

Appendix N
Wildfire Evacuation Memorandum

Appendix N-1
Fire and Emergency Response
Memorandum



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December 2, 2022

Bibiana Sparks-Alvarez
Project Manager
Acorn Environmental
5170 Golden Foothill Parkway
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Re: Shiloh Resort and Casino Project

Fire and Emergency Response Comments for the Shiloh Resort and Casino Project

The primary purpose of the fire code and other fire safety regulations and recommendations is to provide for the safety of life and property from the threats of fire. This document was prepared to summarize the fire risks, code requirements, and recommendations to reduce the threat of fire and loss of life and property.

Experience

My recommendations contained in this document are based on over 45 years of experience in fire safety and emergency management.

A significant part of my duties included the development of fire codes and ordinances for several government agencies. In Sonoma County alone I was involved with several fire code adoptions that also included vegetation management guidelines and requirements of the Public Resources Code for all unincorporated Sonoma County.

Another part of my experience was conducting numerous plan reviews and site inspections for residential and commercial development insuring compliance with local, state, and federal regulations. This included an emphasis on wildland fire code compliance. Another responsibility was the investigation of all fires including structure, vehicle, and wildland incidents.

My emergency response history spans five decades. That history includes responding to hundreds of incidents involving structure fires and wildland emergencies. I have responded to major wildland urban interface incidents throughout Sonoma County and California as an engine Captain, Strike Team Leader responsible for multiple engines and crews, and incident command staff.

Summary of Fire Risk and Recent Fire History

Having reviewed the available information for the Shiloh Resort and Casino Project, I offer the following comments:

Shiloh Resort and Casino Project is a proposed new development with access off Shiloh Road and Old Redwood Highway in unincorporated Sonoma County California. It lies within a moderate and high fire zone of the State Responsibility Area (SRA). It should be noted that Cal Fire's SRA Zones are under review and reported to be updated. The maps are now out for an internal Cal Fire review and should be available to the public sometime in calendar year 2023.

The proposed project site is located on approximately 68 acres and currently has an active vineyard operation, with fruit trees, a single-family dwelling, and miscellaneous outbuildings for the vineyard operation.

The proposed project has a total of 807,000 square feet of occupied space and a parking garage of 1.2 million square feet. The total allowable occupant load for the casino space is approximately 20,814. The total building code allowable occupant load for the casino and hotel space is approximately 20,814. The available parking spaces allow for 5,110 vehicles and nine bus parking spots. The parking spaces at 1.7 people per vehicle would indicate 8,687 customers and staff. The nine bus parking spots with 56 passenger buses would be approximately 504 customers and staff. These numbers do not account for bus and vehicle services that would bring customers to the facility.

Pruitt Creek runs through the middle of the property and the balance of the property is a vineyard. There is a very limited amount of flammable vegetation on the property due to the planted rows of grape vines.

Sonoma County has had its share of wildfire events. Several years of wildfire history reveals that numerous fires have occurred in or around the vicinity where the Tubbs Fire and Kincade Fire have burned. It is well documented that the Hanley Fire in 1964 burned an area like the Tubbs Fire, with final perimeter lines from both fires mirroring one another in some areas.

Similar circumstances have occurred with many fires, including the Atlas Peak fire in 1981, and the Atlas Fire in 2017, which burned simultaneously with the Tubbs Fire.

The development site is in an area that has seen recent significant fire activity, including the Tubbs Fire in October of 2017 and the Kincade Fire in October of 2019. The Tubbs and Kincade fires burned up near the northeast side of the property near the intersection of E. Shiloh Road and Faught Road. The fire stopped short of reaching the project property.

A few factors could have been in play to prevent the fire from reaching the project property. One could have been the active efforts of fire suppression forces in the area and using the roads as a fire break for their suppression actions. Another reason could have been the roads and vineyards served as a “fire break” with their natural limited flammable vegetation features.

The development of the casino and resort will only add to the fire resistive features of the area. The northeast area of the project is proposed to be a noncombustible parking structure, a hard surface parking area and the remaining area will continue to be a vineyard. There will be a 3.5-acre treatment area that will meet all local codes and standards for vegetation management. Pruitt Creek will be protected with vegetation management that is allowed within a riparian area. The actual potential flammable vegetation will be greatly reduced in this area.

The balance of the property will be the casino floor, event center, hotel, swimming pool, and covered parking drop off. This area will be bordered by the existing vineyards on the south, north, and west providing an additional flammable vegetation break.

Tubbs Fire

By the time the Tubbs Fire had been extinguished, near the end of October 2017, it had become the third deadliest wildfire in California history (at that time – it is currently the fourth deadliest wildfire on record), killing 22 people. It also became the most destructive wildfire in California history (at the time-it is now the second most destructive wildfire on record). The Tubbs Fire burned 36,807 acres and 5,636 structures.

Kincade Fire

The Kincade Fire also started on October 23 of 2019 at 9:24 pm at the Geysers north of the project site. This fire burned 77,758 acres. It destroyed 374 structures and damaged 60 others.

As stated previously, according to available fire mapping data neither fire reached the project site. Both fires did come down to Faught Road just east of the project site. The Tubbs Fire did cross over Faught Road north Shiloh Road and the project site.

2019 Kincade Fire Maps

<https://storymaps.arcgis.com/stories/3ea9e0ceb81042618f0de719b299d32d>

<https://sonomalandtrust.maps.arcgis.com/apps/TimeAware/index.html?appid=a5a8825d160440887a181bdd7009730>

2017 Tubbs Fire Maps

<https://storymaps.arcgis.com/stories/3ea9e0ceb81042618f0de719b299d32d>

Project Evacuation

The hot summer and early fall weather in Sonoma County can be accompanied by strong winds coming from the north and northwest. These temperatures and winds fuel very destructive fires. The fast moving, early morning, wind driven Tubbs Fire in 2017 created a “no-warning” event in Sonoma County where many residents had little or no warning to evacuate.

Since the Tubbs Fire of 2017 the early warning and notification tools that provide information to the public in Sonoma County have vastly improved. This process included ways to increase, expand and improve on all public education messaging related to fires and disasters in the county. Some of public education steps include:

1. **Red Flag Warnings**. A Red Flag Warning is the highest level of alert for critical weather related to wildfires. The county and most cities post information on fire weather and Red Flag Warnings on their web sites. Most fire stations in the county display messages or actual red flags during red flag days.
https://www.weather.gov/media/lmk/pdf/what_is_a_red_flag_warning.pdf
2. **Fire Cameras**. There are dozens of fire cameras now installed in the north bay that includes Sonoma County. The purpose of these cameras is to quickly discover, locate, and confirm a fires ignition. They assist first responders in providing response resources. This enhanced situational awareness will also assist with evacuations. These cameras are also available to be viewed by the public.
<https://www.alertwildfire.org>
3. **Alerts**. Sonoma County as significantly increased their public education efforts for emergency alerts for the residents and visitors of the county. Examples of those alerts are: SoCoAlert, Nixle, NOAA weather radio. These alerts work with mobile and home phones. The NOAA weather radio works independent of telephones and provides weather and emergency alerts
<https://socoemergency.org/get-ready/sign-up/>
4. **Evacuation Zone Maps**. The Sonoma County Sheriff’s Office and the Emergency Management Department have developed zones within the unincorporated area of Sonoma County to help manage any emergency evacuation. The unincorporated county is broken down into many zones. When disaster strikes and evacuations are needed county officials will use these zone maps. The specific areas needed to be evacuated will be provided information through the emergency alerts and local media outlets. This project is in Sonoma County Zone #SON-3C1.
<https://socoemergency.org/get-ready/evacuation-map/>

The project developers are committed to provide a comprehensive evacuation plan for all occupants of the development. The components of the plan will allow for early evacuation of all occupants to lesson any impacts on neighboring properties. The guests, employees, and staff will

be made aware of the above early warning tools, specifically the emergency alerts. The plan will be further developed once the land is taken into trust and specific building plans and drawings are available. The plan will be completed prior to occupancy as required by the California Fire Code.

(See recommendation #10 on evacuations below)

California Building and Fire Code Requirements

With the increase in severity and intensity of wildfire activity across California over the past several years, fire researchers and data collection have revealed a great deal of information that was previously unknown. It is now widely known that embers, or fire brands, are the direct or indirect cause of many structure ignitions during a wildfire event. These embers are unburned pieces of vegetation or structural elements that are blown far in advance of the main fire front itself, igniting receptive fuel beds of dry vegetation, or structures themselves. We also know that historically, a future catastrophic event like the Tubbs Fire is somewhat predictable as to the direction it will travel. These types of “Foehn” wind events, known as Santa Ana Winds in Southern California, or Diablo Winds in Northern California, have always been pushed by high wind events that are moving from North to South, Northeast to Southwest, East to West, or some combination of these directional winds. Knowing this information allows us to address potential vulnerabilities on certain aspects of a structure, knowing some facades will face a higher impact of embers and other factors as the fire burns through. While there are no guarantees, it is possible to address these impacts by utilizing appropriate building materials, assembly details, and long-term maintenance to maximize the resistance of a structure from a potential ember ignition.

Wildfire resiliency and life safety issues are a high priority for the developers of this project. There are several wildfire codes and standards that will be applied to the construction of this development. They will include building materials themselves, but will also include landscaping, defensible space efforts, evacuation planning.

The entire project and in particular the exterior materials selected for this project will meet or exceed minimum standards required by California Building Code Chapter 7A, widely referred to as the “WUI Code,” or Wildland Urban Interface Code. These requirements were first established in 2008 and continue to be updated and improved on with every adoption of the code by the State. All buildings will be required to have interior fire sprinklers. Fire sprinklers will contain any interior fire to the area of origin and reduce the risk of the fire spreading to other structures.

