

## MEMORANDUM

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**To:** Olivia Ervin, Principal Environmental Planner, City of Petaluma      **Job No.** 1222.001  
**From:** Rima Ghannam, CEQA Lead, Impact Sciences team  
**Subject:** Responses to Comments (Neuman Fire Consulting letter  
dated: June 6, 2021, submitted to the City of Petaluma on  
February 24, 2023)  
**Date:** February 27, 2023

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On February 24, 2023, Ms. Susan Jaderstrom on behalf of Petalumans for Responsible Planning submitted a memorandum with comments on the Scott Ranch Revised Environmental Impact Report (RDEIR) prepared by M. Jason Neuman from Neuman Fire Consulting that and dated June 6, 2021. The comments were related to the wildfire analysis in the RDEIR and associated *Wildfire Evacuation Transportation Assessment*. This memorandum provides responses to Neuman's comments related to the project's wildfire analysis.

CEQA does not require that a lead agency, such as the City, provide any responses to comments on an EIR received after the close of the public comment period on the EIR. Although not legally required to do so, the City, in its discretion, requested that its consultant, Impact Sciences, prepares responses to certain comments received on the RDEIR. This memorandum includes responses to Neuman's comments submitted on June 6, 2021. These responses will be included in the record. The reason for providing these responses is to ensure that the City Council is provided as much information as possible regarding the proposed project. This information, however, does not alter the conclusions or analysis that was set forth in the RDEIR and the Responses to Comments document.

### **Comment #1:**

The EIR identifies the projects site within a Wildland Urban Interface Area according to Figure 4.15-2. The City of Petaluma Fire Prevention Bureau identifies this area as a Very High Fire Hazard Severity Zone as identified on the city website and defined in Section 17.20.020 of the Petaluma Municipal Fire Code. The City Fire Department has the authority to expand its fire hazard boundaries to be more restrictive than the CAL FIRE minimum recommendations. The 2020 Local Hazard Mitigation Plan, Chapter 4, Section 4.3.4 Wildfire, Figure 4-20 depicts Fire Hazard Severity Zones in the Local Responsibility Areas (LRA) in Petaluma. The map is not consistent with the fire prevention map identifying VHFHSZ. No Fire Hazard maps were found in the 2025 General Plan revised on January 11, 2012. The Scott Ranch EIR Section 4.15 Fire Hazard Severity Zones provides a reference to visually identify the project site in Figure 4.15-2, City of Petaluma Wildland Urban Interface Areas. Figure 4.15-2, City of Petaluma Wildland Urban Interface Areas that is

referenced in the EIR is different than the land designation from the fire department and referenced in Petaluma Municipal Code. The Fire Department utilizes a similar map. However, the city fire department map is labeled as a Very High Fire Hazard Severity Zone. Figure 4.15-2 in the EIR has the VHFHSZ designation removed. This information is inconsistent with adopted documents and the EIR should reflect accurate information.

**Response #1:**

The map presented on **Figure 4.15-2** of the RDEIR is from the City of Petaluma General Plan. The area shaded in pink is designated as a Wildland Urban Interface (WUI). As the commenter notes, this map is currently depicted on the City Fire Department site as a High Fire Hazard Severity Map. In 2020, the city adopted the 2020 Local Hazard Mitigation Plan which depicts the project site within a Moderate Fire Hazard Severity area. The RDEIR and associated Fuel Management Plan analyzed fire risk and assumed wildfires occurrence scenario at the project site. The discrepancies in the site designation would not affect the analysis and findings of the RDEIR and updated information in the FEIR.

**Comment #2:**

The Scott Ranch Fire Protection Plan submitted as part of the Revised Draft Environmental Impact Report was very well written and apparently addressed the items within the firm's scope of work. Based on the findings and fire run scenarios the report did not identify additional or proposed mitigation to reduce potential impacts to the proposed development.

The question for the lead agency, will actions W-1, W-2 & W-5 become part of the conditions of approval or a form of mitigation. Should these programs/plans be in place prior to approving a new development project?

