APPENDIX B

Draft EIR Comment Letters

A1

REGIONALSAN
TAKING THE WASTE OUT OF WATER
Sacramento Regional County Sanitation District

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Treatment Plant
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February 15, 2017

Don Lockhart, AICP
Sacramento Local Agency Formation Commission
Assistant Executive Officer
1112 I Street, Suite 100
Sacramento, CA 95814-2836

Subject: Kammerer Road/Highway 99 Sphere of Influence Amendment Environmental Impact Report (LAFC#07-15)

Dear Mr. Lockhart:

Sacramento Regional County Sanitation District (Regional San) and the Sacramento Area Sewer District (SASD) have the following comments regarding the Draft Environmental Impact Report for the South of Kammerer Road:

Section 3.15 UTILITIES AND SERVICE SYSTEMS

3.15.1 Environmental Setting (p 3.15-7)

Wastewater Collection, Conveyance, and Treatment Facilities

Sacramento Area Sewer District

The information in this section is misleading. The subject area is located outside the Regional San and SASD Service Areas. This area will need to be annexed into both the Regional San and the SASD Service Areas through LAFCo in order to receive sewer service. This applicant will need to initiate this process.

Once annexed, SASD will provide local sewer service for this area. Regional San conveys sewage from local trunk sewers to the Sacramento Regional Wastewater Treatment Plant (SRWTP) through large pipelines called interceptors.

Currently there are no SASD trunk facilities located in or planned to serve the project area. All existing connection points adjacent to the project area convey wastewater north. *These pipelines are not designed to accommodate any additional flows from this project*. In order to receive sewer service from SASD, the developer will need to construct *new* facilities or *upgrade the existing pipelines*.

The project proponents should work closely with SASD Development Services to ensure proper connection to any existing SASD facilities. SASD and

Regional San approve connections on a case-by-case basis. The project proponent should continue to work closely with SASD's Development Services once the property is annexed.

Wastewater Treatment (p 3-15.9)

Replace the entire section with the following:

The SRWTP provides secondary treatment using an activated sludge process. Incoming wastewater flows through mechanical bar screens through a primary sedimentation process. This allows most of the heavy organic solids to settle to the bottom of the tanks. These solids are later delivered to the digesters. Next, oxygen is added to the wastewater to grow naturally occurring microscopic organisms, which consume the organic particles in the wastewater. These organisms eventually settle on the bottom of the secondary clarifiers.

Clean water pours off the top of these clarifiers and is chlorinated, removing any pathogens or other harmful organisms that may still exist. Chlorine disinfection occurs while the wastewater travels through a two-mile "outfall" pipeline to the Sacramento River, near the town of Freeport, California. Before entering the river, sulfur dioxide is added to neutralize the chlorine.

The design of the SRWTP and collection system was balanced to have SRWTP facilities accommodate some of the wet weather flows while minimizing idle SRWTP facilities during dry weather. Regional San designed the SRWTP to accommodate some wet weather flows with the storage basins and interceptors designed to accommodate the remaining wet weather flows. The Central Valley Regional Water Quality Control Board (Water Board) issued an NPDES Discharge Permit to Regional San in December 2010.

In adopting the new Discharge Permit, the Water Board required Regional San to meet significantly more restrictive treatment levels over its current levels. Regional San began the necessary activities, studies, and projects to meet the permit conditions in August of 2014. Regional San must complete construction of the new treatment facilities to achieve the permit and settlement requirements by May 2021 for ammonia and nitrate and May 2023 to meet these pathogen requirements.

Add the following section:

Recycled Water

Regional San currently owns and operates a 5-mgd Water Reclamation (WRF) that has been producing Title 22 tertiary recycled since 2003. The WRF is located within the SRWTP property in Elk Grove. Regional San uses a portion of the recycled water at the SRWTP and the rest is wholesaled to the Sacramento County Water Agency (SCWA). SCWA retails the recycled water, primarily for landscape irrigation use, to select customers in the City of Elk Grove. It should be noted that Regional San currently does not have any planned facilities that could provide recycled water to the proposed project or its vicinity. Additionally, Regional San is not a water purveyor and

any potential use of recycled water in the project area must be coordinated between the key stakeholders, e.g. land use jurisdictions, water purveyors, users, and the recycled water producers.

If you have any questions regarding these comments, please contact me at 916-876-9994

Sincerely,

Sarenna Moore

Sarenna Moore
Regional San/SASD
Policy and Planning

Cc: Regional San Development Services, SASD Development Services, J. Matthew Gerken, Stephen Moore, SP Mann, Steve Norris, Michael Meyer, Dave Ocenosak, Christoph Dobson

A2

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February 27, 2017

Donald J. Lockhart, AICP
Assistant Executive Officer
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814

Re: Comments on the Draft Environmental Impact Report for the Proposed Kammerer Road/Highway 99 Sphere of Influence Amendment (State Clearinghouse #2016032015)

Dear Mr. Lockhart:

Thank you for inviting SACOG's comments on the Draft Environmental Impact Report (DEIR) for the Proposed Kammerer/99 Sphere of Influence Amendment (SOIA) to the City of Elk Grove dated February 15, 2017. As you are aware, SACOG has commented multiple times in the past on documents relating to previous Sphere of Influence Amendment applications for the City of Elk Grove. The majority of our previous comments are still applicable to this analysis and are therefore briefly reiterated in this letter and we are attaching our previous letters for your reference. From a regional perspective, the key issues around such an expansion are the timing of urbanization and conditions for development (like jobs-housing balance).

The basis for our comments is the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and Blueprint. SACOG's primary responsibility is developing and implementing the MTP/SCS, a document that establishes transportation spending priorities throughout the region. The MTP/SCS must be based on the most likely land use pattern to be built over the 20+ year planning period, and it must conform with federal and state air quality regulations. The foundation for the MTP/SCS land use forecast is local government general plans, community plans, specific plans, and other local policies and regulations. Other market and regulatory/policy variables that are considered help refine the sum of the local plans in order to determine the most likely future development pattern for a specific period of time. The Blueprint vision is based on the principles of smart growth and is intended to give general direction on how the region should develop to reap the benefits of the Blueprint Preferred Scenario (and related MTP/SCS). Implementation of the Blueprint vision depends greatly on the efforts of cities and counties to implement that vision through local plans and projects. The MTP/SCS and Blueprint are in alignment with each other because of these local efforts.

The current Metropolitan Transportation Plan/Sustainable Communities Strategy (2016 MTP/SCS) was adopted in February 2016. The land use forecast for the 2016

MTP/SCS projects housing and employment growth expected through 2036. As noted in the DEIR, the MTP/SCS assumes no housing or employment growth by 2036 in the SOIA area. To be clear, the purpose of the MTP/SCS is to forecast what is likely to be constructed during the planning period. This is different from a land supply contingency needed to support a healthy land market. Additionally, the 2016 MTP/SCS does include a number of transportation capacity projects in the southern portion of the City, including widening and extending Kammerer Road before 2036. We agree that Elk Grove may need additional land outside of the current city limits at some point beyond 2036 to support additional job growth to help the City's current imbalance of jobs and housing. However, given the very large supply of housing entitlements in the rest of the region, and Elk Grove's current high ratio of housing to jobs, we do not foresee a need for land in the SOI for housing for very long time.

We understand that there are no land use changes proposed as part of this project and that the conceptual land use scenario presented in the DEIR is only to facilitate environmental analysis for this SOIA request. However, in the conceptual land use scenario, roughly 45 percent of the SOIA land area is residential. If the SOIA is approved and eventually a land use plan is created and/or annexation is requested, we suggest LAFCO and the City include strong policies around the timing and phasing of development in this area. Policies that require phased growth encourage a complete neighborhood and can be used to help the City ensure its goal of more employment is being met before a significant number of new homes are added in this area. We have several examples of policies like this throughout the region and would be happy to discuss this further at the appropriate time.

We are encouraged to see that the size and general location of the proposed SOIA is generally consistent with the Blueprint. The small variance that exists between the Blueprint and proposed SOIA footprint is to be expected since the Blueprint is a conceptual map and not intended to be interpreted or implemented in a literal, parcel-specific manner.

Finally, we ask for the following corrections to the DEIR, which are shown using strikeout for text that should be deleted and underline for text that should be added:

- On page 3.11-3: "Based on the current employment totals and projections, SACOG estimates the City of Elk Grove would have approximately ~~47,619~~ 50,865 jobs by 2036 (SACOG 2016)." This information can be found in the 2016 MTP/SCS Appendix E-3.
- On page 3.11-3: "SACOG projects that the total number of jobs would be ~~52,176~~ 72,225 at buildout of the City (SACOG 2016)." This information can be found in the 2016 MTP/SCS Appendix E-3.
- On page 3.11-27: "SACOG estimates that the total number of dwelling units will be 65,282 by 2036 and 67,820 at build out of the City. ~~The increase in dwelling units attributed to the proposed project would account for 6 to 8 percent of the dwelling units in 2036 and 6 to 7 percent at buildout of the City.~~ The SOIA Area is not included in SACOG's future housing projections; therefore, the number of dwelling units potentially generated by future development was not accounted for in SACOG's housing projections for the city." As noted in the DEIR, the SOIA area was not included in our projections and therefore the units

- attributed to the proposed project do not account for any of the SACOG 2036 or build out estimates.
- On page 3.11-28: "SACOG estimates the City of Elk Grove would have approximately ~~47,619~~ 50,865 jobs by 2036 and ~~52,176~~ 72,225 at buildout of the City. ~~This increase in jobs attributed to the proposed project would account for approximately 38 to 42 percent of the number of jobs in 2036 and 34 to 38 percent of the jobs at buildout of the City~~. The SOIA Area is not included in SACOG's future employment projection; therefore, the number of jobs potentially generated by future development would represent a substantial number of jobs not accounted for in SACOG's employment projections for the City." As noted in the DEIR, the SOIA area was not included in our projections and therefore the jobs attributed to the proposed project do not account for any of the SACOG 2036 or build out estimates.
- On page 3.11-29: There is a discussion on "Future (2036) Conditions" that compares future conditions using SACOG's housing and employment estimates for 2036. It's important to note that there is a difference between the 2036 projections and the build out estimates included in the MTP/SCS. As an example of this, in the Southeast Policy Area, the MTP/SCS assumes only about 20 percent of the employment capacity planned for in the Southeast Policy Area. For this reason, adding the future development of the SOIA area to the MTP/SCS 2036 estimates is not a complete picture and we suggest editing this section to include the build out estimates as well.
- On page 3.14-21: "Kammerer Road would be widened to ~~six~~ four lanes from SR 99 to Bruceville Road, and would be extended (four lanes) from Bruceville Road to I-5 with UPRR overcrossing." This information can be found in the 2016 MTP/SCS Appendix A.

Thank you again for the opportunity to comment and for continuing to engage us in this important process. Please don't hesitate to contact myself or Kacey Lizon, Planning Manager at klizon@sacog.org or 916-340-6265 if you have further questions.

Sincerely,

Kirk Trost
Interim Chief Executive Officer

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August 13, 2008

Peter Brundage, Executive Officer
Sacramento Local Agency Formation Commission
1112 "I" Street, Suite 100
Sacramento, CA 95814

Dear Mr. Brundage:

I am writing to comment on the City of Elk Grove Sphere of Influence Amendment Request (LAFCO 04-08). The application's "Municipal Service Review" document refers to SACOG projections, stating that:

> *"The City based future land demands on SACOG's projections to estimate the amount of vacant lands necessary to accommodate the projected growth." (p. 3.0-3)*

> *"SACOG anticipates that existing neighborhoods and subdivisions within the City are expected to build out in the vacant areas within SACOG's (2035 Metropolitan Transportation Plan) planning period." (p. 3.0-2)*

I don't believe that these statements accurately convey SACOG's adopted growth projections for Elk Grove. Our recently adopted 2035 Metropolitan Transportation Plan land use allocation shows all of the projected housing and employment growth for Elk Grove through 2035 occurring within the existing city limits, with an additional 1,700 acres of vacant land in 2035 that the City's General Plan currently designates for development. Additionally, within the city limits the 2050 Blueprint growth pattern projects another 19,000 employees and 1,500 housing units from 2035 to 2050. These figures were carefully coordinated with Elk Grove staff when the final Blueprint map was created because the City Council had asked SACOG to ensure complete consistency between the Blueprint map and the City's recently adopted General Plan. We had communicated our concerns about these issues to the City in the attached letter dated January 23, 2008.

Recently, SACOG met with Elk Grove senior management staff and consultants to discuss these issues and agreed that our staff would meet in the near future to compare information and hopefully resolve, within the next few weeks, the discrepancies noted above. We will keep you posted on the progress of those discussions.

I have indicated to City staff that as they move forward to establish a Sphere of Influence, we encourage them to consider:

- the timing of urbanization in the Sphere of Influence and its possible impact on the build-out of the General Plan within the city's current municipal boundaries; and,
- focusing on jobs-housing balance and prioritizing future development that promote employment growth and development of a strong economic base for the City.

These issues matter to SACOG because of their strong connection to travel behavior and air emissions. I believe City leadership shares these concerns and we look forward to a good partnership working with them on these issues as this process moves forward.

Thank you for your consideration on this matter. Please let me know if you have questions.

Sincerely,

Mike McKeever
Executive Director

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cc: Laura Gill, Elk Grove

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January 23, 2008

Jim Estep, City Manager
8401 Laguna Palms Way
Elk Grove, CA 95758

Dear Mr. Estep:

Thank you for discussing the Sphere of Influence Amendment staff report with me last evening and the clarifications I believe should be made. As we discussed, the January 23, 2008 City Council Meeting staff report includes a discussion of the Sacramento Area Council of Government's (SACOG's) regional growth projections that does not accurately convey information in SACOG's adopted growth forecast and land use allocation for Elk Grove in the Metropolitan Transportation Plan.

I am writing to formally ask that this information be clarified in time for the City Council consideration of this topic at its Wednesday, January 23 meeting based upon our discussion. While you clarified for me that the City's time horizon for the development of the proposed Sphere of Influence is longer than SACOG 2035 MTP projections, and is not simply based on SACOG's 2035 growth forecast, it is important to note that in some places the staff report indicates that the land supply is not adequate for even a 20-year horizon. I very much appreciate your willingness to clarify page two of the staff report which currently states that "The Sacramento Area Council of Governments (SACOG) is projecting that the City will experience a 98% growth in employees and 72% growth in dwelling units over the next 20 years (2035 SACOG Land Use allocation). Based on these projections, existing land uses and intensities within the current City limits would result in a land shortage of approximately 19,500 acres over the next 20 years."

As we discussed, I understand that the City did not mean to indicate that there was a demand for a total of 19,500 acres outside of its current City boundaries using SACOG's projections. The SACOG growth forecast and land use allocation for the MTP are consistent with the Elk Grove General plan and show adequate capacity for SACOG's projected employment and housing growth in Elk Grove through 2035 within the current city boundaries.

I respectfully request that the statement in the staff report be clarified at the City Council meeting to ensure the City Council and the public are aware of these differences in time horizons.

Again, thank you for agreeing to clarify this item and SACOG looks forward to continuing to work collaboratively with you and the City of Elk Grove.

Sincerely,

Mike McKeever
Executive Director

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February 28, 2011

Donald J. Lockhart, AICP
Assistant Executive Officer
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814

Dear Mr. Lockhart,

Thank you for inviting SACOG's comments on the Elk Grove Municipal Service Review for the Elk Grove Sphere of Influence Amendment Project (LAFC 09-10) and the support Elk Grove Market Study. We also thank the City of Elk Grove for commissioning the market study to determine the long term land use needs of the City. SACOG supports the City's aim to improve job opportunities in its jurisdiction and this market study is an important step toward that end. We also appreciate that the City asked its market study consultant team to meet with us to discuss and compare employment projections. We've since reviewed the final market study and find it to be a technically solid study of employment demand.

Our understanding of the market study is that it projected two potential growth scenarios – a low growth, high density scenario and a high growth, low density scenario – for the City of Elk Grove through the year 2029. The scenarios are intended to bracket the range of possible employment and housing growth that the City would need to plan for during that time period, including the amount of land that would need to be available to support that growth. The study states that these scenarios are intended to provide varying estimates of growth potential, but "are not meant to incorporate judgments about the likelihood of projections results or embedded assumptions" (Page A-14, Elk Grove Market Study). We have compared the market study to our preliminary MTP projections and generally agree that it is possible the city could need more employment land beyond the city limits sometime after the next 20 years and that the amount of land likely to be needed is within the amount identified by the Elk Grove Market Study. We do have a few observations as to the reason for some of this additional land supply:

- The market study discounts 80% of vacant unentitled land as unlikely to develop fully.
- The market study assumes very low residential densities for the high land consumption scenario (Scenario 2), at approximately 6.5 dwelling units per acre on average city-wide, which contributes substantially to the scenario's higher land demand.

- The market study assumes no redevelopment potential in its land supply analysis.
- The market study land supply analysis assumes no re-designation of vacant land, either from residential to employment or between employment designations. With no re-designation of land use assumed, the market study indicates that the employment acres in shortest supply are for institutional and school uses, which are public, not private uses.
- The market study arrives at land demand by adding an additional 20% of land capacity as a land supply contingency. Of the additional land needed in Scenario 1 (low growth, high intensity development), 100 percent of the 200 acre additional land supply is part of this contingency. For Scenario 2 (high growth, low intensity development), about 53% of the additional 1,422 acre additional land supply is part of this contingency. It is worth noting that this aspect of the land demand projections is different from SACOG's land use forecasts, which must represent actual anticipated development.

Lastly, as you know, SACOG is in the midst of the Rural-Urban Connection Strategy (RUCS) project, which focuses on economic and environmental sustainability in the region's rural areas. The project has not yet resulted in policy or program recommendations but we have been conducting groundbreaking technical research on the urban-rural interface and in particular, the effects of urban uses on neighboring agricultural use. Our preliminary research and modeling indicates that the more certainty there is to the edge of future urbanization, the lesser the impact will be on neighboring farming operations. A higher percentage of land is more likely to remain in active agriculture if there is some long-term certainty that farming is an economically viable use of the land.

Thank you again for inviting SACOG's comment in this process. We would be happy to discuss any of this information in more detail with the City and LAFCO if it would be of use.

Sincerely,

Mike McKeever
Chief Executive Officer

MM:KL:ef

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May 18, 2011

Donald J. Lockhart, AICP
Assistant Executive Officer
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814

Dear Mr. Lockhart,

Thank you for inviting SACOG's comments on the Elk Grove Municipal Service Review for the Elk Grove Sphere of Influence Amendment Request. The revisions to "Area Growth and Population" chapter, dated April 27, 2011, include information on SACOG's current housing and employment projections and suggest those projections as the basis for the city needing additional development land outside the current city limits. We do not find these statements to be accurate and would like to correct the following points.

- Page 3.0-2 states ,"The City utilized the MTP 2035 growth projection numbers in calculating future needed acreage for the initial Sphere of Influence Amendment application submitted in May 2008 and subsequent application update submitted in August 2010." SACOG submitted comments to LAFCO and the City explaining the misstatement of our projections for this purpose. Please reference the attached letter to the City dated January 23, 2008 and the letter to LAFCO dated August 13, 2008.

- Page 3.0-3 provides a table showing a "SACOG 2035 MTP Projection" for population. We did not provide this information and we have not released population projections for individual jurisdictions at this point in our MTP update process.

- Page 3.0-4 states, "The City has based future land demands on SACOG's MTP 2035 Preliminary Draft Preferred Scenario projections to estimate the amount of vacant lands necessary to accommodate the projected growth" and references "Table 3.0-45 Land Demand Projections for the MTP 2035 Preliminary Draft Preferred Scenario". The same paragraph then continues, "Based on the availability of 2,918 acres within the City, a total of 6,327 acres will be needed outside of the City limits to accommodate the projected growth to 2035". Again, we did not provide the acreage numbers shown in that table nor do we believe that additional acreage outside of the city is needed to meet our draft 2035 projections. For your reference, the projections we are using in our MTP 2035 Preliminary Draft Preferred Scenario are below. These projections were coordinated with city staff to ensure consistency with the city's latest capacity estimates for development *within* the current city limits. The projections do not assume development outside of the current city limits. The research supporting our current projections for the region indicate the region will grow less and at a slower pace than previously forecasted. This trend affects all parts of the region, including the city of Elk Grove.

SACOG Projections for Preliminary Draft Preferred Scenario for the 2035 MTP Update

	2008 Employees	2008 Housing Units	2035 Employees	2035 Housing Units
City of Elk Grove (current City limits)	28,431	49,018	48,429	66,014

As we indicated in prior communications, we believe our estimates of development capacity inside current city boundaries are likely to be low because they do not account for any redevelopment activity. Over the next two to three decades, some level of redevelopment seems highly likely. In fact, the City is working hard to encourage this as a revitalization strategy.

To summarize, neither the currently adopted MTP projections nor the draft Preliminary Preferred Scenario projections being used in the MTP update assume growth in the proposed SOI area. To be clear, the purpose of the MTP is to forecast actual constructed development during the planning period. This is different from a land supply contingency needed to support a healthy land market. We agree that Elk Grove may need additional land outside of the current city limits at some point beyond 2035 to support additional job growth to help the City's current imbalance of jobs and housing. We do not see a need for land in the SOI for housing for a very long time. The key issues around such an expansion would involve the timing of urbanization and conditions for development.

Thank you for consideration in this matter.

Sincerely,

Mike McKeever
Chief Executive Officer

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Attachment

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S A C O G

August 13, 2008

Peter Brundage, Executive Officer
Sacramento Local Agency Formation Commission
1112 "I" Street, Suite 100
Sacramento, CA 95814

Dear Mr. Brundage:

I am writing to comment on the City of Elk Grove Sphere of Influence Amendment Request (LAFCO 04-08). The application's "Municipal Service Review" document refers to SACOG projections, stating that:

> *"The City based future land demands on SACOG's projections to estimate the amount of vacant lands necessary to accommodate the projected growth." (p. 3.0-3)*

> *"SACOG anticipates that existing neighborhoods and subdivisions within the City are expected to build out in the vacant areas within SACOG's (2035 Metropolitan Transportation Plan) planning period." (p. 3.0-2)*

I don't believe that these statements accurately convey SACOG's adopted growth projections for Elk Grove. Our recently adopted 2035 Metropolitan Transportation Plan land use allocation shows all of the projected housing and employment growth for Elk Grove through 2035 occurring within the existing city limits, with an additional 1,700 acres of vacant land in 2035 that the City's General Plan currently designates for development. Additionally, within the city limits the 2050 Blueprint growth pattern projects another 19,000 employees and 1,500 housing units from 2035 to 2050. These figures were carefully coordinated with Elk Grove staff when the final Blueprint map was created because the City Council had asked SACOG to ensure complete consistency between the Blueprint map and the City's recently adopted General Plan. We had communicated our concerns about these issues to the City in the attached letter dated January 23, 2008.

Recently, SACOG met with Elk Grove senior management staff and consultants to discuss these issues and agreed that our staff would meet in the near future to compare information and hopefully resolve, within the next few weeks, the discrepancies noted above. We will keep you posted on the progress of those discussions.

I have indicated to City staff that as they move forward to establish a Sphere of Influence, we encourage them to consider:

- the timing of urbanization in the Sphere of Influence and its possible impact on the build-out of the General Plan within the city's current municipal boundaries; and,
- focusing on jobs-housing balance and prioritizing future development that promote employment growth and development of a strong economic base for the City.

These issues matter to SACOG because of their strong connection to travel behavior and air emissions. I believe City leadership shares these concerns and we look forward to a good partnership working with them on these issues as this process moves forward.

Thank you for your consideration on this matter. Please let me know if you have questions.

Sincerely,

Mike McKeever
Executive Director

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cc: Laura Gill, Elk Grove

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SACOG

January 23, 2008

Jim Estep, City Manager
8401 Laguna Palms Way
Elk Grove, CA 95758

Dear Mr. Estep:

Thank you for discussing the Sphere of Influence Amendment staff report with me last evening and the clarifications I believe should be made. As we discussed, the January 23, 2008 City Council Meeting staff report includes a discussion of the Sacramento Area Council of Government's (SACOG's) regional growth projections that does not accurately convey information in SACOG's adopted growth forecast and land use allocation for Elk Grove in the Metropolitan Transportation Plan.

I am writing to formally ask that this information be clarified in time for the City Council consideration of this topic at its Wednesday, January 23 meeting based upon our discussion. While you clarified for me that the City's time horizon for the development of the proposed Sphere of Influence is longer than SACOG 2035 MTP projections, and is not simply based on SACOG's 2035 growth forecast, it is important to note that in some places the staff report indicates that the land supply is not adequate for even a 20-year horizon. I very much appreciate your willingness to clarify page two of the staff report which currently states that "The Sacramento Area Council of Governments (SACOG) is projecting that the City will experience a 98% growth in employees and 72% growth in dwelling units over the next 20 years (2035 SACOG Land Use allocation). Based on these projections, existing land uses and intensities within the current City limits would result in a land shortage of approximately 19,500 acres over the next 20 years."

As we discussed, I understand that the City did not mean to indicate that there was a demand for a total of 19,500 acres outside of its current City boundaries using SACOG's projections. The SACOG growth forecast and land use allocation for the MTP are consistent with the Elk Grove General plan and show adequate capacity for SACOG's projected employment and housing growth in Elk Grove through 2035 within the current city boundaries.

I respectfully request that the statement in the staff report be clarified at the City Council meeting to ensure the City Council and the public are aware of these differences in time horizons.

Again, thank you for agreeing to clarify this item and SACOG looks forward to continuing to work collaboratively with you and the City of Elk Grove

Sincerely,

Mike McKeever
Executive Director

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May 13, 2013

Don Lockhart, AICP, Assistant Executive Officer
Sacramento Local Agency Formation Commission
1112 I Street #100
Sacramento, CA 95814

Dear Mr. Lockhart,

On behalf of the Sacramento Area Council of Governments, I am submitting the following comments on the Recirculated Draft Environmental Impact Report (RDEIR) for the Proposed City of Elk Grove Sphere of Influence Amendment (LAFC # 09-10).

Background

The Sacramento Area Council of Governments (SACOG) is comprised of six counties and 22 cities in the region. SACOG's primary responsibility is developing and implementing the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), a document that establishes transportation spending priorities throughout the region. The MTP/SCS must be based on the most likely land use pattern to be built over a 20+ year planning period, conform with federal air quality regulations and achieve state greenhouse gas reduction targets.

The MTP/SCS must effectively address the linked challenges of reducing regional traffic congestion levels and mobile-source air pollutants, including particulate matter, ozone and greenhouse gases. The SACOG Blueprint Study (Blueprint), conducted from 2002-2004, revealed that there is a strong connection between land use patterns, travel behavior and air quality. Specifically, certain land use strategies lead to increased walking, biking and transit use, shorter automobile trips, and reduced mobile-source air pollution. These land use strategies include higher density housing and employment, locating jobs and housing near each other, and providing strong connectivity in the design of street and bicycle/pedestrian systems. In support of these findings, the SACOG Board adopted the Blueprint principles and conceptual map as a depiction of a way in which the region could grow and achieve these transportation and air quality benefits, as well as many other environmental and quality of life benefits (Attachment – 12 page BP report).

Comments

Of the alternatives analyzed in the RDEIR, the Enhanced Regional Alternative to the proposed project is the most consistent with the Blueprint, particularly if Elk Grove plans the area for future employment growth. As noted above, one of the land use strategies that achieves congestion and air pollution reduction is jobs-housing balance. For the region to realize these reductions, communities that currently have a low ratio of jobs to housing, such as Elk Grove, need to plan for and attract enough job growth over time to minimize the need for long-distance commuting out of the city (measured in vehicle miles traveled[1]).

[1] A vehicle mile traveled, or VMT, is one vehicle traveling on a roadway for one mile. VMT correlates to vehicle emissions and congestion.

To illustrate the effectiveness of this land use strategy, SACOG conducted a sketch-level analysis of the vehicle miles traveled (VMT) effects of using the proposed sphere of influence (SOI) for jobs. Daily VMT per capita within the City of Elk Grove was slightly higher than the regional average in 2008. VMT per capita is projected to decline by 2035 in the adopted MTP/SCS at a faster rate than the decline in the regional average VMT per capita, largely due to a projected improvement in the Elk Grove jobs-housing balance from 0.58 jobs per household in 2008 to 0.72 jobs per household in 2035. Our sketch level modeling indicates that additional improvements in jobs per household would further reduce VMT per capita in Elk Grove, producing benefits within the city but also for the region's congestion and air pollution challenges. It is the goal of the MTP/SCS to reduce regional VMT per capita by 2035 to achieve federal clean air standards, state greenhouse gas emissions reduction targets, and Blueprint growth principles. Based on this analysis, it appears that the Enhanced Regional Alternative, if used for employment uses, would aid the region in achieving congestion and air quality goals.

We note that the size and location of the Enhanced Regional Alternative is generally consistent with the Blueprint conceptual map, which contemplated future growth south of the current city limits of Elk Grove. Some level of variance is expected within a given geography since the Blueprint is a conceptual map and not intended to be interpreted or implemented in a literal, parcel-specific manner. The Enhanced Regional Alternative includes approximately the same amount of acreage west of State Highway 99 that is included in the Blueprint. While the area east of State Highway 99 is not shown in the Blueprint map, the acreage makes up less than half of the acreage of the entire Enhanced Regional Alternative, is confined to an area bounded on three sides by the current city limits and on one side by the floodplain, and sits within the Urban Service Boundary. These conditions make it a logical future extension of the city limits.

Gov. Code Sec. 56668 (g) requires Sacramento LAFCo to consider, in the review of the sphere of influence proposal, the adopted MTP/SCS. The purpose of the MTP/SCS is to forecast actual constructed development during a 20+ year planning period (the current MTP/SCS covers 2012-2035). This is different from a land supply contingency needed to support a healthy land market. We agree that Elk Grove may need additional land outside of the current city limits at some point to support additional job growth to help the city's current imbalance of jobs and housing. The key issues around such an expansion would involve the timing of urbanization and conditions for development.

Thank you for your consideration. Please don't hesitate to contact me if you have any questions.

Sincerely,

Mike McKeever
Chief Executive Officer

cc: Gary Davis, Mayor
City of Elk Grove

1415 L Street,
Suite 300
Sacramento, CA
95814

tel: 916.321.9000
fax: 916.321.9551
tdd: 916.321.9550
www.sacog.org

SACOG

July 15, 2013

Don Lockhart AICP, Assistant Executive Officer
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814

Dear Mr. Lockhart:

Thank you for notification of the updated Draft Municipal Services Review for the proposed sphere of influence amendment for the City of Elk Grove (LAFC 09-10). As you know, SACOG submitted a comment letter on the Draft Environmental Impact Report for the proposed sphere of influence (SOI) in May of this year. Our comments on the proposed SOI are articulated in that letter, which is attached here for reference.

We would be happy to answer any other questions Sacramento County LAFCO may have as this application is processed.

Sincerely,

Mike McKeever
Chief Executive Officer

Attachment

cc: Gary Davis, Mayor, City of Elk Grove
Laura Gill, City Manager, City of Elk Grove
Taro Echiburu, Planning Director, City of Elk Grove

Attachment

Sacramento Area Council of Governments

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Suite 300
Sacramento, CA
95814

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fax: 916.321.9551
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www.sacog.org

May 13, 2013

Don Lockhart, AICP, Assistant Executive Officer
Sacramento Local Agency Formation Commission
1112 I Street #100
Sacramento, CA 95814

Dear Mr. Lockhart,

On behalf of the Sacramento Area Council of Governments, I am submitting the following comments on the Recirculated Draft Environmental Impact Report (RDEIR) for the Proposed City of Elk Grove Sphere of Influence Amendment (LAFC # 09-10).

Background

The Sacramento Area Council of Governments (SACOG) is comprised of six counties and 22 cities in the region. SACOG's primary responsibility is developing and implementing the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), a document that establishes transportation spending priorities throughout the region. The MTP/SCS must be based on the most likely land use pattern to be built over a 20+ year planning period, conform with federal air quality regulations and achieve state greenhouse gas reduction targets.

The MTP/SCS must effectively address the linked challenges of reducing regional traffic congestion levels and mobile-source air pollutants, including particulate matter, ozone and greenhouse gases. The SACOG Blueprint Study (Blueprint), conducted from 2002-2004, revealed that there is a strong connection between land use patterns, travel behavior and air quality. Specifically, certain land use strategies lead to increased walking, biking and transit use, shorter automobile trips, and reduced mobile-source air pollution. These land use strategies include higher density housing and employment, locating jobs and housing near each other, and providing strong connectivity in the design of street and bicycle/pedestrian systems. In support of these findings, the SACOG Board adopted the Blueprint principles and conceptual map as a depiction of a way in which the region could grow and achieve these transportation and air quality benefits, as well as many other environmental and quality of life benefits (Attachment – 12 page BP report).