The exterior landscaping will be required to have a plan to be ignition resistant and have a maintenance component. A great deal of information is currently available regarding landscaping, and how decisions about plant selection and location can have direct impacts on how wildfires affect structures. This information has now been scientifically validated via research, in conjunction with observations from numerous wildfires over the past several years.

Another step toward ember resistance is now being widely accepted and has been recently adopted by the California State Board of Forestry. Flying embers are a significant cause of structure

fires during a wildfire incident. Research shows that a non-combustible zone measuring 0 – 5 feet surrounding a structure can significantly reduce the likelihood of ember ignitions. There should be no vegetation or landscaping in the non-combustible zone, greatly reducing the ability for embers to ignite a structure significantly increasing wildfire resiliency. The structural hardening and vegetation management efforts will help prevent the ignition of fires from flying embers inside and outside of the structures.

Riparian Corridor Fire Safety

As previously mentioned, Pruitt Creek runs through the project site. It starts in unincorporated Sonoma County northeast of the site and travels southwest into the town limits of Windsor. The creek is considered a riparian corridor. The Town of Windsor and the County of Sonoma have both developed wildfire fuel management plans for riparian corridors. The applicant will review these plans and other recommendations, regulations, and guidelines from state and federal agencies. The applicant will provide wildland fuels management and reduction as required in the riparian areas of the project.

The fuel reduction efforts will include annual and seasonal reduction of grass, shrubs, dead and dying plants and other overgrown vegetation. The efforts to reduce ground fuels will aid in preventing ground fires from spreading to other larger shrubs or trees. The separation of trees will reduce the tree to tree spread of fires in the riparian area. This work will aid in preventing fires from spreading to other areas of the project site.

Fire and Life Safety Recommendations for the Project

Wildland fires tend to be driven by slope, terrain, topography and fuel type and concentration. Weather, specifically winds, temperature, fuel moisture and humidity also play a significant factor in fire spread and intensity.

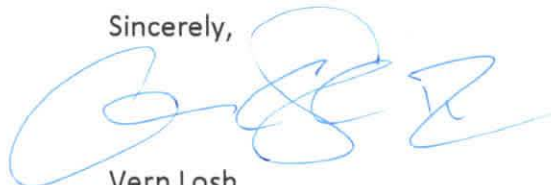
This project site is relatively flat with very little change in slope or topography. Other than the area of Pruitt Creek the entire site is essentially free of any dense brush, hardwoods, or timber fuels that could intensify a wildland fire. As stated earlier, any remaining vegetation will fall under the vegetation management requirements of the California Fire Code. A well-executed vegetation management plan greatly reduces the impact of a potential wildfire. A vegetation management plan will be developed as required by the fire code.

This report identifies areas of vulnerability from a wildfire to this project. While the project proposal meets the minimum wildfire resistant requirements, there are several recommendations that can be taken to further bolster the resiliency and life safety of this project from a wildfire event and other fires within the project's property and structures.

Recommendations

1. Ensure all construction materials meet the minimum or exceed the code requirements from Chapter 7A of the California Building Code, current edition.
2. The contractor must pay close attention to the installation of these materials, with special care taken to eliminate any openings at joints or other locations where embers could intrude and potentially ignite flammable material.
3. A long-term maintenance plan should be created with annual maintenance to ensure fire resistive materials and construction details are maintained at their highest level to reduce ember impacts. This maintenance plan should remain in place for the life of the structure.
4. Develop an overall landscape management and maintenance plan. This vegetation management plan (VMP) should comply with requirements of the local and state fire agencies.
5. Maintain a landscape plan immediately around the structure to reduce the number of flammable materials within the 0 – 5-foot zone immediately surrounding the base of the structure. If any plants are placed in this zone, the plants should be highly fire resilient, and carefully located to avoid being placed in front of any door or window openings around the perimeter of the structure.
6. Create a detailed defensible space plan for the site, with special attention to the downhill slope at the rear of the structure. Grass should be kept mowed, ladder fuels on trees should be removed, and any shrubs should be spaced with appropriate distances to break the fuel continuity of the vegetation.
7. Develop a riparian corridor vegetation management plan. Use the plans developed by the Town of Windsor and Sonoma County as a guide for the plan. Sonoma County, Permit Sonoma 8-2-3 Guidelines for Fire Fuel Management in Riparian Corridors (July 2020), <https://permitsonoma.org/policiesandprocedures/8-2-3guidelinesforfirefuelmanagementinripariancorridors>
Town of Windsor Riparian Corridor Wildlife Fuel Management Plan (June 2020), <https://www.townofwindsor.com/DocumentCenter/View/24987/Riparian-Corridor-Wildfire-Fuel-Management-Plan---Final>
8. A robust construction fire safety plan should be developed for use during construction.
9. Provide all staff and employees on-going fire safety and prevention training as stated in the California Fire Code.
10. A comprehensive evacuation plan is critical for the life safety of customers and the staff of this project. The project was provided evacuation planning recommendations by CAS Safety Consulting. I support the recommendations in their document.

Sincerely,



Vern Losh
Vern Losh & Associates

Appendix N-2
Traffic Evacuation Memorandum



TECHNICAL MEMORANDUM

November 11, 2022

To: Jennifer Wade
From: Chris D. Kinzel
Subject: Evacuation of Shiloh Casino

TJKM has been asked to assess the evacuation of the proposed Shiloh Casino under potential wildfire conditions. Wildfire scenarios can vary widely and in most cases all occur under high traffic congestion levels. The timing of evacuation creates a variety of potential conditions – evacuation during congested commute periods, under standard daytime weekday traffic conditions, during weekend periods, or during less-traveled overnight conditions all affect conditions.

TJKM has considered alternative evacuation scenarios in the following portions of this report. The first considers evacuation of only the casino grounds for the Proposed Project (Alternative A).

CASINO EVACUATION

In this scenario, the Casino will be fully occupied and all of the improvements on the site, including its three access points will be in place.

Assumptions for Evacuation

- A parking garage holding about 3,692 vehicles will be available
- Surface parking with about 618 park stalls will be available
- Entry area parking of about 800 vehicles will be available
- The total evacuating vehicles assumed are the above 5,110 vehicles. However, an estimate based on the marketing study assumes that the expected maximum on site attendance would involve only 2,450 vehicles, so these evacuation assumptions are very conservative.
- The 4,310 garage and surface parking stalls would be served by a looped two-lane two-way roadway with one end connecting to a stop sign controlled intersection on the east end of the site on two-lane Shiloh Road.
- The other end of the looped roadway would connect to a signalized project entrance on Old Redwood Highway.

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- The entry area parking is near the new signalized entrance onto Shiloh Road that will be located near the Old Redwood Highway signalized intersection.
- West of the new signalized intersection serving the entry area, Shiloh Road will have been expanded to include two westbound through lanes between its intersection with Old Redwood Highway and the new signalized intersection providing access to the Project Site.

Elements of Mitigation Plan

The following mitigation measures are recommended to achieve a safe, efficient and organized site evacuation:

- Trained on-site personnel will direct roughly half of the 4,310 vehicles from the rear of the site to each of the two access points (the east Shiloh Road access point and the signalized Old Redwood Highway access point.) Thus, each access point connecting to adjacent public streets would handle about 2,155 vehicles.
- The two-lane two-way loop road serving the 4,310 vehicles should be converted to two outbound lanes during evacuation. However, only a single lane of traffic would enter the single westbound lane on Shiloh Road, so the extra outbound lane would be for storage of vehicles that would be directed onto the westbound lanes of Shiloh Road by two on-site attendants to keep traffic flowing.
- To accommodate any opposite flow emergency vehicles, the loop road should be designed with at least one paved shoulder wide enough to handle in-bound traffic during evacuation. This design should be available at all three access points.
- The Old Redwood Highway access point will be signalized and it also only has a single receiving lane on southbound Old Redwood Highway. All evacuation traffic should be directed to the south. This exit should also have two outbound lanes but only one vehicle at a time can use the outbound lane at the signal. Two attendants will be necessary to direct traffic.
- At the signalized exit near the entry area, also only a single lane can exit onto Shiloh Road. There would be two westbound receiving lanes at this location allowing both the vehicles exiting from the entry area and the other evacuating vehicles from the east access point to have their own westbound lane approaching the signalized intersection of Shiloh Road and Old Redwood Highway. To keep traffic flowing smoothly, two attendants should be present at this location.
- There should be at least six traffic attendants to direct the 4,310 vehicles exiting the garage and surface parking areas. In addition, at least two attendants would be needed at each of the three casino parking lot exit points. A total of 12 persons would be needed during evacuation. These traffic attendants should be specially trained employees of the casino.
- It is assumed that the approximate 2,155 vehicles exiting the site on the east Shiloh Road access point would have a maximum service rate of about 1,000 vehicles per hour. This is a typical rate assumed in urban areas and assumes that other traffic will be present, although at this location other traffic should be relatively light. This exit can therefore handle the exiting evacuating traffic in 2.2 hours or about two hours and twelve minutes.

- At the signalized exit onto Old Redwood Highway, the exiting would be less efficient due to the signal itself and a higher proportion of other traffic using the signalized intersection. At a service rate of about 800 vehicles per hour, it would take about two hours and 45 minutes to handle all the traffic at this location.
- If outbound traffic were adjusted at the two rear exits to balance the flow and the exit time, the combined average service rate would be 900 vehicles per hour and it would take just under two hours and 30 minutes to empty the rear of the site.
- The 800 vehicles in the entry area could be evacuated in about one hour using the signaled intersection serving the entry area.
- It has been speculated that many of the casino evacuees would want to return to their homes as the first part of their evacuation process. In this case, some might desire to travel north on Old Redwood Highway or north on US 101. Roughly 35 percent of the Shiloh customers are assumed to come from the north. If they evacuated in that direction they are likely to use one of these two roadways to travel northerly, which should not increase the evacuation time.
- To ensure that Casino evacuations operate as efficiently and safely as possible, the Casino operator shall produce a comprehensive Traffic Evacuation Manual that describes steps similar to those described herein at least 90 days prior to the opening of the Casino.
- Casino management shall have quarterly evacuation training sessions for all evacuation personnel.