**Response #2:**

The commenter is referring to the Fuel Management Plan (FMP) prepared as part of the EIR, which (1) describes existing conditions that affect fire hazard and risk, (2) delineates fuel management zones, (3) establishes appropriate treatments for each zone, (4) documents maintenance schedule and frequency, and (5) provides a schedule and criteria for updates to the plan. Identified treatments, maintenance schedule, and frequency were incorporated in the proposed project (Section 3.5.7 – Fuel Management Program of the RDEIR).

The FMP was subject to a peer review performed by Wildfire Defense Works. Input received from the peer review effort was incorporated into the FMP. The peer review states that the Fuel Management Plan relies upon acceptable wildfire modeling software and that inputs used to run the model are in line with acceptable practice. The peer review concurs with the findings of the FMP; that implementation of the proposed development and the Fuel Management Program improve fire conditions relative to existing conditions onsite, which not only reduces the risk of fire to the new development but potentially reduces the current risk of wildfire impacts to existing subdivisions nearby. Attachment D to the FEIR contains the Revised Fuel Management Plan, which was updated to reflect the project revisions. There is no new substantive information introduced in the Revised Fuel Management Plan and there are no changes to the conclusions reached in the RDEIR. The FEIR clarifies the extent of the Fuel Management Zones, and like the RDEIR concludes that project impact associated with wildfire risk and exposure would be less than significant.

**Comment #3:**

The Revised EIR references the City of Petaluma General Plan Policies relating to Fire Protection along with the Sonoma County Community Wildfire Protection Plan (CWPP) below: The Revised EIR Section 4.15 references the Sonoma County Community Wildfire Protection Plan (CWPP) and provides an overview of the plan. It does not identify the significance or the relationship to the proposed development for planning purposes and entitlements.

**Response #3:**

As the comments noted the RDEIR adequately outlines the CWPP strategies to be undertaken to reduce the risk of wildfire to life, property, and the wildland environment, including:

- Structural modifications that residents can do to make their homes more resistant to ignition during wildland fires.
- Vegetation management within the 100-foot “Defensible Space Zone,” proven to be critical to home survival in wildland fires.
- Landscape-scale projects such as fuel breaks and shaded fuel breaks, wherein fire fuels are strategically reduced in order to reduce risk to entire communities, ecosystems or infrastructure.
- Education and pre-fire planning.

All development associated with the proposed Scott Ranch project is required to comply with City Fire Code Chapter 17.20, which adopts the California Building Standard including the Building Code, Residential Code, and the 2019 Fire Code. Regulations provide for fire resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services, features such as fire apparatus access roads, means of egress, and fire safety during construction. Regulations imposed in the WUI include ignition resistant design to deter entry of flying embers and fire radiation during a wildfire, noncombustible roofing assembly, ignition resistant exterior walls and siding, resistant attic vent and underfloor vent openings, insulated windows and noncombustible exterior doors, fire-retardant treated exterior decking and stairs, and other ignition resistant exterior treatments. Compliance with WUI provisions is verified through the Building Permit review process including review by the Fire Department. In addition to demonstrated compliance with the Fire and Building Code for development within the WUI, the Scott Ranch Project proposes to implement a Fuel Management Plan. Wildfire fuel control implemented through the Fuel Management Plan would reduce fuel loads, introduce defensible space, fire resistant materials, and irrigated landscaping, all of which would minimize wildfire risks and facilitate quick containment in the event of a wildfire.

**Comment #4:** The revised EIR did not address the applicable fire and life safety concerns in Appendix G of the State CEQA Guidelines sections with the determination of significant impacts. It is presumed the proposed project would have significant impacts requiring the need for a Fuel Management Plan. As mentioned previously, the Fuel Management Plan was professionally written and addressed the concerns based on the scope of work for fire behavior and risk potential. However, the Fuel Management Plan did not provide additional mitigation measures to harden the dwellings that would be impacted the most based on the worst-case fire scenario. Incorporating additional mitigation above the minimum standards may be essential to ensure survivability and reduce cumulative impacts and the potential for structure ignition. The EIR mentioned Ignition Resistant Structures based on the Petaluma

Municipal Fire Code which appeared to be the minimum standard. No information was provided to increase the requirements above the minimum standards.