Comments

Of the alternatives analyzed in the RDEIR, the Enhanced Regional Alternative to the proposed project is the most consistent with the Blueprint, particularly if Elk Grove plans the area for future employment growth. As noted above, one of the land use strategies that achieves congestion and air pollution reduction is jobs-housing balance. For the region to realize these reductions, communities that currently have a low ratio of jobs to housing, such as Elk Grove, need to plan for and attract enough job growth over time to minimize the need for long-distance commuting out of the city (measured in vehicle miles traveled[1]).

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Thank you for your consideration. Please don't hesitate to contact me if you have any questions.

Sincerely,

Mike McKeever
Chief Executive Officer

cc: Gary Davis, Mayor
City of Elk Grove

A3

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670-4599
916-358-2900
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

March 8, 2017

Don Lockhart
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814

Subject: KAMMERER ROAD/HIGHWAY 99 SPHERE OF INFLUENCE AMENDMENT PROJECT
AMENDMENT ENVIRONMENTAL IMPACT REPORT
SCH# 2016032015

Dear Mr. Lockhart:

The California Department of Fish and Wildlife (CDFW) received and reviewed the Notice of Completion of an Amendment Environmental Impact Report (AEIR) from the Sacramento Local Agency Formation Commission (Sacramento LAFCo) for the Kammerer Road/Highway 99 Sphere of Influence Amendment Project (Project) pursuant the California Environmental Quality Act (CEQA) statute and guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources, and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required. CDFW also administers the Native Plant Protection Act, Natural Community Conservation Act, and other provisions of the Fish and Game Code that afford protection to California's fish and wildlife resources.

PROJECT DESCRIPTION SUMMARY

The proposed Project is a landowner initiated proposal to amend the City of Elk Grove's current Sphere of Influence (SOI), the Sacramento Area Sewer District (SASD) SOI, and the Sacramento Regional County Sanitation District (SRCSD) SOI to add approximately 1,156 acres in an area just south of, and adjacent to the City of Elk Grove's current City limits, increasing the City's SOI from 27,032 acres to 28,188 acres.

SOI is defined by Government Code Section 56425 as "a plan for the probable physical boundary and service area of local governmental agency, including areas adjacent to the existing service area of a jurisdiction where services might reasonably be expected to be provided in the next 20 years."

Although the proposed SOI would amend the City of Elk Grove's SOI boundaries, property within the amended SOI would not be within the City of Elk Grove's jurisdiction until future requests for annexation of property are approved by Sacramento LAFCo. If and when future requests for annexation are approved, the newly annexed property would be within the City's jurisdiction and subject to applicable City General Plan policies and regulations.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist Sacramento LAFCo in adequately identifying and, where appropriate, mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources.

CDFW is primarily concerned with the Project impacts to the successful implementation of the South Sacramento Habitat Conservation Plan (SSHCP).

Alternatives to the Proposed Project
The AEIR describes the proposed Project (which will result in approximately 1,575 acres of impact to habitat), and two alternatives to the proposed Project, including: 1) the No Project Alternative (which represents no additional impacts to habitat), and 2) a Reduced

Size Alternative (which would avoid the ditches and reduce the Project site to 530 acres, less than half the size of the proposed Project).

It is important to note that currently the draft South Sacramento Habitat Conservation Plan (SSHCP) requires that mitigation for mixed agricultural croplands in the western portion of the planning area must occur within the western portion of the planning area. Although the SSHCP is not yet finalized, any growth not currently identified within the SSHCP planning area, including the proposed Project, will make it difficult to be able to meet the mitigation standards required by Fish & G. Code § 2080 et seq. and to properly implement the SSHCP. CDFW supports the AEIR's no Project alternative, which we believe would best allow for the successful implementation of the SSHCP. However, we also believe that with the current draft of the SSHCP, it may be possible to implement the SSHCP successfully if the AEIR's Reduced Size Alternative were selected, limiting the Project to 530 acres.

Swainson's Hawk

The proposed Project area contains mostly agricultural lands, and these lands mostly contain suitable foraging habitat for the Swainson's hawk (SWHA; *Buteo swainsoni*). CDFW considers these mixed agricultural lands to be of the highest quality of foraging habitat. The potential impact to the SWHA as a result of the increase of the City's SOI is significant. The AEIR acknowledges that approval of the SOI area could result in urbanization of the area at an undetermined future time, and describes the potential impact to the SWHA as potentially significant. The AEIR describes several mitigation measures (MM) to lessen this impact, including MM 3.4-2c.

MM 3.4-2c requires that all discretionary projects: 1) preserve suitable SWHA foraging habitat to ensure 1:1 mitigation for lost habitat, with consultation with CDFW on the suitability of the preservation habitat, 2) consultation with CDFW on the appropriateness of the mitigation, 3) applicant transfer the SWHA mitigation land to a non-profit conservation organization, with the City of Elk Grove and CDFW named as third-party beneficiaries, and 4) applicant consult with the City of Elk Grove and CDFW to establish an endowment that is sufficient to fund in perpetuity the operation, maintenance, management and enforcement of the conservation easement. CDFW agrees that these measures are necessary to lessen impacts to special status species. In addition, CDFW recommends that the AEIR be revised to state that the suitability of the preservation habitat and establishment of the endowment require coordination with CDFW rather than simply consulting with CDFW, since a consultation in itself does not necessarily result in effective mitigation measures to protect these species and their habitat.

Giant Garter Snake

As stated in the AEIR, the SOI area contains suitable aquatic habitat for GGS. GGS is a highly cryptic species that spends the majority of its time, even during its active season, in underground burrows (Halstead et al. 2015). Although minimization measures have been included in the AEIR, take of GGS could still occur from future Project development. It is unlawful to take a State-listed endangered or threatened species (Fish & G. Code §2050 et seq.). Take is defined as "hunt, pursue, catch, capture or kill or attempt to hunt, pursue, catch, capture or kill" (Fish & G. Code §86). California Endangered Species Act (CESA)

take authorization should be obtained for the future development projects, as they will have the potential to result in take of a State-listed plant or wildlife species.

Issuance of a CESA permit is subject to CEQA documentation; therefore the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. Early consultation is encouraged, as significant modification to the Projects and mitigation measures may be required in order to obtain a CESA permit. A CESA permit may only be obtained if the impacts of the authorized take of the species are *minimized and* fully mitigated and adequate funding has been ensured to implement the mitigation measures. CDFW may only issue a CESA permit if CDFW determines that issuance of the permit does not jeopardize the continued existence of the species. CDFW will make this determination based on the best scientific information available, and shall include consideration of the species' capability to survive and reproduce, including the species known population trends and known threats to the species. Issuance of a CESA permit may take up to 180 days from receipt of an application from the applicant.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDB_FieldSurveyForm.pdf. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

Pursuant to Public Resources Code §21092 and §21092.2, the Department requests written notification of proposed actions and pending decisions regarding the proposed project. Written notifications shall be directed to: California Department of Fish and Wildlife North Central Region, 1701 Nimbus Road, Rancho Cordova, CA 95670.

CDFW appreciates the opportunity to comment on the AEIR to assist in identifying and mitigating Project impacts on biological resources. CDFW personnel are available for consultation regarding biological resources and strategies to minimize and/or mitigate impacts. Questions regarding this letter or further coordination should be directed to Tanya Sheya, Environmental Scientist at (916) 358-2953 or tanya.sheya@wildlife.ca.gov.

Sincerely,

Tina Bartlett
Regional Manager

ec: Jeff Drongesen, jeff.drongesen@wildlife.ca.gov
Isabel Baer, isabel.baer@wildlife.ca.gov
Tanya Sheya, tanya.sheya@wildlife.ca.gov
Department of Fish and Wildlife

Office of Planning and Research, State Clearinghouse, Sacramento

References

Halstead, Brian J., Shannon M. Skalos, Glenn D. Wylie, and Michael L. Casazza. 2015. *Terrestrial ecology of semi-aquatic giant garter snakes* (Thamnophis gigas). Herpetological Conservation and Biology.10 (2): 633–644.

A4

Lockhart. Don

From: Marcos Guerrero <mguerrero@auburnrancheria.com>
Sent: Friday, March 17, 2017 11:03 AM
To: Lockhart. Don; Melodi McAdams
Cc: Matthew Moore; Gerken, Matthew (Matthew.Gerken@aecom.com); jgore@rshslaw.com
Subject: RE: Cultural Resources Assessment for Kammerer Road/Highway 99 Sphere of Influence Amendment Request (LAFC#07-15)

Hello Mr. Lockhart,
Thank you for your most recent call. We have no additional comments at this time. Keep us in the loop. If there is a complete cultural inventory report please send it over.
Thanks again,
Marcos

From: Lockhart. Don [mailto:Don.Lockhart@SacLAFCo.org]
Sent: Tuesday, July 26, 2016 10:31 AM
To: Melodi McAdams
Cc: Marcos Guerrero; Matthew Moore; Gerken, Matthew (Matthew.Gerken@aecom.com); jgore@rshslaw.com
Subject: RE: Cultural Resources Assessment for Kammerer Road/Highway 99 Sphere of Influence Amendment Request (LAFC#07-15)

Dear Ms. McAdams, A PDF map is attached for your use. This is the only format available from this office. Further project information may be viewed online @ http://www.saclafco.org/Pages/ProjectInformation.aspx.
Please do not hesitate to contact me if I may be of any further assistance. Thank you for your inquiry.

Don Lockhart, AICP
Assistant Executive Officer
1112 I Street, Suite 100
Sacramento, CA 95814-2836
916.874.2937
916.854.9099 (FAX)
Don.Lockhart@SacLAFCo.org

From: Melodi McAdams [mailto:mmcadams@auburnrancheria.com]
Sent: Tuesday, July 26, 2016 10:10 AM
To: Lockhart. Don
Cc: Marcos Guerrero; Matthew Moore

Subject: RE: Cultural Resources Assessment for Kammerer Road/Highway 99 Sphere of Influence Amendment Request (LAFC#07-15)

Good Morning Assistant Executive Officer Lockhart,

I am contacting you to follow up about the Kammerer Road/Highway 99 Sphere of Influence Amendment Request (LAFC#07-15). Can you please send a SHP file or other GIS file that delineates the project boundary?

Thank you for your assistance.

Sincerely,
Melodi McAdams
Cultural Resources Associate
Tribal Historic Preservation Department
United Auburn Indian Community of the Auburn Rancheria
10720 Indian Hill Road
Auburn, CA 95603
(530) 328-1109 - office
(530) 401-7470 - cell

From: Marcos Guerrero
Sent: Monday, July 25, 2016 6:26 PM
To: Matthew Moore; Melodi McAdams
Subject: FW: Cultural Resources Assessment for Kammerer Road/Highway 99 Sphere of Influence Amendment Request (LAFC#07-15)

From: Gerken, Matthew [mailto:Matthew.Gerken@aecom.com]
Sent: Wednesday, July 13, 2016 10:53 AM
To: aruiz@wiltonrancheria-nsn.gov; Marcos Guerrero; shutchason@wiltonrancheria-nsn.gov; Tristan Evans
Cc: jgore@rshslaw.com; Lockhart, Don; Ferrini, Allison; Goldman, Jeff; Deis, Richard
Subject: Cultural Resources Assessment for Kammerer Road/Highway 99 Sphere of Influence Amendment Request (LAFC#07-15)

Good morning,

Don Lockhart, the Assistant Executive Officer for the Sacramento Local Agency Formation Commission (LAFCo) has asked that I send this correspondence regarding the proposed Kammerer/Hwy 99 Sphere of Influence Amendment (SOIA) (LAFC 07-15). This same letter is being sent out in hard copy today.

This letter acknowledges the receipt of requests from Native American representatives, provides additional information related to this project, and invites further input regarding tribal cultural resources and values in relation to this proposed Sphere of Influence Amendment request. Please note that this project does not include any land use change or any development. If the SOIA request is approved, the City of Elk Grove would become the lead agency for any future development requests.

Please contact Don Lockhart at Don.Lockhart@SacLAFCo.org or 916-874-2937 if you would like additional information or would like to provide additional input.

Respectfully yours,
Matthew Gerken

A5

County Executive
Navdeep S. Gill

County of Sacramento

March 21, 2017

Mr. Don Lockhart
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814

SUBJECT: Draft Environmental Impact Report KAMMERER HWY 99 SPHERE OF INFLUENCE AMENDMENT APPLICATION (LAFC 07-15)

Mr. Lockhart:

We have received the Proposed Kammerer HWY 99 Sphere of Influence (SOI) Amendment Application – Draft Environmental Impact Review dated February 2017. The County Departments of Transportation, Community Development, and the Sacramento County Water Agency have prepared detailed response to this request for comment. Attached please find the County's formal responses.

Sincerely,

Jeff King
CEO Management Analyst II

Attachments:

County Department of Transportation Letter dated February 21, 2017
County Department of Community Development dated March 20, 2017
Sacramento County Water Agency Letter dated March 6, 2017

Department of Transportation
Michael J. Penrose, Director

Divisions
Administration
Maintenance & Operations
Engineering & Planning

County of Sacramento

February 21, 2017

Mr. Don Lockhart
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) FOR THE PROPOSED KAMMERER ROAD HIGHWAY 99 SPHERE OF INFLUENCE (SOI) AMENDMENT TO THE CITY OF ELK GROVE (LAFC 07-15)

Mr. Lockhart:

We have received a copy of the Draft Environmental Impact Report (DEIR) for the Kammerer Road Highway 99 SOI Amendment to the City of Elk Grove (LAFC 07-15), dated February 2017. We appreciate the opportunity to comment. We would like to reiterate the comments that we made in the letter we sent dated March 10, 2016 and again on April 7, 2016. We also recently sent comments on February 8, 2017 for the Draft Municipal Services Review.

General Comments

Future urbanization of the proposed area will affect the many rural roadways adjacent to this urban growth. These roadways have narrow travel lanes with no shoulders and will not support the increases in travel demand and the existing roadway pavement will not support the additional traffic. Sacramento County is in the process of developing a roadway functionality standard for rural roadways such as these that are affected by urbanization. The result is lane widening and shoulder construction on roads that meet certain ADT criteria. We would ask that the City of Elk Grove participate in bringing any affected rural roadways in the vicinity up to this standard when future annexation of this SOI occurs.

We would ask the City of Elk Grove to enter into a maintenance and operations agreement for the responsibility of the public roadway infrastructure as well as for the shared public roadway facilities adjoining this SOI at the time future annexation occurs.

Frontage improvement responsibility for adjoining roadway facilities in this SOI should be 100% the responsibly of the future development projects at the time future annexation occurs. Sacramento County Department of Transportation does not anticipate making any financial contributions towards the widening of shared roadways that will be on the border of the City of Elk Grove limits and the County jurisdiction.

We would ask the City of Elk Grove to enter into a cross jurisdictional reciprocal funding agreement with the County of Sacramento to address each other's impacts and mitigation measures for development projects when future annexation of the SOI occurs. The County's

impacted roadways should be mitigated to acceptable level of service standards and improvements shall be installed according to the County's latest Improvement Standards.

Please coordinate and solicit comments from the Capital Southeast Connector JPA staff.

Should you have any questions, please feel free to contact me at (916) 874-6291.

Sincerely,

Matthew G. Darrow, PE, TE, PTOE.
Senior Transportation Engineer
Department of Transportation

MGD

Cc: Mike Penrose, DOT
Dan Shoeman, DOT
Reza Moghissi, DOT
Dean Blank, DOT
Ron Vicari, DOT
Kamal Atwal, DOT
Leighann Moffitt, PER
Catherine Hack, PER
Susan Goetz, Special Districts
Tom Zlotkowski. Capital Southeast Connector JPA
Derek Minnema, Capital Southeast Connector JPA

Department of
Community Development
Michael J. Penrose,
Acting Director

Divisions
Administrative Services
Building Permits & Inspection
Code Enforcement
County Engineering
Economic Development & Marketing
Planning & Environmental Review

March 20, 2017

Mr. Don Lockhart, AICP
Assistant Executive Officer
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814-2836

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) FOR THE PROPOSED KAMMERER ROAD/HIGHWAY 99 SPHERE OF INFLUENCE (SOI) AMENDMENT TO THE CITY OF ELK GROVE (LAFC 07-15)

Dear Mr. Lockhart:

Thank you for the opportunity to review the DEIR for the proposed Kammerer Road/Highway 99 Sphere of Influence Amendment to the City of Elk Grove (Project). The proposed Project would facilitate future urbanization on the approximately 1,156-acre project area that is outside the County's Urban Services Boundary (USB) and currently in agricultural use.

Sacramento County Community Development comment letter dated April 8, 2016: The Department of Community Development's April 8, 2016 letter identified the South of Grant Line Visioning (SoGL) effort underway as an effort that fell within the definition of "probable future projects". Although it does not appear that the DEIR referenced the SoGL effort specifically, the County recently received notice from the landowner representative to place the SoGL effort on hold indefinitely.

Our previous comment letters indicated that the County's Urban Services Boundary would need to be amended if the Project is approved and future annexation to the City of Elk Grove occurs. We wish to provide further clarification regarding the County's future potential action if the Project is approved and annexation occurs.

The Urban Services Boundary was established in Sacramento County's General Plan prior to the City of Elk Grove's incorporation. Subsequent to incorporation, the City adopted its own General Plan which superseded the County's General Plan. The County's General Plan policies are not applicable to areas within incorporated cities. Therefore, if the Project properties are annexed to the City of Elk Grove, the City's General Plan would be applicable. The County may choose to modify its General Plan to reflect the new jurisdictional boundary. However, the County's potential action is independent of the City's action, and should not be interpreted as a barrier to development in the Project area following annexation by the City of Elk Grove.

Aesthetics – Chapter 3.1
The County suggests that the glare analysis found in Impact 3.1-2 acknowledge the presence of an existing solar energy facility located directly adjacent to the proposed SOIA area; the proposed SOIA area nearly

surrounds the facility on three sides. Since solar facilities can be significant sources of glare, so it is possible that future land uses within the SOIA area may be adversely affected by this existing facility. This should be considered in the analysis.

While a land use plan has not yet been developed for the proposed SOIA area, the County recommends that a buffer be placed within the proposed SOIA area surrounding the solar facility to minimize the potential for future conflicts associated with glare and land use conflicts. A buffer would also reduce the potential for future conflicts between future development and ongoing agricultural operations outside of the proposed SOIA area.

Ag Resources – Chapter 3.2: We provide the following comments:

- The colors on the Important Farmlands Exhibit 3.2-1 do not appear to match the legend colors, so it is difficult to determine the farmland type on the exhibit.
- The discussion of the indirect loss of adjacent agricultural land (Page 3.2-21) appears to omit the Farmland of Statewide Importance classification.
- The mitigation for the indirect loss of adjacent agricultural land (see Page 3.2-22) includes preparing an Agricultural Land Use Compatibility Plan. We encourage the Compatibility Plan to require more than just site design, screening, fencing, landscaping, and setbacks, but transitional uses such as urban farms and very low density residential uses to create land use buffers within the Project to protect existing agricultural operations outside the Project boundaries. The Compatibility Plan should also encourage placement of schools away from the perimeter adjacent to existing agricultural uses to minimize potential impacts associated with pesticide application and dust from agricultural operations.
- Based on the proposed mitigation in the DEIR, mitigation required for direct loss will include only Prime and Farmlands of Statewide Importance, since at this time there are no Unique classified farmlands on the project site. We encourage the City of Elk Grove to rely on Sacramento County's General Plan agricultural mitigation policy AG-5 for the loss of farmland since the site is currently within unincorporated Sacramento County and outside the USB. AG-5 requires mitigation for the loss of more than 50 acres of Prime, Statewide Importance, Unique, Local Importance, and Grazing farmlands located outside the USB. It is important to include all the categories, especially if farmers change their agricultural practices that cause their land to be reclassified from a more productive category to a less productive category in a future mapping cycle. AG-5 is provided below for convenience.

  AG-5. Projects resulting in the conversion of more than fifty (50) acres of farmland shall be mitigated within Sacramento County, except as specified in the paragraph below, based on a 1:1 ratio, for the loss of the following farmland categories through the specific planning process or individual project entitlement requests to provide in-kind or similar resource value protection (such as easements for agricultural purposes):

  - prime, statewide importance, unique, local importance, and grazing farmlands located outside the USB;
  - prime, statewide importance, unique, and local importance farmlands located inside the USB.

  The Board of Supervisors retains the authority to override impacts to Unique, Local, and Grazing farmlands, but not with respect to Prime and Statewide farmlands.

  However, if that land is also required to provide mitigation pursuant to a Sacramento County endorsed or approved Habitat Conservation Plan (HCP), then the Board of Supervisors may consider the mitigation land provided in accordance with the HCP as

meeting the requirements of this section including land outside of Sacramento County.

Note: This policy is not tied to any maps contained in the Agricultural Element. Instead, the most current Important Farmland map from the Department of Conservation should be used to calculate mitigation.

While a land use plan has not yet been developed for the proposed SOIA area, the County encourages the consideration of a buffer within the proposed SOIA area along the eastern, western, and southern edges to reduce the potential for future conflicts between future development within the proposed SOIA area and ongoing agricultural land uses in the County. This is consistent with County General Plan Policy AG-3.

The County also recommends compliance with General Plan Policy AG-4 and the Right-to-Farm Ordinance, which require that prospective buyers of property adjacent to agricultural land be notified of potential inconveniences associated with adjacency to ongoing farming activities.

Biological Resources – Chapter 3.4

Page 3.4-45 – IMPACT 3.4-9 Conflicts with the provisions of an adopted habitat conservation plan.

The authors state that the South Sacramento Habitat Conservation Plan (SSHCP) will need 33,796 acres of preservation to mitigate 33,499 acres of impact. They go on to say that there are 250,038 acres within which preservation land would be sought from willing sellers. The authors conclude that the 1,156 acre SOIA Area is unlikely to interfere with the ability to successfully implement the SSHCP preservation goals. It should be acknowledged that a significant amount of the 250,038 acre mitigation inventory area will not be available as mitigation land for various reasons. Some of the land within the 250,038 acre mitigation inventory area is already preserved, some will not be suitable habitat and some will not be available for acquisition. As written, the reader is mistakenly lead to believe that all 250,038 acres are potentially suitable and available for use as mitigation.

Furthermore, the SSHCP has several species specific objectives that require a certain amount of habitat to be preserved in specific areas. One such objective is to ensure that mitigation for impacts to high-value modeled Swainson's hawk habitat will occur within areas considered to be high-value modeled Swainson's hawk habitat. This objective would require that a specific amount of high-valued modeled Swainson's hawk habitat be preserved south of the current Elk Grove City boundary and west of the Central California Traction Railroad line. The EIR fails to analyze what effects the SOIA might have on the SSHCP's ability to meet species specific objectives.

SSHCP staff does not agree with the statement that evaluation of project consistency with the SSHCP would be too speculative for meaningful analysis and an impact conclusion cannot be made at this time. The Draft SSHCP and Draft SSHCP EIS/EIR have been completed and submitted to the USFWS. It is anticipated that the Notice of Availability will be published in the Federal Register sometime in April 2017. This will be followed by adoption hearings, which are expected to begin in October/November of this year. The SSHCP is sufficiently well developed for analysis in the SOIA EIR.

Other CEQA Considerations – Chapter 5.0

The growth inducement analysis in Chapter 5.0, Other CEQA Considerations, acknowledges the potential for indirect growth inducement that could occur if the SOIA is approved. The analysis also recognizes that the proposed SOIA would be a precursor to annexation into the City of Elk Grove, which would then likely result in development of the proposed SOIA area.

However, the County does not agree with the conclusion that approval of the proposed SOIA would not result in substantial growth inducement in areas outside of the SOIA. It is logical to assume that once municipal infrastructure and services are extended south of Kammerer Road, then areas to the west and south of the proposed SOIA could also be subject to future requests for SOIAs and eventual annexation and development. These areas contain agricultural lands, including Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance, and potential mitigation lands for Swainson's hawk, the potential loss of which will need to be considered.

Furthermore, the City of Elk Grove's General Plan Update includes the consideration of four "Study Areas" outside of the existing city limits. A portion of one of the Study Areas (Study Area 2) includes the proposed SOIA; however, the Study Areas also consider thousands of acres outside of the proposed SOIA. Therefore, it is reasonable to assume and foreseeable that the City of Elk Grove will eventually pursue these areas as future growth areas, and that approval of this proposed SOIA would remove barriers to development of the Study Areas, including the expansion of municipal infrastructure and services south of Kammerer Road. This is clearly foreseeable growth inducement that should be acknowledged and evaluated in the EIR.

Thank you for the opportunity to review the Project's DEIR. If you have any questions regarding these comments, please contact Todd Smith at smithtodd@saccounty.net or (916) 874-6918.

Sincerely,

Leighann Moffitt

Leighann Moffitt
Planning Director

Department of Water Resources
Michael L. Peterson, Director

SACRAMENTO COUNTY
WATER AGENCY

Including service to the Cities of
Elk Grove and Rancho Cordova

Date: March 6, 2017

To: Jeff King – CEO Analyst
County of Sacramento

From: Mike Huot – Principal Civil Engineer MH
Sacramento County Water Agency

Subject: SCWA Comments on the Draft Municipal Service Review for the Proposed Kammerer/99 Sphere of Influence Amendment (LAFC #07-15) Draft Environment Impact Report

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Sacramento County Water Agency (SCWA) reviewed the subject document and has the following comments:

1. SCWA is a potential water purveyor for the area and will consider supplying water to the area. Please contact SCWA to begin preparing for this scenario.
2. Should SCWA serve the area with water, there will be additional requirements. A list of potential requirements is listed below and more requirements may be added in the future.
    a. Adding the area to Zone 40 and Zone 41.
    b. Updating or amending the existing Zone 40 Water Supply Master Plan.
    c. Updating or amendming the existing Water System Infrastructure Plan.
    d. Adding demand to the Urban Water Management Plan.
    e. Performing a Water Supply Assessment for the project as determined by the land use planning agency.
3. Should SCWA serve the area, additional infrastructure will be required. At a minimum this will include a ground water treatment plant and storage facilities, water wells, and transmission and distribution mains. The size and number of facilities will be determined by the water demand. The new water system will be required to connect to the existing Zone 40 system.
4. Additional surface water and groundwater supplies need to be procured to serve the area with water and continue the conjunctive use program. Recycled water supplies may serve some of this demand if they are available. At this time SCWA's water supply portfolio is fully allocated in the current Zone 40 service area. One additional potential source of supply could be groundwater banked through the South County Agriculture & Habitat Lands Recycled Water Program that is planned for the future.

Electronic Copy: P:\Shared Folders\Wsplandev\County CEQA Comments-Protests\Sacramento County

Department of
Community Development
Michael J. Penrose, Interim Director

Divisions
Administrative Services
Building Permits & Inspection
Code Enforcement
County Engineering
Economic Development & Marketing
Planning & Environmental Review

February 21, 2017

Mr. Don Lockhart, AICP
Assistant Executive Officer
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814-2836

SUBJECT: COMMENTS ON THE DRAFT MUNICIPAL SERVICES REVIEW (MSR) FOR THE PROPOSED KAMMERER ROAD/HIGHWAY 99 SPHERE OF INFLUENCE (SOI) AMENDMENT TO THE CITY OF ELK GROVE (LAFC 07-15)

Dear Mr. Lockhart:

Thank you for the opportunity to review the Draft MSR for the proposed Kammerer Road/Highway 99 Sphere of Influence Amendment to the City of Elk Grove (Project). The proposed Project would facilitate future urbanization on the approximately 1,156-acre project area that is outside the County's Urban Services Boundary and currently in agricultural use. Sacramento County's interests in the proposed Project relate to the ongoing South Sacramento Habitat Conservation Plan (SSHCP) process and a recent application to the County (Control Number PLNP2015-00266) for what is known as the South of Grant Line (SoGL) land use visioning process for approximately 1,070 acres on the east side of Highway 99.

We previously provided the attached comments on the Notice of Preparation on April 8, 2016. This letter reiterates those comments, and clarifies that an amendment to the Sacramento County General Plan will be necessary to move the USB to incorporate the project area at the time annexation into the City of Elk Grove occurs, not upon approval of the SOI Amendment as previously stated.

Thank you for the opportunity to submit these comments. We look forward to further dialogue on the proposed Project. County staff are available to meet and discuss these comments and our interests should the need arise. Please contact Todd Smith, Principal Planner, at smithtodd@saccounty.net or (916) 874-6918 if you have any questions.

Sincerely,

Leighann Moffitt, AICP
Planning Director

cc: Rich Radmacher

Department of
Community Development
Michael J. Penrose, Interim Director

Divisions
Administrative Services
Building Permits & Inspection
Code Enforcement
County Engineering
Economic Development & Marketing
Planning & Environmental Review

April 8, 2016

Mr. Don Lockhart, AICP
Assistant Executive Officer
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814-2836

SUBJECT: COMMENTS ON THE NOTICE OF PREPARATION (NOP) OF A DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) AND NOTICE OF PUBLIC SCOPING MEETING FOR THE PROPOSED KAMMERER ROAD/HIGHWAY 99 SPHERE OF INFLUENCE (SOI) AMENDMENT TO THE CITY OF ELK GROVE (LAFC 07-15)

Dear Mr. Lockhart:

Thank you for the opportunity to review the Notice of Preparation for the proposed Kammerer Road/Highway 99 Sphere of Influence Amendment to the City of Elk Grove (Project). The proposed Project would facilitate future urbanization on the approximately 1,156-acre project area that is outside the County's Urban Services Boundary and currently in agricultural use. Sacramento County's interests in the proposed Project relate to the ongoing South Sacramento Habitat Conservation Plan (SSHCP) process and a recent application to the County (Control Number PLNP2015-00266) for what is known as the South of Grant Line (SoGL) land use visioning process for approximately 1,070 acres on the east side of Highway 99. We are providing these comments from both perspectives.

SSHCP

The majority of the SSHCP Covered Activities will be implemented within the region of the Plan Area designated as the Urban Development Area (UDA), the boundary of which is coterminous with the location of the County's Urban Services Boundary (USB) in the vicinity of the Project. The SSHCP effects analysis assumes that all undeveloped parcels located within the UDA boundary will be developed during the 50-year SSHCP Permit Term, with some exceptions that are not applicable to the Project. Outside the UDA boundary, the draft SSHCP contemplates a Conservation Strategy that includes provisions for habitat preservation as well as restoration activities for the benefit of covered species habitats and individuals. The EIR for the Project should include analysis of potential impacts on the proposed SSHCP. County staff are available to assist with any information needs related to the SSHCP as it continues to move forward.

As described in the NOP, the SOIA Project area is estimated to accommodate 18,000 to 20,000 jobs in office, industrial, and commercial settings as well as a broad array of housing types, with a total of 4,000 to 5,000 dwelling units. The proposed project area is located immediately south of the Urban Services Boundary (USB). If the Project is approved, an amendment to the Sacramento County General Plan will be necessary to move the USB to incorporate the project

area. As stated in the Sacramento County General Plan, the USB is a growth boundary intended to protect the County's natural resources from urban encroachment. Given the SSHCP and General Plan policy goals, the EIR should include an alternative that provides a buffer between urban development and the potential future USB location. This buffer could be used for habitat restoration or agricultural activities.

South of Grant Line (SoGL) Visioning

The County has begun a land use visioning process with property owners of approximately 1,070 acres inside the USB northeast of Highway 99 and the City of Elk Grove's proposed Multi-Sport Park Complex. This planning effort is intended to permanently define the relationship of urban uses within the USB with adjacent agriculture and open space outside the USB and will attempt to ensure compatibility of land uses with the proposed Multi-Sport Park Complex and other surrounding land uses.

The Project will result in development pressure on surrounding properties, not just on the site itself. Such impacts may be considered growth-inducing impacts, and must be addressed in the EIR. Please refer to CEQA Guidelines Section 15126.2 for more information.

CEQA requires that an EIR discuss cumulative impacts when they are significant and the project's incremental contribution is "cumulatively considerable" (CEQA Guidelines Section 15130(a)). A project's incremental contribution is cumulatively considerable if the incremental effects of the project are significant "when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (CEQA Guidelines Section15065(a)(3)). The SoGL land use visioning process area clearly falls within the definition of "probable future projects," and must be considered in the EIR's analysis of cumulative impacts.

Thank you for the opportunity to submit these comments. We look forward to further dialogue on the proposed Project. County staff are available to meet and discuss these comments and our interests should the need arise. Please contact Todd Smith, Principal Planner, at smithtodd@saccounty.net or (916) 874-6918 if you have any questions.