With the implementation of the mitigation measures described above, **the impacts related to evacuation of the Shiloh Casino shall be considered less than significant.**

WINDSOR EVACUATION

The purpose of conducting an evacuation study of the larger nearby area is to determine how the presence of the Shiloh Casino would affect such an evacuation. For example, in the 2019 Kincade Fire, a large area in Sonoma County between Geyserville and Windsor, which included a population of over 186,000 persons, was issued four separate mandatory evacuation orders over a four day period – October 23, 2019 to October 27, 2019. For this analysis, a hypothetical mandatory evacuation of only the Town of Windsor, the following assumptions are considered. Many factors influence evacuation times such as the time of day, the day of the week, etc., that evacuation orders are issued. The following factors were considered in this simplified evacuation analysis:

- There are about 10,800 homes in the Town of Windsor. The greatest number of residential evacuations would occur if all residents were at home. The assumption is that each residence would evacuate an average of 1.7 vehicles. This yields a total of 18,360 vehicles to evacuate.
- It is assumed that 90 percent of the vehicles would evacuate to the south, or about 16,500 vehicles. In previous evacuations, facilities to accept evacuees were available in Santa Rosa.
- There are three roadways leading to the south – US 101 with three southbound lanes and Old Redwood Highway and Slusser Road with one southbound lane each.

- The freeway lanes have a capacity of about 2,000 vehicles per hour each and the conventional highway lanes have a capacity of about 800 vehicles per hour each. Thus the total hourly capacity of the roadways leading to the south is 7,600 vehicles.
- In this case the assumption is that non-evacuation background traffic from other highway users would utilize about half of the available roadway capacity, leaving available capacity of about 3,800 vehicles per hour.
- The time to evacuate 16,500 vehicles at the rate of 3,800 vehicles per hour is about 4 hours and 20 minutes.

It should be pointed out that in this hypothetical evacuation it is assumed that everyone is at home and that no employees or visitors from out of the area are included in the evacuees. Also during commute periods, especially in the morning with a heavy southbound flow on the freeway, much less roadway capacity is available. It can be seen that the evacuation period of this hypothetical evacuation could be in the range of four to six hours.

COMBINED EVACUATION OF TOWN OF WINDSOR AND CASINO

The two evacuation periods – about four to six hours for the Town and about two and one-half hours for the casino alone -- could be six to eight hours if combined. This is a conservative estimate as some of the patrons of the Casino could be residents of Windsor and thus double counted (assumed in both the Windsor residents and Casino patron evacuation numbers).

Appendix N-3
Evacuation Recommendations
Memorandum



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November 30, 2022

Bibiana Sparks-Alvarez
Acorn Environmental
5170 Golden Foothill Parkway
El Dorado Hills, CA 95762

RE: Shiloh Resort and Casino Project

Dear Bibiana Sparks-Alvarez:

The purpose of this letter is to provide our professional recommendations for evacuation planning considerations at the Shiloh Resort and Casino (Project) during a disaster; specifically related to wildfire evacuations.

Disasters are unpredictable, much like human behavior in response to them. A comprehensive disaster evacuation plan prepares for many contingencies. No disaster response plan can eliminate risk, but a well-designed plan, reinforced with continuous training and clear communication can reduce risk.

EXPERIENCE

Our recommendations are based on a law enforcement perspective of traffic-related evacuations during a disaster. We have a combined 54 years of law enforcement experience, including leadership roles during the 2017 Sonoma County Complex Fires. At that time, these were the most devastating wildfires and in California's history. Serving as the Sonoma County Sheriff and Assistant Sheriff during these fires, let us see first-hand the importance of evacuation preparedness and planning. One of many important lessons learned during these fires was early evacuation is the key to protecting life and getting people out in an efficient manner. Our professional experience with wildfire evacuations means that we are uniquely qualified to provide evacuation recommendations, while working collaboratively with public agencies and other project team members, such as fire and traffic experts. Our goal is to provide the safest evacuation recommendations possible, recognizing that each project and its physical location are unique, and requires a tailored approach.

Our recommendations are based on our professional experience and first-hand knowledge of evacuations during disasters. In addition to our experience, we reviewed the following items:

- On-site reconnaissance;
- Sonoma County's Emergency Operation Plan, and the incorporated annexes: Alert and Warning and Evacuation Plans;
- Presentations by Law Enforcement leaders on disaster management of actual incidents;
- News media covering disaster issues for law enforcement including review of the Sonoma County Complex Fires of 2017, and the 2019 Kincade Fire;



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- Client's square footage calculations (Reduced Intensity and Full Build Site Plan)
- Client's Full Build Site Plan and Reduced Intensity Site Plan;
- Client's Environmental Assessment Section 2.1.2 (Resort Facility) and 2.1.6 (Roadway Access and Circulation);
- Draft Reports by Vern Losh regarding Fire and Emergency Response recommendations;
- Personally driving and observing relevant evacuation roads and routes.

PROPOSED PROJECT LOCATION

South/East corner of East Shiloh Road at Old Redwood Highway, Windsor, California

PROPOSED PROJECT DESCRIPTION

The proposed Project is located on 68.6 acres on the south/east corner of East Shiloh Road and Old Redwood Highway in the unincorporated area of the County of Sonoma. The Project Site includes a three-story casino, a five-story hotel with spa and pool area, ballrooms/meeting space, and event center. The resort would be designated as entirely non-smoking and open 24 hours a day, 7 days a week. It is anticipated that the event center would host concerts and performances while the ballrooms/meeting space would host banquets, conferences, or other special events. An enclosed pedestrian bridge would connect the parking garage with the casino approximately 12 feet above Pruitt Creek. The Project Site would create an estimated 1,571 full-time equivalent jobs.

Project Occupancy Numbers:¹

The total occupancy load of the Resort and Casino is 20,814². However, the total occupancy based on parking capacity is 9,191. There are 5,110 parking spaces on the entire property and nine bus parking spaces. Based on figures provided, the average vehicle would contain 1.7 persons per vehicle for a total of 8,687 people. There are nine bus parking spaces with 56 seats per bus which totals 504 persons.

The market study showed peak bodies at any given time to be 4,165 people. Assuming 1.7 persons per vehicle, that would equal 2450 total vehicles at the Project. Additional considerations should be made for shuttle services that bring persons to and from the Resort and Casino.

¹ Information provided by Acorn Environmental based on figures they receive from the architect and from a GMA market study.

² Provided to Acorn Environmental from Architect Dale Partners.



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CONCEPTUAL SITE PLAN



ROADWAY ACCESS FROM PROJECT SITE

Ingress and egress onto the Project Site are through the following roadway access points:

1. An existing driveway on East Shiloh Road, east of Caporale Court;
2. A new driveway on East Shiloh Road across from Gridley Drive and;
3. A new driveway on Old Redwood Highway across from the southern driveway of the existing Shiloh Neighborhood Church.

The two main roadways to exit the property are Old Redwood Highway and E. Shiloh Road. Old Redwood Highway is a two-lane highway that traverses through the Town of Windsor to the north and the City of Santa Rosa to the south. Shiloh Road is a two-lane roadway that crosses Highway 101 to the west, which is the main evacuation artery in the area. There is a traffic-controlled intersection at Old Redwood Highway and Shiloh Road. Evacuee's most viable options for evacuation from the Project Site at the Old Redwood Highway access point is southbound on Old Redwood Highway toward



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Larkfield, where more evacuation routes become available to access Highway 101. Or, heading northbound on Old Redwood Highway and then west on Shiloh Road towards Highway 101.

For evacuee's leaving the Project Site from the E. Shiloh Road access point, the best option would be heading westbound on E. Shiloh Road to Highway 101.

DEFINITIONS

This letter uses four types of definitions: definitions that are specific to the Shiloh Resort and Casino; definitions from FEMA; and Sonoma County and State of California evacuation terminology as is set forth below.

1. Shiloh Resort and Casino Specific Definitions

For a clear description of the different aspects of the Project, we included the following terms when describing the Shiloh Resort and Casino and its components.

Casino: 538,137 square foot facility to serve gaming, ballrooms, meeting rooms, food court, retail, service bars, and an event center.

Hotel: A 400 room hotel with spa.

Parking: The Project will provide for 5,119 parking spaces as follows:

- Casino drop-off parking is 800 parking spaces
- Four-story parking garage with 3,692 parking spaces
- Additional paved surface parking is 618 parking spaces
- Bus parking is 9 spaces

2. FEMA Definitions

Evacuation: Organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas, and their reception and care in safe areas.

3. Sonoma County and California Statewide Evacuation Terminology

Our experience showed that using correct terminology during a disaster is significant. Therefore, we will use the following list of common terms based on the California Standard Statewide Evacuation Terminology. Sonoma County adheres to this terminology.

Evacuation Order: Immediate threat to life. This is a lawful order to leave now. The area is lawfully closed to public access.



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Evacuation Warning: Potential threat to life or property. Those who require additional time to evacuate, and those with pets and livestock should leave now.

Shelter-in-Place: Go indoors. Shut and lock doors and windows. Prepare to self-sustain until further notice and/or contacted by emergency personnel for additional direction.

EVACUATION EVOLUTION IN SONOMA COUNTY

Typically, strong “Diablo Winds” from the northeast have fueled Sonoma County’s most destructive wildfires. These wind-driven fires caused “No-Notice” events, such as the Sonoma County Complex fires in October 2017 when people had little or no warning time to evacuate.

Today, Sonoma County has developed fire preparedness education, advanced Alert and Warning Systems, Evacuation Zones, and early detection devices such as wildfire cameras to enhance life-safety through orderly evacuations. However, “No Notice” events still merit significant consideration and planning. In a “No-Notice” event, people are typically forced to self-evacuate³ or shelter-in-place. “No-Notice” events may include loss of infrastructure, such as power, internet, and cell phones.

