would be required for the Project would address required water pressure and other infrastructure requirements such as water storage, sprinklers and fire hydrants. Some fire-fighting equipment would be located at the maintenance yard and in vehicles.

### ***Power Lines***

Fires associated with the power lines could also be an issue, stemming from such factors as high winds and avian collisions. Routine inspections would be performed periodically in accordance with good utility practice of all electrical connections, and any faulted cables or damaged insulators would be replaced as needed for the underground/overhead collection system within the Project area. Pacific Gas and Electric Company (PG&E) would operate and maintain the interconnection facilities between the Project Substation and their high voltage grid in accordance with good utility practices. Should events such as severe storms, earthquakes, or accidents result in downed power lines or poles, procedures outlined in the emergency response plan and the standard operating procedures would be applied. Vegetation would be cleared around the power line in compliance with PG&E requirements.

### ***Access Roads***

Access roads throughout the LWEF site could act as firebreaks, and the new and improved roads would allow increased access by firefighting equipment. Portions of some access roads have slopes greater than 30 percent, however, which could limit the types of emergency vehicles that may use them.

### ***Conclusion***

Although the Project contains many elements that would reduce the potential for severe fires, it still would increase fire risks. Because it is located primarily in an Extreme Fire Hazard Area, and there are scattered residences in both the vicinity of the WTGs as well as along the power line route, there is the likelihood of exposing people or structures to the risk of loss, injury, or death involving wildland fires. Impacts would be significant but mitigable (*Class II*).

<b>Impact No.</b>	<b>Impact Description</b>	<b>Phase</b>	<b>Impact Classification</b>
FPES-3	The Project would have the potential to increase demand for fire protection services.	Construction and Operations	Class II

**Impact FPES-3: Fire Department Response Times.** The Project would have the potential to increase demand for fire protection services during both construction and operations. Fire department/paramedic response times to the LWEF would be a minimum of 10 minutes and could be considerably more, depending on the location of the incident. Temporary blockage of San Miguelito Road by trucks carrying large loads would potentially increase response times during Project construction. The Project could result in response times that

would be considered unsafe in an Extreme Fire Hazard Area, and this impact would be significant, but mitigable (*Class II*).

Impact No.	Impact Description	Phase	Impact Classification
FPES-4	The influx of workers may temporarily increase the need for paramedic services during construction, although only about 10 staff would be required during operations.	Construction and Operations	Class III

**Impact FPES-4: Emergency Services Response Times.** The LWEF would not be readily accessible to the public, which would minimize the need for police services during both construction and operations. The site is located in a remote area at the end of a road on private property, and VAFB is located along the south and west sides of the LWEF; thus, no public access would be possible from these areas. All WTGs would be locked, and the Project Substation would be fenced and locked to prevent unauthorized entry. These measures would further minimize the need for police surveillance and response.

During construction, the influx of 50 to 100 workers may temporarily increase the need for paramedic services, although only about 10 staff would be required during operations. By restricting site access to properly trained personnel and through the implementation of security programs, the likelihood of accidents or trespassing, and thus the need for increased emergency services, would be minimized.

Impacts to emergency service response times would be adverse, but less than significant (*Class III*).

Impact No.	Impact Description	Phase	Impact Classification
FPES-5	The Project would introduce tall towers and a new power line into an Extreme Fire Hazard Area. In the event that controlled burns are required in the Project area, fire fighters would need to take the new structures into consideration.	Construction and Operations	Class II

**Impact FPES-5: Interference with Fire Prevention Techniques.** The Project would introduce tall towers and a new power line into an Extreme Fire Hazard Area. Controlled burns already take place in some areas within the County that contain power lines, and accommodations are in place to address their presence (C. Hahn, Personal Communication). In the event that controlled burns are required in the Project area, fire fighters would need to take the new structures into consideration, and if the smoke or heat could affect the WTGs or other structures, this could hamper fire prevention techniques (D. Campbell, Personal Communication). The Project would include regular vegetation clearance around the Project Substation, transformers, riser poles, and the O&M facility; and vegetation clearances for fire management and safety associated with the power line would comply with applicable PG&E procedures. This impact would be significant, but mitigable (*Class II*).

Impact No.	Impact Description	Phase	Impact Classification
FPES-6	For security <u>and safety</u> reasons, the Applicant may request that Sudden Road <u>and upper Miguelito Canyon Road</u> become a private road, which would be required to have a lock that could be opened by fire and other emergency service providers.	Construction and Operations	Class III

**Impact FPES-6: Emergency Evacuation/Response.** For security and safety reasons, the Applicant may request that the County ~~close~~ ~~abandon~~ Sudden Road and Miguelito Canyon Road beyond their intersection to their terminus at the VAFB property line. in the area of the O&M facility and Project Substation. The resulting closed private road would serve VAFB and the property owners that have access rights off of ~~these roads~~ Sudden Road, all of which are Project participants. At the end of the Project life, the roads would be re-opened to the public. If the road were gated, it would be required to have a lock that could be opened by fire and other emergency service providers. Impacts would be adverse, but less than significant (*Class III*).