Sincerely,

Leighann Moffitt

Leighann Moffitt, AICP
Planning Director

cc: Rich Radmacher

A6

State of California • Natural Resources Agency
Department of Conservation
Division of Oil, Gas, and Geothermal Resources
Northern District – Sacramento
801 K Street • MS 18-05
Sacramento, CA 95814
(916) 322-1110 • FAX (916) 445-3319

Edmund G. Brown Jr., *Governor*
Kenneth A. Harris Jr., *State Oil and Gas Supervisor*

CEQA Project SCH# 2016032015
WELL REVIEW REPORT clear 4/3/17E
March 27, 2017

County Assessor's Parcel Nos: 1320151013; 1320151018 to 022; 1320220062 to 067
Local Building or Planning Agency: Sacramento Local Agency Formation Commission
Developer: Kamilos Companies, LLC and Feletto Development Company
Project Title: Kammerer Road/Highway 99 Sphere of Influence Amendment Project
Property Address: Kammerer Road, McMillan Road, W. Stockton Blvd, Eschinger Road

Division Reference: Well API #06720276, Backer 1
Well API #06720144, Harry 1
Well API #06720019, Howard P. Wackman A 1
Well API #06720103, Holthouse 1-19

The Division of Oil, Gas, and Geothermal Resources (Division) possesses records regarding oil and gas wells drilled and operated in the State of California. (Cal. Public Res. Code, §§ 3215, 3126.) Based on the Division's records and expertise, the Division has undertaken review of the proposed Kammerer Road/Highway 99 Sphere of Influence Amendment Project (Project) to determine if oil or gas well(s) are in the vicinity of the proposed Project. The Division is a responsible agency. The Division provides the information below to facilitate the Lead agency's exercise of local land use authority regarding use of land where oil and gas wells are situated. In contrast, the Division does not possess local land use decision authority, but alternatively has authority for permitting any necessary work on any well in the State. (Cal. Public Res. Code, §§ 3106 and 3203.)

The Division has conducted a records review but not on-site evaluations of the known gas wells (Backer 1; Harry 1; Howard P. Wackman A 1; Holthouse 1-19) located within the above referenced project boundary. The records review process consists of determining the possible location, last known operator, and abandonment status of any known well on the property by examining records previously submitted to the Division, and then comparing the abandonment status with current abandonment standards.

In general, a well may be considered adequately abandoned when both the record review process and the on-site evaluation process reflect that steps have been taken to isolate all oil-bearing or gas-bearing strata encountered in the well, and to protect underground or surface water suitable for irrigation or farm or domestic purposes from the infiltration or addition of any detrimental substance, and to prevent damage to life, health, property, and other resources. (Cal. Public Res. Code, § 3208.)

There are four buried, plugged and abandoned well within the project boundary. The wells are identified as

1. Coastal Oil and Gas Corporation, Backer 1, API #06720019, Section 34, Township 06N, Range 05E, Latitude 38.33085, Longitude -121.415673 (approximate location on enclosed Maps). The well was plugged and abandoned in 1990 to the standards of that time.
2. Tiger Oil Company, Harry 1, API #06720144, Section 26, Township 06N, Range 05E, Latitude 38.34027, Longitude -121.396422 (approximate location on enclosed Maps). The well was plugged and abandoned in 1979 to the standards of that time.
3. Sun Oil Company, Howard P. Wackman A 1, API #06720019, Section 24, Township 06N, Range 05E, Latitude 38.36175, Longitude -121.375802 (approximate location on enclosed Maps). The well was plugged and abandoned in 1968 to the standards of that time.
4. SWEPI, LP, Holthouse 1-19, API #06720103, Section 19, Township 06N, Range 06E, Latitude 38.36128, Longitude -121.367432 (approximate location on enclosed Maps). The well was plugged and abandoned in 1976 to the standards of that time.

The location of the wells appears to be in close proximity (4000-8000 ft) to the existing and proposed Eschinger Road.

The local permitting agency and property owner should be aware of, and fully understand, that significant and potentially dangerous issues may be associated with development near oil and gas wells. These issues are non-exhaustively identified in the following comments, and are provided by the Division for consideration by the local permitting agency, in conjunction with the property owner and/or developer, on a parcel-by-parcel or well-by-well basis. **As stated above, the Division provides the above well review information solely to facilitate decisions made by the local permitting agency regarding potential development near oil or gas wells.**

1. It is recommended that access to the wells located on the property be maintained in the event re-abandonment of the wells becomes necessary in the future. Impeding access to a wells could result in the need to remove any structure or obstacle that prevents or impedes access. This includes, but is not limited to, buildings, housing, fencing, landscaping, trees, pools, patios, sidewalks, and decking.

2. Nothing guarantees that wells abandoned to standards at the time of abandonment will not start leaking oil, gas, and/or water in the future. It always remains a possibility that any well may start to leak oil, gas, and/or water after abandonment, no matter how thoroughly the well was plugged and abandoned. The Division acknowledges that the wells presently abandoned to current standards have a lower probability of leaking oil, gas, and/or water in the future, but makes no guarantees as to the adequacy of the abandonment or the potential need for future re-abandonment.

3. Based on comments **1** and **2** above, the Division makes the following general recommendations:

    a. **Maintain physical access to these gas wells.**

    b. **Ensure that the abandonment of gas wells is to current standards.**

These wells do not meet current abandonment standards; however, they were dry holes and reentry to re-abandon is not recommended at this time.

If the local permitting agency, property owner, and/or developer chooses not to follow recommendation "**b**" for the well located on the development site property, the Division believes that the importance of following recommendation "**a**" for the well located on the subject property increases. If recommendation "**a**" cannot be followed for the well located on the subject property, then the Division advises the local permitting agency, property owner, and/or developer to consider any and all alternatives to proposed construction or development on the site (see comment **4** below).

4. Sections 3208 and 3255(a)(3) of the Public Resources Code give the Division the authority to order the re-abandonment of any well that is hazardous, or that poses a danger to life, health, or natural resources. Responsibility for re-abandonment costs for any well may be affected by the choices made by the local permitting agency, property owner, and/or developer in considering the general recommendations set forth in this letter. (Cal. Public Res. Code, § 3208.1.)

5. Maintaining sufficient access to a gas well may be generally described as maintaining "rig access" to the well. Rig access allows a well servicing rig and associated necessary equipment to reach the well from a public street or access way, solely over the parcel on which the well is located. A well servicing rig, and any necessary equipment, should be able to pass unimpeded along and over the route, and should be able to access the well without disturbing the integrity of surrounding infrastructure.

6. The Division recommends that a local permitting agency consider the use of surface mitigation measures as a condition for project approval, if and when appropriate. Examples of surface mitigation measures include venting systems for wells, venting systems for parking lots, patios, and other hardscape, methane barriers for building foundations, methane detection systems, and collection cellars for well fluids. The Division **does not** regulate the design, installation, operation, or adequacy of such measures. The Division recommends that such surface mitigation measures are designed, installed, and operated by qualified engineers. The permitting of surface mitigation measures falls under the jurisdiction of the local permitting agency.

7. If during the course of development of a parcel any unknown well(s) is discovered, the Division should be notified immediately so that the newly discovered well(s) can be incorporated into the Well Review processes.

8. The Division recommends that any soil containing significant amounts of hydrocarbons to be disposed of in accordance with local, state, and federal laws. Please notify the appropriate authorities if soil containing significant amounts of hydrocarbons is discovered during development.

9. The Division recommends that the information contained in this Well Review Report, and any pertinent information obtained after the issuance of this report, be communicated to the appropriate county recorder for inclusion in the title information of the subject real property. This is to ensure that present and future property owners are aware of (1) the

well(s) located on the property, and (2) potentially significant issues associated with any improvements near a gas well.

No well work may be performed on any oil or gas well without written approval from the Division in the form of an appropriate permit. This includes, but is not limited to, mitigating leaking fluids or gas from abandoned wells, modifications to well casings, and/or any other re-abandonment work. (NOTE: the Division regulates the depth of any well below final grade (depth below the surface of the ground). Title 14, Section 1723.5 of the California Code of Regulations states that all well casings shall be cut off at least 5 feet but no more than 10 feet below grade. If any well needs to be lowered or raised (i.e. casing cut down or casing riser added) to meet this grade regulation, a permit from the Division is required before work can start.)

To reiterate, the local permitting agency, property owner, and/or developer should be aware of, and fully understand, that the above comments are made by the Division with the intent to encourage full consideration of significant and potentially dangerous issues associated with development near oil or gas wells.

Sincerely,

Charlene L Wardlow

Charlene L Wardlow
Northern District Deputy

Enclosures:

1. Kammerer Road/Highway 99 Sphere of Influence Amendment Project Additions Map
2. Backer 1; Harry 1; Howard P. Wackman A 1; Holthouse 1-19 Location Map
3. Well Summary Reports

SUNRAY DX OIL COMPANY

SOUTHWESTERN DIVISION — NEWHALL DISTRICT

DIVISION OF OIL AND GAS
RECEIVED
AUG 2 8 1968
WOODLAND, CALIFORNIA

WELL SUMMARY REPORT

Field East Elk Grove Area

*Well No. Howard P. Wackman "A" #1, Sec. 24, T. 6N, R. 5E, M.D. B. & M.

Location 1320' South & 1320' West from the NE corner Sec. 24, Sacramento County, California.

Elevation of K.B. above sea level 50.7'. K.B. above ~~XXXXXXXXX~~ Ground 12.7'.

Date August 26, 1968

Signed _____
J. R. Hinkle, District Engineer

Contractor N.E.C.K. Petroleum Company
Type Rig IDECO Model 650
Commenced Drilling : 6-4-68 (Date)

Completed Abandoned : 6-8-68 (Date)

WELL CONDITIONS PRIOR TO WORK

Total Depth _____ Plugged Depth _____

NEW WELL

WELL CONDITIONS AFTER WORK

Total Depth 4400' Plugged Depth --

9 5/8" 36#, J-55 casing at 500' w/335 sx.
8 3/4" hole to 4400'.
Top Plug #1 - 2095'
Top Plug #2 - 432'

Well Plugged and Abandoned.

Commenced Producing Plugged and Abandoned (Date) Flowing/gas lift/pumping

	Clean Oil Bbls. per day	Gravity Clean Oil	Per Cent Water Incl. Emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production						
Production after _____ days						

DIVISION OF OIL AND GAS
RECEIVED
JAN 5 1978
WOODLAND, CALIFORNIA

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

Operator VENADA NATIONAL, Well No. BROWN #4, API No. 067-20123,

Sec. 10, T. 4N, R. 4E, M.D. B. & M., RIVER ISLAND GAS Field, SACRAMENTO County.

Location 600' SOUTH & 900' WEST FROM THE NORTHEAST CORNER OF SECTION 10
(Give surface location from property or section corner, or street center line and/or Lambert coordinates)

Elevation of ground above sea level -3 feet.

All depth measurements taken from top of KELLY BUSHING (Derrick Floor, Rotary Table or Kelly Bushing) which is 12 feet above ground.

In compliance with Sec. 3215, Division 3 of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date 11/28/77

Signed RONALD D. REINEKE

CHARLES H. FRY, Geologist

Title PRESIDENT VENADA NATIONAL

Commenced drilling November 19, 1977

Completed drilling November 25, 1977

Total depth (1st hole) 5,671' (2nd) (3rd)

Present effective depth P & A

Junk None

GEOLOGICAL MARKERS	DEPTH
Domengine	3,409'
Capay	3,802'
Meganos-Martinez	4,075'
H & T Shale	5,500'
Starkey	5,600'

Formation and age at total depth Starkey (U. Cret.)

Commenced producing (Date) Flowing/gas lift/pumping (Cross out unnecessary words)

Name of producing zone None

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production						
Production after 30 days						

CASING RECORD (Present Hole)

Size of Casing (A.P.I.)	Depth of Shoe	Top of Casing	Weight of Casing	Grade and Type of Casing	New or Second Hand	Size of Hole Drilled	Number of Sacks or Cubic Feet of Cement	Depth of Cementing if through perforations
8-5/8"	584'	surface	24#	K-55, ST&C, R-3	NEW	12-1/4"	258 sacks	thru shoe

PERFORATED CASING
(Size, top, bottom, perforated intervals, size and spacing of perforation and method.)

Was the well directionally drilled? No If yes, show coordinates at total depth

Electrical log depths from 5667' to 584' Other surveys Dual Induction with BHC & RWA

ATTACH ONE COPY OF EACH LOG AND SURVEY

DIVISION OF OIL AND GAS
RECEIVED
SEP 11 1979
WOODLAND, CALIFORNIA

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

Operator Tiger Oil Company, Well No. " Harry " #1, API No. 067-20144,

Sec. 26, T. 6N, R. 5E, M.D. B. & M., -- Field, Sacramento County.

Location 1600'N and 1980'W FSE Corner of Section 26
(Give surface location from property or section corner, or street center line and/or lambert coordinates)

. Elevation of ground above sea level 50 feet.

All depth measurements taken from top of Kelly Bushing which is 10 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

In compliance with Sec. 3215, Division 3 of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date 8/30/79

Signed Floyd L. Clawson

Floyd L. Clawson
(Engineer or Geologist)

Title Agent

Commenced drilling 8/8/79

Completed drilling 8/23/79

Total depth (1st hole) 7805' (2nd) (3rd)

Present effective depth 7805'

Junk

GEOLOGICAL MARKERS	DEPTH
H & T Shale	4175'
Starkey	4290'
Winters Sh.	5785'
Forbes	7635'

Formation and age at total depth Cretaceous

Commenced producing N/A (Date) Flowing/gas lift/pumping (Cross out unnecessary words)

Name of producing zone N/A

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	N/A					
Production after 30 days						

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	Grade and Type of Casing	New or Second Hand	Size of Hole Drilled	Numbers of Sacks or Cubic Feet of Cement	Depth of Cementing if through perforations
9-5/8"	880'	0'	40#	N-80	Used	12-1/4"	302 cf	

PERFORATED CASING
(Size, top, bottom, perforated intervals, size and spacing of perforation and method.)

Was the well directionally drilled? No If yes, show coordinates at total depth

Electrical log depths 7805' (DIL) Other surveys Sonic

ATTACH ONE COPY OF EACH LOG AND SURVEY

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

...ON OF OIL AND GAS
RECEIVED API No. 067-20276

WELL SUMMARY REPORT AUG 3 1990

Operator	Well				
Coastal Oil & Gas Corporation	Backer #1 WOODLAND, CALIFORNIA				
Field	**County**	**Sec.**	**T.**	**R.**	**B.&M.**
Bruceville Prospect	Sacramento	34	6N	5E	M.D.

Location (Give surface location from property or section corner, street center line and/or California coordinates): 1793' FNL & 2818' FEL

Elevation of ground above sea level: 21.85'

Commenced drilling (date): 6/5/90

Completed drilling (date): 6/15/90

Commenced producing (date): P&A'd 6/16/90

☐ Flowing ☐ Pumping ☐ Gas lift

Name of producing zone(s): N/A

Total depth

(1st hole)	(2nd)	(3rd)
8,000'		

Present effective depth: 8,000'

Junk:

Depth measurements taken from top of: ☐ Derrick Floor ☐ Rotary Table ☒ Kelly Bushing

Which is 35 feet above ground

GEOLOGICAL MARKERS	DEPTH
Domengine	2,982'
Capay	3,588'
Mokelumne River	3,892'
H&T Shale	4,517'
Starkey	4,633'
Winters Shale	5,914'
Bentonite Marker	6,170'
Winters Sand	6,250'
Sacramento Shale	7,502'

Formation and age at total depth: Sacramento Shale/Upper Cretaceous

	Clean Oil (bbl per day)	Gravity Clean Oil	Percent Water including emulsion	Gas (Mcf per day)	Tubing Pressure	Casing Pressure
Initial Production						
Production After 30 days						

CASING RECORD (Present Hole)

Size of Casing (API)	Top of Casing	Depth of Shoe	Weight of Casing	Grade and Type of Casing	New or Second Hand	Size of Hole Drilled	Number of Sacks or Cubic Feet of Cement	Depth of Cementing (if through perforations)
16" Conductor	Surface	40'		.25" Wall	New	24"	5.5 Yds.	
8-5/8"	Surface	824'	32#	K55, LT&C	New	12-1/4"	350 sx.	

PERFORATED CASING (Size, top, bottom, perforated intervals, size and spacing of perforation and method.)

N/A

Was the well directionally drilled? If yes, show coordinates at total depth
☐ Yes ☒ No

Electrical log depths: DIL-AVL-GR-Caliper TD-824'; CNL-FDC-GR TD-5,500'

Other surveys: Dipmeter TD-4,500'

In compliance with Sec. 3215, Division 3 of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Name	Title	
Eileen Danni Dey	Regulatory Analyst	
Address	**City**	**Zip Code**
P.O. Box 749, Denver, CO 80201-0749		
Telephone Number	**Signature**	**Date**
(303) 573-4476	Eileen Danni Dey	7-31-90

OG100 (3/82/GSR1/5M)

SUBMIT IN DUPLICATE

.GOV Conservation

Lat: 38.35528, Long: -121.33781

Division of Oil, Gas & Geothermal Resources Well Finder

Legend:

Well Types:

- New
- Active Producer
- Active Injector
- Dry Hole
- Plugged
- Geothermal
- Notice & Permit
- Enhanced Oil Recovery
- Disposal

Geologic Map:

Bookmarks:

Data Grid:

API #	Operator
06720103	SWEPI, LP
06720019	Sun Oil Company
06720144	Tiger Oil Company
06720276	Coastal Oil and Gas Corporation

A7

DEPARTMENT OF TRANSPORTATION
DISTRICT 3 – SACRAMENTO AREA OFFICE
2379 GATEWAY OAKS DRIVE, STE 150 – MS 19
SACRAMENTO, CA 95833
PHONE (916) 274-0635
FAX (916) 263-1796
TTY 711

Serious drought.
Help save water!

March 30, 2017

clear
4/3/17

03-SAC-2017-00112
SCH # 2016032015

Don Lockhart
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814-2836

Draft Environmental Impact Report for the Proposed Kammerer Road/Highway 99 Sphere of Influence Amendment (LAFC#07-15)

Dear Mr. Lockhart:

Thank you for including the California Department of Transportation (Caltrans) in the application review process for the project referenced above. Caltrans' new mission, vision, and goals signal a modernization of our approach to California's transportation system. We review this local development for impacts to the State Highway System (SHS) in keeping with our mission, vision and goals for sustainability/livability/economy, and safety/health. We provide these comments consistent with the State's smart mobility goals that support a vibrant economy, and build communities, not sprawl.

The proposed amendment applies to the City of Elk Grove Sphere of Influence (SOI); the Sacramento Area Sewer (SASD) SOI; and the Sacramento Regional County Sanitation District (SRCSD) SOI. The affected territory includes approximately 1,156 acres of agricultural land west of State Route 99 (SR 99), south of Kammerer Road, and east of McMillan Road.

The project site is just south of, and adjacent to Kammerer Road, which is part of the alignment of the Capital SouthEast Connector, an on-going project to construct 35-mile multi-lane, limited access roadway that would ultimately connect Interstate 5 (I-5) in the Elk Grove area, with U.S. Highway 50 (US 50), in El Dorado County.

At this time, there are no changes to the land uses proposes as part of this SOI Amendment application. However, for the purpose of facilitating environmental analysis for this SOI Amendment request, the applicant estimates that the project site could accommodate development that could provide 18,000 to 20,000 jobs in office, industrial, and commercial settings. Development could include a significant employment component near the Grant Line Road/SR 99 interchange and along the Kammerer Road

(future Capital Southeast Connector) corridor. In addition, the applicant has identified that the project site could accommodate the development of a broad array of housing types, with a total of 4,000 to 5,000 dwelling units.

The following comments are based on the Draft Environmental Impact Report (DEIR).

Mitigation Measure 3.14-1a: Impacted Roadway and Freeway Segments Improvement

In addition to the proposed mitigation measures, Caltrans would like to see mitigation measures that reduce Vehicle Miles Traveled (VMT) and thereby avoid Level of Service (LOS) impacts to the SHS. This includes walkable neighborhoods, high quality transit access, land uses that capture trips within the SOI, complete streets, travel demand management programs, and other VMT reduction methods.

Please provide our office with copies of any further actions regarding this project. We would appreciate the opportunity to review and comment on any changes related to this development.

If you have any questions regarding these comments or require additional information, please contact Alex Fong, Intergovernmental Review Coordinator at (916) 274-0566 or by email at: Alexander.Fong@dot.ca.gov.

Sincerely,

ERIC FREDERICKS, Chief
Office of Transportation Planning – South Branch

c: State Clearinghouse

A8

Lockhart. Don

From: Joanne Chan <JChan@airquality.org>
Sent: Thursday, March 30, 2017 3:34 PM
To: Lockhart. Don
Cc: Paul Philley; Larry Robinson; Karen Huss; Darcy Goulart (dgoulart@elkgrovecity.org); Christopher Jordan (cjordan@elkgrovecity.org)
Subject: SMAQMD comment letter on the Kammerer/Hwy99 SOIA DEIR
Attachments: SMAQMD comment letter (Kammerer-Hwy99 SOIA DEIR).pdf

Dear Mr. Lockhart:

Thank you for providing an opportunity for the Sacramento Metropolitan Air Quality Management District (SMAQMD) to review and comment on the Kammerer/Hwy 99 Sphere of Influence Amendment Draft Environment Impact Report. The SMAQMD appreciates the opportunity to work cooperatively with the Sacramento Local Agency Formation Commission staff on this effort. The SMAQMD comment letter is attached.

Feel free to contact me if you have any questions about these comments. My contact information is shown below.

Regards,

JOANNE CHAN
CEQA and Land Use Planning Section
Sacramento Metropolitan Air Quality Management District
777 12th Street | Sacramento | California | 95814
Office: 916-874-6267 | Email: JChan@airquality.org

SACRAMENTO METROPOLITAN
AIR QUALITY
MANAGEMENT DISTRICT

Larry Greene
AIR POLLUTION CONTROL OFFICER

March 30, 2017

SENT VIA EMAIL

Mr. Don Lockhart, AICP, Assistant Executive Officer
Sacramento Local Agency Formation Commission
1121 I Street, Suite 100
Sacramento, CA 95814

RE: Kammerer/Hwy 99 Sphere of Influence Amendment (LAFC #07-15; State Clearinghouse No. 2016032015) Draft Environment Impact Report

Dear Mr. Lockhart:

Thank you for providing an opportunity for the Sacramento Metropolitan Air Quality Management District (SMAQMD) to review and comment on the Kammerer/Hwy 99 Sphere of Influence Amendment (SOIA) Draft Environment Impact Report (DEIR). The SMAQMD appreciates the opportunity to work cooperatively with the Sacramento Local Agency Formation Commission (LAFCo) staff on this effort. SMAQMD comments are as follows:

Short-term Construction Emissions of Criteria Air Pollutants and Precursors
SMAQMD recommends replacing the following sentence from the Significance after Mitigation paragraph on page 3.3-23 of the DEIR:

"There is no additional feasible mitigation available."

with the following modified mitigation language:

If a project cannot fully mitigate onsite construction emissions by implementing off-road and on-road measures, a fee will be assessed to achieve the remaining mitigation offsite. The mitigation fees will be adopted by the City of Elk Grove and calculated in cooperation with the SMAQMD.

Long-term Operational Emissions of Criteria Air Pollutants and Precursors
This SOIA was not considered when forecasting the impacts for the Metropolitan Transportation Plan (MTP) and the State Implementation Plan (SIP). In order to provide consistency among SOIA's and to ensure that the appropriate level of operational mitigation for this SOIA, the SMAQMD recommends the following modified mitigation language for Mitigation Measure 3.3-2a on page 3.3-24 of the DEIR:

Mitigation Measure 3.3-2a:
At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove will require all discretionary projects to prepare an Air Quality Mitigation Plan (AQMP) that includes strategies to reduce or offset operational ozone precursor emissions by 35 percent compared to each project without the application of air pollution emission reduction strategies.

The AQMP will include policies and emission reduction measures demonstrating compliance with the City of Elk Grove's General Plan Conservation and Air Quality Element, in addition to reduction measures identified by the SMAQMD. The City of Elk Grove will coordinate the development of the AQMP with the SMAQMD and Sacramento Area Council of Governments (SACOG), and will use modeling tools approved by those agencies to gauge the effectiveness of the AQMP strategies.

Mitigation Measure 3.3-2a.1 (alternative air quality mitigation):
The AQMP required under Mitigation Measure 3.3-2a will be required to demonstrate a 15 percent reduction in operational emissions if, at the time of application for annexation of the SOIA Area or any portion thereof, the City of Elk Grove demonstrates that:

i. *the project proposal is consistent with the land use assumptions in the MTP that supports the SMAQMD's applicable SIP or attainment plan;*
ii. *the MTP meets transportation conformity requirements;*
iii. *and the SMAQMD and SACOG concur with the analysis.*

If the demonstration uses modeling tools, the tools must be approved by the SMAQMD and SACOG.

The SMAQMD recommends additional discussion in the DEIR regarding the exceedance of operational PM_{10} and $PM_{2.5}$ emissions and mitigation. The SMAQMD recommends application of Best Management Practices and Best Available Control Technology to reduce operational PM emissions as noted in chapter 4 of the SMAQMD's *Guide to Air Quality Assessment in Sacramento County.* Additionally, the SMAQMD recommends the following mitigation language to be included in the Significance after Mitigation paragraph on page 3.3-25 of the DEIR:

Mitigation measures to reduce PM emissions should be identified and included in the AQMP for ozone precursor emissions since many ozone precursor mitigation measures will also result in operational PM emissions reductions.

Greenhouse Gas Emissions
The SMAQMD appreciates the work done by the LAFCo staff on the DEIR to include mitigation that will best address the uncertainty of future land uses and the changing nature of greenhouse gas (GHG) mitigation. The SMAQMD is ready to work with the City of Elk Grove on implementing either mitigation option identified in the DEIR for GHG.

Thank you for your consideration of these comments. If you have any questions about these comments, please contact me at 916-874-6267 or JChan@airquality.org.

Regards,

Joanne Chan
Air Quality Planner/Analyst

c: Paul Philley, SMAQMD
Larry Robinson, SMAQMD
Karen Huss, SMAQMD
Darcy Goulart, City of Elk Grove
Christopher Jordan, City of Elk Grove

Attachment:
SMAQMD Rules & Regulations Statement

SMAQMD Rules & Regulations Statement (revised 1/2017)

*The following statement is recommended as standard condition of approval or construction document language for **all** development projects within the Sacramento Metropolitan Air Quality Management District (SMAQMD):*

All projects are subject to SMAQMD rules in effect at the time of construction. A complete listing of current rules is available at www.airquality.org or by calling 916.874.4800. Specific rules that may relate to construction activities or building design may include, but are not limited to:

Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the SMAQMD early to determine if a permit is required, and to begin the permit application process. Other general types of uses that require a permit include, but are not limited to, dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.

Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc.) with an internal combustion engine over 50 horsepower is required to have a SMAQMD permit or a California Air Resources Board portable equipment registration (PERP) (see Other Regulations below).

Rule 402: Nuisance. The developer or contractor is required to prevent dust or any emissions from onsite activities from causing injury, nuisance, or annoyance to the public.

Rule 403: Fugitive Dust. The developer or contractor is required to control dust emissions from earth moving activities, storage or any other construction activity to prevent airborne dust from leaving the project site.

Rule 414: Water Heaters, Boilers and Process Heaters Rated Less Than 1,000,000 BTU PER Hour. The developer or contractor is required to install water heaters (including residence water heaters), boilers or process heaters that comply with the emission limits specified in the rule.

Rule 417: Wood Burning Appliances. This rule prohibits the installation of any new, permanently installed, indoor or outdoor, uncontrolled fireplaces in new or existing developments.

Rule 442: Architectural Coatings. The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

Rule 453: Cutback and Emulsified Asphalt Paving Materials. This rule prohibits the use of certain types of cut back or emulsified asphalt for paving, road construction or road maintenance activities.

Rule 460: Adhesives and Sealants. The developer or contractor is required to use adhesives and sealants that comply with the volatile organic compound content limits specified in the rule.

Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

Other Regulations (California Code of Regulations (CCR))

17 CCR, Division 3, Chapter 1, Subchapter 7.5, §93105 Naturally Occurring Asbestos: The developer or contractor is required to notify SMAQMD of earth moving projects, greater than 1 acre in size in areas "Moderately Likely to Contain Asbestos" within eastern Sacramento County. The developer or contractor is required to comply with specific requirements for surveying, notification, and handling soil that contains naturally occurring asbestos.

13 CCR, Division 3, Chapter 9, Article 5, Portable Equipment Registration Program: The developer or contractor is required to comply with all registration and operational requirements of the portable equipment registration program such as recordkeeping and notification.

13 CCR, Division 3, Chapter 9, Article 4.8, §2449(d)(2) and 13 CCR, Division 3, Chapter 10, Article 1, §2485 regarding Anti-Idling: Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes. These apply to diesel powered off-road equipment and on-road vehicles, respectively.

A9

Lockhart. Don

From: Jeff Ramos <JeffRamos@yourcsd.com>
Sent: Friday, March 31, 2017 1:58 PM
To: Lockhart. Don
Subject: Kammerer Road/Highway 99 Draft EIR
Attachments: EDITSKammererEIR3.13PublicServiceandRecreation.docx

Hi Don,

Here are the Cosumnes CSD's comments on the Kammerer EIR.

Thank you for allowing us to submit our comments.

Have a great day.

Jeff Ramos
General Manager
9355 E. Stockton Blvd, Suite 205, Elk Grove, CA 95624
Phone: (916) 405-7150 Fax: (916) 685-6622
Direct: (916) 405-7166
JeffRamos@yourcsd.com
www.yourcsd.com

COSUMNES CSD Cosumnes Community Services District

3.13 PUBLIC SERVICES AND RECREATION

This section describes the existing public services and facilities, including fire protection, law enforcement, public schools, and parks and recreation and potential effects attributable to the project. Impacts are evaluated in relation to the actions needed to provide the services that could potentially lead to adverse physical environmental effects.

3.13.1 ENVIRONMENTAL SETTING

Descriptions and analysis in this section are based on information provided by Sacramento County, the City of Elk Grove, the Cosumnes Community Service District (CCSD), the Sacramento County Sheriff's Department (SCSD), the City of Elk Grove's Police Department (EGPD), the California Highway Patrol (CHP), the Elk Grove Unified School District (EGUSD), and applicable regulations.

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

The CCSD Fire Department provides fire protection, prevention and emergency medical services to a 157-square-mile area encompassing the city of Elk Grove, the city of Galt, and areas of unincorporated southern Sacramento County.

The CCSD Fire Department currently provides fire protection, fire prevention and emergency medical services to the SOIA Area. The Fire Department is headquartered at 10573 East Stockton Boulevard, Elk Grove. The CCSD operates eight fire stations serving the cities of Elk Grove and Galt, as well as areas of unincorporated Sacramento County and a fire training facility. The closest existing fire stations to the SOIA Area are Station 71 or Station 72, at 8760 Elk Grove Blvd. and 10035 Atkins Drive respectively (CCSD 2016c). Both are approximately 5 miles (or 7 minutes per Google maps) from the SOIA Area. In addition, two new fire stations are planned in the vicinity of the SOIA Area, one within the Sterling Meadows project immediately north of the SOIA Area (near Lotz Parkway near Kammerer Road), and one in the Laguna Ridge Specific Plan Area, northwest of the SOIA Area (on Poppy Ridge Road just east of Big Horn Road)~~(Near~~ that will be built as these projects develop and as the need arises (Elk Grove 2014b). These new fire stations would directly serve the SOI Area (Ramos pers. comm. 2016).

Service Response

The CCSD Fire Department responds to various emergencies, including fires, vehicle collisions, hazardous materials spills, and medical and public assistance calls. The department has over 165 sworn personnel in the Operations Division, which has units devoted to fire suppression, training, and emergency medical services. The department currently staffs eight Type I engine companies, one ladder truck company, seven ~~six~~ ambulances, and a command officer each day on a 24-hour basis. The Department also operates ~~Also in the Elk Grove area,~~ eight Type III ~~grass~~ engines and other specialty apparatus are staffed using these personnel as seasons and emergency circumstances dictate their use. Specialty apparatus include~~s~~ one heavy foam unit, a heavy rescue ~~vehicle~~, a mass decontamination trailer, a mass casualty incident trailer, two flood boat response trailers (containing eight boats total) and a swift water rescue boat. The department provides ambulance transportation and pre-hospital care for the cities of Elk Grove and Galt. The department employs over 100 ~~80~~ paramedics and over 4760 emergency medical technicians (EMTs). The Department's seven full time ambulances are staffed and operate 24 hours a

day. ~~operates seven six full-time ambulance companies~~.