Advanced warning and early evacuations provide more time for people to get out of the danger areas. The 2019 Kincade Fire and 2020 Glass Fires, saw early and widespread evacuations by design⁴ to protect life and enable the firefighters to fight the fire. Although traffic problems were widely reported during the Kincade and Glass Fire evacuation, traffic congestion is expected and normal when trying to get all residents out of an area. The roadways were not designed to handle the high volume of vehicles during a mass evacuation. The critical metric for success in these evacuations was that no loss of life occurred. Consequently, structure losses were significantly lower relative to wildfires without these early evacuations.

VERN LOSH’S FIRE AND EMERGENCY RESPONSE LETTER, DATED NOVEMBER 29, 2022

We reviewed retired Sonoma County Fire and Emergency Service’s Department Head Chief Vern Losh’s November 29, 2022 opinion letter on the Fire and Emergency Response for the Project Site. Losh summarized the fire risk and history for the Project site. We noted that fire data shows there have been three fires that have burned up to Faught Road at East Shiloh Road; the 1964 C. Hanly Fire, 2017 Tubbs Fire, and 2019 Kincade Fire.

³ “Self evacuate” means to leave without being ordered to leave, such as when a no notice-fire occurs.

⁴ The Sonoma County Alert and Warning Annex discusses this in “Appendix A: Communication System Hazards.”



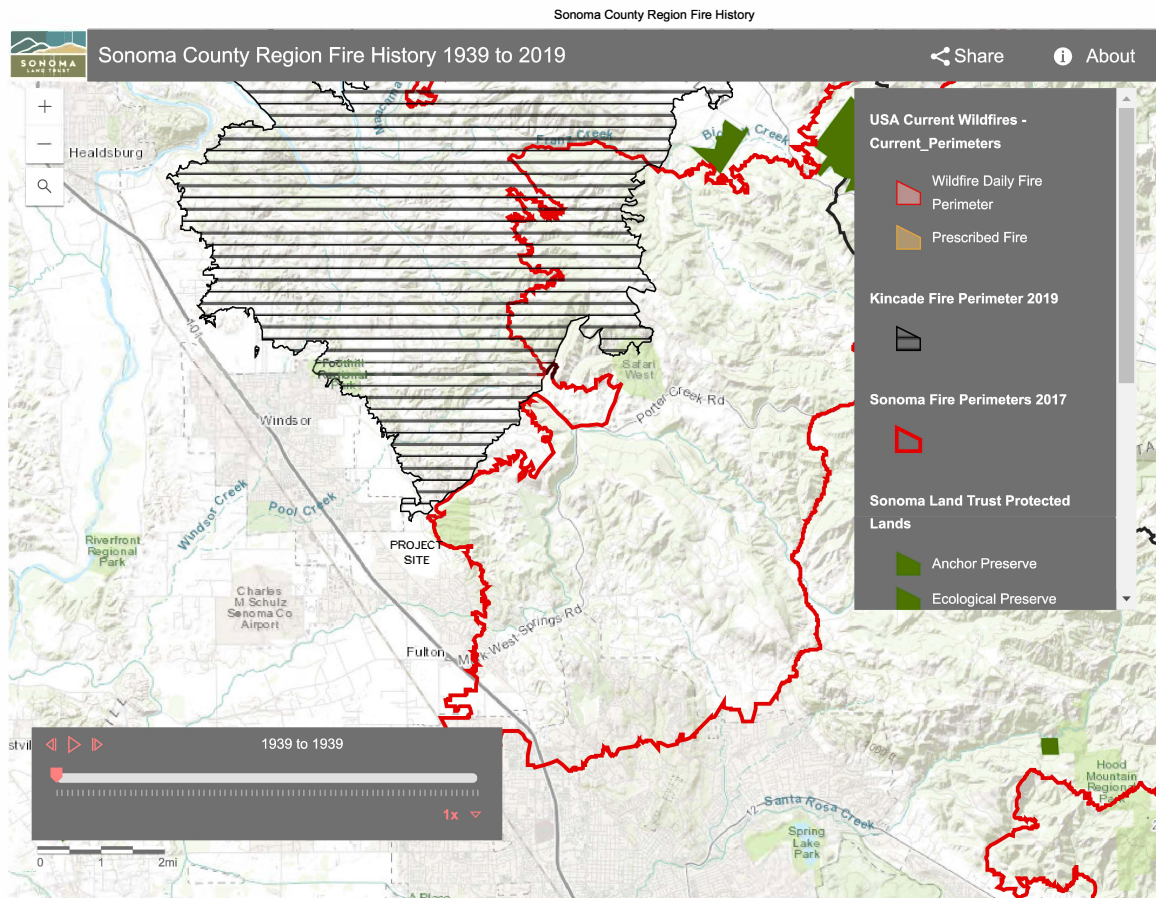
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The following illustration depicts the 2017 Tubbs Fire and 2019 Kincadee Fire in relation to the Project Site. The 1964 C. Hanly Fire burned in a similar footprint as the Tubbs Fire; specifically, near the Project Site.

SONOMA COUNTY REGION FIRE HISTORY⁵



<https://sonomalandtrust.maps.arcgis.com/apps/TimeAware/index.html?appid=a5a88825d160440887a181bdd7009730>

INTENTIONALLY BLANK

⁵ This map can be located here: <https://sonomalandtrust.maps.arcgis.com>



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RECOMMENDATIONS

Based on our evaluation and experience from the law enforcement perspective, we have the following recommendations for wildfire evacuations for the Shiloh Resort and Casino:

1. Alert and Warning Notifications

We recommend Shiloh Resort and Casino executives and senior management staff working at the Resort and Casino subscribe to and monitor local emergency Alert and Warning Notification Systems. There should always be executive and management staff present who fulfill this role and are responsible for emergency evacuations.

Executive and management staff should be trained and understand the local emergency alert and warning systems. By subscribing to and monitoring the alert and warning systems, executive and management staff will be apprised of immediate disaster information and be able to assist guests in proper safety instructions. Alert and Warning Notification Systems are one of the most important aspects of emergency preparedness. For this above recommendation, the following are the notification systems executive and management staff will subscribe to and monitor or have knowledge of:

A. *Wireless Emergency Alert (WEA)*

The Wireless Emergency Alerts system is an essential part of America's emergency preparedness. Since its launch in 2012, the WEA system has been used more than 70,000 times to warn the public about dangerous weather, missing children, and other critical situations; all through alerts on compatible cell phones and other mobile devices.

WEA is a public safety system that allows customers who own compatible mobile devices to receive geographically targeted, text-like, messages alerting them of imminent threats to safety in their area. WEA enabled devices can receive a brief text message along with a unique tone to specific areas over cell phones and other communication devices. This is a message forced out to these communication devices in a specific area. Most people have had exposure to this system when an Amber Alert comes to their cell phone.

Executive and management staff at the Shiloh Resort and Casino will ensure WEA is enabled on their cellular phones.

B. *SoCoAlert*

SoCoAlert is a local emergency warning system capable of sending out automated messages to phones, text, email, and TDD (telecommunications device



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for the deaf) systems. This is an opt-in system that generally requires people to sign-up to receive alert notifications. It is one of Sonoma County's primary alert systems.

Executive and management staff will sign-up to receive SoCoAlert notifications thru email, SMS text, and phone calls.

C. Nixle

Nixle is another notification system used locally for emergency. Nixle is used by Sonoma County in addition to SoCoAlert. Executive and management staff would be required to register with Nixle in order to receive alert notifications. The Nixle registration system is simple and user friendly, one can text the Zip Code they want warning for to "888777" and the system is activated.

Based on our early evacuation recommendations, executive and management staff at the Resort and Casino would need to know their Sonoma County evacuation zones and monitor Nixle for Alert and Warning notifications.

D. NOAA Weather Radio (NWR)

Working with the Federal Communications Commission's Emergency Alert System, NOAA Weather Radio is an "all hazards" radio network, making it the single source for the most comprehensive weather and emergency information available to the public. It broadcasts warning and post-event information for all types of hazards; Both natural (such as fires, earthquakes and tsunamis) and technological (such as chemical releases or oil spills). Certain NOAA Weather radios have battery backup power and the capability to send out a tone and an emergency alert even if the radio is turned off. These radios also have strobe lights and vibrating pillow accessories that can be added to the NOAA radio for ADA compliance.

NOAA radios with alert capabilities should be located in executive and management staff office spaces, to be able to monitor NOAA radio in case of an infrastructure failure due to wildfire or another disaster.

E. Hi-Lo Sirens

Hi-Lo sirens have been adopted by local jurisdictions as an emergency signal. The Hi-Lo siren is broadcast from patrol cars, giving first responders the ability to drive thru a neighborhood notifying large groups of people quickly that there is an emergency. The Hi-Lo siren will only be used during an emergency where people need to act. Upon hearing the Hi-Lo siren, community members are to act, by paying attention to first responder's instructions, seeking out information via news sources, and checking their surroundings.



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Executive and management staff at the Shiloh Resort and Casino will need to know about Sonoma County's Hi-Lo siren program to be able to provide evacuation information to guests and visitors.

F. Other Emergency Related Apps and Websites

There are several applications and websites that provide emergency information related to wildfire and other disasters, such as Watch Duty, Alert Wildfire Camera Network, Pulse Point and Perimeter (a new system Sonoma County has purchased but is not fully functional yet).

Executive and management staff can use these Apps as helpful tools for situational awareness if they choose. However, these are not replacements for official government notifications. It is critical that executive and management staff use government Alert and Warning notification systems for reliable and consistent evacuation information.

2. Register Phone Lines with SoCoAlert

We recommend that primary phone lines into Shiloh Resort and Casino be registered with SoCoAlert.