**Response #4:**

See **Response #3** above. Regulations imposed in the WUI include ignition resistant design to deter entry of flying embers and fire radiation during a wildfire, noncombustible roofing assembly, ignition resistant exterior walls and siding, resistant attic vent and underfloor vent openings, insulated windows and noncombustible exterior doors, fire-retardant treated exterior decking and stairs, and other ignition resistant exterior treatments. Compliance with WUI provisions is verified through the Building Permit review process including review by the Fire Department.

**Comment #5:**

Section 4.12 Public Services of the Revised Draft EIR did not provide an accurate response time to the project area. The only information that was provided was a response time based on national standard thresholds. The EIR did not provide the total response time to the proposed project. The total response time would include Alarm Answer Time + Alarm Processing Time + Apparatus Turnout Time + Travel Time to equal the actual response time of the first arriving fire apparatus. This information could be confusing to the public reading the document. The EIR also states “currently the department is not able to meet the four-minute response goal.” In section 4.12 Public Services. The Petaluma General Plan 2025 is referenced indicating the following policies would apply to the proposed project with respect to fire protection services and provides conflicting information adding to the confusion of response times. The General Plan Policies list, fire services will maintain a four-minute travel time for emergencies in the city and transportation improvements will be provided not to adversely impact response times. The Revised EIR did not mention fire department response capabilities or define what a fire response consists of to the project area or outline the initial and ongoing fire prevention and education initiatives.

**Response #5:**

As noted in the RDEIR, the City’s Fire Department adopted the national service level standard of four-minute response time to 90 percent of emergency incidents. The RDEIR accurately reported the Fire Department response times in 2012-2013, 2018, and 2020.

The RDEIR adequately analyzes potential impacts associated with fire response time and states the following: “Fire protection services at the Helen Putnam Regional Park are provided by the Petaluma Fire Department (PFD). Implementation of the regional park trail would not increase population growth in the area. However, the proposed regional park trail could require a slight increase in PFD services or response time due to new users on the trail. However, this increase would be minimal and the implementation of the proposed regional park trail would have a less than significant impact on fire protection services.”

**Comment #6:**

The information identified in the Revised EIR which references the 2020 LHMP update provides information relating to challenges implementing the Fire Protection Policies 7P-18 and P-27 in the General Plan. These challenges may place constraints on the proposed development and the service delivery throughout the construction phase and at buildout.

**Response #6:**

Policy 7P-18 and Policy 7P-27 call for the following:

*Policy 7P-18: Ensure facilities, equipment, and personnel are adequate to maintain quality of service demands of the community, including but not limited to: fire suppression, Advanced Life Support (ALS), rescue, fire prevention, education, CUPA, and disaster preparedness and management.*

*Policy 7P-27: Reduce the impacts of wildland fires.*

*A. Develop a program and standards to address the increased fire risk associated with development within the Urban Interface areas to the west.*

*B. Continue the annual Weed Abatement Program.*

*C. Continue the regulation of fireworks city wide.*

*D. Consider the prohibition of the sale and use of fireworks within the City, with the exception of city sanctioned and permitted events with appropriate City standards in place.*

As described in the RDEIR Section 3.0, Project Description and the FMP, the proposed project incorporates applicable requirements of policies 7P-18 and 7P-27. See **Response #3** for the description of the project compliance with regulations related to fire resistance-rated construction.

The Scott Ranch property is on the City's weed abatement list and is in compliance with the City's weed abatement program. Post development the Homeowners Association (HOA) and Sonoma County Regional Parks will be responsible for implementation and maintenance of the subdivision and the extension of Helen Putnam Park, respectively, in accordance with the Revised Fuel Management Program.