Service Standards

Communications and Mutual Aid

Fire and emergency services in Sacramento County have developed a Joint Powers Authority (JPA) for a unified dispatch system. The Sacramento Fire EMS Communications Center dispatches all fire agencies in Sacramento County.

CCSD is the primary fire protection and emergency medical response service within the K/99 SOIA area. Sacramento Metro Fire District (SMFD), the City of Sacramento Fire Department (SFD), and the CCSD share common jurisdictional boundaries and participate in a regional automatic/mutual aid agreement. The CCSD Fire Department also has a mutual aid agreement with the surrounding volunteer fire districts in southern Sacramento County, including Wilton, Courtland, Walnut Grove, and Herald Fire Districts. As a result of the existing automatic and mutual aid agreements the closest unit available is dispatched to an incident and fire district boundaries are not an issue when an incident occurs.

If this proposed SOIA is approved, the area may develop over time. As the recognized primary service provider for fire protection, prevention and emergency medical and rescue services, the CCSD and the City will be encouraged to work together closely to identify fire station locations, equipment and personnel needs to support any increased demands on the CCSD. The development review process should minimize service impacts to joint responder agencies, such as SMFD and SFD.

~~to provide mutual aid in the form of supplemental fire prevention, fire investigation, emergency~~

~~medical services, hazardous materials control, water rescue, technical rescue and/or other emergency support during a major fire, disaster or other emergency. The JPA is comprised of the Sacramento Fire Department, the Sacramento Metropolitan Fire District, CCSD, and the Folsom Fire Department. Parties endeavor to cooperatively provide an appropriate, consistent, and efficient full service emergency response without regard to jurisdictional boundaries (City of Sacramento 2013).~~

POLICE PROTECTION

Sacramento County Sheriff's Department

The SOIA Area is currently served by the SCSD, which provides specialized law enforcement services to the County and local police protection to both the incorporated and unincorporated areas. Specialized law enforcement includes providing court security services, operating a system of jails for pretrial and sentenced inmates, and operating a training complex. Local police protection includes response to calls, investigations, surveillance, and routine patrolling. As of 2015, the SCSD employed 1,293 sworn officers, including 289 patrol officers (City of Elk Grove 2015b). The closest station to the SOIA Area is located at 7000 65th Street in Sacramento, approximately 11 miles (or 12 minutes) away.

City of Elk Grove Police Department

The EGPD also provides certain law enforcement services to the SOIA Area through a mutual aid agreement and would be the main provider if future annexation requests were approved. The EGPD provides comprehensive police services throughout the City, including emergency and routine call response, follow-up investigations of crime, traffic enforcement, specialized anti-gang initiatives, and other crime prevention activities. EGPD has a force of 132 sworn officers and 80 civilian employees. This is equivalent to a staffing ratio of 0.82 sworn officer per 1,000 residents (City of Elk Grove 2015). The Police Department operates out of one police station, located at 8400 Laguna Palms Way, part of the City Hall complex, approximately 5 miles away from the SOIA Area.

As part of this facility, the EGPD operates a Community Service Center to report non-urgent or ongoing crimes, to have crime reports taken, and to take fingerprints and process other, routine requests for information. The EGPD handles approximately 100,000 service calls per year with a goal of handling Priority One calls (those involving a violent crime in-progress or other life-threatening emergency) within five minutes. During 2015, EGPD's actual average Priority One response time was 5.5 minutes.

California Highway Patrol

The CHP provides traffic regulation enforcement, emergency management, and vice assistance on State highways, all federal interstate highways, and other major roadways in Sacramento County. The SOIA Area is located within the CHP Valley Division, which is comprised of 20 area offices, one commercial vehicle enforcement facility, and four communications centers (CHP 2016).

SCHOOLS

The EGUSD provides K–12 education to the City of Elk Grove and the SOIA Area. Located in southern

Sacramento County, the district covers 320 square miles. EGUSD had a 2015–2016 school year enrollment of 62,000 students. EGUSD has 66 schools: 40 elementary schools, 9 middle schools, 9 comprehensive high schools,

3 continuation high schools, an independent study school, an adult school, a special education school, a virtual academy, and 1 charter school (EGUSD 2016).

As shown on the EGUSD school attendance boundaries maps, students within the SOIA Area would attend Franklin Elementary School, Elizabeth Pinkerton Middle School, and Cosumnes Oak High School (EGUSD 2016). However, EGUSD periodically changes its school boundaries if a new school is built or the population in a particular area changes significantly. Thus, these schools or others may serve residents at the SOIA Area. Table 3.13-1 identifies the 2015–2016 school-year enrollments for these schools. All three schools are currently operating below design capacity.

Table 3.13-1. Elk Grove Unified School District Enrollment, 2015–2016

School Name	Grade	Enrollment	Design Capacity	Estimated Remaining Capacity
Franklin Elementary School	Pre-K–6	789	Traditional Calendar Capacity: 802	13
			Multi-track Year Round Calendar Capacity: 1,062	260
Elizabeth Pinkerton Middle School	7–8	1,084	1,424	340
Cosumnes Oak High School	9–12	2,237	2,568	331

Note: Student enrollment in the district changes daily as more students enroll and others leave; therefore, Table 3.13-1 does not necessarily reflect exact current enrollment.

Source: EGUSD 2016

Franklin Elementary School is located at 9373 4011 Hood-Franklin Road and serves pre-kindergarten through sixth grade students. Elk Grove Elementary School was completed in 1995 and has 29 classrooms, a library, multipurpose room, cafeteria, playfields, and hard courts.

Elizabeth Pinkerton Middle School is located at 8365 Whitelock Parkway and serves middle school students in grades 7–8. Elizabeth Pinkerton Middle School was opened in 2008. School facilities include 48 classrooms, a library, multipurpose rooms, a gymnasium with locker rooms, playfields and hard courts.

Elk Grove High School is located at 8350 Lotz Parkway and serves high school students in grades 9–12. The Elk Grove High School was opened in 2008. School facilities include 90 classrooms, multipurpose rooms, a library, a gymnasium with locker rooms, playfields, and hard courts.

EGUSD prepared the *Facilities Master Plan 2015–2025 Update* (Master Plan) to provide updated enrollment, school capacity, student generation rates, and to determine the approximate number of new students generated by new residential development between 2015 and 2025. The Master Plan anticipates that due to significant development (which did not include any future development within the SOIA Area) within its boundaries, enrollment at Franklin Elementary School, Elizabeth Pinkerton Middle School, and Cosumnes Oak High School is projected to increase and exceed the schools' traditional calendar capacity by 2025, which could be addressed by constructing new schools and/or adjusting attendance boundaries. Changing to a multi-track year-round calendar or other measures may also be necessary as shown above (EGUSD 2016).

EGUSD Funding

The EGUSD is funded by 50 percent State and 50 percent local sources. EGUSD can receive local funding through developer impact fees, tax revenue from Mello-Roos districts, and General Obligation bonds. Developer impact fees are the major source of funding for the district. Based on its facility needs assessment, EGUSD demonstrated the need to levy Level II developer fees (described below in Section 3.13.2, "Regulatory Framework") that are higher than the statutory fee. As of September 2016, Level II fees for residential development are $5.01 per square foot and $0.56 per square foot for commercial/industrial construction. Developer fees may be used to finance new schools and equipment, and to reconstruct existing facilities to maintain adequate housing for all the EGUSD's students. Additional school funding is also provided through the EGUSD Mello-Roos Community Facilities District (CFD) No.1.

PARKS

Cosumnes Community Services District

The CCSD provides parks and recreation facilities for residents of the city of Elk Grove, as well as unincorporated portions of Sacramento County. CCSD serves an area of roughly 157 square miles, including the city limits of the City of Elk Grove, plus unincorporated areas of Sacramento County. CCSD serves an estimated population of 183,000 of which 163,000 is served by the Parks and Recreation Department. The CCSD Parks and Recreation Department manages 94 parks totaling an estimated 705 acres, 256 acres of landscape corridors and medians and 18 miles of trails, provides for several community programs, including youth sports, adults sports, aquatic programs, and manages a 9-hole golf course (CCSD Parks and Recreation 2016). The closest existing CCSD facility is the Emerald Lakes Golf Course, directly to the east of the SOIA Area. Elk Grove Regional Park is approximately one mile north of the SOIA Area. This and other parks with other amenities could be used by future residents of the SOIA Area.

CCSD updated their Parks and Recreation Master Plan in 2016 to plan for future parks and recreational facilities over the next 10- to 15-year period and determined that a need currently exists for more park acreage. No parks and recreation services are provided for or planned within the SOIA Area, since there is no development and no planned development (CCSD 2016). The CCSD is working on a new Parks and Recreation Master Plan which is scheduled to be completed early 2018.

Cosumnes Community Services District & City of Elk Grove Memorandum of Understanding (MOU)

Parks and recreation facilities in new development areas specifically, Laguna Ridge Specific Plan (LRSP), SouthEast Policy Area (SEPA), Silverado Village and Sterling Meadows are developed and operated in accordance with the MOU between the CCSD and the City. The City is responsible for funding the development and operations of the park and recreation facilities. The CCSD will own these facilities and exclusively provide their programming. Seven new parks have been already completed within the LRSP. These parks as well as future parks and recreation facilities within LRSP, Sterling Meadows and SEPA which are all developments immediately north of the SOIA could be used by future residents of the SOIA area.

City of Elk Grove (Civic Center Community Park)

In accordance with the MOU, the City will solely own and maintain the future Civic Center Community Park which is located in the LRSP and planned for a grand opening in 2018 (City of Elk Grove 2004; City of Elk Grove 2016b). These park facilities could be used by future residents of the SOIA Area.

3.13.2 Regulatory Framework

Federal and State Plans, Policies, Regulations, and Laws

No federal plans, policies, regulation, or laws pertaining to public services and recreation are applicable to the proposed project.

California Occupational Safety and Health Administration

In accordance with California Code of Regulations, Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment," the California Occupational Safety and Health Administration (Cal OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include but are not limited to guidelines on the handling of highly combustible materials; fire hose sizing requirements; restrictions on the use of compressed air; access roads; and the testing, maintenance, and use of all firefighting and emergency medical equipment.

California Fire Code

The California Fire Code, which is contained in Title 24,Part 9 of the California Code of Regulations~~Uniform Fire Code (UFC),~~, includes regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist firest responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises.

~~The California Fire Code (CFC) contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The CFC contains specialized technical regulations related to fire and life safety.~~

California Health and Safety Code

State fire regulations are set forth in Sections 13000, et seq. of the California Health and Safety Code, which includes regulations for building standards (as set forth in the California Building Code); fire protection and notification systems; fire protection devices such as extinguishers and smoke alarms; high-rise building and childcare facility standards; and fire suppression training.

Per the California Health and Safety Code, the Fire Code Official is both authorized to perform life safety inspections, and responsible for the enforcement of panic and life safety regulations adopted by the California State Fire Marshal in the California Buildings Standards. The Fire Prevention Bureau performs plan reviews and provides comments and field inspection on all construction projects within the jurisdiction. The Fire Inspectors also inspect occupancies and hazardous operations as required by the California Health and Safety Code.

State of California Emergency Medical Services regulations are set forth in Division 2.5 of the Health and Safety Code (Sections 1797-1799), which is known as the Emergency Medical Services System and the Prehospital

Emergency Medical Care Personnel Act. The regulations include system administration, certification, medical control, facilities, and other facets of emergency medical care

Quimby Act

The Quimby Act (California Government Code Section 66477) was established by the California legislature in 1965 to preserve open space and parkland in the rapidly urbanizing areas of the state. The Quimby Act authorizes local governments to establish ordinances requiring developers of new subdivisions to dedicate land for parks, pay an in-lieu fee, or perform a combination of the two. The Quimby Act requires a city or county to adopt standards for recreational facilities in its general plan recreation element if it is to adopt a parkland dedication/fee ordinance. The City's standards for parkland dedication under the Quimby Act are provided in the discussion of local regulations below. Both the County and the City collect Quimby Act in-lieu fees. These fees contribute to a fund that would be used to acquire properties for parkland.

State School Funding

California Education Code Section 17620 authorizes school districts to levy a fee, charge, dedication, or other requirement against any development project for the construction or reconstruction of school facilities, provided that the district can show justification for levying of fees. California Government Code Section 65995 limits the fee to be collected to the statutory fee unless a school district conducts a School Facility Needs Assessment (California Government Code Section 65995.6) and meets certain conditions.

Senate Bill 50 (Chapter 407, Statutes of 1998) instituted a school facility program by which school districts can apply for state construction and modernization funds. This legislation imposed limitations on the power of cities

and counties to require mitigation of school facilities impacts as a condition of approving new development. It also provided the authority for school districts to levy fees at three different levels:

- **Level I fees** are the current statutory fees allowed under Education Code Section 17620. As mentioned above, this code section authorizes school districts to levy a fee against residential and commercial construction to fund school construction or reconstruction. These fees are adjusted every two years in accordance with the statewide cost index for Class B construction as determined by the State Allocation Board.

- **Level II developer fees** are outlined in Government Code Section 65995.5. This code section allows a school district to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multitrack year-round scheduling, having an assumed debt equal to 15–30 percent of the district's bonding capacity (the percentage is based on revenue sources for repayment), having at least 20 percent of the district's teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past 4 years that received at least 50 percent plus one of the votes cast. A facility needs assessment must demonstrate that the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years. As of September 2016, EGUSD's Level II fees are $5.01 per square foot for residential development and $0.56 per square foot for commercial/industrial construction.

- **Level III developer fees** are outlined in Government Code Section 65995.7. This code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction if State funding becomes unavailable. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of State funding.

Regional and Local Plans, Policies, Regulations, and Ordinances

City of Elk Grove General Plan

Approval by LAFCo of this SOIA does not authorize any change in land use or governance. However, the proposed project would adjust the City of Elk Grove's SOI and allow the City the opportunity to file an annexation request with LAFCo to annex lands within the SOIA Area.

The City of Elk Grove General Plan establishes goals and policies to guide both present and future development within the City's jurisdiction. Note that Elk Grove is currently updating their General Plan and that future development would need to comply with the most current version of the General Plan. The City of Elk Grove's current General Plan policies and actions relevant to public services are provided below.

Parks

- **Policy PTO-1:** The City of Elk Grove supports the development, maintenance, and enhancement of parks and trails serving a variety of needs at the neighborhood, area, and citywide level. The City may seek to accomplish the provision of parks and trails in cooperation with the Cosumnes Community Services District (CCSD).

- **PTO-1-Action 1** As part of the review of development projects, ensure that public parks and trails are provided which meet the City's and CCSD's criteria and which implement the CCSD/City Parks Master Plan and City Bicycle, Pedestrian, and Trail Master Plan.

► **Policy PTO-3:** Funding for maintenance of parks and/or trails shall be assured to the City's satisfaction prior to the approval of any Final Subdivision Map which contains or contributes to the need for a public parks and facilities.

► **Policy PTO-4:** New residential developments may be required to, at a minimum, provide parks consistent with the Quimby Act (CA Govt. Code Section 66477), through land dedication, fees in lieu, or on-site improvements at a standard of five (5) acres of land for parks per 1,000 residents. Land dedication and/or payment of in-lieu fees shall be required consistent with state law. Land dedication and/or fees may be required pursuant to other policies in this Element with or without the use of the authority provided in the Quimby Act, or in combination with the Quimby Act and other legal authority.

Public Facilities and Finance

► **Policy PF-1:** Except when prohibited by state law, the City shall require that sufficient capacity in all public services and facilities will be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.

► **Policy PF-7:** The City shall require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, and firefighting needs.

► **Policy PF-16:** Specific Plans shall identify all existing and planned school sites and should include guidelines and conceptual examples for incorporating new schools into overall neighborhood design.

► **Policy PF-19:** Public facilities should be phased in a logical manner which avoids "leapfrog" development and encourages the orderly development of roadways, water and sewer, and other public facilities. The City shall not provide public financing or assistance for projects that do not comply with the planned phasing of public facilities. Interim facilities may be used only if specifically approved by the City Council.

► **Policy PF-21:** New development shall fund its fair share portion of its impacts to all public facilities and infrastructure as provided for in state law.

Safety

► **Policy SA-1:** The City will seek to maintain acceptable levels of risk of injury, death, and property damage resulting from reasonably foreseeable safety hazards in Elk Grove.

► **Policy SA-29:** The City shall regularly monitor and review the level of police staffing provided in Elk Grove, and ensure that sufficient staffing and resources are available to serve local needs.

► **Policy SA-32:** Cooperate with the Cosumnes ~~Elk Grove~~ Community Services District (C~~EG~~CSD) Fire

Department ~~[Cosumnes Community Services District]~~ to reduce fire hazards, assist in fire suppression and emergency medical services, and promote fire safety in Elk Grove.

- **SA-32-Action 1** Review new development for adequate water supply and pressure, fire hydrants, and access to structures by firefighting equipment and personnel.

- **SA-32-Action 2** Review projects for compliance with the Fire Code as part of the building permit process.

- **SA-32-Action 4** Require, where appropriate, on-site fire suppression systems for all new commercial and industrial development to reduce the dependence on fire department equipment and personnel.

City of Elk Grove Municipal Code Chapter 22.40 "Park and Recreation Dedication and Fees"

Elk Grove Municipal Code Chapter 22.40 "Park and Recreation Dedication and Fees" provides standards and formulas for the dedication of parkland and in-lieu fees. These policies help the City acquire new parkland. As previously stated, the General Plan sets forth the standard that 5 acres of property for each 1,000 persons residing within the city is to be devoted to local recreation and park purposes. Where a recreational or park facility has been designated in the 2030 General Plan or a specific plan, and is to be located wholly or in part within a proposed subdivision to serve the immediate and future needs of the subdivision's residents, the sub-divider must dedicate land for a local recreation or park facility sufficient in size and topography to serve the residents. The amount of land to be provided is determined based on the appropriate standards and formula contained in Chapter 22.40. Under the appropriate circumstances, the sub-divider must, in lieu of dedicating land, pay a fee equal to the value of the land prescribed for dedication to be used for recreational and park facilities that will serve the residents of the area being subdivided.

City of Elk Grove Municipal Code Chapter 16.95 "Development Impact Fees"

The Elk Grove City Code imposes six citywide development impact fees. Fees are assessed on landowners who develop property to provide funds for facilities required to meet the needs of, and address impacts caused by, the additional persons residing in or employed on the property as a result of the development. The fees are:

1. Capital Facilities Fee, which funds the following facilities: Civic Center; Police Facilities; Corporation Yard; Library Facilities; and Transit

2. Affordable Housing Fee, which funds the construction, acquisition or financing of new or existing multi or single family affordable housing projects within the City for low or very low income residents.

3. Roadway Fee, which is a multi-zonal fee program that funds the center lanes and medians of major roadways, and funds major intersections, freeway interchanges, and bridges

4. Fire Fee, which is a multi-zonal fee program that funds fire capital facilities and equipment.

5. Measure A Transportation Mitigation Fee, which funds regional transportation facilities. The City collects this fee on behalf of the Sacramento Transportation Authority (STA).

Elk Grove Bicycle, Pedestrian, and Trails Master Plan

The Elk Grove Bicycle, Pedestrian, and Trails Master Plan (Master Plan) is intended to offer recreational opportunities and an alternative method for transportation for Elk Grove residents (Elk Grove 2014a). The City

Council adopted the Master Plan in January 2007, but the plan is continually updated as goals are achieved, as new funding sources become available, and in order to ensure consistency with the Elk Grove General Plan. The Master Plan shows a planned multi-use trail running east-west along Kammerer Road and several planned parks north of Kammerer Road (Elk Grove 2014)

Cosumnes Community Services District Parks Master Plan

The Cosumnes Community Services District Parks Master Plan was initially approved by the CCSD in 2008, and the City gave its approval in 2010. The subsequent Master Plan 2016 Update was approved by both the City and CCSD in 2016. The Park Master Plan takes a system-wide approach to address recreation needs in Elk Grove and provides infrastructure direction for all areas in the CCSD/City service area, which includes the SOIA Area. CCSD had coordinated efforts with the City to update the Master Plan and ensure the document's vision, standards, and strategies meet the needs of both agencies. The CCSD Parks and Recreation Department is currently undertaking a new Parks and Recreation Master Plan which is scheduled to be completed early 2018.

CCSD Service Standards

CCSD has established a response time goal of arriving on scene within seven-minutes of the 911 call, 90% of the time.

CCSD has been given an Insurance Services Office (ISO) rating of 2 in "watered" areas and 2Y in "unwatered" areas, such as the proposed SOIA Area. The ISO rating is the recognized classification for a fire department or district's ability to defend against major fires. According to the ISO, newly developing urban areas should have a fire station opened within 1½ miles of all commercial development and 2½ miles from all residential development when "build-out" exceeds 20 percent of the planned area. A rating of 10 generally indicates no protection; whereas an ISO rating of 1 indicates high firefighting capability. The proposed SOIA Area is considered "unwatered". According to the ISO, newly developing urban areas should have a fire station opened within 1½ miles of all commercial development and 2½ miles from all residential development when "build-out" exceeds 20 percent of the planned area.

~~CCSD has established a response time goal of arriving on scene in six minutes or less 90 percent of the time in the urbanized portions of the City. The CCSD Fire Department has established a standard response time of 12 minutes or less 90 percent of the time in the rural areas (this includes the SOIA Area).~~

~~The Insurance Services Office (ISO) rating is the recognized classification for a fire department's or district's ability to defend against major fires. According to the ISO, newly developing urban areas should have a fire station opened within 1.5 miles of all commercial development and 2.5 miles of all residential development when "buildout" exceeds 20 percent of the planned area. A rating of 10 generally indicates no protection, whereas an ISO PPC rating of 1 indicates high firefighting capability. CCSD has been given an ISO rating of 3 in "watered" areas and 9 in "unwatered" areas. The proposed SOIA Area is currently considered "unwatered."~~

EGPD Service Standards

The EGPD handles approximately 100,000 service calls per year with a goal of handling Priority One calls (those involving a violent crime in-progress or other life-threatening emergency) within five minutes. EGPD's actual average Priority One response time was 5.5 minutes for the fiscal year 2014–2015 (City of Elk Grove 2015).

3.13.3 Environmental Impacts and Mitigation Measures

Methodology

There are no changes to land uses proposed as part of this SOIA application. However, in order to facilitate environmental analysis for this SOIA request, the applicant has developed a conceptual land use scenario. The applicant-proposed array of land uses has been derived from the recently approved 1,200-acre mixed-use Southeast Policy Area (SEPA) land use distribution adjacent to the north, in order to facilitate project analysis. The applicant estimates that the SOIA Area could accommodate development that could provide 18,000 to 20,000 jobs in office, industrial, and commercial settings. The SOIA application identifies a jobs-to-housing ratio ranging from 3.6:1 to 5.0:1. Development could include a significant employment component near the Grant Line Road/SR 99 interchange and along the Kammerer Road (future Capital Southeast Connector) corridor. Additionally, for the purposes of analysis, the applicant has identified that the SOIA Area could accommodate the development of a broad array of housing types, with a total of 4,000 to 5,000 dwelling units. For the purposes of

analysis, the applicant notes that future proposed development would involve supportive infrastructure, public lands, and retail development that is oriented to future employment areas.

Evaluation of potential public services and recreation impacts was based on a review of regional and local planning documents pertaining to the SOIA Area and surrounding area, including the Elk Grove General Plan (City of Elk Grove 2015a). Additional background information on current services, staffing, and equipment was obtained through consultation with appropriate agencies.

Impacts related to public services and facilities attributable to the proposed SOIA were identified by comparing existing service capacity and facilities against future demand associated with implementation of the EIR land use scenario and identifying reasonably foreseeable service and facilities expansion required to serve the SOIA Area if it is developed in the future. Where possible, a quantitative comparison was used to determine impacts of the project on future demands. Population projections used in this analysis were calculated based on the construction of 4,000 to 5,000 dwelling units multiplied by the California Department of Finance's (DOF's) 2015 estimate of 3.25 persons per dwelling unit (DOF 2015). Based on this estimate, the proposed project would generate a total of 13,000 to 16,250 persons, along with non-residential development, as outlined above.

THRESHOLDS OF SIGNIFICANCE

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the CEQA Guidelines, as amended. The proposed project would have a significant impact related to public services and recreation if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, or parks;
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

IMPACT ANALYSIS

IMPACT 3.13-1

Increased demand for fire protection and emergency medical services. *Future development could increase demand for CCSD fire protection and emergency medical services. This could trigger the need for additional fire stations and facilities, the construction and operation of which could result in*

impacts on the physical environment. This impact is considered ***significant.***

CCSD will provide fire protection, fire prevention, and emergency medical services to the SOIA. The closest fire stations to the SOIA Area are Station 71 or Station 72, at 8760 Elk Grove Blvd. and 10035 Atkins Drive respectively (CCSD 2016c). Both are approximately 5 miles (or 7 minutes per Google maps) from the SOIA Area. In addition, three ~~two~~ new fire stations are planned in the vicinity of the SOIA Area, one within the Sterling Meadows project

immediately north of the SOIA Area (near Lotz Parkway and Kamerer Road), and one in the Laguna Ridge Specific Plan Area, northwest of the SOIA Area (off Poppy Ridge near Big Horn), and one near the intersection of Bradshaw Road and Grant Line Road. These stations will be built as these projects develop and as the need arises (Elk Grove 2014a).

Although the project does not propose any development or land use change, future development could occur as a result of the SOIA. If the SOIA is approved, there may be annexation proposed in the future. If annexation is approved and then development is proposed that requires discretionary review by the City of Elk Grove, this would require General Plan consistency findings. In addition to consistency with the City's General Plan, future project proponents would be required to incorporate California Fire Code, California Health and Safety Code, and OSHA requirements into the project design to address access and finished surfaces for firefighting equipment; fire hydrant placement and sufficiency of fire hydrants; and fire flow availability. These topics are addressed by the City's General Plan Policy PF-7, Action SA-32-Action 1, SA-32-Action 2, and SA-32-Action 4. Physical impacts associated with construction and operations of on-site public facilities are evaluated throughout this EIR. The placement of any new on-site fire protection facilities has been considered in the other sections of this EIR, such as Air Quality, Biological Resources, and other sections, which specifically analyze the potential for project construction and implementation.

The CCSD Fire Department receives its funding through property taxes, fees for service, and grant funding. New development projects are required to pay fire protection development fees to fund additional facilities and equipment. These funds would help to pay for all costs associated with the development of a new fire station, if needed. A Community Facilities District (CFD) has also be established to assist in the long term mitigation of growth impacts. Annexation into the CFD or lump sum payment to offset growth impact is required of property owners of new growth development through a balloting process. Fee programs are regularly evaluated and updated, consistent with Elk Grove General Plan Policy PF-21, to ensure that adequate service levels are maintained.

The ~~It is currently not known if CCSD's~~ existing CCSD fire protection facilities and personnel would not be adequate to meet the demands of future development. Due to the substantial number of residents (an estimated 13,000 to 16,250 persons) that could theoretically be accommodated within the SOIA Area in the future, the CCSD Fire Department will ~~could~~ need build one or more of the predesignated new fire stations, and ~~to~~ hire additional firefighters, prevention and emergency medical personnel to accommodate the increased demand for services. ~~It is possible that t~~The construction and operation of new off-site facilities and expansion of existing off-site facilities by CCSD could also be required in order to maintain service ratios. Therefore, this impact is conservatively assumed for the purposes of this EIR to be **significant**.

Mitigation Measure 3.13-1: Demonstrate Adequate Fire Protection Facilities are Available before the Annexation of Territory within the SIOA Area.

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall demonstrate that CCSD fire protection facilities will meet the service demands of development identified for the annexation territory, or that fair-share funding will be provided for the construction of new or expansion of existing fire protection facilities, as needed, to accommodate the increase in demand

resulting from development of the annexation territory. The City of Elk Grove shall demonstrate future development has incorporated adequate water supply and pressure, fire hydrants, and access to structures by firefighting equipment and personnel and where appropriate, identified on-site fire suppression systems for all new commercial and industrial development into design plans consistent with General Plan polices PF-7, PF-21, and SA-32 and Action SA-32-Action 1, SA-32-Action 2, and SA-32-Action 4.

Significance after Mitigation

Implementation of Mitigation Measure 3.13-1 would reduce significant impacts associated with increased for fire protection services because the City of Elk Grove would reduce the dependence on fire department equipment and personnel by reducing fire hazards, assisting in fire suppression, and promoting fire safety in Elk Grove. Mitigation presented in this EIR for other environmental topic area addresses potentially significant adverse environmental effects to the extent feasible. This mitigation could apply to the public facilities elements of potential future development, in addition to the private development components.

Construction of future off-site fire protection facilities and expansion of existing facilities is the responsibility of CCSD. Implementation of mitigation measures would be the responsibility of the CCSD. However, physical environmental impacts from construction or operation of new or expansion of existing facilities could remain significant after implementation of mitigation (i.e., significant and unavoidable), or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level. Neither LAFCo nor the City of Elk Grove would have control over CCSD's future fire protection facilities planning or the approval, timing, or construction. There is no additional feasible mitigation. Therefore, the impact is **significant and unavoidable**.

IMPACT 3.13-2

Increased demand for law enforcement services. *Future development could increase demand for EGPD law enforcement services. This could trigger the need for additional police stations and facilities, the construction and operation of which could result in impacts on the physical environment. This impact is considered* ***significant.***

After annexation, the EGPD will provide police protection services ~~fire protection and emergency medical~~ services to the SOIA. The EGPD operates out of one police station, located at 8400 Laguna Palms Way, part of the City Hall complex, approximately 5 miles (or 7 minutes) away from the SOIA Area. If there is development in the future in the SOIA Area, this could increase demand for law enforcement services. EGPD currently has a staffing ratio of
0.82 officers per 1,000 residents. With the addition of 13,000 to 16,250 persons identified in the EIR land use scenario, an estimated 11 to 14 (rounded up) officers could be needed.

The EGPD could need to hire additional officers and administrative staff or construct new on-site facilities to accommodate the increased demand for services. Physical impacts associated with construction and operations of on-site public facilities are evaluated throughout this EIR. The placement of any new on-site police protection facilities has been considered in the other sections of this EIR, such as Air Quality, Biological Resources, and other sections, which specifically analyze the potential for project construction and implementation.

New staff, equipment, and facilities that would be necessary to provide additional law enforcement services would be funded by property taxes, development impact fees, and potentially other mechanisms. The EGPD collects development impact fees for police facilities. The purpose of the fees is to mitigate the impacts caused by

development. The City planning department assesses a fee of $480 per single family dwelling (for fewer than 3 units, including duplexes), $317 per multi-family dwelling units,$305 for single family age-restricted housing, $220 for multi-family age restricted housing, $0.09 per square foot of commercial uses, $0.07 per square foot of car sales, $0.05 per square foot of hotel uses, $0.15 per square foot of office space, and $0.03 per square foot of industrial uses (City of Elk Grove 2016a). The City reviews development impact fees yearly and adjusts as necessary to adequately fund police protection services (City of Elk Grove 2016a). Future development would be required to pay a fair share of costs associated with law enforcement services and facilities through payment of

development impact fees, consistent with Elk Grove General Plan Policy PF-21. This would help to ensure sufficient police protection facilities if there is development in the future within the SOIA Area.

It is currently not known if the EGPD's existing police ~~fire~~ protection facilities would be adequate to meet the demands of future development. Due to the substantial number of residents (an estimated 13,000 to 16,250 persons) that could theoretically be accommodated within the SOIA Area in the future, the EGPD could need to construct new off-site facilities and expand existing off-site facilities to maintain service ratios. Therefore, this impact is conservatively assumed for the purposes of this EIR to be **significant**.

Mitigation Measure 3.13-2: Prepare a Plan for Service that Demonstrates Adequate Police Protection Facilities are Available before the Annexation of Territory within the SOIA Area.

At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove shall demonstrate that EGPD police protection facilities will meet the service demands of development identified for the annexation territory, or that fair-share funding will be provided for the construction of new on-site or off-site police protection facilities or expansion of existing police protection facilities, as needed, to accommodate the increase in demand resulting from development of the annexation territory.

Significance after Mitigation

Mitigation Measure 3.13-2 would reduce significant impacts associated with increased for police protection services because the City of Elk Grove would demonstrate EGPD police protection facilities will meet the service demands of development identified for the annexation territory, or that fair-share funding will be provided. This mitigation could apply to the public facilities elements of potential future development, in addition to the private development components. Mitigation presented in other environmental topic area this EIR addresses potentially significant adverse environmental effects to the extent feasible. LAFCo is charged with applying requirements for changes in the organization of service agencies, ensuring efficient provision of government services, and guiding development away from prime agricultural land and other open space unless that development is planned, orderly, and efficient.