If SoCoAlert sends an emergency notification for the area including Shiloh Resort and Casino, all phones registered will automatically receive a phone call with the emergency notification⁶.

3. Red Flag Warning and Fire Weather Watches

We recommend that Red Flag Warnings and Fire Weather Watches information be posted so visitors and guests will be apprised of the high fire danger conditions.

The Nation Weather Service issues Red Flag Warnings and Fire Weather Watches to alert fire departments and communities of the onset, or possible onset, of critical weather and dry conditions that could lead to rapid or dramatic increases in wildfire activity.

Red Flag Warnings are the highest alert to fire danger. These warnings pertain to weather which may cause extreme fire behavior within the next 24 hours.

A Fire Weather Watch, one step below a Red Flag Warning, is issued when weather conditions could exist in the next 12-72 hours. The type of weather patterns that can cause a warning or a watch include low humidity, strong winds, dry fuels, the possibility of dry lightning strikes, or any combination thereof.

⁶ If this is possible based on the communication's system used for the Project.



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Staff, guests, and visitors should be apprised of the conditions of critical fire danger in the area. Educating guests and visitors about Red Flag Warnings and Fire Weather Watches creates better “situational awareness,” which is the foundation of evacuation preparedness.

Executive and management staff can easily obtain weather condition information from the National Weather Service or directly contacting the Windsor Fire Department. This critical fire danger information can simply be posted on site at entrance/exit locations.

4. Efficient Project Design for Mass Evacuation

We recommend traffic engineers review the design of the Project Site parking locations and entrance/exit locations to determine the most efficient plan for mass evacuation of vehicles from the Project Site.

To determine the timeline to an early evacuation, it is important to know traffic data for the property and existing roadways that would potentially be used during an evacuation. In review of the conceptual site plan, there appears to be two entrance/exits points for the parking structure⁷. Additionally, the Project Site has three entrance/exit points.

The basis of this recommendation is to ensure the Project Site has considered mass evacuations of vehicles from the Project Site in the most efficient manner possible. Some of the questions that could provide more insight are:

- Would it be beneficial to add additional entrances/exits for the parking structure?
- What are the most efficient routes for vehicles to exit the property during a mass evacuation? Should there be one-way routes to split traffic during an evacuation?
- Would more entrance/exit locations and designated evacuation routes within the property increase evacuation efficiency?

5. Cumulative Impacts

We recommend evaluating the scale of the Shiloh Resort and Casino evacuation impact along with other proposed projects in the area.

Traffic engineers should evaluate traffic conditions based on the cumulative impacts of known or planned projects in the area. Any additional known or proposed project should be considered in determining the evacuation impacts of the Shiloh Resort and Casino and surrounding community.

⁷ Acorn Environmental coordinated with the architect who indicated that, preliminarily, the smaller entrance/exit was one lane in and one lane out. The larger (main entrance/exit) was two lanes in and three lanes out.



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6. Regular Evacuation Trainings

We recommend staff and management train on evacuation procedures for guests and visitors as part of their new hire orientation. Additionally, all staff should receive updated evacuation procedures training annually.

The best of plans will fail if training is not a considerable component of the plan. The training should include tabletop exercises⁸ facilitated by qualified personnel. Designated staff should be comfortable handling evacuations of the Shiloh Resort and Casino and communicating with guests and visitors about situations during emergency conditions. Staff should be familiar with all evacuation routes and be able to direct traffic for evacuees out of the Project site.

7. Internal Alert and Warning Systems

We recommend staff have methods to notify guests that don't rely on government notification systems.

As early evacuation will be a strategy for this project, staff may need to evacuate the property long before a government notification. Staff will need methods to notify guests that don't rely on government notification systems. Resort staff will need a system to be able to notify guests through their mobile devices using guest phone numbers and other information obtained during the check-in process. However, in the case of infrastructure failure, will need to use public address systems on the property, phone calls to the resort rooms, PA broadcasts, or in-person (door-to-door) notifications.

We recommend AM/FM radios with battery backup power be in each room of the Hotel, and in various locations within the Casino and Hotel where staff can monitor.

In addition to using technology devices like special apps on guest's phones and public address systems, AM/FM radios should be integrated into these alert and notice plans. In past fires, we quickly lost infrastructure that eliminated cell phone and internet connection for many people. Traditional radio remained the most reliable communication system. Staff should monitor radios as well as the other networks.

We recommend designated staff have handheld portable radios for communication during an emergency.

Staff will take an active role communicating public safety information to guests during an emergency. Because of the possible infrastructure failures discussed above, staff should have

⁸ Tabletop exercises are discussion-based sessions where team members meet in an informal setting, such as a classroom or conference room, to discuss their roles during an emergency and their responses to a particular emergency situation. A qualified facilitator guides participants through a discussion of one or more scenarios.



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handheld radios to communicate to each other during evacuations and to direct guests and visitors off the property safely and efficiently. This method of communication is in addition to direct notifications of property owners and guests via Nixle, SoCoAlerts and the WEA system⁹, and will augment official government notifications in the event of a fire or other emergency.

The Resort and Casino will have significant back-up generator power to keep emergency radios and other powered devices operational during an emergency.

8. Exit Route and No Parking Signage

We recommend all intersections on the Shiloh Resort and Casino property include signage that clearly indicates the exit route from the property to major evacuation routes such as Old Redwood Highway and Shiloh Road to Highway 101.

Signage on the property should clearly indicate the direction traffic should go during an evacuation. In addition, staff should be trained and able to direct traffic according to the most efficient exit off the property as designed based on the results of recommendation #4 (Efficient Project Design for Mass Evacuation).

We recommend no parking signage on all the ingress/egress roadways within the Resort and Casino property.

Ingress and egress roads during an emergency are critical to evacuate visitors and guests and provide access for first responders to enter the property. Parking should not be allowed on these roads to maintain open ingress/egress access. Proper signage indicating no parking should be displayed on these roads.

9. Early Evacuation and Traffic Analysis

We recommend an analysis of the available science on traffic modeling and evacuation times be conducted specific to this area, including a review of Sonoma County's upcoming Evacuation Route Analysis¹⁰ work with Fehr and Peers, Traffic Engineers.

⁹ "WEA" stands for Wireless Emergency Alert System, which forces notifications to cellphones in the area, irrespective of where the cell phone originated.

¹⁰ As part of its Public Safety Element Update to the General Plan, the County of Sonoma has hired Fehr and Peers, traffic engineers, to perform an Evacuation Route Analysis within the County. This analysis will include among many things, an assessment of roadway capacity under described scenarios, an identification of evacuation routes and an identification of critical evacuation zone groups. This plan is discussed in detail in the County of Sonoma Board of Supervisors Resolution September 13, 2022 meeting, Resolution Number 2022-0916, Attachment 1, draft Professional Services Agreement, Task S-4.3, Evacuation route Analysis.



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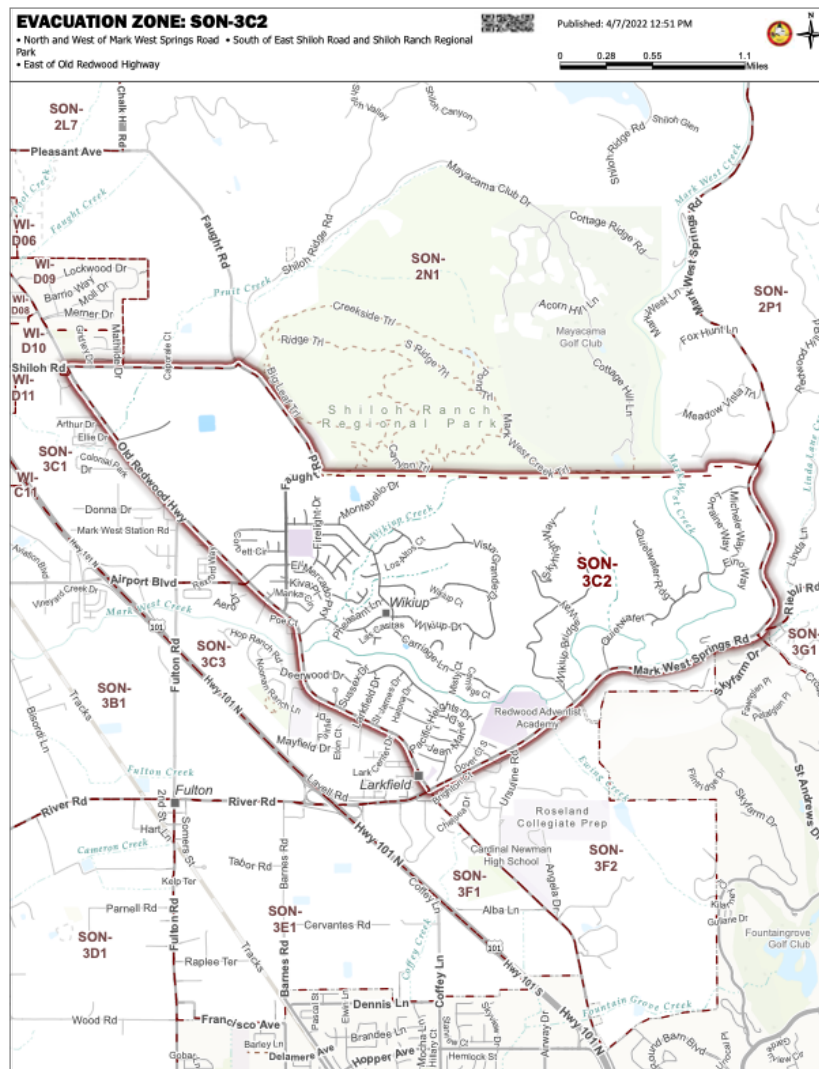
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Early evacuation is a very effective tool in the event of a wildfire. Certain developments can benefit from this strategy. This Project places a large guest population between the Town of Windsor and the City of Santa Rosa (approximate population of over 200,000 people combined). The logical and most efficient evacuation routes out of this area are north and south on Old Redwood Highway and Highway 101. This is a populated area and any evacuation in this area will create traffic congestion and delays - a natural part of evacuations. The goal is preservation of life. Early evacuation is an excellent tool to increase the effectiveness and safety of the evacuation. An example of early evacuation would be requiring the Resort and Casino to close all operations and evacuate when any adjacent evacuation zone receives an Evacuation Warning or Order.