**Comment #7:**

The 2020 LHMP Update identifies, the use of a Type VI fire engine. A Type VI fire engine may not have the capabilities to sustain an effective and desired fire flow to contain a wildfire in the project area or provide the needed protection to fire personnel in an emergency situation. Type VI fire engines have limitations compared to Type III engines listed in the LHMP. At this point, it is not confirmed if the Petaluma FD has a Type VI engine in service, staffed full time or cross staffed with other fire apparatus. Cross staffing an engine will add to the total response time to the project area as crews remove essential personnel protective equipment, essential gear and respond to the incident. The EIR also did not differentiate response times based on a full alarm assignment arriving at scene or a single engine arriving at the scene. A full alarm assignment will add to the overall response time and would possibly exceed the four-minute response target objective identified in the General Plan Policy and add to the overall response based on national standards. It is assumed the Petaluma FD has a standard response plan based on incident type and the types of fire apparatus that would respond to various types of incidents along with augmented resources from adjacent jurisdictions. Although the Revised EIR appears to focus on the wildfire impacts, every incident type should be considered. No fire response plan or Emergency Operation Plan was available for public view to verify.

In the first draft of the EIR, correspondence from the previous Fire Marshal Michael Ginn indicated: “The existing staffing levels are minimally adequate. Any new additions can create some measurable impacts on our delivery. Especially in the area of EMS response.” “Increases in call volume create proportional increases in equipment usage and maintenance as well as increases in corresponding risks for accidents and lost time to employees due to injuries associated with EMS response.” “With the proposed increase in growth, the numbers of simultaneous incidents will also increase.” The former Fire Marshal also indicated and identified cumulative impacts to the fire departments level of service dealing with the proposed development of Scott Ranch. The EIR did not adequately address or explain the impacts in relation to response capabilities to the project area. In a city announcement describing Measure U Petaluma’s Local Recovery, Emergency Preparedness and Essential City Services bulletin placing the measure on the November 3, 2020 ballot. The intent of Measure U is to prepare for any future wildfire, public health and safety, or other natural disaster. The bulletin describes the fire related impacts from previous fire incidents in the surrounding areas and current road conditions. The section below describes the importance of response capabilities to meet service demands.

**Response #7:**

See **Response #5** with respect to the RDEIR analysis of fire response time. CEQA does not require the preparation of an Emergency Operation Plan for the proposed project.

**Comment #8:**

The cumulative impact of fire response capabilities was not addressed in the Revised EIR. Measure U indicates impacts currently exist. These impacts could place constraints on the proposed development and adverse impacts to response times. The status of Measure U is unknown and may take years to analyze the successful performance of the fire departments operational capabilities.

**Response #8:**

Cumulative impacts related to fire response capabilities were analyzed in RDEIR on **page 4.12-18**.

**Comment #9:**

The information regarding Petaluma’s current roadways network indicates safety related issues. The current status of the roadways was not identified in the revised EIR. These roadway conditions will greatly affect emergency response capabilities by increasing response time. Emergency service vehicles will need to slow down to prevent unwanted damage to expensive fire apparatus. The previous Fire Marshal M. Ginn also addressed maintenance, usage, increased corresponding risks for accidents etc. in a previous correspondence. On August 12, 2018, a news article in the Argus-Courier reported that “Petaluma sees Increased Workload.” The article points out an increase in call volume, the need for additional emergency personnel, increase in commuter traffic and accidents. It is unknown if the fire department added additional staff and equipment to meet service demands. The increase in call volume may create delays with simultaneous incidents in the city and impact response capabilities to the proposed development. The increased traffic volume with daily commuter traffic could also impact evacuations from the project area.

**Response #9:**

See **Response #5** with respect to the RDEIR analysis of fire response time.

**Comment #10:**

The Scott Ranch Wildfire Evacuation Transportation Assessment summarized the local roadways serving the proposed development of 28 residential dwelling units and is not considered an evacuation plan as indicated in the assessment. The assessment describes consultation with city staff which include representatives from the fire department. The assessment did not indicate if the police department was present during the discussion to provide comment dealing with diverting traffic away from evacuation routes and establishing traffic control officers under emergency conditions. The assessment raises several questions that could be confusing to a public audience. The assumption is law enforcement participated in the development of the assessment. However, the assessment does not provide the mechanism or the nexus of police department notification to initiate the evacuation process. It was also not determined which city department would implement Penal Code 409.5. The Revised EIR Section 4.12.2.2 indicates the police department has a recommended emergency response time of three minutes. The response provided in the Revised EIR does not specify if police response would be a Priority I or Priority II etc. type of call. Police response may be a factor assisting the fire department in effectively evacuating residents out of the hazardous area in a safe and timely manner. In addition, actual police response times to the project were not clearly defined.