Construction of future off-site police protection facilities and expansion of existing facilities is the responsibility of the EGPD. Implementation of mitigation measures would be the responsibility of the EGPD. However, physical environmental impacts from construction or operation of new or expansion of existing facilities could remain significant after implementation of mitigation (i.e., significant and unavoidable), or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level. There is no additional feasible mitigation. Therefore, the impact is **significant and unavoidable**.

IMPACT 3.13-3

Increased demand for schools. *Future development could result in the generation of school-aged children that increases the demand for schools. Future project applicant/s would be required to pay all applicable State-mandated*

school impact fees to EGUSD and the California Legislature has declared that payment of the applicable school impact fee is deemed to be full and adequate mitigation under CEQA for impacts on school facilities (California Government Code Section 65996). This impact is considered ***less than significant.***

Any development within the SOIA Area could lead to a substantial number of school-aged children in the area. The conceptual land use plan has estimated that future development could generate approximately 2,700 students.

The SOIA Area is currently in the Franklin Elementary School District and the Elizabeth Pinkerton Middle School/Cosumnes Oaks High School District but it should be noted that school attendance boundaries may change, so other schools may eventually provide school services. As described above, Franklin Elementary School, Elizabeth Pinkerton Middle School, and Cosumnes Oak High School could accept more students. Due to the number of students that could be generated by the proposed project, it is possible that adding these students to any existing school could exceed a school's capacity.

The project does not propose development or land use change. The location, type, and intensity of future development in the SOIA are not known at this time. For the purpose of analysis, a land use scenario was developed that included school facilities within the SOIA Area. Physical impacts associated with construction and operation of future public facilities within the SOIA Area are evaluated in the other sections of this EIR, such as Air Quality, Biological Resources, and other sections, which provide analysis and mitigation of buildout of the SOIA Area, including public facilities.

However, depending on how school facilities are located and designed relative to possible future residential development within the SOIA Area, future students could potentially be bused or driven to off-site schools within the EGUSD boundaries resulting in indirect impacts related to transportation, such as air pollutant emissions, greenhouse gas emissions, and transportation noise. It is possible that future residential development within the SOIA Area would generate demand for school facilities that are not met within the SOIA Area or are not for some period of time within the SOIA Area as it builds out. The timing and specifics necessary to fully evaluate construction projects are unknown and would be determined by the EGUSD.

However, the proposed project alone would not trigger the need for additional school facilities, and exceeding school capacity would not be considered a physical impact under CEQA. Pursuant to SB 50, the project applicant would be required to pay all applicable State-mandated school impact fees to EGUSD. As of September 2016, EGUSD's fees were $5.01 per square foot for residential construction and $0.56 for commercial construction, although these fees may increase by the time development is proposed (City of Sacramento Community Development Department, 2016). The City would determine the assessable square footage that would be subject to the fee at the time of development. The California Legislature has declared that payment of the applicable school impact fee is deemed to be full and adequate mitigation under CEQA for impacts on school facilities (California Government Code Section 65996). This impact is considered **less than significant**.

Mitigation Measures

No mitigation measures are required.

IMPACT 3.13-4

Increased demand for park and recreation facilities. *Future development would increase demand for park and recreation facilities, the construction of which could result in impacts on the physical environment. This impact is considered* ***less than significant.***

Currently, there are no trails within or adjacent to the SOIA Area. According to the Elk Grove Bicycle, Pedestrian, and Trails Master Plan map, the City has planned for a multipurpose trail along Kammerer Road north of the SOIA Area (Elk Grove 2014a).

City and CCSD parkland standards require a minimum of 5 acres of developed parkland per 1,000 residents. Currently, the CCSD Parks and Recreation Department serves an estimated population of 163,000, and manages 750.7 acres of developed parks and 18 miles of trails. In addition the City and CCSD own 124.4 acres of parkland located within the City limits that is in the process being developed.

residents. Future development within the SOIA Area could add an estimated 4,000 to 5,000 housing units, or 13,000 to 16,250 residents to the CCSD service area.[1] This would require the development of an estimated 65 to 81.25 acres of parkland, using standards maintained by the City and CCSD. Whether or not this would occur depends on the amount of residential development within the SOIA Area and recreational interests of this population vis-à-vis the parks and recreational facilities that are developed within the SOIA Area in the future and existing and future parks and recreational facilities within and outside Elk Grove that are accessible to SOIA Area residents.

If there is development within the SOIA Area in the future, this development is assumed to be under the jurisdiction of the City of Elk Grove, and therefore subject to Elk Grove Municipal Code and General Plan policies requiring the dedication of park and recreation facilities and/or the payment of an in-lieu fee. Any new residential development would be required to pay applicable impact fees, including the General Government Fee that funds park facilities and development fees or other fair share funding mechanisms required by the City. These impact fees could fund the development of a new park or the maintenance of existing parks. In addition, the City would ensure that individual development proposals within the SOIA Area would provide trail segments consistent with the Elk Grove Trails Master Plan as part of the development review process of any future development.

The land use scenario used for analysis in this EIR assumes parkland within the SOIA Area. Physical impacts associated with construction and operation of future public facilities within the SOIA Area are evaluated in the other sections of this EIR, such as Air Quality, Biological Resources, and other sections, which provide analysis and mitigation of buildout of the SOIA Area, including public facilities. The land use scenario assumes that development of the SOIA Area includes facilities associated with typical development projects, which includes parks. This is consistent with requirements of the City's Municipal Code, General Plan, and existing development pattern. Consequently, the construction of parks within the SOIA Area is assumed in each of the technical sections of this EIR, and there are no known additional potentially significant impacts related to the provision of parks and recreational facilities or deterioration of existing facilities. This impact is considered **less than significant**.

Mitigation Measures

No mitigation measures are required.

[1] According to the California Department of Finance (2015), the City of Elk Grove, for the most recent year of data (2015), estimated the persons per household rate at 3.25. Approximately 4,000 to 5,000 units multiplied by 3.25 is approximately 13,000 to 16,250 new residents within the SOIA area.

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A10

Susan Bell
Chief Facilities Officer
Facilities and Planning

Robert L. Trigg Education Center
9510 Elk Grove-Florin Road, Elk Grove, CA 95624

(916) 686-7711
FAX: (916) 686-7754

March 31, 2017

Sent Via Email to: Don.Lockhart@SacLAFCo.org

Don Lockhart, Assistant Executive Officer, AICP
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814-2836

Re: Draft Environmental Impact Report for the Kammerer/Hwy 99 Sphere of Influence Amendment (LAFCO 07-15)(SOIA)

Dear Mr. Lockhart:

The Elk Grove Unified School District (EGUSD) appreciates the opportunity to review and comment on the Draft Environmental Impact Report (DEIR) for the Kammerer/Hwy 99 Sphere of Influence Amendment (LAFCO 07-15). EGUSD requests that the following comments be considered and included in the Final Environmental Impact Report.

While approval of the SOIA alone would not trigger the need for additional school facilities, it is clear that any future intensification of land use within the proposed SOIA would have an impact on the EGUSD. Though the SOIA does not include any land use plans other than the applicant's estimates, it is critical to note that any future residential development in the subject area has not yet been considered in EGUSD long-range facilities master planning. The applicant's estimate of development of 4,000 to 5,000 dwelling units would trigger a need for approximately two new elementary schools, one new middle school and one new high school. Any capacity at existing schools or identified future schools will be utilized to house future students from already approved land use plans.

Listed below for your consideration are some specific comments and/or corrections to the DEIR.

Page 2-9 – Table 2-1

Table 2-1. Conceptual Land Use Scenario

Land Use	Jobs	Acreage	Dwelling units
Multi-Family Residential	-	90	1,790
Single-Family Residential	-	430	3,200
Commercial	1,600	50	-
Office	15,000	330	-
Industrial	3,500	130	-
School (~~2,696~~ students)	190	~~30~~	-
Parks/Open Space, Trails	-	110	-
Total	20,000	1,156	5,000

Based upon the conceptual land use scenario and the number of dwelling units in Table 2-1, the number of students and the acreage listed for schools is inaccurate. Using Elk Grove Unified School District's current student yield factors, 1,790 multi-family homes and 3,200 single-family homes would generate 3,287 students. Additionally, developing this area would trigger the need for 2 new elementary schools and an additional middle school and high school, which would require 90 acres of land, not 30 as listed in Table 2-1.

Page 3-13-3

Cosumnes Oaks High School is spelled incorrectly throughout this section. (Note that it is Cosumnes Oaks High School)

The following paragraph contains several statements that are not true and EGUSD requests they be corrected as noted below.

Current Paragraph with Incorrect Information:

~~*As shown on the EGUSD school attendance boundaries maps, students within the SOIA Area would attend Franklin Elementary School, Elizabeth Pinkerton Middle School, and Cosumnes Oak High School (EGUSD 2016). However, EGUSD periodically changes its school boundaries if a new school is built or the population in a particular area changes significantly. Thus, these schools or others may serve residents at the SOIA Area. Table 3.13-1 identifies the 2015–2016 school-year enrollments for these schools. All three schools are currently operating below design capacity.*~~

Suggested Replacement Paragraph with Accurate Information:

Based upon current EGUSD school attendance boundaries, the SOIA area falls within the attendance areas of Franklin Elementary School, Elizabeth Pinkerton Middle School, and Cosumnes Oak High School (EGUSD 2016). However, Franklin Elementary School is currently over capacity and has been offloading students to nearby schools for several years. Additionally, any excess capacity currently existing at Elizabeth Pinkerton Middle School and Cosumnes Oaks High School will be utilized to house future students from the already approved Laguna Ridge Specific Plan, Sterling Meadows and the Southeast Policy Area. Therefore those schools will not be able to accommodate the students who would reside in the proposed Kammerer/Highway 99 SOI area, should it be developed as described in the DEIR.

The following paragraph erroneously provides statistics for Elk Grove Elementary school instead of Franklin Elementary School. Suggested correction is shown below.

Franklin Elementary School is located at ~~9373~~ 4011 Hood-Franklin Road and serves pre-kindergarten through sixth grade students. ~~Elk Grove Elementary School was completed in 1995 and has 29 classrooms, a library, multipurpose room, cafeteria, playfields, and hard courts.~~ **Franklin Elementary school was constructed in 1955 and has 29 classrooms, multipurpose room, cafeteria, playfields and hard courts.**

The following paragraph erroneously references Elk Grove High School instead of Cosumnes Oaks High School.

~~*Elk Grove*~~ **Cosumnes Oaks** *High School is located at 8350 Lotz Parkway and serves high school students in grades 9–12. The* ~~*Elk Grove*~~ **Cosumnes Oaks** *High School opened in*

2008. School facilities include 90 classrooms, multipurpose rooms, a library, a gymnasium with locker rooms, playfields, and hard courts.

EGUSD Funding (Page 3.13-4)

Current Paragraph with Incorrect Information:

~~*The EGUSD is funded by 50 percent State and 50 percent local sources. EGUSD can receive local funding through developer impact fees, tax revenue from Mello-Roos districts, and General Obligation bonds. Developer impact fees are the major source of funding for the district. Based on its facility needs assessment, EGUSD demonstrated the need to levy Level II developer fees (described below in Section 3.13.2, "Regulatory Framework") that are higher than the statutory fee. As of September 2016, Level II fees for residential development are $5.01 per square foot and $0.56 per square foot for commercial/industrial construction. Developer fees may be used to finance new schools and equipment, and to reconstruct existing facilities to maintain adequate housing for all the EGUSD's students. Additional school funding is also provided through the EGUSD Mello-Roos Community Facilities District (CFD) No.1*~~

Suggested Replacement Paragraph with Accurate Information:

Under California's current funding model for new school construction, theoretically, 50 percent of the funding comes from the State and 50 percent from local sources. The reality is that for the vast majority of new schools built by EGUSD, the State participation ends up being far below 50%. In order to construct new schools to mitigate growth from new residential development, EGUSD's local share comes from developer school impact fees. Based on its facilities needs assessment, EGUSD demonstrated the need to levy Level II developer fees (described below in Section 3.13.2, "Regulatory Framework") that are higher than the statutory fee. As of September 2016, Level II fees for residential development are $5.01 per square foot and $0.56 per square foot for commercial/industrial construction.

It is important to note that EGUSD cannot count on the State of California to provide its 50 percent share when needed. For example, the State has not allocated funding for any new school construction projects since 2012. Additionally, applications for over $1.5 billion worth of projects have been submitted to the Office of Public School Construction which have not been funded, or in some cases even processed despite the passage of Proposition 51 in November 2016. All of these projects are waiting in line for the next round of State funding, and to date, it is not known when that will occur.

Additional school facilities funding is provided through the EGUSD Mello-Roos Community Facilities District (CFD) No.1; however, this funding source is not intended to address needs resulting from new development.

Pages 3.13-13 to 3.13-14

IMPACT 3.13-3 Increased demand for schools

Current Paragraph with Incorrect Information:

~~***Increased demand for schools.** Future development could result in the generation of school-aged children that increases the demand for schools. Future project*~~

~~*applicant/s would be required to pay all applicable State-mandated school impact fees to EGUSD and the California Legislature has declared that payment of the applicable school impact fee is deemed to be full and adequate mitigation under CEQA for impacts on school facilities (California Government Code Section 65996). This impact is considered less than significant.*~~

~~*Any development within the SOIA Area could lead to a substantial number of school-aged children in the area. The conceptual land use plan has estimated that future development could generate approximately 3,300 students. The SOIA Area is currently in the Franklin Elementary School District and the Elizabeth Pinkerton Middle School/Cosumnes Oaks High School District, but it should be noted that school attendance boundaries may change, so other schools may eventually provide school services. As described above, Franklin Elementary School, Elizabeth Pinkerton Middle School, and Cosumnes Oak High School could accept more students. Due to the number of students that could be generated by the proposed project, it is possible that adding these students to any existing school could exceed a school's capacity.*~~

Suggested Replacement Paragraph with Accurate Information:

Increased demand for schools. Future development will result in the generation of school-aged children that increases the demand for schools. Future project applicant/s would be required to pay all applicable State-mandated school impact fees to EGUSD, and the California Legislature has declared that payment of the applicable school impact fee is deemed to be full and adequate mitigation under CEQA for impacts on school facilities (California Government Code Section 65996). As discussed in the Schools – EGUSD Funding section on page 3.13-4, the State of California has not funded its portion of any new school construction since 2012, so at this time, payment of school impact fees will NOT fully or adequately mitigate the impacts of 4,000 to 5,000 additional, unplanned homes within EGUSD. Therefore this impact will be significant.

Any development within the SOIA Area could lead to a substantial number of school-aged children in the area. The conceptual land use plan has estimated that future development could generate approximately 3,300 students. The SOIA Area is in the current Franklin Elementary School and the Elizabeth Pinkerton Middle School/Cosumnes Oaks High School attendance areas. As described above, Franklin Elementary School is currently over capacity and offloading students, and any existing capacity at Elizabeth Pinkerton Middle School and Cosumnes Oak High School will be utilized to house future students from the already approved Laguna Ridge Specific Plan and the Southeast Policy Area. Neither these, nor any other existing or currently planned schools, will be able to accommodate the students who will reside in the proposed Kammerer/Highway 99 SOI area, should it be developed as envisioned in this DEIR.

Current Paragraph with Incorrect Information:

The project does not propose development or land use change. The location, type, and intensity of future development in the SOIA are not known at this time. For the purpose of analysis, a land use scenario was developed that included school facilities within the SOIA Area. Physical impacts associated with construction and operation of future public facilities within the SOIA Area are evaluated in the other sections of this EIR, such as Air Quality, Biological Resources, and other sections, which provide analysis and mitigation of buildout of the SOIA Area, including public facilities.

EGUSD's Comments on this Paragraph:

The problem with this paragraph is that any development within the Kammerer/Highway 99 SOI, would trigger the need for an additional middle and an additional high school. This DEIR didn't contemplate the addition of these secondary schools and their impact on the environment. Therefore, at a minimum the traffic study and air quality analyses were based on inaccurate assumptions.

Current Paragraph with Incorrect Information:

However, the proposed project alone would not trigger the need for additional school facilities, and exceeding school capacity would not be considered a physical impact under CEQA. Pursuant to SB 50, the project applicant would be required to pay all applicable State-mandated school impact fees to EGUSD. As of September 2016, EGUSD's fees were $5.01 per square foot for residential construction and $0.56 for commercial construction, although these fees may increase by the time development is proposed (City of Sacramento Community Development Department, 2016). The City would determine the assessable square footage that would be subject to the fee at the time of development. The California Legislature has declared that payment of the applicable school impact fee is deemed to be full and adequate mitigation under CEQA for impacts on school facilities (California Government Code Section 65996). This impact is considered ***less than significant.***

EGUSD's Comments on this Paragraph:

Theoretically, under the school facilities building program enacted in 1998 by SB 50, payment of school impact fees fully mitigates the impacts of new residential development on school districts. However, EGUSD cannot count on the State of California to provide its share when new schools are needed due to the impacts of newly constructed homes. For example, the State has not allocated funding for any new school construction projects since 2012. Additionally, applications for over $1.5 billion worth of projects have been submitted to the Office of Public School Construction which have not been funded, or in some cases even processed. All of these projects are waiting in line for the next round of State funding, and to date, it is not known when that will occur. Therefore, EGUSD respectfully suggests that the impact of building 5,000 new homes in the Kammerer/Highway 99 SOIA could have a **significant** impact on our current facilities and families.

EGUSD appreciates LAFCO's consideration of these comments. Please don't hesitate to contact me, should you have any questions.

Sincerely,

Kim Williams

Kim Williams
Planning Manager

A11

Powering forward. Together.

SMUD®

Sent Via E-Mail

March 31, 2017

Don Lockhart
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814-2836
Don.Lockhart@SacLAFCo.org

Subject: Draft Environmental Impact Report (DEIR) for the Kammerer Road/Highway 99 Sphere of Influence Amendment (LAFC#07-15)

Dear Mr. Lockhart:

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide comments on Sacramento Local Agency Formation Commission's (LAFCo) the Draft Environmental Impact Report (DEIR) for the Kammerer Road/Highway 99 Sphere of Influence Amendment. SMUD is the primary energy provider for Sacramento County and the proposed Project area. SMUD's vision is to empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve our region. As a Responsible Agency, SMUD aims to ensure that the proposed Project limits the potential for significant environmental effects on SMUD facilities, employees, and customers.

Recognizing that the Project area is one of several new growth areas being considered in the region, it is our desire that the DEIR for the Kammerer Road/Highway 99 Sphere of Influence Amendment will acknowledge any Project impacts related to the following:

- Overhead and or underground transmission and distribution line easements. Please view the following links on smud.org for more information regarding transmission encroachment:
  - https://www.smud.org/en/business/customer-service/support-and-services/design-construction-services.htm
  - https://www.smud.org/en/do-business-with-smud/real-estate-services/transmission-right-of-way.htm
- Utility line routing
- Electrical load needs/requirements
- Energy Efficiency
- Cumulative Impacts

Based on SMUD's review of the DEIR for the Kammerer Road/Highway 99 Sphere of Influence Amendment, we refer LAFCo to the same transmission and distribution electrical requirements identified in the letter SMUD previously submitted on April 5, 2016 (see attached).

SMUD would like to be involved with discussing the above areas of interest as well as discussing any other potential issues. We aim to be partners in the efficient and sustainable delivery of the proposed Project. Please ensure that the information included in this response is conveyed to the Project planners and the appropriate Project proponents.

Environmental leadership is a core value of SMUD and we look forward to collaborating with you on this Project. Again, we appreciate the opportunity to provide input on this DEIR for the Kammerer Road/Highway 99 Sphere of Influence Amendment. If you have any questions regarding this letter, please contact Rob Ferrera at rob.ferrera@smud.org or (916)732-6676.

Sincerely,

Angela C. McIntire
Regional & Local Government Affairs
Sacramento Municipal Utility District
6301 S Street, Mail Stop A313
Sacramento, CA 95817
angela.mcintire@smud.org

Cc: Rob Ferrera, SMUD

Powering forward. Together.

SMUD™

April 5, 2016

Don Lockhart, Assistant Executive Officer
Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814

SUBJECT: Notice of Preparation (NOP) For an Environmental Impact Report (EIR) on the Proposed Kammerer Road/ Highway 99 Sphere of Influence Extension Project

Dear Mr. Lockhart,

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide comments on the NOP for the proposed Kammerer Road/ Highway 99 Sphere of Influence Extension Project EIR. SMUD is the primary energy provider for Sacramento County and the proposed project location. As a Responsible Agency, SMUD aims to limit the project's potential for significant environmental effects on SMUD facilities, employee and customers.

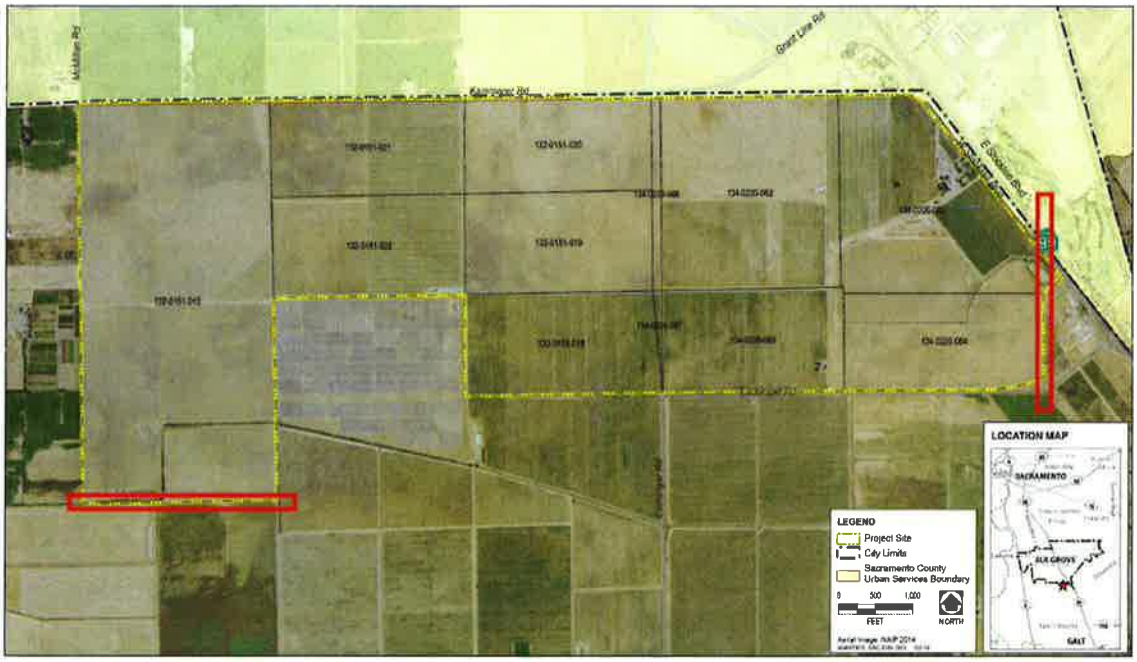
As you know, it is the responsibility of the project proponent to evaluate and analyze the environmental impacts associated with any new or relocated electrical service needs that may require SMUD to construct facilities; including but not limited to substations, distribution lines and the possible effect on current or future transmission line routing. SMUD has reviewed the Kammerer Road/ Highway 99 Sphere of Influence NOP and has the following comments:

1. The proposed Kammerer Road/ Highway 99 Sphere of Influence Project will have a significant impact on SMUD's electrical system. This increase in the load could require a new substation site in the vicinity.

2. The following specific electrical requirements should be considered for the Kammerer Road/Highway 99 Sphere of Influence Amendment Project NOP and project design:

    - Maintain existing PUE on Kammerer Road for existing and future 12/69KV overhead electrical facilities.
    - Provide new PUE if SMUD facilities are relocated.

3. SMUD has 230kV overhead transmission lines and structures located inside and within the immediate vicinity of the proposed project. Please see the approximate locations of SMUD transmission lines and structures in the areas outlined in red on the following map.



4. Any proposed SMUD transmission facilities modifications/relocations by the project owner shall be performed under an executed cost recovery agreement. Project owner shall provide 18 months' timeframe to allow for design and construction of identified facilities.

5. Project owner shall provide detailed engineering drawings for any improvements that are proposed within the SMUD transmission line easement. SMUD engineering will review the plans and provide comments as required.

6. Under no circumstance shall any grading or construction activities be permitted within SMUD's transmission line easements without the conveyance of rights from SMUD's real estate department. Should applicant be found performing unapproved improvements, the applicant will be responsible for returning the property to its original condition at their expense.

7. Project owner or contractor shall comply with the clearance requirements between the proposed rail tracks and SMUD overhead transmission lines per G.O 95. Project owner or contractor shall abide the clearance requirements from all CAL-OSHA Title 8 approach distance as stated in Subchapter 5, Group 2, Article 37, during project construction.

8. SMUD reserves the right to construct new or move existing facilities as necessary within its legal easement. Any developments installed by owner or assignees within this easement may need to be removed or modified as a result of the new or existing installed facilities.

9. SMUD reserves the right to use any portion of its easement and shall not be responsible for any damages to the developed property within said easement.

Please ensure that the information included in this response is conveyed to the project planners and the appropriate project proponents. Environmental leadership is a core value of SMUD and we look forward to collaborating with you on this project.

Again, we appreciate the opportunity to provide input on the NOP. If you have any questions regarding this letter, please contact Kim Crawford, SMUD Environmental Specialist at (916) 732-5063 or at kim.crawford@smud.org.

Sincerely,

Rob Ferrera
Environmental Specialist
Environmental Management
Sacramento Municipal Utility District

Cc: Kim Crawford
Tina Tran
Wenjie Chen
Joseph Schofield
Steve Johns

A12

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

April 4, 2017

Don Lockhart
Sacramento County Local Agency Formation Commission (LAFCO)
1112 I Street #100
Sacramento, CA 95814

Subject: Kammerer Road/Highway 99 Sphere of Influence Amendment Project
SCH#: 2016032015

Dear Don Lockhart:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on April 3, 2017, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2016032015
Project Title Kammerer Road/Highway 99 Sphere of Influence Amendment Project
Lead Agency Sacramento County Local Agency Formation Commission

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Type EIR Draft EIR

Description Sacramento LAFCo is the lead agency for a Sphere of Influence amendment and reorganization of special utility districts. The project is a landowner initiated proposal to amend the City of Elk Grove Sphere of Influence (SOI); the Sacramento Area Sewer District (SASD) SOI; and the Sacramento Regional County Sanitation District (SRCSD) SOI. The affected territory includes a 1,156-acre area that abuts the southern portion of the City's existing jurisdictional boundary. The proposed project would require LAFCo approval of a 1,156-acre SOIA.
APN No. 132-0151-013;

Lead Agency Contact

Name Don Lockhart
Agency Sacramento County Local Agency Formation Commission (LAFCO)
Phone 916-874-6458 **Fax**
email
Address 1112 I Street #100
City Sacramento **State** CA **Zip** 95814

Project Location

County Sacramento
City Elk Grove
Region
Lat / Long 38° 21' 05" N / 121° 22' 43" W
Cross Streets Kammerer Road, McMillan Road, W. Stockton Blvd, Eschinger Road
Parcel No.
Township 6 **Range** 6 **Section** below **Base**

Proximity to:

Highways 99
Airports
Railways UPRR
Waterways Deer Creek, Cosumnes River
Schools Pinkerton, Cosum. Oaks
Land Use Sacramento County General Plan designation: Ag Cropland Zoning: AG-80

Project Issues Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Cumulative Effects; Aesthetic/Visual; Growth Inducing; Landuse

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Reviewing Agencies Resources Agency; Department of Conservation; Department of Fish and Wildlife, Region 2; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 3 S; State Water Resources Control Board, Division of Drinking Water, District 9; State Water Resources Control Board, Divison of Financial Assistance; State Water Resources Control Board, Division of Water Rights; Regional Water Quality Control Bd., Region 5 (Sacramento); Native American Heritage Commission; Public Utilities Commission

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Date Received 02/14/2017 **Start of Review** 02/15/2017 **End of Review** 04/03/2017

Note: Blanks in data fields result from insufficient information provided by lead agency.

A13

8401 Laguna Palms Way • Elk Grove, California 95758
Tel: 916.683.7111 • Fax: 916.691.3175 • www.elkgrovecity.org

March 31, 2017

Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814-2836
ATTN: Mr. Don Lockhart, Assistant Executive Officer, AICP
Email: Don.Lockhart@SacLAFCo.org

VIA USPS and EMAIL

RE: Draft Environmental Impact Report for the Kammerer Road/Highway 99 Sphere of Influence Amendment (LAFC#07-15)

Dear Mr. Lockhart,

Thank you for providing the Kammerer Road/Highway 99 Sphere of Influence Amendment (K/99 SOIA, the proposed Project) Draft Environmental Impact Report (DEIR) for the City's review and comment. The proposed Project envisions the amendment of the City of Elk Grove (City's) Sphere of Influence (SOI) to add 1,156 acres just south of, and adjacent to, the City's current City limits. The Project is being proposed by private land interests; the City is not a party to the application. As stated in our letter of July 29, 2015, the Project is within the area identified in the 2003 General Plan as "Urban Study Areas."

In reviewing the DEIR, the City has identified a number of concerns and questions, which are attached. We request that LAFCo consider these as it finalizes the environmental review and considers action on the Project.

Should you have any questions, please feel free to contact me.

Sincerely,

Christopher Jordan, AICP
Assistant to the City Manager
City of Elk Grove

Enclosure

Kammerer Road/Highway 99 Sphere of Influence Amendment
Draft Environmental Impact Report (DEIR)
Comments from the City of Elk Grove

The following are comments/questions from the City regarding the above referenced project.

General Comments

1. Overall, the analysis in the document is speculative, based upon a conceptual land use capacity as provided in the SOIA application, which has not be reviewed and approved by the City. The final land use plan, should the property move forward for annexation to the City, could take a different form. Therefore, there should be some sort of flexibility in the mitigation measures so that the ultimate measures (to be approved by the City with annexation) reflect the final plan and the regulatory framework in place at the time of adoption.

2. The City is in the process of completing a comprehensive General Plan Update. The document should reflect that the policies of the City could be updated at that time.

3. Many of the proposed mitigation measures call upon the City to undertake a specified action. Examples include, but are not limited to, imposing conditions on the removal of trees, implementing the Citywide Design Guidelines, and preserving agricultural land. However, while the City has a role in the future development of the area (if ultimately annexed to the City), it is not a party to the Project. Therefore, we suggest that the mitigation measures be universally revised to read similar to the following (adapted from proposed measure 3.1-2, Reduce Light and Glare):

   "Prior to approval of an application for annexation within the SOIA area, LAFCo shall ensure that subsequent project-level analysis addresses potential impacts of daytime glare and nighttime lighting."

4. Many of the proposed mitigation measures are inconsistent with the City's typical approach for addressing project impacts. For example, the language in Mitigation Measure 3.1-1 calls for the preservation of certain trees and potential off-site preservation or payment of in-lieu mitigation fees if preservation is not an option. Rather than going through this discussion, the City recommends that the measure be reworded as follows:

   "Prior to approval of an application for annexation within the SOIA area, LAFCo shall ensure that subsequent project-level analysis addresses potential loss of protected trees."

   To guide LAFCo in this review of its proposed Mitigation Measures, attached are typical measures the City uses for larger projects.

Specific Comments

5. On page 3.1-12, the document identifies a Special Sign Corridor within the Elk Grove Zoning Code, and being applied along SR 99. There is no such corridor identified in the Zoning Code.

6. Figure 3.2-5 does not reflect the City's current zoning layer. Specifically, the zoning for the Southeast Policy Area is not correct. This area has been rezoned to SEPA Special Planning Area, effective July 9, 2014.

7. Mitigation Measure 3.2-1 is not consistent with the City's standard practice. Please see the attached sample measures.

8. Please review impact 3.3-4 and corresponding mitigation measure for consistency with California Building Industry Association v. Bay Area Air Quality Management District (CBIA v. BAAQMD, 2 Cal. App 5th 485 (2016)). There are references in the analysis and measure calling for an analysis of existing facilities, which is not provided for under CEQA.

9. Page 3.4-25 references the City's Swainson's hawk Impact Mitigation Fee program. While generally accurate, the discussion (and corresponding mitigation measure later in the document) does not reflect the fact that the procedures outlined in the City's Code may be amended in the future. For example, the City is beginning an update to the Code relative to procedures and appropriateness of mitigation sites. Flexibility in the measure will be necessary for future project approvals.

10. Impact 3.4-6 makes the conclusion that the Project area is suitable habitat for giant garter snake. Prior to the implementation of the draft mitigation measure, future development should have the opportunity to work with the regulatory agencies to verify the presence of giant garter snake habitat. If the area is determined to not be giant garter snake habitat, no further mitigation should be required.

11. Measure 3.4-7 requires wetland delineations to be conducted under a specific manual. Consider modifying the language to reflect the Corps guidance in place at the time of application in the event the guidance is modified in the future.