The County of Sonoma and incorporated cities have established standardized evacuation zones. The Project Site is in Sonoma County Evacuation Zone SON-3C2.





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These pre-determined evacuation zones allow for efficient and managed evacuations during an Evacuation Warning or Order. These predetermined evacuation zones, along with the current alert and warning systems, have improved evacuation efficiency during wildfires. These zones, with knowledge of traffic modeling data, provide a method to make an early evacuation recommendation.

To evaluate an early evacuation strategy for this project, we'll need to quantify travel times under various scenarios, consider capacity of roadways, and the timing for community evacuations.

10. Consultations with Local Emergency Response Officials

We recommend evacuation and fire experts consult with local law enforcement, fire departments, and emergency management officials to ensure that any assumptions and conclusions regarding evacuation risk are substantiated.

The following is a list of the local law enforcement agencies within the Resort and Casino jurisdiction. The proposed Project resides within the unincorporated area of the County of Sonoma but is within the sphere of influence for the Town of Windsor.

A. Sonoma County Sheriff's Office (Main Office)

2796 Ventura Avenue
Santa Rosa, CA 95403

B. Town of Windsor Police Department¹¹

9291 Old Redwood Hwy
Windsor, CA 95492

C. California Highway Patrol – Santa Rosa Office

6100 Labath Avenue
Rohnert Park, CA 94928

11. Evacuation Strategy During Construction Phase

We recommend an evacuation strategy be conducted for the construction phase of the Shiloh Resort and Casino.

During construction of the Resort and Casino, it will be imperative that construction crews know and understand evacuation procedures, fire prevention plans, and Alert and Warning Notification Systems. The planning/recommendations for construction should entail similar evacuation strategies as

¹¹ The Town of Windsor contracts with the Sonoma County Sheriff's Office for police services.



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adopted for the Resort and Casino but more specific to the construction industry. These plans/recommendations should be included in the General Contractors Site-Specific Emergency Action and Evacuation Plans.

11/30/22

Robert Giordano

Date

11/30/22

Clint Shubel

Date

Attachments:

1. Rob Giordano CV
2. Clint Shubel CV



CURRICULUM VITAE
for
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OVERVIEW

I began my law enforcement career in 1989 and progressed from a police officer to serving as the Sheriff for Sonoma County. The 2017 Sonoma Complex fires, which included the Tubbs, Nuns, and Pocket fires, occurred during my tenure as the Sonoma County Sheriff. At the time, these were the worst fires in the history of California and still rank among the most significant wildfire disasters in our state. The Sonoma Complex Fires consisted of seven major fires that merged into three large fires and burned over 100,000 acres. Over 100,000 people were evacuated during these fires.

As Sheriff, along with my Assistant Sheriff, Clint Shubel, we were responsible for evacuations in response to these wildfires and other aspects of the disaster response. As a result of the 2017 fires, I gained a valuable, first-hand understanding of large-scale disaster management, including wildfire evacuations. Wildfire evacuations throughout the state changed significantly after this event-spurring an evolution of evacuation and notice improvements. The United States Congress, California State Legislature, and several local groups recognized my leadership and contributions to the community during the 2017 fires.

WORK EXPERIENCE

Member-CAS Safety Consulting, LLC May 2022 to Present
Consultant providing expertise in evacuation safety specifically in wildfire preparedness. Working with builders to comply with CEQA regulations and make developments safer.

Owner-R. Giordano Consulting & Investigations, LLC 2019 to Present
Provides outside investigative services to government agencies, specifically in employment issues. This includes looking at alleged misconduct in the use of force, unlawful harassment, and racial bias. Completing over 60 investigations for Sheriff's Offices and Police Departments in Northern California. The firm also consults in all areas of law enforcement policy, procedure, and administration to include expert witness consultation.

Sheriff-Sonoma County Sheriff's Office 2017-2018
After the early retirement of the elected sheriff, I was appointed by the Board of Supervisors, through a selection process, as the Sheriff. Responsible for the complete management and control of the Sonoma County Sheriff's Office which included 650 employees, two detention facilities



(that housed on average 1000 inmates a day), state courthouse security, and law enforcement services for the unincorporated area of Sonoma County (including two contract cities). Managed a budget of over 160 million dollars. Decision maker and public representative for all civil litigation involving the Office. Developed and maintained working relationships with government and non-governmental agency leaders including a civilian auditor of the Office. Made several key decisions in significant personnel investigations involving discipline. Testified on behalf of the Office in litigation and civil service hearings. Recognized for my leadership during the 2017 firestorm that devastated Sonoma County, burning over 100,000 acres, and resulting in the evacuation of 100,000 people. Conducted numerous public presentations where I was able to educate the public on Sheriff's Office policy and procedure including the implementation of a controversial immigration policy. Media spokesperson for the Office during significant events.

Assistant Sheriff-Sonoma County Sheriff's Office 2014-2017

Oversight and management of the Law Enforcement Division of the Sheriff's Office, which included the following bureaus and units; Court Security, Transportation, Patrol Services, Helicopter, Marine, Investigations, Coroner's Office, Central Information Bureau, Information Technology, Telecommunications, and the law enforcement contracts for the Town of Windsor and City of Sonoma. Represented the Sheriff in public events and managed the Sheriff's Office in his absence. Responded to and implemented recommendations from a Community and Law Enforcement Taskforce that came about after one of our deputies shot a 13-year-old who displayed a replica firearm. This response and implementation included the creation of a Civilian Auditor's Office to review Sheriff's Office work and the format in which the Office would work with the Auditor's Office. Led numerous public presentations on Sheriff's Office policy and procedure. Represented the Office in civil litigation. Oversaw our response to significant civil disobedience as a result of the shooting. Implemented a body-worn camera program. Managed and expanded our public communications presence, including social media presence and the hiring of a Community Engagement Liaison. Initiated and oversaw the re-development of the helicopter safety program after deficiencies were found. Conducted due process discipline appeals, such as "Skelly" hearings.

Sheriff's Captain-Sonoma County Sheriff's Office 2012-2014

Operations Captain responsible for all uniformed personnel in the Sheriff's Office. The Patrol Division handled 100,000 calls for service a year. Managed significant incidents such as large civil disobedience events and overall patrol operations response. Tasked with decision-making in the hiring process and the personnel investigation process. Developed and maintained the security agreement and relationship with the largest Indian gaming casino in northern California. Responsible for all patrol operations specialty units including; the Special Weapons and Tactics Team, Helicopter and Search and Rescue, Marine Unit, Tactical Response Team, and Court Security (including its relationship with the State Court system). Responsible for the deployment of public safety resources to best protect the community. Responsible for labor relations with the Deputy Sheriffs' Association. Chair of the CALGANG Executive Board, 2013/2014.

Sheriff's Lieutenant-Sonoma County Sheriff's Office 2006- 2012

Managed the Personnel and Internal Affairs Bureaus. These bureaus were responsible for all hiring, background investigations, injured employees, safety programs, internal affairs



investigations, and litigation management. Gained a strong working knowledge of the Peace Officer Bill of Rights and government labor law as it relates to hiring, discipline, and terminations. Managed, reviewed, and conducted personnel investigations including; discrimination and harassment, use of force, sexual conduct in detention facilities, abuse of authority, improper evidence handling, and other inappropriate employee behavior allegations. Managed and reviewed background investigations. Coordinated discovery requests in civil litigation. Managed the development of our “Brady” policy—the policy that dealt with what information must be released during criminal cases from peace officer personnel records. Sheriff’s Office representative in court for “Pitchess Motions.” This involved the court hearings that deal with what information must be released from peace officer personnel records for the defense. Participated in employee interactive process meetings for injured employees. Managed the Investigations Bureau consisting of seven investigative units including the Coroner’s Office. Responsible for budget management and all personnel decisions of these units. This role also required extensive collaboration with outside law enforcement agencies including the District Attorney’s Office in the investigation of several officer-involved shootings, by far the most critical of investigative cases. Represented the Sheriff’s Office in court cases regarding Sheriff’s Office policy and procedure relative to criminal investigations.

Sheriff’s Sergeant-Sonoma County Sheriff’s Office 2003-2006

Violent Crimes Unit supervisor responsible for the supervision of the detectives handling assault, robbery, and homicide cases. Supervised the Domestic Violence/Sexual Assault unit, responsible for a team of detectives investigating Sexual Assault, Domestic Violence, and Child Abuse cases. Sheriff’s Office representative for Sonoma County’s Domestic Violence Death Review Team and the County’s Sexual Assault Response Team. Firstline supervisor responsible for a team of deputies and detectives. Supervised a patrol team responsible for frontline emergency response and law enforcement services. Management and development of personnel assigned to me. Responsible for the training and transition to the new automated report writing and records system.

Deputy Sheriff-Sonoma County Sheriff’s Office 1996-2003

A detective assigned to the Domestic Violence/Sexual Assault Unit. Responsible for the investigation of sexual assault cases, domestic violence cases, and child abuse cases. Carried an ongoing regular caseload of over 30 cases. Interviewed and interrogated individuals who were involved in these cases. Wrote detailed reports covering all aspects of the investigation. Testified numerous times in court for criminal cases. Worked closely with non-governmental organizations assisting victims, including the YWCA (providing services to victims of domestic violence) and Verity (providing services to victims of sexual assault). Board member of the Sonoma County Child Abuse Prevention Council for four years. Conducted training presentations on domestic violence and sexual assault for nonprofit groups and state child abuse employees. Managed the internship program in the Domestic Violence/Sexual Assault Unit. Responsible for frontline emergency response as a deputy sheriff assigned to patrol. Handled a wide range of investigative work, community problem solving, and basic law enforcement. Trained other patrol deputies in how to provide service for the Sheriff’s Office.