The assessment describes the means of egress based on the fire scenarios with traffic leading to various portions of the city away from the project area. Although the assessment is not considered an Evacuation Plan it may formulate questions from the residents in the Scott Ranch and the public. The Revised EIR did not appear to reference connectivity with the Mobility Element in the 2012 General Plan or reference the 2020 LHMP Update in relation to traffic and evacuation.

**Response #10:**

The Wildfire Evacuation Transportation Assessment evaluates the capacity of local roadways serving the project site during a wildfire evacuation event and concludes that roadways can successfully operate at evacuation capacity. See **Master Response 13 – Wildfire Evacuation** of the Responses-to-Comments document.

The Petaluma Police and Fire Department have plans for managing evacuations, including notifications, diverting traffic away from evacuation routes, and establishing traffic control officers under emergency conditions. The specified evacuation scenarios developed based on expert opinion by a wildfire specialist and relevant representatives from the City's emergency operations team were engaged during the development of the scenarios used in the Scott Ranch Wildfire Evacuation Transportation Assessment. These representatives confirmed the assumptions included within the analysis were appropriate and consistent with the 2020 LHMP. The City of Petaluma 2025 General Plan is introduced in **section 4.13.3.3** and referenced throughout the RDEIR.

**Impact PUB-2 on page 4.12-12** of the RDEIR adequately analyzed potential impact of the proposed project to the police service and quantified the project demand in service. As noted in the RDEIR, "the PPD currently has a service ratio of 1.16 officers per 1,000 residents which is slightly below their service standard of 1.3 police officers per 1,000 residents. With the increase in population, the service ratio would decrease to 1.15 officers per 1,000 residents. The PPD has indicated that the additional residents associated with the proposed project would not in and of itself result in the need for expansion of police facilities."

The RDEIR adequately concludes that the proposed project would result in less-than-significant impact to the police service.

**Comment #12:**

In addition, the Revised EIR did not appear to address in detail the cumulative impacts associated with the proposed project in relation to adopted policies in the Mobility Element of the 2025 General Plan. The two policies below may be confusing to the public and the nexus to Wildfire Evacuation Transportation Assessment.

5-P-4 New development and/or major expansion or change of use may require construction of off-site mobility improvements to complete appropriate links in the network necessary for connecting the proposed development with existing neighborhoods and land uses.

5-P-5 Consider impacts on overall mobility and travel by multiple travel modes when evaluating transportation impacts.

**Response #12:**

**Section 4.9, Land Use and Land Use Planning**, addresses project consistency with applicable policies. Consistency analysis of Policies 5-P-4 and 5-P-5 are addressed on **page 4.9-24 and 4.9-25**.

**Comment #13:**

The Wildfire Evacuation Transportation Assessment did not provide information in reference to evacuation notification nor did the assessment identify evacuation of residents with disabilities, special needs or account for the evacuation of pets and or service animals. The assessment also did not address signage indicating escape routes or provide alternate egress routes.

The 2020 LHMP Update did not have revised evacuation maps for the public to view in the event of an emergency specific to the geographic area. The Wildfire Evacuation Transportation Assessment did not address Public Safety Power Shut Offs (PSPS) as a possible constraint as residents evacuate. The loss of power in conjunction with a wildfire scenario has the potential to impact egress, create stacking of vehicles at intersections causing confusion to motorists from inoperable traffic signals. The out of service traffic signals would cause heavy congestion and extended response times for emergency first responders.

**Response #13:**

The Petaluma Police and Fire Department have plans for managing evacuations, including for the evacuation of residents with disabilities, special needs and or service animals. Residents of the future project could use east or westbound Windsor Drive as an escape route from the project site, then travel either north or south on D Street or Western Avenue, depending on where emergency service providers direct them. The City may consider removal of the B Street bollards as a separate project to serve the existing and future residents along Windsor Drive to provide a third route out.