12. Chapter 3.5 identifies the requirement for Native American tribal consultation but does not identify if any consultation was conducted and, if any, the conclusions of that consultation. Please advise the City on the results of the AB 52 consultation.

13. Page 3.9-18 makes reference to a private airport in the City (the Mosier Airport). This is incorrect information. No such airport is in operation in the City.

14. Page 3.11-4 references data from the Center for Strategic Economic Research regarding jobs-housing data for the City. This data is not accurate and underrepresents jobs available in the City. Please see more current and complete information available at this link:
http://www.elkgrovecity.org/UserFiles/Servers/Server_109585/File/cityclerk/citycouncil/2016/attachments/03-23-16_10.1.pdf

15. Impact 3.11-2 is listed on page 3.11-20 as being considered significant. However, on page 3.11-23 the impact is considered less than significant. This appears to be an inconsistency.

16. Page 3.11-27 identifies that the Project is outside the City's Planning Area. That is incorrect. The Project is within the City's Planning Area as evidenced by Figure 1 of the General Plan (page 1-4 of the General Plan).

17. Page 3.11-29 references 2012 as existing conditions. The Notice of Preparation was released in 2016, so this may not be correct. Additionally, please see previous connect regarding jobs in the City.

18. Mitigation measure 3.12-6 identifies some very specific design requirements for future development. Since a development project is not being considered under this EIR, this level of detail is not necessary. Further, some of the requirements do not provide flexibility for changes in equipment design and efficiency, or other viable design alternatives that achieve the mitigation's goals. Please consider simplifying the measure, leaving the land use agency (potentially the City) to address this at the time a land use application is considered.

19. Pages 3.13-8 and 3-13.9 reference Elk Grove Municipal Code regarding parks and recreation dedication and the Parks and Recreation Master Plan. Both were updated in 2016. The most recent regulations should be referenced in the document.

20. Measure 3.13-1, as drafted, requires the City to make a determination that CCSD facilities are adequate to provide fire protection. Since the City is not the fire services provider for the area it cannot make this determination. See comment no. 3 above. Language relative to this is provided in discussion later in the document. The mitigation measure itself should reflect this.

21. Page 3.13-12 (Impact 3.13-2) identifies the City as the fire protection and emergency medical services provider. This is not accurate. Please update to reflect CCSD Fire as the responsible agency.

22. Table 3.14-2 (Roadway Segment Level of Service – Existing Conditions) lists the daily capacity for Grant Line Road (various segments) incorrectly, and is not reflective of the current level of infrastructure.

23. Impact 3.14-1/Mitigation Measure 3.14-1a: The City is preparing for implementation of SB 743, which will eliminate Level of Service (LOS) analysis in CEQA documents, replacing with Vehicle Miles Traveled (VMT) analysis. The analysis presented in this section is based upon a theoretical holding capacity and not a land plan and, therefore, will not be sufficient for subsequent development-level analysis. Further, fair share roadway improvement funding will no longer be an acceptable CEQA mitigation measure for traffic impacts if the funding only addresses capacity improvements. Therefore, the proposed mitigation measure will not be applicable or feasible in the future.

24. Alternatives Analysis: Alternative 2 is listed in several places as having reduced impacts when compared to the Project. However, the analysis goes on to state that the impacts would be similar. It may be helpful to clarify that the quantity of the impact is reduced under Alternative 2, but the character is the same; therefore, the Project mitigation is still required for Alternative 2. In that same way, section 4.5 should be updated to clarify that Alternative 2 would have reduced quantity of impacts but the character of the impacts would be the same. Otherwise, Alternative 2 could be considered the superior alternative.

25. Section 5.3 (Cumulative Impacts) should be clarified to note which portion of CEQA Guidelines Section 15130(b) is being utilized to complete the analysis. For example, if

15130(b)(1) is being utilized, a list of projects needs to be included in the document. Staff was unable to locate a list.

The following are example mitigation measures previously used by the City for programmatic Environmental Impact Reports similar in scale to the proposed SOIA project. This is not an exhaustive list of measures.

Mitigation Measure
Future projects shall protect 1 acre of existing farmland or land of equal or higher quality for each acre of Farmland of Statewide Importance or Unique Farmland that would be developed as a result of the Project. The protected acreage must be located within Sacramento County. This protection may consist of the establishment of a farmland conservation easement, farmland deed restriction, or other appropriate farmland conservation mechanism that ensures the preservation of that land from conversion in perpetuity, but may also be utilized for compatible wildlife habitat conservation efforts (e.g., Swainson's hawk foraging habitat mitigation). In deciding whether to approve the land proposed for preservation by the Project applicant, the City shall consider the benefits of preserving farmlands in proximity to other protected lands. The preservation of off-site farmland may be done at one time, prior to the City's approval of the Project's first grading permit, or may be done in increments with the buildout of the Project, with preservation occurring prior to the approval of each grading permit. Grading plans shall include the acreage and type of farmland impacted. In addition, the City shall impose the following minimum conservation easement content standards: a) All owners of the agricultural/wildlife habitat mitigation land shall execute the document encumbering the land. b) The document shall be recordable and contain an accurate legal description of the agricultural/wildlife habitat mitigation land. c) The document shall prohibit any activity that substantially impairs or diminishes the agricultural productivity of the land. If the conservation easement is also proposed for wildlife habitat mitigation purposes, the document shall also prohibit any activity that substantially impairs or diminishes the wildlife habitat suitability of the land. d) The document shall protect any existing water rights necessary to maintain agricultural uses on the land covered by the document and retain such water rights for ongoing use on the agricultural/wildlife habitat mitigation land. e) Interests in agricultural/habitat mitigation land shall be held in trust, in perpetuity, by the City and/or an entity acceptable to the City. Without the prior written approval of the City, the entity shall not sell, lease, or convey any interest in agricultural/wildlife habitat mitigation land. f) The applicant shall pay to the City an agricultural/wildlife habitat mitigation monitoring fee to cover the costs of administering, monitoring, and enforcing the document in an amount determined by the receiving entity, not to exceed 10 percent of the easement price paid by the applicant, or a different amount approved by the City Council, not to exceed 15 percent of the easement price paid by the applicant. g) The City shall be named a beneficiary under any document conveying the interest in the agricultural/wildlife habitat mitigation land to an entity acceptable to the City. h) If any qualifying entity owning an interest in agricultural/wildlife habitat mitigation land ceases to exist, the duty to hold, administer, monitor, and enforce the interest shall be transferred to another entity acceptable to the City.

Mitigation Measure
i) Before committing to the preservation of any particular farmland pursuant to this measure, the Project applicant shall obtain the City's approval of the farmland proposed for preservation.
Applicants for any subsequent projects shall retain qualified biologists to conduct a preliminary evaluation of the specific project site to determine whether wet meadow, freshwater emergent wetland, or irrigation/drainage ditch vegetative communities occur within the specific project site. If any of these habitats are identified within the specific project site, surveys in and adjacent to (within 100 feet, where appropriate) the proposed impact area, including new construction access routes, shall be conducted to determine the presence/absence of special-status plant species. Surveys shall be conducted in accordance with CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (2009). These guidelines require that rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Field surveys shall be scheduled to coincide with known flowering periods and/or during appropriate developmental periods that are necessary to identify the plant species of concern. Survey results shall be submitted to the City for review and approval. If none of the species identified in Table X.X-X are found in or adjacent to (within 100 feet) proposed impact areas, no further mitigation is required. If any of the species identified in Table X.X-X are found in or adjacent to (within 100 feet) proposed impact areas during the surveys, these plant species shall be avoided to the greatest extent feasible. Any special-status plant species that are identified adjacent to the Project area, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and material stockpiles do not impact any special-status plant species. These avoidance areas shall be identified on site plans and/or, tentative subdivision maps. If Project-related impacts will result in the loss of greater than 10 percent of occupied habitat for a special-status plant species, mitigation shall be required for all impacts that exceed the 10 percent threshold. For example, if 18 percent of occupied habitat will be impacted, mitigation shall only be required for the 8 percent that exceeds the 10 percent threshold. Mitigation for permanent impacts to special-status plant species shall include the preservation of occupied habitat at a 1:1 ratio (i.e., 1 acre preserved for each acre impacted). Temporarily disturbed special-status plant species sites shall be restored to original function and value. Preservation areas may include undisturbed areas of the site that will be preserved and managed in perpetuity, off-site mitigation lands, or a combination of both. The preserved habitat shall be of equal or greater habitat quality to the areas impacted in terms of soil features, extent of disturbance, and vegetation structure, and contain extant populations of the same or greater size as the area impacted. Plans for avoidance, minimization, and mitigation (if appropriate) shall be prepared and submitted to the City of Elk Grove

Mitigation Measure
Development Services Department, Planning Division at the time of application for the City's review and approval. Surveys shall occur no more than two years prior to ground breaking of the subsequent project.
Applicants shall retain qualified biologists to conduct a preliminary evaluation of the specific project site to determine whether vernal pool fairy shrimp and/or vernal pool tadpole shrimp habitat occurs on or within 250 feet of the project area. If habitat is not present, project applicants shall submit a letter of their findings to the City and the USFWS for concurrence. If the USFWS concurs with the negative survey findings, project applicants shall submit proof of concurrence to the City with their application, and no further mitigation is required. If the USFWS does not concur, applicants shall undertake surveys or assume presence based on the USFWS's direction. If it is determined that listed vernal pool branchiopods are present, the following mitigation is required. For every acre of vernal pool habitat directly affected, project applicants shall replace the affected acreage at a 1:1 ratio (1 acre creation for each acre of impact) through the dedication of vernal pool creation credit(s) within a USFWS-approved mitigation bank or through creation/restoration of vernal pool habitat as part of a USFWS-approved mitigation plan. Vernal pool creation shall not occur within 250 feet of extant vernal pools unless specifically approved by the USFWS. For every acre of vernal pool habitat directly and indirectly affected, the project applicant shall replace the affected acreage at a 2:1 ratio (2 acres of preservation for every 1 acre of impact) through the dedication of vernal pool preservation credit(s) within a USFWS-approved mitigation bank or preserved on- or off-site as part of a USFWS-approved mitigation plan. Other conservation measures may be required by the USFWS.
Applicants shall retain a qualified biologist to survey for the presence of elderberry shrubs with stems measuring greater than 1-inch diameter at ground level. Surveys shall be conducted in accordance with the USFWS 1999 *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. If no elderberry shrubs with one or more stems measuring 1 inch or greater in diameter at ground level are documented, no further mitigation is required. Survey results shall be submitted to the City for review and approval. If an elderberry shrub(s) with one or more stems measuring 1 inch or greater in diameter at ground level is documented, and a 100-foot avoidance buffer can be maintained around the shrub, the following protective measures shall be implemented: 1) Fence and flag all areas to be avoided during construction activities. In areas where encroachment into the 100-foot buffer has been approved by the USFWS, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant. 2) Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements. 3) Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet and must be maintained for the duration of construction.

Mitigation Measure
4) Instruct work crews about the status of the beetle and the need to protect its elderberry host plant. 5) Restore any damage done to the buffer area (area within 100 feet of elderberry plants) during construction. Provide erosion control and revegetate with appropriate native plants. 6) Continue to protect buffer areas after construction from adverse effects of the Project. Measures such as fencing, signs, weeding, and trash removal are usually appropriate. 7) Do not use insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant in the buffer areas or within 100 feet of any elderberry plant with one or more stems measuring 1 inch or more in diameter at ground level. 8) Project applicants shall provide a written description of how the buffer areas are to be restored, protected, and maintained after construction is completed to the USFWS and the City of Elk Grove Development Services Department, Planning Division. 9) Mowing of grasses/ground cover shall only occur from July through April to reduce fire hazard. No moving shall occur within 5 feet of elderberry plant stems. Mowing shall be done in a manner that avoids damaging plants (e.g., stripping away bark through careless use of mowing/trimming equipment). If elderberry plants cannot be avoided, they must be transplanted to a conservation area in accordance with the 1999 USFWS guidelines, with USFWS approval. A plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation through consultation with the USFWS. In addition to transplanting all elderberry shrubs, additional elderberry seedlings or cuttings shall be planted at a 1:1 ratio (new plantings to affected stems). Native plants shall also be planted at a 1:1 ratio (native tree/plant species to each elderberry seedling or cutting). Stock of saplings, cuttings, and seedlings shall be obtained from local sources. If the parent stock is obtained from a distance greater than 1 mile from the conservation area, the USFWS must approve the plant donor sites prior to initiation of revegetation work. Planting or seeding the conservation area with native herbaceous species is encouraged.
Standard best management practices shall be implemented during and after construction to protect water quality in sensitive habitat areas during construction.
Prior to implementation of construction activities, the project applicants with specific project sites within 100 feet of aquatic features shall retain qualified biologists to conduct a survey for western pond turtle no more than 3 days prior to initiation of construction activities. If this species is documented near any proposed construction areas, the individual(s) shall be moved at least 500 feet downstream to suitable habitat. If individuals are observed during construction activities, all construction activities shall be halted, a qualified biologist shall be notified, and the qualified biologist shall relocate the individual prior to continuing construction activities. If active nest sites are identified during the survey, the project applicant shall impose a construction setback of 100 feet for all active nest sites prior to commencement of any construction activities to avoid construction or access-related disturbances to western pond turtles until the eggs hatch or the nest is moved to an appropriate location as authorized by the CDFW.
Applicants shall retain a qualified biologist to determine whether suitable nesting habitat occurs within 500 feet of the specific project

Mitigation Measure
site. If suitable habitat exists, focused surveys must be performed by a qualified biologist in accordance with the CDFW's *Staff Report on Burrowing Owl Mitigation*, published March 7, 2012. Surveys shall be repeated if project activities are suspended or delayed more than 15 days during nesting season. If no burrowing owls are detected, no further mitigation is required. If active burrowing owl nest sites are detected, the project applicant shall implement the avoidance, minimization, and mitigation methodologies outlined in the CDFW's *Staff Report on Burrowing Owl Mitigation* prior to initiating project-related activities that may impact burrowing owls. Burrowing owl surveys are valid for one year from the date of the survey.
If clearing and/or construction activities would occur during the raptor nesting season (January 15–August 15), preconstruction surveys to identify active raptor nests shall be conducted by a qualified biologist within 14 days of construction initiation in specific project sites. Focused surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 1,000-foot buffer. If no active nests are found, no further mitigation is required. Surveys shall be repeated if construction activities are delayed or postponed for more than 30 days.
If active white-tailed kite or other raptor (excluding Swainson's hawk) nest sites are identified within 1,000 feet of Project activities, the applicant shall impose a 500-foot setback of all active nest sites prior to commencement of any Project construction activities to avoid construction or access-related disturbances to nesting raptors. Project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur within the setback until the nest is deemed inactive. Activities permitted within setbacks and the size of setbacks may be adjusted through consultation with the CDFW and/or the City. If active Swainson's hawk nest sites are identified within 1,000 feet of project activities, the applicant shall impose a 1,000-foot setback of all active nest sites prior to commencement of any construction activities to avoid construction or access-related disturbances to nesting raptors. Project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur within the setback until the nest is deemed inactive. Activities permitted within setbacks and the size of setbacks may be adjusted through consultation with the CDFW and/or the City.
Trees containing white-tailed kite or other raptor (excluding Swainson's hawk) nests that must be removed as a result of Project implementation shall be removed during the non-breeding season (September 1–January 1). Swainson's hawks are State listed as a threatened species; therefore, impacts to Swainson's hawk nest trees require regulatory authorization from the CDFW prior to removal.
Project applicants shall mitigate for the loss of Swainson's hawk foraging habitat at a 1:1 ratio consistent with Elk Grove Municipal Code (EGMC) Chapter 16.130, *Swainson's hawk Impact Mitigation Fees*.
If clearing and/or construction activities would occur during the migratory bird nesting season (March 15–August 15), preconstruction surveys to identify active bird nests shall be conducted by a qualified biologist within 14 days of construction initiation on specific project sites. Focused surveys must be performed by a qualified biologist for the purpose of determining the presence/absence of active nest sites within the proposed impact area and a 200-foot buffer (if accessible). Surveys shall be repeated if construction

Mitigation Measure
activities are delayed or postponed for more than 30 days. If active nest sites are identified within 200 feet of project activities, project applicants shall impose a 100-foot setback for all active nest sites prior to commencement of any project construction activities to avoid construction or access-related disturbances to bird nesting activities. Project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur within setbacks until the nest is deemed inactive. Activities permitted within and the size (i.e., 100 feet) of setbacks may be adjusted through consultation with the CDFW and/or the City.
Applicants shall retain a qualified wetland consultant to determine if potentially jurisdictional waters are present. If potentially jurisdictional features are identified, the project applicant shall submit a preliminary jurisdictional determination to the USACE for verification. The verified delineation will be submitted to the City for its records.
Applicants shall ensure there is no net loss of riparian vegetation. Mitigation as required in regulatory permits issued through the CDFW, the USACE, or the RWQCB may be applied to satisfy this measure. Evidence of compliance with this mitigation measure shall be provided to the City prior to construction and grading activities for the proposed Project.
Project applicants shall ensure that their specific projects would result in no net loss of federally protected waters through impact avoidance, impact minimization, and/or compensatory mitigation, as determined in CWA Section 404 and 401 permits and/or a 1602 Streambed Alteration Agreement. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for each proposed project.
If cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts) are discovered during grading or construction activities within the Project area, work shall be halted immediately within 50 feet of the discovery, the City of Elk Grove Development Services Department, Planning Division shall be notified, and a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in archaeology and/or history shall be retained to determine the significance of the discovery. The City shall consider mitigation recommendations presented by a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in archaeology and/or history for any unanticipated discoveries. The City and the Project applicant of the site where the discovery is made shall consult and agree on implementation of a measure or measures that the City deems feasible. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The Project proponent shall be required to implement any mitigation necessary for the protection of cultural resources.
If human remains are discovered during any ground-disturbing activities within the Project area, all work shall be halted immediately within 50 feet of the discovery, the City of Elk Grove Development Services Department, Planning Division shall be notified, and the County Coroner must be notified according to Section 5097.98 of the California Public Resources Code and Section 7050.5 of the California Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American

Mitigation Measure
Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.
Prior to the approval of subsequent development projects within the Project area that have not already been evaluated for the presence of cultural resources, a detailed cultural resources field survey of the subject property shall be conducted by the City and funded by the applicant. If the site is deemed to have a high probability of Native American cultural resources, the site will require preconstruction coordination with the local Native American tribe. The applicant shall provide proof of this coordination to the City. The cultural resources field survey shall identify any cultural resource finds and will set out measures to mitigate any impacts to any significant resources as defined by CEQA, the California Register of Historic Resources, and/or the National Historic Preservation Act. Mitigation methods to be employed include, but are not limited to, the following: a. Redesign of the subsequent development project to avoid the resource. The resource site shall be deeded to a nonprofit agency to be approved by the City for maintenance of the site. b. If avoidance is determined to be infeasible by the City, the resource shall be mapped, stabilized, and capped pursuant to appropriate standards. c. If capping is determined infeasible by the City, the resource shall be excavated and recorded to appropriate standards.
If any paleontological resources (fossils) are discovered during grading or construction activities within the Project area, work shall be halted immediately within 50 feet of the discovery, and the City of Elk Grove Development Services Department, Planning Division shall be immediately notified. At that time, the City will coordinate any necessary investigation of the discovery with a qualified paleontologist. The City shall consider the mitigation recommendations of the qualified paleontologist for any unanticipated discoveries of paleontological resources. The City and the appropriate project applicant shall consult and agree on implementation of a measure or measures that the City deems feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The project proponent shall be required to implement any mitigation necessary for the protection of paleontological resources.

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Memorandum

To: Don Lockhart

From: Matthew Gerken and Allison Ferrini

Date: March 15, 2017

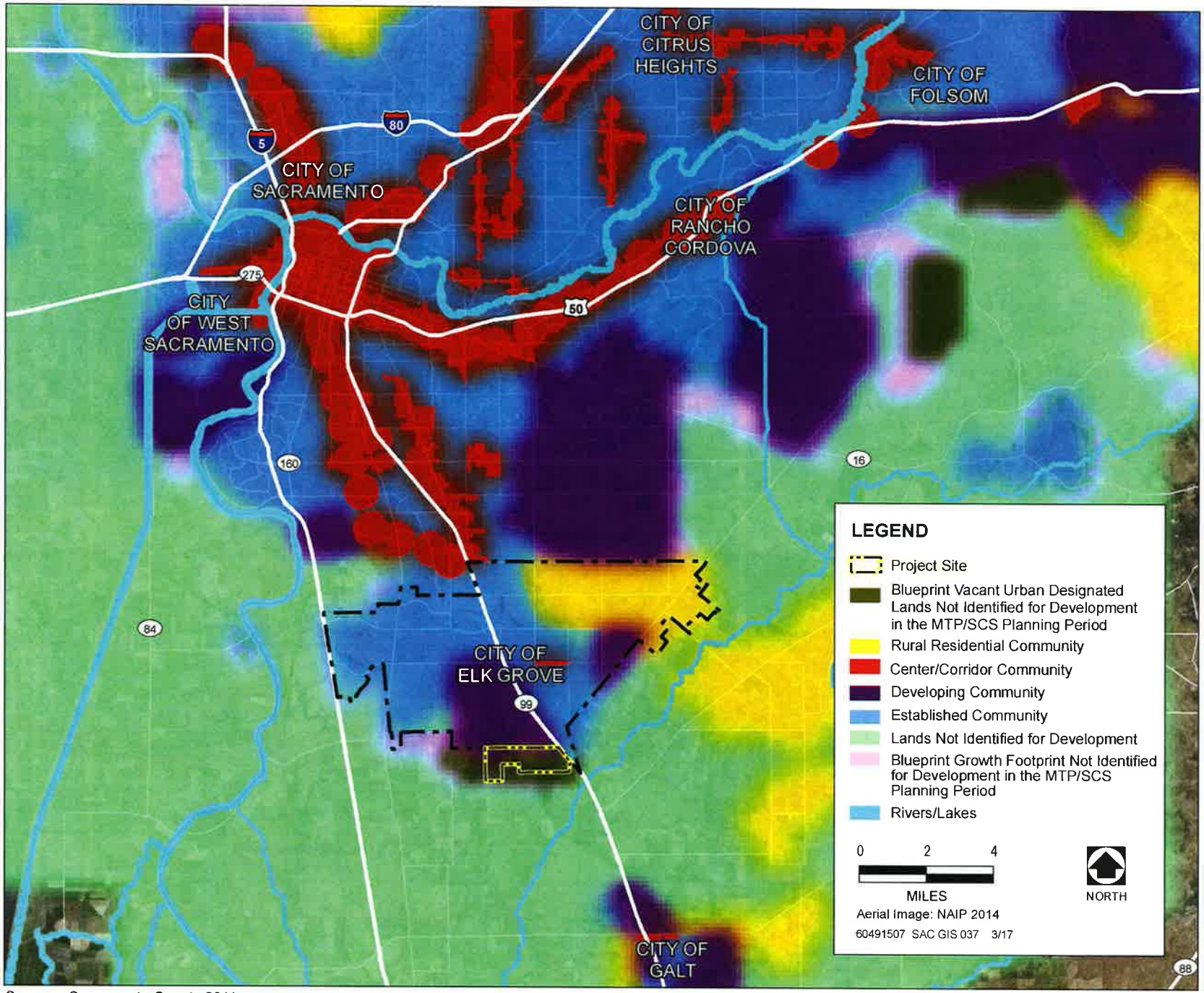
Subject: Open House March 10, 2017 Kammerer Road/Highway 99 SOIA EIR, LAFC#07-15

We would like to provide you with the comments from the open house on March 10th. We have added to our files and will incorporate comments into the Final EIR, as appropriate. In addition, you requested a map with the SACOG community types and one showing the South Sacramento HCP. Please see attached. Both of these exhibits can be made a part of the Final EIR, too, if we are so directed.

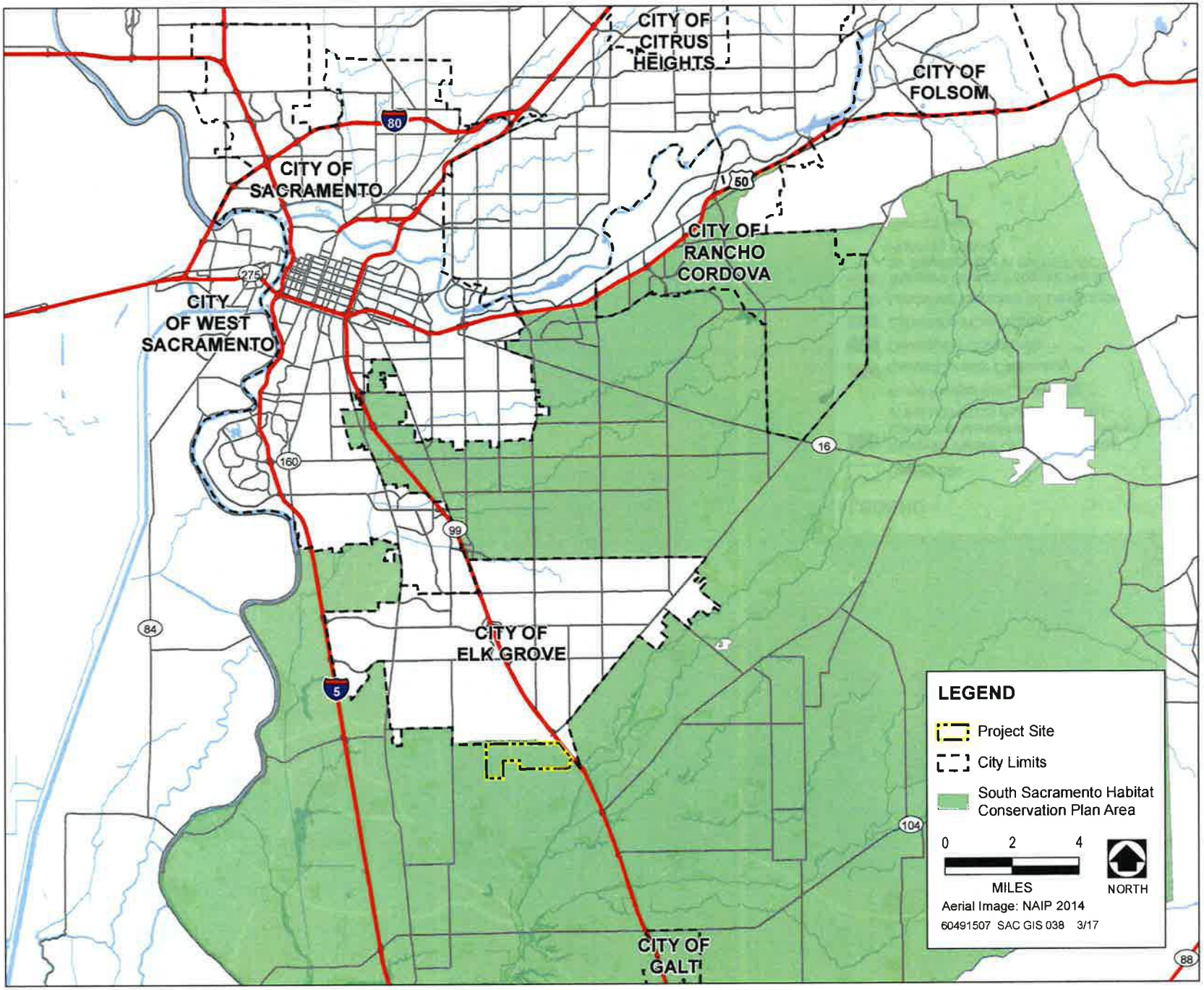
Comments

- Concern regarding jobs/housing balance + skepticism of project description assumptions related to potential jobs development.
- Concern regarding residential rezone trends in the City of Elk Grove – the City has allowed many non-residential zoned areas to rezone to allow residential development. Commenter wonders how this would affect the analysis in the EIR.
- Concern regarding the relationship between jobs and housing on one hand and air quality-related impacts on the other hand, as well as transportation funding. Interest in how jobs/housing trends in the City of Elk Grove relates to SACOG planning principles.
- SEPA: this Plan requires a super majority for rezone requirements. However, since, on planning issues, there is no dissent on the City Council, rezone requests would be approved.
- District organization for City Council has an impact on how planning-related issues are decided in the City of Elk Grove.
- Reference to a scoping letter from SCWA – Vineyards Case reference. "Paper" water issue.
- Water supply effects in same basin + cumulative impacts related to all planned development should be considered.
- Groundwater recharge effects should be considered, this project should be communicated with the emerging local Sustainable Groundwater Agency; this is working through DWR now.
- Interest in Suburban Propane and any encroachment on safe buffer area. Newer studies should be done for Suburban Propane, agencies should not just consider safety but terrorist risk and emergency services and response, too. Concern regarding age of Suburban Propane study.

- Interest in how the LOS -> VMT change will affect transportation and land use planning in the City of Elk Grove.
- Concern regarding downstream flooding effects from urbanization in Elk Grove (RD800, to Pleasant Point area). Concern regarding focused flow of water instead of sheet flowing.
- Concern regarding status as a proposed SOIA rather than a development plan.
- Concern re: casino assumptions for traffic, etc.
- LAFCo should advertise hard copies using the City's week-at-a-glance for noticing. LAFCo should ask whether the City can issue a press release for this LAFCo EIR.
- Mitigation: Want agricultural mitigation to occur within the SOIA.
- Clarify FMMP legend and farmland type.
- Ensure water supply with cumulative development and demand (Casino/mall). SCWA capacity problems for casino/mall. SASD same sewer capacity problems.



Source: Sacramento County 2011



Source: Sacramento County 2017

Comments **12**

FROM THE DESK OF

PAUL LINDSAY

March 15, 2017

Sacramento Local Agency
Formation Commission
1112 I St
Sacramento, Ca 95814

Dear Sir,

Thank you for allowing me to comment on the Kammerer Road/Highway 99 Sphere of Influence Amendment Environmental Impact Report (LAFC#07-15, State Clearinghouse Number: 2016032015).

First, I would like to address the lack of a concurrent Municipal Service Review to be used for comments at the time of the Draft EIR. An MSR is "required to assess the adequacy of required infrastructure and services capacity and means of financing ***prior*** to any modification of an SOI boundary."[1] While the MSR is not subject to CEQA review, it is a vital tool in "informing the environmental impact process."[2] The lack of a completed MSR at the period for public comment on the Draft EIR impedes a coherent review of the Draft EIR and makes comments, at this juncture, difficult to make.

The EIR also fails to place this request in the context of recent developments that will have a significant impact on the area of the SOIA. I speak of the proposed Wilton Rancheria Casino, the potential completion of the Elk Grove Mall, and the Southeast Planning Area (SEPA). These have been researched individually, but not in connection with the further buildout contemplated in the SOIA. It is incumbent on this EIR to consider the cumulative impacts for the entire area. We know what the plans are for both and they should have been included.

One significant factor that the EIR fails to address is whether or not the City of Elk Grove needs to add the SOIA area for future growth. Christopher Jordan, Assistant to the City Manager, responded to a question regarding available land within current City limits for housing use, commercial use, industrial use, office space use, and public use. Mr Jordan indicated that there are approximately 1800 acres available for housing use. This acreage would accommodate almost 12, 600 dwelling units.[3]

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[1] Executive Summary, Kammerer Rd/Hwy 99 SOIA EIR (LAFC#07-15), p. ES-7. Bold Italics are my emphasis.

[2] Executive Summary, Kammerer Rd/Hwy 99 SOIA EIR (LAFC#07-15), p. ES-7

[3] Email from Christopher Jordan, dated 3/14/17 attached as Appendix A

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With that amount of housing capacity available within the City limits (infill), one has to wonder if the SOIA is even necessary for consistent, logical, planned growth for the City of Elk Grove, at this time.

I would also like to take immediate exception with comments made in the Executive Summary. LAFCO takes a position that since this in SOIA application only, no land use or planning should be examined. I think this is short sighted and defeats the purpose of good planning. As mentioned in the Executive Summary, the applicants themselves envision 4000 to 5000 dwelling units as well as development that could accommodate 18000 to 20000 jobs, in various settings.[4] The enormity of this use could put a strangle hold on the Southern boundary of the City, create major environmental issues for the city, create traffic nightmares, and require substantial changes in infrastructure. The Draft EIR attempts to look forward, in some sections, to what may be necessary for an annexation or development request in the future. In that respect, the document must be applauded. Substantial questions, however, are left unanswered that should, and must be answered before LAFCo or the citizens of Elk Grove can form reasonable conclusions about this SOI application.