Police Officer/Investigator-City of Pittsburg Police Department 1989-1996

A detective assigned to general crimes and ultimately worked robbery/homicide. Performed general duties of a patrol officer including traffic enforcement. Responsible for the investigation of all crimes and general law enforcement in the city. Member of the Special Weapons and Tactics Team. Field training officer responsible for training new officers.

RETAINED AS AN EXPERT

2019 Retained as a law enforcement expert by Greg Thomas and Temitayo O. Peters, of Burke Williams and Sorenson, LLP (attorneys representing San Joaquin County) to offer my opinion related to a lawsuit stemming primarily from a law enforcement response to a courthouse protest-Black Lives Matter vs. San Joaquin County Sheriff's Office

SELECT COURSES ATTENDED

2017 Calibre Press
Constitutional Use of Force, 8 hours

2015 California Peace Officers Association
Labor Law Legal Update, 8 hours

2013 California Peace Officers Association
Labor Law Legal Update, 8 hours

2012 Peace Officer Standards and Training
Executive Development Course, 80 hours

2011 California Peace Officers Association
Labor Law Legal Update, 11 hours

2011 Systems for Public Safety
Background Investigations Commanding Officer Legal Update, 24 hours

2009 Americans For Effective Law Enforcement
Discipline and Internal Investigations, 20 hours

2009 California Peace Officers Association
Pitchess Motions, 6.5 hours

2009 California Peace Officers Association
Peace Officer Bill of Rights Update, 6 hours

2007 Dr. Kevin Gilmartin
Leadership Training, 8 hours

2007 California State University Long Beach
Management Course, 104 hours

2005 San Jose State University
Internal Affairs Investigations, 21 hours

2004 California Department of Justice
Officer-Involved Shooting School, 36 hours

2004 Rohnert Park Department of Public Safety
Critical Incident Response for Law Enforcement Managers, 32 hours

2004 Dr. Kevin Gilmartin



2003 Emotional survival for law enforcement, 8hours
Santa Rosa Junior College

2003 Law Enforcement Supervisory Course, 80 hours
Napa Junior College

2002 Field Training Officer School, 40 hours
Sonoma County Sheriff's Office

2000 Basic Rifle Course, 24 hours
Behavior Analysis Training Institute

2000 Interview and Interrogation Techniques, 40 hours
California Sexual Assault Investigators Association Conference, 28 hours

2000 Family Violence and Sexual Assault Institute
International Conference on Family Violence, 32 hours

2000 California Sexual Assault Investigators Association Conference, 18 hours
2000 Child Abuse Prevention Councils of Sonoma, San Francisco, Napa, and Marin
Child Abuse Prevention Conference, 16 hours

1999 National College of District Attorneys
National Conference on Domestic Violence, 24 hours

1999 California Sexual Assault Investigators Association Conference, 28 hours
1999 Reid and Associates
Interview and Interrogation, 24 hours

1999 San Jose State University
Sexual Assault Investigation, 36 hours

1999 Alameda County Sheriff's Office
Plain Clothes Officer Safety, 24 hours

1999 Child Abuse Prevention Councils of Sonoma, San Francisco, Napa, and Marin
Child Abuse Prevention Conference, 16 hours

1999 San Diego Regional Training Center
Domestic Violence First Responder, 8 hours

1995 Los Medanos Criminal Justice Training Center
Investigation of Officer Involved Fatal Incidents, 16 hours

1995 Los Medanos Criminal Justice Training Center
Search and Arrest Warrants, 28 hours

1994 Behavior Analysis Training Institute
Interview and Interrogation Techniques, 40 hours

1994 San Joaquin Delta College
Advanced Special Weapons and Tactics, 40 hours

1993 San Jose State University
Robbery Investigation, 24 hours

1991 Los Medanos Criminal Justice Center
Homicide Investigation, 40 hours

1989 Los Medanos Criminal Justice Training Center
Basic Police Academy



FORMAL TRAINING PRESENTATIONS CONDUCTED

- 2022 California Police Chiefs Association Annual Symposium
Pros and Cons of Using Outside Investigators to Conduct Internal Affairs
Investigations
- 2018 California Police Chiefs Association Annual Symposium
Crafting Your Message in a Crisis: How to effectively communicate in a natural
disaster and be the voice of calm in your community
- 2018 California Police Chiefs Association Annual Symposium
Panel Member: Response to Disasters-2017 North Bay Firestorm
- 2018 California State Sheriff's Association Conference
Panel Member: Response to Disasters-2017 North Bay Firestorm

CERTIFICATES

California State Private Investigators License	Awarded October 2019	License # PI188829
POST Advanced	Awarded September 2005	Certificate #A71776
POST Intermediate	Awarded May 2001	Certificate #70417
POST Basic	Awarded January 1991	Certificate #63190

PROFESSIONAL ASSOCIATIONS

California State Sheriff's Association
California Peace Officers Association
Peace Officers Research Association of California
Formerly -California Sexual Assault Investigators Association

AWARDS AS SHERIFF

Recognized by the United States Congress and the California Legislature for leadership of the Sonoma County Sheriff's Office, specifically related to leadership during the 2017 firestorm.



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CURRICULUM VITAE

BACKGROUND

I started my career in Law Enforcement in 1994 as a Police Officer with the City of Sausalito, California. In 1997, I began working for the Sonoma County Sheriff's Office as a Deputy Sheriff. I progressed through the Sheriff's Office ranks and ultimately retired as Assistant Sheriff for the Law Enforcement Division in 2019.

I have extensive experience in policing, law enforcement management, and law enforcement administration. Most of my experience in law enforcement was spent in operational capacities, such as patrol operations, tactical planning, and emergency management. I have testified in court and administrative hearings. I have specialized experience in tactical planning for pre-planned, no-notice incidents and emergency situations such as wildfire evacuations.

In 2017, Sheriff Rob Giordano and I managed the Sonoma County Sheriff's Office disaster response during the Sonoma County Complex Wildfires. The fires consisted of seven fires that merged into three major firestorms known as the Tubbs, Nuns, and Pocket fires. These fires burned over 100,000 acres and required over 100,000 people to evacuate. The Sonoma County Complex Fires still rank as one of the most devastating wildfire disasters in California.

During the Complex Fires, I was assigned as the Department Operations Center (DOC) Incident Commander for the Sonoma County Sheriff's Office. I was responsible for patrol operations, Mutual Aid, evacuations or rescue missions, repopulating residents, missing persons investigations, and Coroner mass fatality investigations. I worked and coordinated with other governmental agencies, such as Sonoma County Emergency Management, Cal-Fire, FEMA, the Sonoma County Board of Supervisors, and other Sonoma County departments. In my leadership role, I worked with a team of highly experienced and knowledgeable professionals. It was the team environment and trust in one another that helped with our successes during this unpredicted natural disaster.

I have managed and planned incidents to protect the peace in civil disobedience, hostage situations, barricaded subjects and predicted natural disasters (flooding, mudslides, etc.). I have held positions in the Emergency Operations Center for the County of Sonoma as the Operations Section Chief and Law Enforcement Branch Manager.

PROFESSIONAL EXPERIENCE

2022 – Present Member/Owner
CAS Safety Consulting, LLC.

I perform safety consulting services and expert witness testimony for emergency disaster evacuations, specifically related to wildfire evacuations. I work with developers to comply with the California Environmental Quality Act (CEQA) land use laws by providing sound recommendations on wildfire evacuations. I also conduct safety inspections and audits for



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developers to ensure recommended evacuation plans are in compliance during the construction phase of project.

2019 - Present Health and Safety Coordinator

Stockham Construction, Inc.

After retiring from law enforcement, I was hired to help develop health and safety programs for the company which includes:

- Plan and develop programs to prevent injury and illness to workers
- Analyze data to help determine best course of action to mitigate further injuries
- Prepare reports for injuries, job hazard analysis, annual audit reports, and task planning
- Develop and review policies and procedures, emergency action plans, insurance records, and pre-qualification documents
- Train staff on health and safety procedures, equipment and tools, and driving safety
- Participate in hearings when needed for Cal/OSHA offenses.

2017-2019 Assistant Sheriff

Sonoma County Sheriff's Office

I was appointed by two different Sheriffs to serve in the Law Enforcement Division. Duties and responsibilities included:

- Oversaw law enforcement operations for the Sonoma County Complex Fires natural disaster
- Oversight and management of the Law Enforcement Division, which included the following bureaus and units: Court Security, Transportation, Patrol Services, Helicopter, Marine, Investigations, Coroner's Office, Central Information Bureau, Dispatch, Information Technology, Telecommunications, and the law enforcement contracts for the Town of Windsor and City of Sonoma
- Represented the Sheriff in public events and managed the Sheriff's Office in his absence.
- Responded to and implemented recommendations from a Community and Law Enforcement Taskforce
- Worked in coordination with Civilian Auditor's Office to review Sheriff's Office complaints and investigations
- Led numerous public presentations on Sheriff's Office policy and procedure
- Worked with Risk Management and participated in settlement conferences in civil litigation matters
- Conducted due process discipline appeals, such as "Skelly" hearings

2014 -2017 Sheriff's Captain

Sonoma County Sheriff's Office

I served as both the Operations Captain and the Administrations Captain. The Operations Captain was responsible for all uniformed personnel in the Sheriff's Office, including the Patrol Division, the Special Operations Unit, Tactical Response Team, the Helicopter Unit, Search and Rescue Team, and the Marine Unit Dispatch, and Court Security. The Administrations Captain was responsible the Investigation Bureau, Civil Bureau, Internal Affairs, Telecommunication Unit, Central Information Bureau, and Information Technology Unit. In this position, I gained a strong



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working knowledge of the Peace Officer Bill of Rights and government labor law as it relates to hiring, discipline, and terminations.