Assembly Bill 747 (AB 747) requires that citywide Safety Elements (a component of the City's General Plan) be reviewed and updated to identify evacuation routes and their capacity, safety, and viability under a range of emergency scenarios for all safety elements or updates to a Local Hazard Mitigation Plan (LHMP) completed after January of 2022. Therefore, the City will update the safety element or



LHMP with these required materials during the next update, which typically happens approximately every five years. This requirement does not apply to individual development projects and is not a CEQA requirement, and therefore does not apply to this project.

As described in **Response #10**, the Wildfire Evacuation Transportation Assessment was based on scenarios developed by outside wildfire experts and City emergency operations staff. The nearest traffic signal that would affect the potential evacuation route from the project site is at D Street, El Rose Drive, and Sunnyslope Avenue, which is located within the evacuation area that would be controlled by police to facilitate the evacuation of the area. Other signals are located over a mile away from the project site and drivers could turn off D Street onto the many side streets and use West Petaluma's grid network to leave the evacuation area if vehicles started to stack up.

**Comment #14:**

The results of the analysis describe volume to capacity (V/C) ratios of under 1.0. However, it does not provide clarification if the ratios were heavy or medium and what affect they will have on the adjacent road network during peak operating times and during local events. Nearby Sonoma Raceway holds several events during the summer months that attract upwards of over 100,000 spectators per event. At the conclusion of each sporting event the roadways are inundated with heavy traffic. In addition, emergency vehicle access is compromised, and response times are extended. The analysis indicates vehicles will evacuate the area only to end up in a congested area(s) of the city and surrounding roadways. The ratio of 0.86 in the Wildfire Evacuation Transportation Assessment appears to be heavy volume of traffic flow. The City of Petaluma interactive website identifies the project area is in evacuation Zone PTL0040. The Wildfire Evacuation Transportation Assessment does not reference this evacuation zone or provide a means of public notification or establish a threshold or an evacuation trigger perimeter when residents should evacuate the project area.

The Wildfire Evacuation Transportation Assessment references the Highway Capacity Manual 6 th edition as a baseline for Capacity per Lane. Are those numbers based on a national standard or are they a reflection and or average of the existing road network capacity? Will the Wildfire Transportation Assessment evolve into a needed evacuation plan with a nexus to the Mobility Element and the Local Hazard Mitigation Plan?

**Response #14:**

As described in the Scott Ranch Wildfire Evacuation Transportation Assessment, a volume to capacity ratio of 1.0 indicates the level at which the roadway would start to become saturated with vehicle queues and it may take more than an hour for people to evacuate along the route. Based on the wildfire expert's wildfire scenarios, given the conditions surrounding the project site, there would be several hours between when a wildfire starts and reach residents. The City of Petaluma Emergency Operation Plan<sup>1</sup> includes guidance that determines when people would have to evacuate in the event of a wildfire, including through the online Zonehaven platform information identified in the comment. As described in the Scott Ranch Wildfire Evacuation Transportation Assessment, the volume to capacity estimates are much higher than would be expected during an actual evacuation as people would evacuate over the course of several hours, rather than the single hour assumed in the analysis. With the very conservative

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<sup>1</sup> <https://cityofpetaluma.org/departments/emergency-prep-response/>

assumption that everyone would evacuate within the hour, the most congested segment would occur over a mile from the project site at Western Avenue between English Street and Petaluma Boulevard north, with approximately 15 percent of the roadway capacity remaining for vehicles before vehicle queues and stop and go traffic starts. Under more likely evacuation conditions, where evacuees spread out over multiple hours and people use the grid network in Petaluma rather than all remain on one road, more than half of the capacity of the roadways would be available on the major routes. Further, the project's contribution to evacuation conditions would only be at most three percent of the total roadway's capacity under the most conservative evacuation scenario.

As described on **page 1** of the Scott Ranch Wildfire Evacuation Transportation Assessment, the industry standard capacity values were adjusted downward to account for local factors such as the number of heavy vehicles typically on these roadways, curves in the roadway, and changes in grade. The City of Petaluma emergency service providers maintain the city's evacuation plans. CEQA requires the assessment of the project's effect on the environment, which is provided in the RDEIR, not the completion of a tailored evacuation plan. As described above, the LHMP and City of Petaluma 2025 General Plan were incorporated into the RDEIR assessment.