These concerns are borne out by Notice of Preparation Comments, found in Table 1-1.[5]

LAFCo again states, in the project description, the project does not include any developmental proposal and does not provide for any changes to land use: "This SOIA would allow the City of Elk Grove and other service providers to plan for future urbanization, but it does not authorize changes in land use or governance."[6] This ignores the very real fact that developers have already begun plans for this area and have stated plans for as many as 5000 dwelling units and commercial, industrial, and office space sufficiently large for 18,000 to 20,000 workers. Ignoring this very real fact and punting it down the road to a pro-developer City Council, vacates the very concept of LAFCo as a deliberative body to "encourage orderly growth and development patterns, discourage urban sprawl, preserve open-space and prime agricultural lands, provide government services, ... and guide development away from open-space and prime agricultural land uses."[7]

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[4] Executive Summary, Kammerer Rd/Hwy 99 SOIA EIR Sacramento LAFCo (LAFC#07-15), p. ES-2

[5] Introduction, Kammerer Rd/Hwy 99 SOIA EIR Sacramento LAFCo (LAFC#07-15), pp 1-11 thru 16

[6] Project Description, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 2-8

[7] Introduction, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 1-2

I would be remiss if I didn't add one more general comment. The Draft EIR lists 28 Significant Unavoidable Adverse Impacts[8]. By definition, these are adverse impacts that are unmitigable. One has to ask at what point a project becomes untenable because of unmitigable impacts? I would have to say this application should meet any reasonable person's conclusion that it simply is unworkable because of the many unmitigable significant impacts.

Having made these general comments, I would like to address specific concerns regarding the specific sections under Environmental Setting, Impacts, and Mitigation Measures:

1. **Aesthetics** - Several impacts are found to be significant before mitigation and still significant but unavoidable after mitigation. The two most prominent are degradation of the visual character of the site and the creation of light and/or glare. Proposed mitigation includes avoiding tree removal and reducing light and glare. Since this is currently used as Agricultural land, any development would serve not to reduce light and glare but to substantially increase light and glare. Stated mitigation measures (requiring projects to comply with Elk Grove Citywide Design Guidelines[9]) will not change the fact that Light and Glare from this area will be substantially increased and the very nature of the area will be inexorably altered for the worse. ***The EIR correctly notes that there is no feasible mitigation***.[10]

2. **Agricultural Resources** - Of the 1156 acres within the SOIA, 105 acres are considered to be Prime Farmland (approximately 9%), 405 acres are designated as Farmland of Statewide Importance (approximately 35%), and 627 acres are designated as Farmland of Local Importance (approximately 54%). The remaining acreage is designated as Other and Urban and Built-up land (less than 2%, approximately.[11] This must be considered in light of Sacramento County's ongoing agricultural land loss in recent years. Table 3.2-1 highlights this loss and concludes that the County has lost 12,830 acres of important Farmland during the period 2004-2014.[12] ***Should the acreage in the SOIA be developed, the County would lose almost 9% as much Important Farmland as it lost in the ten year period from 2004 to 2014.*** The DEIR does not address such a substantial loss of

[8] Executive Summary, Kammerer Rd/Hwy 99 SOIR EIR, Sacramento LAFCo (LAFC#07-15), pp. ES-43-44

[9] Introduction, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), Table ES-1, Comment 3.1-2

[10] Aesthetics, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15) p. 3.1-14

[11] Agricultural Resources, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.2-3

[12] Agricultural Resources, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.2-2

the County's Important Farmland; it simply states that "although the project does not propose any land use changes or development, future development could occur if the property is annexed."[13] I think that this approach, as I have stated above, is disingenuous. The request for an SOIA has to be viewed for what it so clearly is: the first step in developing this area. To say otherwise is simply ignoring the realities of the situation. ***The EIR correctly notes that there is no feasible mitigation for the loss of farmland in the SOIA area.*** The DEIR also concludes that there would be indirect loss of adjacent agricultural land. Development in the SOIA will drive development outside of the SOIA, further exasperating loss of agricultural land in Sacramento County. Further, these lands would include "Prime Farmland, Unique Farmland, Farmland of Local Importance, or land under Williamson Act contract."[14] Although the DEIR attempts to offer some mitigation for this problem by suggesting that the City of Elk Grove should prepare an agricultural land use plan, at the point of any annexation request for the SOIA, it rightly concludes that it would not be possible to "fully mitigate agricultural/urban interface conflicts"[15]. ***The EIR correctly notes that there is no feasible mitigation for the indirect loss of farmland adjacent to the SOIA area.***

3. **Air Quality** - Unavoidably, the DEIR uses an Air Quality Monitoring Station that is closest to the SOIA at 12490 Bruceville Rd, Elk Grove, Ca to provide air quality data, as this is the only state Air Resources Board Quality Assurance Air Monitoring Site in Elk Grove (out of a total of 12 such sites in Sacramento County).[16] Unfortunately, this monitoring station is in an agricultural setting with minimal use, as shown by the site photo below[17]:

The siting of this station does not and cannot adequately project air quality of the proposed SOIA at buildout (remember that the DEIR indicates a potential buildout of 5000 homes as well as sufficient industrial, commercial, and office capacity for 208,000 employees[18]). I would suggest that the DEIR is lacking in this area, as it does not look at

[13] Agricultural Resources, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p.3.2-18

[14] Agricultural Resources, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.2-21

[15] Agricultural Resources, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.2-22

[16] Air Resources Board, "Quality Assurance Air Monitoring Site Information" www.arb.ca.gov

[17] Air Resources Board, "Quality Assurance Air Monitoring Site Information" www.arb.ca.gov

[18] Air Quality, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), Table 3.3-5

specific Sacramento AQMSs in Sacramento County that would be closer, in nature, to a built out SOIA area. I would suggest the Folsom-Natomas AQMS, North Highlands-BlackfootWay AQMS, the Sacrament-Del Paso Manor AQMS, the Sacramento-Goldenland Court AQMS, or the Sacramento T Street AQMS would give us a truer indicator of built out conditions in the SOIA. ***The EIR correctly notes that there is no feasible mitigation for both short term and long term emissions of criteria air pollutants and precursors in the SOIA area.*** I feel that **the DEIR understates the significance of Toxic Air Contaminants (TACs).** The existence of TACs are acknowledged in construction related terms or in "operational"[19] terms (when the SOIA would be developed). However, the DEIR states that "it is possible that multiple roadways could deteriorate in LOS to unacceptable levels should the conceptual land use scenario be built. *However, due to the conceptual nature of the land use scenario, specific intersections cannot be analyzed at this time for CO impacts.*"[20] (italics mine) This is what I consider to be the chief fault or deficiency of the entire DEIR. While it might be proper LAFCo procedure to underplay the developed or built out nature of this type of application (i.e., an SOIA), it ignores the reality. If approved, it is abundantly obvious that the next step would be an annexation request to LAFCo and specific development plans submitted to the City of Elk Grove. That is clearly the motivation of those bringing this application forward and that is why I find the argument that specifics cannot be analyzed in virtually every issue reviewed in this EIR to be deeply flawed and antithetical to the EIR process and to proper review. Finally, the DEIR addresses the exposure to the emissions of odors. ***The EIR correctly notes that there is no feasible mitigation for both short term and long term exposure to the emissions of odors in the SOIA area.***

4. **Biological Resources -** The EIR has a rigorous discussion of Federal and State Plans, Policies, Regulations, and Laws but it must be noted that Federal regulations are being changed under the current Administration and the Final EIR must take that into consideration. Further, the Draft EIR has a robust discussion of local regulations, plans and laws that would apply to biological resources. It must be noted that The Elk Grove General Plan is under review and the applicable portions, if available, at the time of the Final EIR , should be considered for review. Tables 3.4-1 (Wildlife Species Observed, or whose sign was observed, During the March 2016 Field Reconnaissance Survey), 3.4-2 (Special-Status Plant Species Known or Reported and Potential for Occurrence in the SOIA Area), and 3.4-3 (Special - Status Wildlife Known or Reported and Potential to occur in the SOIA Area) give us

[19] Air Quality, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.3-276-28

[20] Air Quality, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.3-26

a complete picture of the flora and fauna in the area and their probability of occurrence in the SOIA. It must be noted that **Table 3.4-3 has a minor error**: It lists several species with a State status of SSC but does not define that status in Footnote 1 of the table under the heading: Legal Status Definitions. There is one species that is considered as a threatened species both by the Federal government and by the State of California (Giant Garter Snake, *Thamnophis gigas)*. The DEIR concludes that the SOIA area would not make a suitable breeding habitat, although individuals could occur on the site.[21] One species, the Swainson's Hawk (*Buteo swainsoni*) is listed as a threatened species by the State of California and is considered likely to occur.[22] **One striking point to mention, in respect to Swainson's Hawk mitigation is that the entire SOIA area "is deemed to provide 100 percent foraging habitat value and the entire acreage must be compensated at a 1:1 ratio."[23]** It is my belief that this must be strengthened and that the applicants must provide this mitigation in toto, rather than to permit alternative impact mitigation fees. This is simply too large a potential foraging area to let it be nickel and dimed out with impact mitigation fees. Two other species are listed as Fully Protected under California law: The White Tailed Kite (*Elamus leucurus*) and the Greater Sandhill Crane (*Grus canadensis tabida*) and are known to occur or are likely to occur. The table lists four other species that are of State Special Concern that are known to occur, are likely to occur or could occur within the SOIA area. **Other than the comment above regarding Swainson's Hawk mitigation, I believe that the Draft EIR does discuss mitigations necessary for an annexation request and appears to be quite thorough.**

5. **Cultural Resources - EIR conclusions are reasonable and thorough. No other comment**

6. **Energy -** The EIR's discussion of projected growth in energy consumption uses projections by SMUD (electricity) and PGE (gas) in Section 3.6.1. Tables 3.6-1 and 3.6-3 show projected use of electricity and gas, respectively with projections for 2020 and 2022. I**t is not clear from the commentary in these tables or in the EIR, that these projections include new growth, such as that that might ensue from this SOIA application. Make no mistake. This SOIA will be growth inducing and will set the table for other SOIA amendments that the City of Elk Grove is already contemplating in its current General Plan Revision**

[21] Biological Resources, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), Table 3.4-3

[22] Biological Resources, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), Table 3.4-3

[23] Biological Resources, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.4-33

process.[24] The DEIR has an adequate discussion of the Regulatory framework, at all levels of government. **The EIR devotes some time to discussion of development related energy consumption and comes to, what I conclude, is an erroneous conclusion that the impact would be less than significant.** Table 3.6-5 reviews estimated annual electrical and natural gas consumption, given the conceptual land use scenario, described above. Electrical consumption, just from the SOIA, would increase consumption in SMUD's system by 186 GWH per year. While only a small incremental change to the overall power usage in SMUD's service area, it ignores the stresses we have seen on that power system in past years and ignores the reality of the sources for that power consumption. Per Table 3.6-2, only 27% of SMUD's electrical power comes from renewable sources. Adding an additional 186 GWHs will strain the consumption of non-renewable electric sources. This does not even address the concept the growth inducing nature of this application, beyond it's current configuration. Natural gas consumption will increase by 309 MM therms[25], increasing PGE's usage (service area wide, not just Sacramento County) by 7%![26] Again, this does not even address the concept the growth inducing nature of this application, beyond it's current configuration. **I cannot agree that this impact is less than significant. To me, it is abundantly clear, that it is a significant and unmitigable impact! I agree with the EIR's conclusion that transportation-related energy consumption impacts will be significant and unavoidable.[27]**

7. **Geology, Soils, Minerals, and Paleontological Resources - EIR conclusions are reasonable and thorough. No other comment.**

8. **Greenhouse Gas Emission - "**Greenhouse Gas emissions have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change."[28] The EIR makes the following finding: **Impact 3.8-1** - "Emissions within the SOIA during construction and operational phases is (sic) considered a cumulatively considerable contribution to the significant cumulative impact of climate change."[29] **I agree with the EIR's**

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[24] Policy Topic Paper 8.0: Annexation Strategy Revised, City of Elk Grove, Planning Department (www.elkgrovecity.org). , pp. 8.0-5, 6

[25] Energy, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), Table 3.6-5

[26] Energy, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), Tables 3.6-3 and 3.6-5

[27] Energy, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.6-17

[28] Greenhouse Gas Emissions, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo, (LAFC#07-15), p. 3.8-1

[29] Greenhouse Gas Emissions, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.9-17

conclusion that Greenhouse Gas emission impacts will be significant and unavoidable.

9. **Hazards and Hazardous Materials -** Most DEIR conclusions are reasonable and thorough. I would like to discuss two areas where I find the DEIR to be deficient. First, **I believe that the discussion regarding Suburban Propane[30] is inadequate.** The DEIR cites only a study by Quest Consultants prepared in 2000. There were at least three other contemporaneous reports, that give a more complete picture of the risk and probabilities of a major incident. [31] These studies should also be reviewed. Moreover, those studies are dated and should be updated for use in this DEIR. Suburban Propane has been the focus of at least one terrorist plot.[32] Then Fire Chief Meaker said that "residents could be endangered by heat from a large fireball, flying projectiles…and a pressure wave that could emanate from the blast. In close, there would be a high level of destruction."[33] I**t is my belief that the EIR is deficient, in that studies that are 13 or more years old do not adequately address the threat from and to Suburban Propane, especially in this age of more pronounced terroristic threats and capabilities. More current studies should be initiated.** Second, **I believe that the discussion of schools is inadequate.** The DEIR dismisses the issue, simply stating that "there are no schools within 0.25 mile of the SOIA area."[34] While currently true, **there is no discussion of the potential development of the area, as has been done in other sections of the EIR.** With 5000 residential units ultimately being considered in the SOIA area, it is inconceivable that schools would not be located within the SOIA area.

10. **Hydrology and Water Quality -** In it's discussion of Groundwater resources, the EIR (pp. 3.10-3), indicates that the SOIA area has poor groundwater recharge capability. Further monitoring data from the Sacramento Central Groundwater Authority showed periods of groundwater depletion, recovery, depletion, etc. The EIR did not include data on groundwater levels during the most recent drought period over the last five years, so it is difficult to assess current groundwater levels. The EIR does discuss the Sustainable Groundwater Management Act (SGMA),

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[30] Hazards and Hazardous Materials, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.9-3

[31] City of Elk Grove General Plan, Draft Environmental Impact Report, August 2003, p. 4.4-6. Studies are by Dunbar and Jukes (November 1999), John Jacobus (November 1999), and a follow-up report by Quest Consultants (June 2003)

[32] CNN, "Police: California men planned to bomb propane tanks" December 4, 1999, www.cnn.com

[33] CNN, "Police: California men planned to bomb propane tanks" December 4, 1999, www.cnn.com

[34] Hazards and Hazardous Materials, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.9-4

passed in 2014 and requiring local agencies to manage groundwater sustainability. As the process of establishing those agencies, setting up groundwater sustainability plans and monitoring systems is still ongoing, it is difficult to assess how it will affect groundwater practices in the SOIA. It is interesting to note, however, that two Resource Conservation Districts are vying to be the groundwater sustainability agency for the SOIA area's groundwater sub-basin.[35] It is difficult to assess how this will affect the whole groundwater issue in the SOIA area. The EIR finds that the degradation/violation of water quality standards is a potentially significant impact "due to the potential for pesticides and herbicides to be present the soil"[36] but can be lessened to less than potentially significant after mitigation. I agree with this assessment. More importantly, **the EIR considers the potential depletion of groundwater in the SOIA area to be a significant but unavoidable impact, even after mitigation.**[37] The EIR correctly concludes that demand for water in a built out SOIA area will be substantial[38] and would outstrip current agricultural water usage.[39] The EIR concludes that that there is a distinct ***"likelihood that at least a portion of the water supply that may be provided to future development at the site could come from already greatly depleted groundwater."*** [40]

11. **Land Use, Population, Housing, Employment, Environmental Justice, and Unincorporated Disadvantaged Communities -** The EIR is deficient in Section 3.11.1 in its discussion of Surrounding Land Uses, as it fails to mention the potential Indian Casino, slated for part of the Lent Ranch Marketplace. This additional land use could have unforeseen impacts on eac and every section of this document. In its discussion of Population, the EIR uses SACOG (Sacramento Area Council of Governments) estimates that the city of Elk Grove is "almost 76 percent built out in terms of residential uses,[41] **suggesting that there is currently substantial residential holding capacity to accomodate future growth within city limits.** The City of Elk Grove estimates population to grow by 27 percent by

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[35] Hydrology and Water Quality, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.10-14

[36] Hydrology and Water Quality, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.10-21 thru 22

[37] Hydrology and Water Quality, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15). p. 3.10-25

[38] Hydrology and Water Quality, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), Table 2.10-2

[39] Utilities and Service Systems, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), Table 3.15-1

[40] Hydrology and Water Quality, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15). p. 3.10-24. Bold italics are my emphasis

[41] Land Use, Population, Housing, Employment, Environmental Justice, and Unincorporated Disadvantaged Communities, Kammerer Rd/Hwy 99 SOIA EIR , Sacramento LAFCo (LAFC#07-15), p. 3.11-2

2035 to 207,000 plus, but no methodology for this projection is shown. This becomes important when discussing housing capacity. The EIR estimates a total of 53, 269 housing units in Elk Grove in 2016 with an average household size of 3.27 persons.[42] Elk Grove is projected to have 65,282 housing units by 2016.[43] This inventory would accommodate a population of 213, 472, assuming the same household size. Clearly, then, **there is sufficient holding capacity within city limits to accommodate projected city population growth. The current SOIA is premature for future city planning.** The EIR has a very good general discussion of jobs/housing balance and is to be commended for that (pp. 3.11-3, 4). It should also be noted that **the EIR concludes that loss of open space is significant and unavoidable and that there is no feasible mitigation.[44]** The EIR also concludes that **the SOIA would be an inducement to unplanned population growth, stating this impact is significant and unavoidable. "There is no feasible mitigation ... without changing the purposes of the proposed project."[45]**

12. **Noise and Vibration - EIR conclusions are reasonable and thorough. No other comment.**

13. **Public Services and Recreation -** No reasonable conclusions can be made, because of the lack of a concurrent Municipal Service Review to be used for comments at the time of the Draft EIR. An MSR is "required to assess the adequacy of required infrastructure and services capacity and means of financing *prior* to any modification of an SOI boundary. While the MSR is not subject to CEQA review, it is a vital tool in "informing the environmental impact process."[46] The lack of a completed MSR at this period for public comment on the Draft EIR impedes a coherent review of the section and makes comments, at this juncture, difficult to make. ***The EIR correctly notes that there is no feasible mitigation or that the impact would remain significant after mitigation for the increased demand for fire protection and emergency services in the SOIA area.[47] The EIR correctly***

[42] Land Use, Population, Housing, Employment, Environmental Justice, and Unincorporated Disadvantaged Communities, Kammerer Rd/Hwy 99 SOIA EIR , Sacramento LAFCo (LAFC#07-15), p. 3.11-2

[43] Land Use, Population, Housing, Employment, Environmental Justice, and Unincorporated Disadvantaged Communities, Kammerer Rd/Hwy 99 SOIA EIR , Sacramento LAFCo (LAFC#07-15), p. 3.11-2

[44] Land Use, Population, Housing, Employment, Environmental Justice, and Unincorporated Disadvantaged Communities, Kammerer Rd/Hwy 99 SOIA EIR , Sacramento LAFCo (LAFC#07-15), p. 3.11-27

[45] Land Use, Population, Housing, Employment, Environmental Justice, and Unincorporated Disadvantaged Communities, Kammerer Rd/Hwy 99 SOIA EIR , Sacramento LAFCo (LAFC#07-15), p. 3.11-28

[46] Executive Summary, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. ES-7

[47] Public Services, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), pp. 3.13-12

notes that there is no feasible mitigation or that the impact would remain significant after mitigation for the increased demand for fire protection and emergency services in the SOIA area.[48] I disagree with the conclusion that school services are considered to have less than a significant impact as school impact fees are mandated and are "deemed to be full and adequate mitigation under CEQA for impacts on school facilities (California Government Code Section 65996)."[49] I feel that this ignores the reality of ongoing funding for new educational facilities. Again, there is no discussion of the area after development and buildout. The EIR, in many instances, does do just that and I feel that a more in-depth discussion is warranted. However, I understand that this is beyond the scope of this EIR, based on the Government Code Section cited above.For the same reason, I disagree with the conclusion that impact of increased demand for parks and recreational services would be less than significant. The DEIR's argument is that the mandate for and the construction of parks and recreational services will be mandated under local regulation. Again, this misses the impact of ongoing costs for maintenance and upkeep. Again, there is no discussion of the area after development and buildout. The EIR, in many instances, does do just that and I feel that a more in-depth discussion is warranted. These costs could have a significant impact.

14. **Transportation -** The EIR presents a comprehensive review of the setting of the SOIA area, current Levels of Service, and the regulatory framework of under which all transportation issues with the SOIA area are governed. Unlike other sections of the DEIR , the Transportation section assumes full buildout of the SOIA area. I agree with this methodology. **Given those assumptions, it is important to note that the Level of Service (LOS) on roadway segments in the SOIA area or adjacent deteriorates to unacceptable by a factor greater than three.**[50] The impacted roadway segments would include both I-5 and SR 99. ***The EIR correctly notes that there is no feasible mitigation for Impacted Roadway and Freeway segments in the SOIA area.***

15. **Utilities and Service Systems -** I would like to repeat my earlier comments regarding the lack of a concurrent Municipal Service Review to be used for comments at the time of the Draft EIR. An MSR is "required to assess the adequacy of required infrastructure and services capacity and means of financing ***prior*** to

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[48] Public Services, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. 3.12-13

[49] Public Services, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), pp. 3.13-13 thru 15

[50] Transportation, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC #07-15) Table 3.14-2 and Table 3.14-5

any modification of an SOI boundary."[51] While the MSR is not subject to CEQA review, it is a vital tool in "informing the environmental impact process."[52] **The lack of a completed MSR at the period for public comment on the Draft EIR impedes a coherent review of the Draft EIR and makes comments, at this juncture, difficult to make.** The EIR correctly notes that there are no public water supply facilities within the SOIA area.[53] Moreover, I **feel that the EIR makes an unwarranted assumption that water service would be provided by the Sacramento County Water Agency (SCWA).**[54] This assumption is made solely because the SOIA area is nearest to that provider (SCWA Zone 40). *Discussions regarding the Sacramento Regional County Sanitation District, the Sacramento Regional Wastewater Treatment Plant, and Solid Waste issues are all subject to the same lack of a completed MSR.* **However, the EIR correctly notes that there is no feasible mitigation for increased demand for water supplies and water system facilities in the SOIA area. The impact remains significant and unavoidable. Moreover, the EIR correctly notes that there is no feasible mitigation for increased demand for wastewater collection, conveyance and treatment facilities in the SOIA area. The impact remains significant and unavoidable. The discussion in the EIR also ignores the growth inducing aspects of this SOIA beyond its own area into areas beyond the County's established urban service boundary.**

16. **Alternatives - EIR conclusions are reasonable and thorough. No other comment.**

17. **Other CEQA Considerations -** This section recaps the significant and unavoidable adverse impacts associated with this application as well as irreversible environmental impacts and cumulative impacts. I find it to be a compelling analysis and should be required reading for all reviewing this EIR. I find the EIR conclusions to be reasonable and thorough. My only comment is the placement of this section. I would have preferred to see it as Section 1, after the Executive Summary.

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[51] Executive Summary, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. ES-7. Bold Italics are my emphasis.

[52] Executive Summary, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo (LAFC#07-15), p. ES-7

[53] Utilities and Service Systems, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo, (LAFC#07-15), p. 3.15-1

[54] Utilities and Service Systems, Kammerer Rd/Hwy 99 SOIA EIR, Sacramento LAFCo, (LAFC#07-15), p. 3.15-1

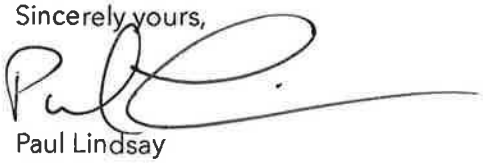
Again, thank you for affording me the opportunity to comment on the Kammerer Rd/ Hwy 99 SOIA EIR (LAFC#07-15). If you have any questions, I may be contacted at

Paul Lindsay, 8909 Castle Park Dr, Elk Grove, Ca 95624

lindsay@elkgrove.net

916-685-8071

Sincerely yours,



Paul Lindsay

Appendix A:

Email correspondance with Christopher Jordan, Assistant to the City Manager of Elk Grove, California

Subject: RE: Question that Planning Dept kicked up to you
From: Christopher Jordan <cjordan@elkgrovecity.org>
To: lindsay@elkgrove.net <lindsay@elkgrove.net>
Date: Tuesday, 14/03/2017 5:28 PM
1 attachment: Development Table.pdf 149 KB

Hi Paul,

Attached is a spreadsheet outlining the vast majority of projects in the City. Stuff that is missing from the list are some smaller 2-acre projects in the rural area (5-10 lot subdivisions). Otherwise, it includes all of LRSP, SEPA, Sterling Meadows, Silverado, and a bunch of smaller projects around town. It also included the Housing Element sites that were not otherwise captured in LRSP, SEPA, or some other project otherwise on the table. The list is a collection of approved projects and some placeholder numbers. Looking at a map of the City, stuff that is missing from the list is pretty minimal. Examples include, but are not limited to:
- Sheldon Farms (Sheldon/Bruceville) area that is not in the Housing Element (Opportunity Sites 2 and 3)
- Opportunity Site 1 (Tegan Road)
- An RD-10 site behind Chevron at EG Blvd and West Taron
- Some stuff on the north side of Bilby at Willard that is zoned AR-1
- Properties in the Elk Grove Triangle

There might be a site or two that is double counted or one site that is missing. I didn't have time today to confirm it. If that is the case, the list could be heavy by about 150 units, which isn't much across the total.

What you see is about 12,500 dwelling units remaining. If you assume an average density of 6.5-7 units per acre (I used that density because there are a number of HDR projects on the list, which average about 22 du/ac) across the remaining dwelling units, you get about 1,800 acres.

Christopher

-----Original Message-----
From: lindsay@elkgrove.net [mailto:lindsay@elkgrove.net]
Sent: Monday, March 13, 2017 2:47 PM
To: Christopher Jordan
Subject: Question that Planning Dept kicked up to you

I was recently reading the Annexation Strategy Policy Topic Paper (#8) prepared for the General Plan update and it brought to mind a question. I assumed I could get an answer through the Planning Department but they referred me to you.

The paper asserts that there are some 1800 acres of vacant land designated for residential use. I presume this includes land that is zoned for residential use as well as land where entitlements have

already been approved, such as SEPA. Does the city maintain an inventory of available land (within the city limits) that shows vacant land designations, in terms of area within the city and the amount of acreage for each designation. If so, does it also designate whether entitlements have been granted or if the land has just been designated with a use? Further, do we have an inventory of current land usage within the City? Page 8.0-5 suggests that the City might have such information, as it has designated "a series of opportunity sites" for potential infill projects. The paper also states "under current planned land use designations and development standards, some, but not all, of the future anticipated population growth may be accommodated."

Since the data appears to exist, I would like to access it for my own reference. Is it available on the City website? If not, how may I obtain that information?

Thanks

Paul Lindsay

City of Elk Grove 3/14/2017

Development Summary - Approved and/or Zoned Projects

Project	Project Type/ Zoning	Unit Type	Gross Acres	Total Dwelling Units		Units Developed	Units Remaining
LAGUNA RIDGE							
The Grove (EG-04-764)							
Village 1	RD-5	du	29.10	136		136	0
Village 2	RD-5	du	31.00	124		124	0
Village 3	RD-5	du	27.00	130		130	0
Village 4	RD-7	du	26.00	156		156	0
Village 5	RD-5	du	19.30	103		103	0
Village 6	RD-5	du	14.00	71		71	0
Village 7	RD-5	du	21.10	98		98	0
Village 8	RD-4	du	17.90	61		61	0
Village 9	RD-4	du	24.40	88		88	0
Village 10	RD-4	du	22.70	79		79	0
The Ridge (EG-15-043; EG-15-039)	Retail	ac	51.80				0
Dignity Health (EG-10-036; EG-12-014)	Hospital	AC	24.00				0
Pappas	Retail	AC	16.70				0
Laguna Ridge Apts (EG-10-053)	Apts	AC	12.10	204		204	0
Civic Center	Civic	AC	20.90				0
Civic Center Park	Park		52.70				0
Stathos Property	BP	ac	5.30				0
Stathos Property	RD-20	ac	2.50				0
							0
EG Blvd							0
The Falls (EG-11-053)	Retail	ac	4.74				0
							0
Del Webb (EG-03-479)							0
Del Webb (Age restr)	Age (RD6)	du	22.70	632		632	0
Del Webb (market)	RD-5	du	111.80	100		100	0

City of Elk Grove 3/14/2017

Development Summary - Approved and/or Zoned Projects

Project	Project Type/ Zoning	Unit Type	Gross Acres	Total Dwelling Units		Units Developed	Units Remaining
Madeira South (EG-05-943)							
Village 1	RD-5	du	17.90	82		0	82
Village 2	RD-5	du	13.60	61		0	61
Village 3	RD-7	du	16.20	83		0	83
Village 4	RD-5	du	18.60	83		0	83
Village 5	RD-5	du	12.10	56		0	56
Village 6	RD-5	du	7.90	39		0	39
Village 7	RD-7	du	10.40	56		0	56
Madeira South Lot A (EG-12-047)							
Village 1	RD-8	du	3.34	27		0	27
Village 2	RD-8	du	6.46	48		0	48
Vineyard at Madeira (07-123; 11-016)	SC	ac	20.00				
Zagraggan (EG-11-005)							
Village 1	RD-5	du	22.30	107		107	0
Village 2	RD-7	du	20.30	117		117	0
Allen Ranch (EG-03-493)							
Village 1	RD-5	du	16.70	81		81	0
Village 2	RD-5	du	14.60	80		80	0
Retail	SC	ac	29.90				
Office	BP	ac	17.20				
Madeira East (EG-03-481/EG-13-020)							
Village 1 (Taylor pt 1)	RD-4	du	15.70	53		53	0
Village 1 (Taylor pt 2)	RD-5	du	39.83	178		178	0

City of Elk Grove 3/14/2017

Development Summary - Approved and/or Zoned Projects

Project	Project Type/ Zoning	Unit Type	Gross Acres	Total Dwelling Units		Units Developed	Units Remaining
Village 1A (DR)	RD-7	du	7.38	49		49	0
Village 1B (DR)	RD-7	du	10.90	73		73	0
Village 2A (DR)	RD-7	du	8.39	42		42	0
Village 2B (DR)	RD-7	du	10.30	88		88	0
Village 3 (DR)	RD-5	du	10.60	54		54	0
Village 4 (Taylor)	RD-4	du	15.51	57		57	0
Village 5 (Taylor)	RD-5	du	3.86	21		21	0
Village 6 (KB)	RD-7	du	15.90	83		83	0
Village 7 (Taylor)	RD-5	du	11.93	64		64	0
Village 8 (Hackberry)	RD-5	du	16.50	83		0	83
Office	BP	ac	32.40				
Pappas/Richmond (EG-07-033)	RD-5	du	20.32	100		100	0
Sun Grove (EG-13-021)	RD-5	du	18.10	86		0	86
Poppy Keys East (EG-13-052)	RD-5	du	20.30	79		0	79
McGeary (EG-10-059)							
50x100	RD-5	du	21.10	134		0	134
60x105	RD-5	du	14.30	66		0	66
60x105	RD-4	du	5.75	27		0	27
Tuscan West (EG-11-015/EG-15-048)							
Tuscan Ridge West	RD-5	du	24.50	100		0	100
Tuscan Ridge South II (EG-15-038)							
Village 1	RD-7	du	6.90	43		0	43

City of Elk Grove 3/14/2017

Development Summary - Approved and/or Zoned Projects

Project	Project Type/ Zoning	Unit Type	Gross Acres	Total Dwelling Units		Units Developed	Units Remaining
Village 2	RD-4	du	20.50	70		0	70
Treasure (EG-03-486A)							
Village 1	RD-7	du	3.80	26		0	26
Village 2	RD-5	du	20.70	111		0	111
Village 3	RD-4	du	18.60	67		0	67
Tuscan East (Moser) (EG-03-485)	RD-5	du	21.32	97		0	97
Alasker							
Village 1	RD-4	du	11.70	38		0	38
Village 2	RD-5	du	10.50	67		0	67
Arbor (EG-10-060)							
Village 1	RD-5	du	16.10	75		0	75
Village 2	RD-7	du	21.00	119		0	119
Village 3	RD-5	du	14.50	68		0	68
Village 4	RD-5	du	15.60	76		0	76
Village 5	RD-8	du	10.50	84		0	84
Village 6	RD-7	du	15.20	103		0	103
Village 7	RD-7	du	15.40	84		0	84
Village 8	RD-7	du	8.70	54		0	54
Village 9	RD-8	du	4.80	38		0	38
Village 10	RD-5	du	10.30	51		0	51
Village 11	RD-5	du	12.20	58		0	58
Backer HDR Site (12 ac gross)	RD-25	AC	12.10	300		0	300