#### 3.8.3.4 ~~Applicant-proposed~~ Mitigation Measures

The following mitigation measures incorporate appropriate provisions of the Applicant-proposed mitigation measures listed in Section 2.8.4, with revisions as needed to ensure maximum feasible mitigation in accordance with Santa Barbara County policy.

~~The following Applicant-proposed mitigation measures are considered part of the Project description. They have been refined to reflect the County Standard Conditions of Approval and Mitigation Measures (Santa Barbara County, 2005), related to adding plan requirements, timing, and monitoring actions that would be required.~~

**Mitigation Measure A-FPES-1: Fire Protection Plan.** The Applicant shall prepare a Fire Protection Plan that meets SBCFD requirements. The plan shall contain (but not be limited to) the following provisions:

- a. All construction equipment shall be equipped with appropriate spark arrestors and carry fire extinguishers.
- b. A fire watch with appropriate fire fighting equipment shall be available at the Project site at all times when welding activities are taking place. Welding shall not occur when sustained winds exceed that set forth by the SBCFD unless a SBCFD-approved wind shield is onsite.
- c. A vegetation management plan shall be prepared to address vegetation clearance around all WTGs and a regularly scheduled brush clearance of vegetation on and adjacent to all access roads, power lines, and other facilities.
- d. Operational fire water tanks shall be installed prior to construction.
- e. Provisions for fire/emergency services access if roadway blockage occurs due to large loads during construction and operation.
- f. Cleared, maintained parking areas shall be designated; no parking shall be allowed in non-designated areas.



g. The need for and/or use of dedicated repeaters for emergency services.

**Plan Requirements:** The Fire Protection Plan shall be provided to the SBCFD and the County for approval.

**Timing:** The plan shall be approved prior to zoning clearance for the first phase of construction.

**MONITORING:** The onsite monitor shall confirm that appropriate measures are implemented during construction. County fire inspectors verify that operations measures and shall periodically spot check for compliance during operations (*Addresses Impacts FPES-1, FPES-2, FPES-3, and FPES-5*).

**Mitigation Measure A-FPES-2: Smoking and Open Fires.** Smoking and open fires shall be prohibited at the Project site during construction and operations.

**Requirements:** A copy of the notification to all contractors regarding prohibiting smoking and burning shall be provided to the County.

**Timing:** The notification shall be provided prior to zoning clearance for the first and subsequent phases of construction.

**MONITORING:** The County staff shall verify the notification prior to zoning clearances for each phase of construction, and the onsite monitor shall confirm compliance during construction (*Addresses Impacts FPES-1, FPES-2, and FPES-3*).

**Mitigation Measure A-FPES-3: Install Gravel around Substation.** Gravel shall be placed around the perimeter of the Project Substation as a fire prevention measure.

**Requirements:** This requirement shall be noted on building plans.

**Timing:** Gravel shall be installed prior to the start of operations.

**MONITORING:** The County shall verify that gravel has been installed (*Addresses Impacts FPES-2*).

### 3.8.3.5 ~~Additional Mitigation Measures~~

~~The following mitigation measures shall be implemented, in addition to the Applicant-proposed mitigation measures, to mitigate impacts to fire protection and emergency services to the extent feasible.~~

**Mitigation Measure FPES-41: Access Roads.** Access roads shall remain passable by emergency vehicles for the duration of the Project. ~~To the extent practicable, no access roads shall exceed a 12 percent grade. In the event an access road is unable to meet this requirement, the access road shall be constructed such that the portion of the roadway segment that exceeds the 12 percent grade is as short as possible. All roadways exceeding a 10 percent grade shall be paved or covered with aggregate acceptable to SBCFD.~~ Turn-around requirements at the terminus of access roads shall be included in roadway designs. The final design shall be approved by the SBCFD, and the final access road map (including topographic map) shall be provided to both the SBCFD and the City of Lompoc Fire Department.

**Plan Requirements:** The approved access road design shall be included on the final plans with a note that the roads shall remain passable at all times.

**Timing:** The plans shall be approved prior to zoning clearance for the first phase and all subsequent phases of construction.

**MONITORING:** County staff shall verify the approval of the access road design plan prior to construction approval and confirm compliance upon completion of construction. SBCFD inspectors shall periodically verify that the access roads are maintained in an acceptable condition (*Addresses Impact FPES-2*).