There were about 233 sworn deputies and another 107 civilian staff members in the Law Enforcement Division. The Patrol Division handled approximately 100,000 calls for service a year. In addition, my duties included:

- Managed public communications, including social media, and the hiring of a Community Engagement Liaison
- Managed significant incidents such as large civil disobedience events and overall patrol operations response
- Tasked with decision-making in the hiring process and the personnel investigation process
- Maintained the security agreement and relationship with the largest Indian gaming casino in northern California
- Responsible for the deployment of public safety resources to best protect the community
- Responsible for labor relations with the Deputy Sheriffs' Association

2011-2014 Sheriff's Lieutenant

Sonoma County Sheriff's Office

I managed and supervised the Sheriff's Office patrol sergeants. I conducted performance evaluations on Sergeants and investigated citizen complaints against Deputy Sheriffs. I was responsible for the research and development of the Body-Worn Camera Program. I presented the program to the Board of Supervisors to obtain additional funding to procure the cameras. Other duties included:

Court Security Lieutenant – 2012 to 2014

- Ensured the Sonoma County Courts had staffing as required by law
- Managed the budget and supervised Court Security Sergeants
- Worked with the Presiding Judge(s) on policies and procedures

Special Operations Unit Commander - 2011-2014

- Overall Incident Commander for the SWAT team, Tech Team, and Crisis Negotiations team
- Managed high-risk incidents such as hostage situations, barricaded subjects, and emergency rescues
- Responsible for reviewing and approving tactical and evacuation plans, and after-action reports

2009-2011 Detective Sergeant, Coroner's Office

Sonoma County Sheriff's Office – Coroner's Bureau

Managed and supervised a team of Coroner detectives, a clerical staff, and a contracted pathologist. My duties included:

- Managed the Coroner's Bureau administration and operational functions that expended \$2.3 Million annually



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- Fostered and maintained relationships with the media, vendors, and multiple law enforcement agencies in the county
- Created a "Coroner's Best Practices Manual", a statistical database, and implemented several staffing and operational changes in the Coroner's Bureau
- Responsible for meeting with physicians within the county to present on death investigations and death certificates
- Developed mass fatality policies and procedures

2006-2009 Sheriff's Sergeant

Sonoma County Sheriff's Office

I supervised a team of Deputy Sheriffs during the performance of their regular duties on patrol or in special assignments. I was responsible for development of Deputy Sheriffs for future growth within the office, including yearly performance evaluations. In addition, I held the following collateral assignments:

Sonoma Police Department – 2007 to 2009

- Sergeant for the Sonoma Police Department, a contract city for the Sheriff's Office
- Supervised and trained the team of Sonoma Police Officers
- Routinely worked with the City of Sonoma, department leaders and city council
- Developed the Emergency Operations Plan for the City of Sonoma Emergency Operations Center

S.W.A.T. Team – 2007 to 2009

- Tactical Team Leader for the SWAT team
- Held the Command-and-Control function for specific units within the SWAT team
- Developed and implemented new training records, after-action reports, and operational plans
- Responsible for developing the action plan with the team on SWAT assignments

2004-2006 Detective, Investigations Bureau

Sonoma County Sheriff's Office

- Assigned to Violent Crimes Investigation
- Investigated violent crimes and officer-involved critical incidents
- Assumed the role of lead investigator on several homicides and an officer-involved fatal incident
- Managed large caseload and complex investigations

1997-2004 Deputy Sheriff

Sonoma County Sheriff's Office

- Performed the regular duties as a Deputy Sheriff assigned to the patrol division
- Patrol assignments included various schedules with the Roseland Community Orientated Policing project, Sonoma Valley Substation, and main office



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- Continually performed at “exceeds standards” or “outstanding” in evaluations from supervisors.

Special assignments and accomplishments have included:

Field Training Officer – 2000 to 2004

- On-scene supervisor for day-to-day operations
- Demonstrated one-on-one supervisory ability with deputies of varied experience
- Identify inadequacies in deputy trainees and adapt to fit the best needs of the deputy
- Reviewed reports for approval, prepared detailed documents of trainee performance, trained and motivated trainee to successful completion of the field-training program
- Remained up to date with case law, search and seizure, department policies and procedures, criminal statutes, and laws of arrest

S.W.A.T. Team – 2000 to 2005

- Embraced the “sense of team” concept
- Primary position on entry team element, but crossed trained in various positions on the team
- Have been involved in high-stress situations, such as “barricaded subjects” and “High-Risk” entries
- Ability to provide solutions to solve potentially dangerous situations
- Knowledgeable in weaponry, tactics, operational plans, hostage rescue tactics, barricaded subjects, vehicle assaults, high-risk search warrant protocol, diversionary devices, and less-lethal options

Tac-Team Member – 1999 to 2000

- Trained in civil disobedience control and tactics

Department Instructor – Ongoing throughout career

- Planned, organized, researched, and instructed officers from other county agencies on Missing Persons investigations. Developed and used a PowerPoint presentation as a teaching aid to assist in the instruction. This Missing Persons course was POST certified
- Citizens Academy instructor for S.W.A.T.
- Coordinated, developed, and instructed lesson plan for BLOC training in tactical responses
- Orientation instructor for newly appointed deputies in building search tactics and high-risk stops
- Coordinated and instructed S.W.A.T. training exercises with scenarios for outside agencies
- Certified Pepperball instructor and armorer. Assigned to maintain inventory, repairs, and provide training
- Developed an orientation class for newly appointed S.W.A.T. team members



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1994-1997 Police Officer

City of Sausalito Police Department

Performed the regular duties of a Police Officer. Conducted complete criminal investigations of all criminal statutes, traffic accidents, drunk driving, and city ordinance violations. Developed and coordinated police department Internet website. Developed and coordinated report forms for department. Special assignments and accomplishments included:

Officer-In-Charge

- Acted as duty supervisor when requested

Police Association President

- Worked in conjunction with the police department and city management on discipline, contract, and “meet and confer” issues
- Formulated 12-hour work schedule for patrol officers to assist management with budget constraints, hiring issues, and morale among officers

D.A.R.E. Instructor

- Coordinated D.A.R.E program at local elementary school
- Instructed students and provided characteristics of a positive role model
- Established community relations with teaching staff, students, and parents of students

Juvenile Officer

- Coordinated and supervised juvenile diversion program for the police department
- Responsible for acting as a liaison with Juvenile Probation
- Developed, supervised, and implemented juvenile procedure guidelines for police officers

Awarded “Officer of the Rotation” (1997)

- Nominated from co-workers, supervisors, and management

EDUCATION

1996 California State University Sacramento / Santa Rosa Junior College

Associate of Arts Degree; General Education

I attended Sacramento State University after graduating from Santa Rosa High School in 1988. While in college, I decided to become a police officer and put myself through the Police Academy at the Santa Rosa Junior College. In 1996, while working full-time as a Police Officer for the City of Sausalito, I returned to Santa Rosa Junior College to obtain my Associate of Arts degree.



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CERTIFICATIONS AND SPECIALIZED AWARDS

Peace Officer Standards and Training (POST) Certifications:

1992	Basic Law Enforcement Course, Santa Rosa Junior College	
1996	Basic Certificate	#B 80486
1998	Intermediate Certificate	#I 59212
2003	Advanced Certificate	#A 65212
2011	Supervisory Certificate	#S 81869
2014	Management Certificate	#M 28414

Emergency Management Certifications:

2006	NIMS/SEMS Certifications	
2007	ICS 300 & 400 Certification	
2008	Introduction to Emergency Management: Earthquakes; Cal OES	
2008	SEMS Introductory Course; Cal OES	

Specialized Awards:

2004	Sheriffs Excellence Award	
2013	The Louis "Pete" Peterka Emergency Management Award; Sonoma County Emergency Management	
2018	Gold Resolution Sonoma County Board of Supervisors for the 2017 Sonoma Complex Fires	

SELECT TRAINING COURSES ATTENDED

1994	Drug Abuse Recognition Investigations (11550 H&S); Santa Rosa Junior College
1995	Basic Traffic Accident Investigations; Los Medanos College
1996	Certified D.A.R.E Instructor; Los Angeles Police Department
1997	Domestic Violence Workshop; Sonoma County Sheriff's Office
1999	Advanced Drug Interdiction Course
2000	Field Training Officer School; Santa Rosa Junior College
2001	Basic S.W.A.T School; Los Angeles Sheriff's Special Enforcement Bureau
2002	Field Training Officer Update Course; Napa Training Academy
2003	Report Writing for Supervisors; Napa Training Academy



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2004 Pepperball Instructor and Armorer Course; Pepperball Technologies
2004 Distraction Devices Course; Armor Academy Training
2004 Hostage Rescue Tactics School; San Francisco F.B.I S.W.A.T
2005 Homicide Investigations; Robert Presley's Institute of Criminal Investigations
2005 Officer Involved Shootings Investigations; California Department of Justice
2005 Interview and Interrogations; Reid and Associates
2006 Officer Involved Shooting Investigations; Department of Justice
2006 Law Enforcement Supervisory Course; Santa Rosa Junior College
2007 Terrorism Concepts for Patrol Personnel; California Department of Justice
2007 Academy Instructor Course; Napa Valley Criminal Justice Center
2007 SWAT Team Leader Course; California Tactical Officers Association
2009 Coroner's Basic Death Investigations MOD A & B; Santa Ana Coroner's Office
2009 Coroner's Mutual Aid and Mass Fatality Planning; Cal E.M.A
2012 Management Course; CSU Long Beach