**Comment #15:**

As mentioned previously, the Wildfire Evacuation Transportation Assessment was professionally written. The focus of the document was based on a predetermined scope of work, that produced an analysis and not an evacuation plan. The analysis appears to be based on probability, likelihood and assumptions incorporating scientific data utilizing fire scenarios as a base layer. Scientific data and analysis in comparison to actual real time events are two different factors to analyze. Each one will deliver a different set of unique characteristics with different outcomes. The analysis appears to present a partial evacuation outcome. The analysis may create confusion with the public and provide a false sense of security upon exiting the proposed development. The Wildfire Evacuation Transportation Assessment did not provide a contingency plan for the residents fleeing the area if egress was compromised or completely blocked to the north and south of Windsor Drive. The proposed development has one point of ingress and one point of egress with a cul du sac dead end road. The analysis also did not address persons without vehicles or access to vehicles and how they would evacuate safely. The Wildfire Evacuation Transportation Assessment did not provide details on the human element dealing with evacuations during an emergency. The human element will create anxiety with evacuees. Anxiety will ensue fear. Fear will lead to panic. At that point the fire suppression mission will transition to rescue and evacuations of people from the project area. This description highlights an operational reality. Wildland fires can require evacuation of portions of the population, revised traffic patterns to accommodate emergency response vehicle operations, and restrictions on water usage during the emergency. Health hazards may exist for elderly or disabled persons who cannot evacuate or succumb to smoke and heat. The loss of utilities, and increased demand on medical services, can also be anticipated. There is recent legislation related to emergency access and fire prevention that will be required upon the next revision of the Safety Element.

Assembly Bill -747 and Sennet Bill – 99.

AB-747 Requires that the safety element be reviewed and updated to identify evacuation routes and evaluate their capacity, safety and viability under a range of emergency scenarios.

SB-99 Requires cities, upon the next revision of the housing element on or after January 1, 2020, to review and update their safety element to include information identifying residential developments in hazard areas that do not have at least two emergency evacuation routes.

**Response #15:** The purpose of the Wildfire Evacuation Transportation Assessment is to evaluate the capacity of local roadways serving the project site during a wildfire evacuation event. It is not intended to be an evacuation plan. The City of Petaluma Emergency Operation Plan<sup>2</sup> includes emergency preparedness and an evacuation plan in the event of a wildfire. AB 747 doesn't apply to this project, as described above in **Response #13**. SB 99 also does not apply to this project as it applies to citywide plans, such as the housing element and safety element to ensure all residential developments have at least two access points. While there is no formal guidance on the appropriate size of a cul-de-sac for application to SB 99, the California Department of Forestry and Fire Protection (Cal FIRE) and the Public Resources Code Section 4290.5, has typically suggested a threshold of 30 dwellings per single access roadway, which is greater than either of the two proposed new streets as a part of the project. Residences along Windsor Drive, including the proposed project, have two points of entry and thus do not conflict with SB 99. Consistent with the CEQA requirements for this study, this assessment is intended to provide the City with a broad understanding of the capacity of the transportation system during the specified evacuation scenario based on expert opinion by a wildfire specialist; it does not provide a guarantee that evacuations will follow modeling that is used for analysis purposes, nor can it guarantee that the findings are applicable to any or all situations.

Emergency evacuation can occur due to any number of events, and emergency events requiring evacuation are inherently unpredictable by nature, as is individual behavior related to evacuation events. For example, driver behavior can be disorderly; evacuation progress can proceed in a nonlinear fashion (for example, it is anticipated that evacuees would vacate at a rate that more closely resembles a bell curve from the time that the evacuation order is issued); and there is general unpredictability in operational issues, such as power issues that would trigger traffic signals to operate in "red flash mode" in which traffic would need to proceed through intersections in an all-way stop configuration. These are conditions which would affect the evacuation and are the responsibility of the City of Petaluma's emergency service providers who can adopt to changing conditions, and not the responsibility of an individual development project as a part of the CEQA process.

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<sup>2</sup> <https://cityofpetaluma.org/departments/emergency-prep-response/>