**Mitigation Measure FPES-5: Water Supply.** The Applicant shall demonstrate to the County that sufficient water can be obtained from the new shallow well or existing spring on the property and/or by trucking in from off-site supplies to adequately supply the O&M facility needs while maintaining 5,000 gallons of stored water for fire-fighting purposes.

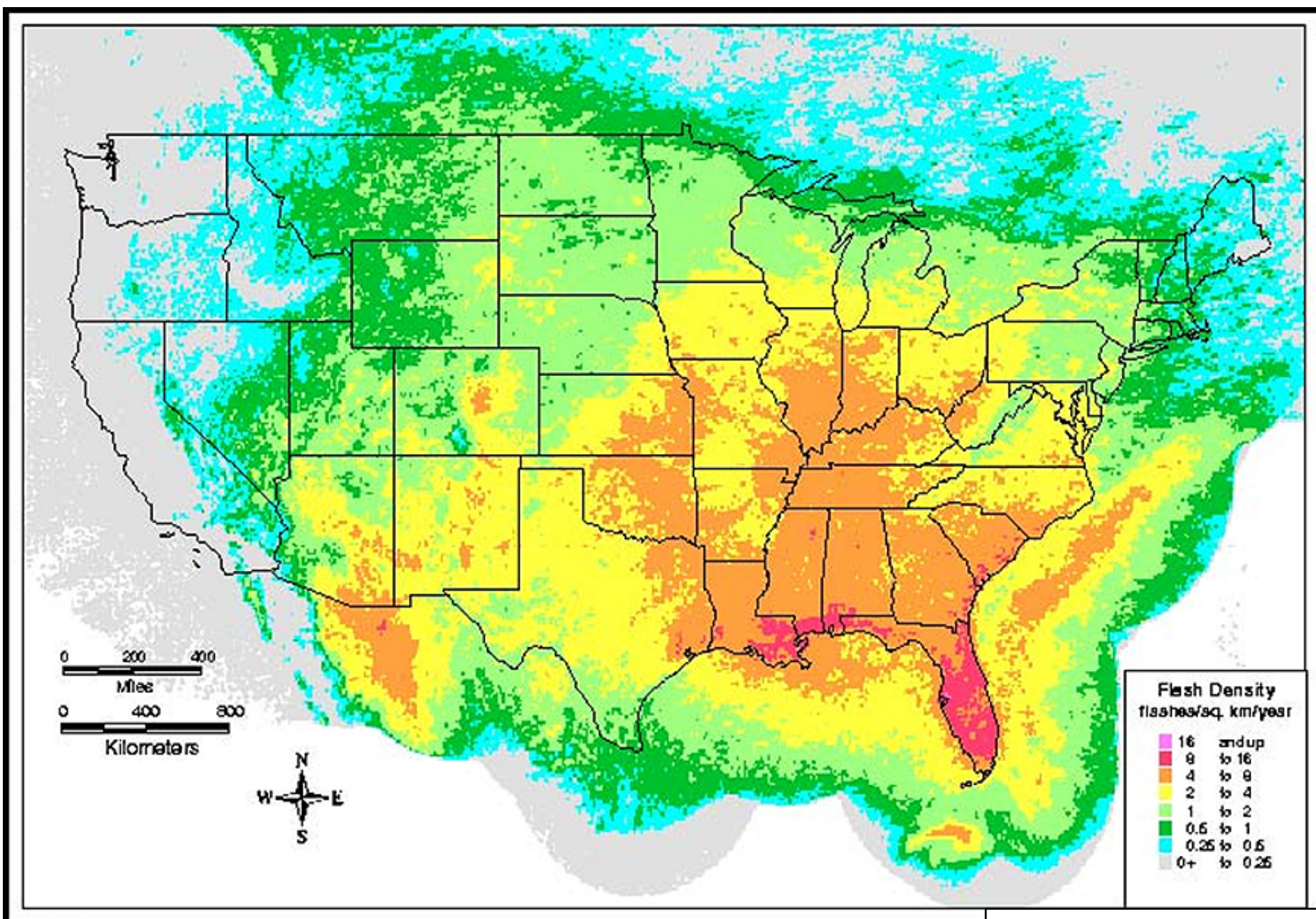
**Plan Requirements:** Evidence demonstrating adequate supply shall be submitted to the County for review and approval.

**Timing:** Evidence demonstrating adequate supply shall be submitted for review and approval prior to zoning clearance for the first phase of construction.

**Monitoring:** County inspectors shall confirm compliance during operations (*Addresses Impact FPES-2*)

### 3.8.3.5 Residual Impacts

With the implementation of the identified mitigations measures, residual impacts would be less than significant.



SOURCE: Global Atmospherics, Inc.

**FIGURE 3.8-1**  
**1996-2000 FLASH DENSITY MAP**  
 LOMPOC WIND ENERGY PROJECT  
 SANTA BARBARA COUNTY, CALIFORNIA