City of Elk Grove 3/14/2017

Development Summary - Approved and/or Zoned Projects

Project	Project Type/ Zoning	Unit Type	Gross Acres	Total Dwelling Units		Units Developed	Units Remaining
Pham							
HDR Site (15.5 ac gross)	RD-25	AC	15.50	388		0	388
LDR Site	RD-5	du		16		0	16
Mesa at Laguna Ridge (9.8 ac gross)	RD-20	AC	9.80	184		0	184
Backer Commercial	SC	ac	9.06				
Seasons (EG-06-1086)	RD-15	Acres	8.28	222		0	222
Bayless/Los Rios			18.50				
STERLING MEADOWS							
Village 1A	RD-6	du	8.91	51		0	51
Village 1B	RD-5	du	19.10	78		0	78
Village 1C	RD-6	du	6.54	43		0	43
Village 1D	RD-5	du	15.00	69		0	69
Village 1E	RD-6	du	9.50	60		0	60
Village 1F	RD-15	du	13.40	159		0	159
Village 1G	RD-5	du	6.70	29		0	29
Village 2A	RD-6	du	13.40	76		0	76
Village 2B	RD-7	du	11.80	69		0	69
Village 2C	RD-7	du	16.80	88		0	88
Village 2D	RD-7	du	10.90	76		0	76
Village 2E	RD-15	du	15.30	178		0	178
Multifamily	RD-20	Acres	12.50	240		0	240

City of Elk Grove
Development Summary - Approved and/or Zoned Projects

3/14/2017

Project	Project Type/ Zoning	Unit Type	Gross Acres	Total Dwelling Units		Units Developed	Units Remaining
SOUTHEAST POLICY AREA							
Souza Dairy (EG-13-030)							
ER, 70x120	ER	du	15.4	54		0	54
LDR, 60x105	LDR	du	49	247		0	247
LDR, 55x105	LDR	du	41.7	223		0	223
LDR, 50x90	LDR	du	18.8	116		0	116
LDR, 45x105	LDR	du	29.4	190		0	190
MDR, 50x60	MDR	du	13.8	123		0	123
MDR, 40x65	MDR	du	15.7	141		0	141
MDR	MDR	du	7	84		0	84
HDR	HDR	du	31	713		0	713
MUR	MUR	du	6.9	159		0	159
Village Center	VC	du	26.4	58		0	58
Bruceville Meadows (EG-15-029)							
LDR	LDR	DU	12.6	59		0	59
ER	ER	DU	17.7	63		0	63
LDR	LDR	DU	10.1	46		0	46
ER	ER	DU	13.5	51		0	51
ER	ER	DU	16.7	62		0	62
ER	ER	DU	13.2	51		0	51
Poppy Keys South (holding number)							
MDR	MDR	DU	52	520		0	520
LDR	LDR	DU	44	220		0	220
PK HDR 1	HDR	DU	10	220		0	220
PK HDR 2	HDR	DU	9.2	202		0	202

City of Elk Grove
Development Summary - Approved and/or Zoned Projects

3/14/2017

Project	Project Type/ Zoning	Unit Type	Gross Acres	Total Dwelling Units		Units Developed	Units Remaining
MENDEZ & Wong	LDR	DU	27	135		0	135
OTHER PROJECTS							
Lent Ranch							
HDR	HDR	DU		245		0	245
Silverado Village							
Village 1A	LDR	DU	21.5	99		0	99
Village 1B	LDR	DU	8.6	36		0	36
Village 2A	LDR	DU	38.8	193		0	193
Village 2B	LDR	DU	12.4	62		0	62
Village 3	Age Restricted	DU	31.6	261		0	261
OTHER PROJECTS							
Crooked Creek	LDR	DU	24.3	121		0	121
Capital Reserve	RES	DU		84		28	56
Fieldstone South	RES	DU		130		16	114
Monterey Village	RES	DU		114		46	68
Emerald Park Estates	RES	DU		16		0	16
Fieldstone North	RES	DU		391		0	391
Northwest Unit 1	RES	DU		32		0	32
Sheldon Crossroads	RES	DU		68		0	68
Stone Springs Estates	RES	DU		9		0	9
Triangle Point Parcel 8	RES	DU		92		0	92
Elk Grove Landing	RES	DU		85		0	85
Ermandarold Estates	RES	DU		35		0	35
G.K. Waterman	RES	DU		22		0	22

City of Elk Grove

3/14/2017

Development Summary - Approved and/or Zoned Projects

Project	Project Type/ Zoning	Unit Type	Gross Acres	Total Dwelling Units		Units Developed	Units Remaining
Sheldon Park Estates (Remaining Phases)	RES	DU		29		0	29
Sheldon Park Estates (Phase 1)	RES	DU		16		12	4
Sheldon Terrace	RES	DU		214		0	214
Stathos Cove	RES	DU		40		0	40
Housing Element Sites not listed above							
Site 2	HDR	DU	12.4	260		0	260
Sites 4-7	HDR	DU	19.39	233		0	233
Site 8	HDR	DU	2	30		0	30
Site 9	HDR	DU	8.68	182		0	182
Site 10	HDR	DU	6.5	137		0	137
Site 12	HDR	DU	3.91	82		0	82
Site 13	HDR	DU	3.92	82		0	82
Site 17	HDR	DU	4.42	93		0	93
Site 19	HDR	DU	3	63		0	63
Site 20	HDR	DU	8.15	171		0	171
Site 21	HDR	DU	146.08	315		0	315
Site 22	HDR	DU	8.4	152		0	152
TOTAL				**15,925**		**3,331**	**12,594**

I3

Lockhart. Don

From: diane owen <dianeooowen@yahoo.com>
Sent: Wednesday, March 29, 2017 2:17 PM
To: Lockhart. Don
Subject: Proposed Kammerer Road/Hwy 99 SOIA (LAFC#07-15)

March 29, 2017

Sacramento Local Agency Formation Commission
Attn: Don Lockhart, Assistant Executive Officer
1112 I Street, Suite 100
Sacramento, CA 95814-2836

re: Proposed Kammerer Road/Hwy 99 Sphere Of Influence Amendment (LAFC#07-15)

Regarding this SOIA, I am requesting that Sacramento LAFCO, an agency that exists to preserve agricultural land and discourage sprawl, reject LAFC#07-15 on this basis.

The 1200 acres this application covers is long established agricultural farmland, much of which is categorized as prime farmland. It is in a region that generates an estimated $14,000,000 annually in agribusiness in addition to a revenue stream equal to that amount in supporting jobs and businesses the depend entirely on the existence of this industry.

In November 2013, LAFCO denied a similar application that would have threatened 8,000 acres of nearby farmland. The reasons for denying that application still exist in 2017 and should apply to LAFC#07-15: The need to expand the SOI is non-existent, the city of Elk Grove is already a place of massive sprawl. The bank of vacant land available for development in 2013 is still in existence in 2017. Large, civic projects already approved in 2013, are still undeveloped and the city's 1200 acre Southeast Policy Area, which borders Kammerer Road on the north has not gone beyond the development stage of 2013.

Another important reason for denial is water. This farmland serves multi-purposes when it comes to water and the environment. Much discussion has been made recently on the importance of maintaining undeveloped farmland to provide areas of aquifer recharge and flood control, specifically flood easements. Rep. John Garamendi, Supervisor Don Nottoli and the Editorial Board of the Sacramento Bee have recently addressed the importance of this type of flood and drought management in California and mentioned this area of south Sacramento specifically in their discussions. Proper planning should take into account the importance of maintaining this open land and the nonexistent need to approve this SOIA.

Sincerely,

Diane Owen
8690 Mecca Road, Elk Grove CA 95624

14

Suzanne Pecci

10212 Equestrian Drive
Elk Grove, CA 95624
(916) 686-6768
slpecci@aol.com

March 28, 2017

Att: Don Lockhart
Assistant Executive Officer
Sacramento Local Agency formative Commission (LAFCo)
11121 I Street, #100
Sacramento, CA 95814
e-mail:don.lockhart@sacLAFCo.org

Dear Mr. Lockhart.,

This is my letter of comment on the Kammerer/99 sphere of Influence which I make as a 40 year-resident of Elk Grove and resident of rural East Elk Grove and living on a property served by a private domestic well.

Since city hood in 2000, I have taken an active interest in my community because I value living here and appreciate all it has to offer. Developing beyond the Urban Services Boundary was the driving force behind city hood so for all these years, Elk Grove has been in an exhausting pursuit of expansion of the city limits beyond the USB publicly driven by the local landowners and developers. The city has spent much of political capital and it's treasure in the endless study and planning of the urbanization of adjacent farmland.

City records confirm that throughout the years, zoning for potential employment opportunities morphed into zoning for more housing, creating temporary construction job fixes that seems to have created a permanent job problem for the city that years of failed city leadership has yet to resolve. The need for a jobs/housing balance has been the mantra for the city. Yet the only solution to the perceived jobs/housing balance problem is more land, but not better and more focused leadership.

The landowner application for an 1100 acre "study area" for future expansion of the city to achieve the illusive jobs/housing balance but without planning it is a blank check for which LAFCo signature is requested. The first tier project DEIR is a litany of laws and regulations and a long list of significant unmitigated environmental impacts to be mitigated at some unknown time in the future, including the threshold requirement—-a future water supply for the project. CEQA allows the amount of detail provided in an environmental document be left to the discretion of LAFCo and doesn't require disclosure of of water supply in a tier one review.

However, the lack of future water supply for the project from the most logical source in the region, SCWA, certainly gets the reader's attention. LAFCo states that the project is outside SCWA, Zone 40-41 boundaries and acknowledges the apparent lack of interest on the part of SCWA in annexing the project area in the future. So maybe the next question would be — what does that mean for any hope of water for this project at any time in the future? An alternate source of water supply is not explored.

There is one sentence in the DEIR that mentions two unnamed water districts in addition to Sacramento Central Groundwater Authority in the Central Basin, which would presumably be Elk Grove Water District/Florin Resource Conservation District adjacent to the proposed project and Omochumnes-Harnell Water District, whose boundaries include the Cosumnes River. Even though it isn't required, more detail by LAFCo on these water districts would provide transparency and a give more insight into the water supply in the Central Basin to the reader. The FEIR should contain this level of detail.

LAFCo focuses with great detail in an extensive discussion of Sacramento Central Groundwater Authority (SCGA) as the agency that has managed the Central Basin in the past and references the 2006 Groundwater Management Plan. LAFCo provides paragraphs of information on the SGMA, but then fails to make it relevant to the present and future operation of SCGA in the Central Basin under SGMA . The FEIR should make that connection.

The enactment in 2014 and implementation in 2015 of the Sustainable Groundwater Management Act (SGMA) , is having an important impact on the present and future dynamic of groundwater management throughout California, as well as in the Central Basin. LAFCo fails to relate SGMA to the lack of project water supply in the context of the complex and ongoing efforts of the past year by local and state agencies, environmentalists, and out-reach groups to reshape water management in the Central Basin by overcoming differences over governance and resolving competing interests over a finite water supply in our basin and gaining approval from DWR. The FEIR should show this relationship.

LAFCo fails to relate SGMA to the lack of future water for this project and the planning, cooperation and coordination and approval processes required by SGMA for the Central Basin that will have to be completed to achieve groundwater sustainability before commitments of water supply to new projects could responsibly be made by SCGA or any water district in the basin. This could be as far out as 2020-2022, but it all depends on water supply and the final governance structure and coordinating efforts and DWR approvals. This relationship and timing should be discussed in the FEIR.

Most, importantly, Elk Grove has a large rural area that comprises 1/4 of the land area within the city limits. There are between 2500-3000 domestic wells within the city. To date the City of Elk Grove has not had the important discussions with the rural area

residents about the impact expansion and future urbanization will have on their wells, in addition to any water monitoring or water use requirements that might be put in place to assure water supply for expansion outside the USB . The updating process for the General Plan has provided no water element for the rural resident's' discussion or review to date and there have been no conversations about a protection plan for domestic wells. The FEIR should contain a discussion of the Elk Grove General Plan Update Water Element and the Sheldon Community Plan and planning for well protection.1

I feel the blanks need to be filled in on water for this project before a decision is made by LAFCo to go approve. It should be the first thing we discuss and not the last thing we discuss about this project

Thank you.

Yours truly,

Suzanne Pecci

April 4, 2017

Don Lockhart
Assistant Executive Officer
Sacramento Local Agency Formation Commission
1112 I Street, #100
Sacramento, CA 95814
Email: don.lockhart@sacLAFCo.org

Re: Draft Environmental Impact Report for the Proposed Kammerer/99 Sphere Of Influence Amendment Application to the City of Elk Grove

Dear Mr. Lockhart,

We appreciate the opportunity to provide comments on the Draft Environmental Impact Report (DEIR) for the Kammerer/99 Sphere of Influence Amendment (SOIA) Application. We believe that the DEIR is largely sufficient in its assessment of potential environmental impacts of the conceptual scenario for development that has been identified, which would be subject to future annexation proceedings and approval by the City of Elk Grove. Our comments with respect to the DEIR largely are focused upon the structure of the various mitigation measures identified by LAFCO for future implementation.

As the DEIR correctly describes, under the Cortese-Knox-Hertzberg Act, LAFCOs have specified authority and are prohibited from directly regulating land use. The Act provides that LAFCOs do not occupy the role of directly regulating land use, land use density or intensity, property development or subdivision requirements. See Government Code §56375(a)(6). Instead, such authority is left directly to cities, here the City of Elk Grove. CEQA confers no independent grant of authority to any public agency to impose mitigation measures on a project. When imposing measures to mitigate a project's significant environmental effects, a public agency may exercise only powers provided by legal authority independent of CEQA. See Public Resources Code §21004. The CEQA Guidelines specify that CEQA is intended to be used in conjunction with discretionary powers granted to public agencies by other laws and that CEQA does not grant new or independent powers to public agencies. See CEQA Guidelines §15040. We believe that some of the mitigation measures in the DEIR need to be expressed in a manner consistent with these legal limitations.

In general, the language in many of the mitigation measures that would require mitigation action on the part of landowner/developers or the City of Elk Grove "at the time of submittal of any application to annex territory within the SOI Area" should be revised. Because the submittal of an application to LAFCO does not, in and of itself, result in physical changes to the environment, we believe that the identified timing of many of the mitigation measures is premature. Impacts on the environment caused by future development within the SOI area will not occur until annexation has been approved by LAFCO and specific development projects are implemented following approval by the City of Elk Grove. LAFCO's role in assigning mitigation for future impacts of development at the SOI amendment stage is limited to measures necessary to assure

that future annexation will be evaluated by LAFCO in accordance with LAFCO's adopted policies.

Instead of requiring that mitigation for physical impacts occur at the time of application submittal, it is appropriate for LAFCO to establish mitigation in the form of performance standards, to be demonstrated to LAFCO prior to LAFCO approval of future annexation requests within the SOI area. LAFCO's role is not necessarily to impose mitigation requirements directly on landowners or the City of Elk Grove, but LAFCO can condition approval of the SOI and future annexation actions (or deny reorganization) based upon consistency with LAFCO policies. Matters that do not directly implicate LAFCO policies are appropriately left to the City of Elk Grove and other Responsible Agencies, consistent with the statutory limitations expressed in the Cortese-Knox-Hertzberg Act and CEQA.

Below are more specific comments on the DEIR document for LAFCo's consideration in preparing the Final EIR.

Page ES-2. The DEIR refers to a "conceptual land use scenario," that was developed by the applicant. The application included a conceptual holding capacity for purposes of the environmental analysis, but did not include a land use map or proposed land use patterns.

Page 3.1-13 (Mitigation Measure 3.1-1). LAFCO does not have adopted policies that relate to aesthetic impacts in the context of Sphere of Influence consideration or reorganization. This mitigation measure should simply recognize that future impacts from development within the SOI area will be addressed under criteria established by the Elk Grove General Plan and Municipal Code, and in particular, Chapter 19.12 of the Municipal Code which addresses mitigation for impacts to trees.

Page: 3.2-3 The zoning designation of all properties within the SOIA Area is AG-80, as established by the County of Sacramento. Reference on 3.2-17, 3.11-12, 3.11-15 and 3.11-19

Page: 3.2-5. Exhibit 3.2-1 The colors used on the Important Farmland map do not match the Legend. The exhibit should be updated to have clear color consistency or labels on the map to show the classification of each area.

Page 3.2-19 (Mitigation Measure 3.2-1). LAFCO's adopted policies addressing agricultural land conservation do not contain any specific requirements for mitigation of impacts associated with the conversion of agricultural land to urban uses. Indeed, the statutory provisions governing LAFCO authority generally relate to prime farmland, open space and land under a Williamson Act contract, as distinguishable from Unique Farmland or Farmland of Statewide Importance. However, the City of Elk Grove has historically required mitigation for the loss of agricultural land from conversion to urban use, either through requirements to obtain easements over like-kind agricultural land or through payment of mitigation fees, or a combination of both. The City does not have a requirement that agricultural preservation easements, if required as mitigation for a particular project, be established within 5 miles of the project site; this provision should be deleted from proposed Mitigation Measure 3.2-1. Mitigation Measure 3.2-1 should instead simply require that prior to approval of annexation by LAFCO, the City of Elk Grove must

demonstrate that mitigation of impacts to agricultural land will occur prior to issuance of grading permits by the City of Elk Grove for development within the SOI, in accordance with City policies and CEQA requirements. When the City of Elk Grove requires mitigation for loss of agricultural land by way of a conservation easement, the City consistently requires an endowment of 10% of the acquisition cost of easement rights, which the City has deemed to be an adequate endowment for operation and maintenance. Finally, Mitigation Measure 3.2-1 should specify that land currently encumbered by a Williamson Act contract is suitable for permanent preservation with an approved agricultural easement, as well as for mitigation for loss of habitat if suitable.

Page 3.3-24 (Mitigation Measure 3.3-2A). LAFCO does not have adopted policies that specifically relate to air quality impacts in the context of Sphere of Influence consideration or reorganization. The identification of a reduction threshold of 35% for Reactive Organic Gases (ROG) appears arbitrary and is not consistent with City of Elk Grove and SMAQMD requirements, which mandate a reduction of 15%. See City of Elk Grove General Plan CAQ-30. A requirement for the City of Elk Grove or a future development to prepare an Air Quality Management Plan at the time of application to LAFCO is infeasible, given that a precise plan of development will not likely be known at that juncture. The DEIR should simply identity that future development occurring post-annexation would be required to implement all feasible mitigation for impacts to air quality required by the City and the SMAQMD.

Page 3.3-24 (Mitigation Measure 3.3-2B). Mitigation Measure 3.3-2B requires project development to prepare a bicycle, pedestrian, and transit master plan consistent with general plan policies, prior to submittal of an application for annexation. This is not a feasible mitigation measure, as a precise plan of project development may not exist as the time annexation approval is sought. The DEIR should simply acknowledge that development in the SOI area will be subject to City of Elk Grove General Plan and other adopted policies regarding standards for alternative modes of transportation.

Page 3.4-1 – the second paragraph under "Environmental Setting" should state that less than 0.35% of the SOI area is comprised of canal and irrigation ditch features.

Page 3.4-28 (Mitigation Measure 3.4-1). It is neither feasible nor necessary to require the preparation of seasonal protocol-level endangered species surveys "at the time of application" for annexation. This measure should instead be limited to a demonstration on the part of the City of Elk Grove that standard special status species will be required within the SOI area, as they are elsewhere in the region.

Page 3.4-29 (Impact 3.4-2). This discussion appears to suggest that the entirety of the 1,150-acre SOI area is subject to mitigation requirements as suitable foraging habitat for Swainson's Hawk. This is not the case, as the DEIR notes that portions of the area are currently planted in vineyards, which are not foraging habitat. This discussion should not apply County of Sacramento planning criteria for determining the suitability of habitat based upon zoning designation alone, as development of the SOI area would occur under the jurisdiction of the City of Elk Grove upon annexation, if later approved by LAFCO. Once specific development proposals are made, site-specific analysis of foraging habitat values would be conducted, and mitigation acreage preserved

(or fees paid), as dictated by the provisions of the City's Swainson's Hawk Ordinance then in effect.

Page 3.4-31 (Mitigation Measure 3.4-2A). This mitigation measure should simply require that, prior to approval of annexation, the City of Elk Grove will demonstrate to LAFCO that these standard pre-construction measures will be applied. The timing of removal of trees and vegetation during nonbreeding season for raptors should be corrected to be September 1 through February 28, rather than closing on February 31.

Page 3.4-32 – (Mitigation Measure 3.4-2B). CDFW protocols for burrowing owl mitigation do not typically require nest sites to be mitigated on a 1:1 basis when eliminated as a result of development. This measure should instead provide that mitigation for potential impacts on the burrowing owl will be imposed by the City of Elk Grove in accordance with CDFW protocols, and that mitigation for impacts to the burrowing owl can be combined with other required mitigation for loss of Swainson's Hawk forging habitat and agricultural land, if suitable.

Page 3.4-34 (Mitigation Measure 3.4-2C). As development in the SOI area will not occur unless and until annexation into the City of Elk Grove takes place, mitigation for impacts to the Swainson's Hawk will be regulated by the City's Swainson's Hawk Ordinance, rather than the more generalized language set forth in Mitigation Measure 3.4-2C. The City has established requirements for establishment of an endowment for specified purposes in connection with the acquisition of conservation easements over suitable foraging habitat. The DEIR should not specify mitigation requirements that are at variance with the mitigation practices of the City, which are based upon adopted ordinance and are in compliance with CDFW guidance.

Page 3.4-37 (Mitigation Measure 3.4-4). The DEIR states that up to 750 acres of the SOI consists of suitable foraging habitat for the wintering sandhill crane, but this conclusion does not appear to be based on site-specific analysis. It is known that rice fields within the northern Central Valley are the most valuable foraging habitat among cropped lands. Exhibit 3.4-1 of the DEIR does not identify any land dedicated to rice production in the SOI area. Fallow cropland and irrigated hayfields and alfalfa fields are of substantially lesser value and sandhill crane seasonal foraging habitat. Mitigation for this species should be assessed and imposed at a later date, based upon site-specific studies and in accordance with adopted regulatory guidance.

Page 3.4-39 (Mitigation Measure 3.4-5). At the time of application to LAFCO for annexation, the City of Elk Grove will not have authority to impose measures to mitigate for impacts to the Western Pond Turtle. This measure should be revised to require that mitigation (if and when required based upon site-specific analysis) will be imposed in accordance with adopted regulatory guidance. LAFCO does not have independent authority to require that off-site improvements be placed to avoid impacts to species, or to make a judgment call as to whether mitigation through avoidance is feasible or infeasible in a particular instance.

Page 3.4-40 (Mitigation Measure 3.4-6). Mitigation for potential impacts to the Giant Garter Snake as a result of future development within the SOI area cannot be accurately assessed until site-specific studies are performed, further to specific plans for development. This mitigation measure should be revised to provide clarification in this regard.

Page 3.4-43 (Mitigation Measure 3.4-7). LAFCO does not have independent authority to establish performance standards for mitigation for loss of jurisdictional wetlands. The third bullet should be revised to eliminate reference to a "no net loss" standard of mitigation. As with development elsewhere, development within the SOI will be subject to Section 404 permit requirements administered by the United States Army Corps of Engineers, which allow for compensatory mitigation in appropriate situations.

Page 3.6-17 (Mitigation Measure 3.6-1). This measure should be revised in accordance with the previous comments relative to Mitigation Measures 3.3-2A and 2B.

Page 3.9-22 (Mitigation Measure 3.9-2). Updated review of environmental databases, or other environmental analysis of site conditions within the SOI area, should not be required at the time an application for annexation is submitted to LAFCO. Such analysis will be required, and performed, at the time site-specific development is proposed.

Page: 3.10-1. Water Consumption of over 597 million gallons of water per year is based upon the existing cropping; however potential alternative crops that could be farmed would result in significantly greater consumption of water.

Page 3.10-25 (Mitigation Measure 1.10-3). This mitigation measure should simply require that, as a condition of annexation, the City of Elk Grove require the preparation of a drainage master plan, which may be in the form of either an update to the Citywide master plan, or a standalone master plan, as the City deems appropriate. References to facilities crossing or affecting SR-99 should be deleted, as the SOI area drains to the west, away from SR-99. Further, drainage master plans, as required, should allow for a menu of options for how the projects will deal with site-specific drainage issues, subject to defined performance standards. The requirement to survey the ground water elevation in the regional basins appears to be based upon a larger project area than the proposed SOI Area. Please review and revise this mitigation measure accordingly.

Page 3.12-35 (Mitigation Measure 3-12-1). This mitigation measure should be reworded to mirror the adopted construction noise mitigation requirements of the City of Elk Grove.

Page 3.12-47 (Mitigation Measure 3.12-5). This measure should be clarified to indicate that LAFCO does not have authority to directly regulate land use, or to impose conditions that would have the effect of regulating compatibly among future land uses. LAFCO's role is to recommend such measures to the City of Elk Grove, while finding that such measures would remain within the authority and discretion of the City to address. This approach is permitted under CEQA Guidelines §15091(a)(2).

Page 3.12-51(Mitigation Measure 3.12-6). See comments under Mitigation Measure 3.12-5 above.

Page 3.14-26 (Mitigation Measure 3.14-1). This mitigation measure references a requirement of "transportation improvement plans," which is unclear and not further defined. Please confirm that the intent is of this measure is to develop a transportation plan that details the transportation

network rather than specifications for the construction of the roads themselves. Unless there is a CalTrans facility involved, this measure should clarify that the City and Sacramento County should be the relevant agencies involved in this future planning effort.

Page 3.14-4. Grant Line Road from East Stockton Boulevard to Waterman Road is listed with a capacity of 18,000 which is the nominal capacity for a 2-lane roadway. In this section with the new railroad overcrossing in place, Grant Line Road is a 4-lane facility with a capacity of 40,000 vpd (High Access Control). There should be a correction of the capacity to 40,000 and a corresponding correction of the V/C ratio and LOS. The LOS should go from F to A.
Grant Line Road east of Waterman is correctly identified as a 2-lane roadway.

Page 5-21 Table 5-1. The Daily Capacity of Grant Line Road from Promenade Parkway to East Stockton Boulevard and then from East Stockton Boulevard to Waterman is shown as 18,000 – for a 2-lane roadway. The number of lanes for these sections are 6 and 4 respectively and the correct numbers should be 54,000 and 36,000 with corresponding changes to the V/C ratios and LOS's.

In addition to the comments above, the attached memorandum from Madrone Ecological Consulting, is being submitted for review and consideration.

Thank you for the opportunity to comment on this DEIR, should you have any questions about the comments contained herein, please contact us.

Sincerely,

Martin Feletto
Applicant

Gerry Kamilos
Applicant

MADRONE ECOLOGICAL CONSULTING

Memo

To: Martin Feletto, Feletto Development, Inc.

From: Ginger Fodge, Principal

Date: March 29, 2017

Subject: Comments on the Kammerer Road/Highway 99 SOIA Draft EIR

Per your request, I am providing comments on the Biological Resources chapter of the Draft EIR prepared for the Kammerer Road/Highway 99 SOIA. I recommend modification to two of the Mitigation Measures, as described below.

Mitigation Measure 3.4-6 for Giant Garter Snake:

The fourth bullet item (Page 3.4-41) begins, *"If wetlands, irrigation ditches, or other potential giant garter snake habitat would be filled, the aquatic habitats shall be dewatered at least 15 days before fill."* I recommend that this sentence be modified to simply state that potential giant garter snake habitat be dewatered at least 15 days before fill. This will eliminate unnecessary restrictions on the fill of aquatic features that are not potential giant garter snake habitat, such as vernal pools/depressional seasonal wetlands.

The fifth bullet item begins, *"If the project involves any ground-disturbing activities in or within 200 feet of waterways that may support giant garter snake, the project proponent/s shall obtain incidental take authorization from the USFWS and CDFW pursuant to ESA and CESA....."* This language is overly restrictive, as ground-disturbing activities within 200 feet of potential giant garter snake aquatic habitat would not necessarily result in take. Suggest that the language be modified to state that if take is expected to occur, incidental take authorization shall be obtained.

Mitigation Measure 3.4-7 for Loss of Waters of the U.S./State:

The fifth bullet item (Page 3.4-43) states, *"If applicable, project applicants shall obtain a USACE Section 404 Individual Permit and Central Valley RWQCB Section 401 water quality certification before any groundbreaking activity within 50 feet of waters or discharge of fill or dredge material into any water of the United States or state."* A Section 404 permit is required for the discharge of dredged or fill material into waters of the U.S. "Groundbreaking activity" within 50 feet of waters of the U.S. that does not result in the discharge of fill material into waters of the U.S. would not require a Section 404 permit/401 Certification. In addition, the placement of dredged or fill material into waters of the state that are not waters of the U.S. would not require a Section 404 permit/401 Certification. Discharges of fill material into non-federal waters of the State of California are currently subject to Waste Discharge Requirements (WDRs); however, the State Water Resources Control Board (SWRCB) is currently developing a state wetland/riparian policy that may

result in an alternative regulatory mechanism for authorizing the placement of fill into waters of the state. I recommend that the language in this section be modified to acknowledge that WDRs or other authorization as may be adopted by the SWRCB would be required for the fill of non-federal waters of the state.

I also recommend that "USACE Section 404 Individual Permit" be replaced by either "USACE Section 404 Permit" or "Department of the Army Permit," as other types of 404 permits besides Individual Permits (Nationwide Permit or Letter of Permission) may be applicable to projects within the plan area.

The eighth bullet item (Page 3.4-43) begins, *"Water quality certification pursuant to Section 401 of the CWA, or waste discharge requirements (for waters of the state), will be required before issuance of the record of decision and before issuance of a Section 404 permit."* The USACE would prepare a Record of Decision as part of permit processing for an action where an Environmental Impact Statement (EIS) was prepared, which I do not believe is occurring here. Suggest the language be modified to state that 401 Certification is required prior to issuance of an Individual Permit or Letter of Permission, and is required for a Nationwide Permit authorization to be valid (the USACE can verify that a project can be authorized by a Nationwide Permit and is denied without prejudice until the 401 Certification is issued).

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APR 03 2017
SACRAMENTO LOCAL AGENCY FORMATION COMMISSION

16

Kammerer Road/Highway 99 Sphere Of Influence Amendment Draft Environmental Impact Report Comment Card

March 10, 2017

Please write clearly and note that all comments received become a part of the public record. If you would like to provide your name or contact information, please do so:

Name: Grant Lynes Organization/Address: 8976 Mackey Rd, Elk Grove 95624

Email: _____

[ ] Please add me to the mailing list for this project.

I am strongly against the SOI Amendment on Kammerer Rd. for the following reasons: Loss of ag. land, loss of critical habitat for Swainson's hawk and the giant garter snake, which incidentally I have seen when we first moved to Sheldon in 1975, the further depletion of groundwater, as well as the increased demand for water supplies and facilities including more demand for waste water facilities; increased traffic flow/congestion. Approving this amendment would only further encourage development in ag. land in the county. Elk Grove already has 3000± Acres of INFILL which is undeveloped. Leapfrogging into ag land only exacerbates the problem. Returning to the issue of "so-called mitigation." Once habitat is 'paved-over,' it is forever lost for whatever organisms occupy that ecosystem. Buying land elsewhere does NOTHING for the original lost habitat, & likely it is not the same type, & if it is, there now is less habitat forever. I am fed up with developers ignoring EIR's & bulldozing riparian habitat and paying the fines to get their greedy way.

Grant Lynes

If you would prefer to take this card and provide comments later, please send them by **March 31, 2017** to:

Sacramento Local Agency Formation Commission

Mr. Don Lockhart, Assistant Executive Officer, AICP
1112 I Street, Suite 100
Sacramento, CA 95814-2836
Phone: (916) 874-2937
Fax: (916) 854-2939
E-mail: Don.Lockhart@SacLAFCo.org

You can review the Draft Environmental Impact Report (EIR) at LAFCo's website at: http://www.saclafco.org

17

Lockhart. Don

From: lynn wheat <wheat91@yahoo.com>
Sent: Thursday, March 30, 2017 6:27 PM
To: Lockhart. Don
Subject: DEIR Kammerer Road/Highway 99 Sphere of Influence Amendment LAFC#07-15
Attachments: maps propane tanks .pdf; Portland-Propane-Terminal-NWCSI-3rd-rev-ed-Feb-27-2015.pdf

Mr. Lockhart,

I mailed the letter below along with the attached documents on Monday March 27, 2017.

Please respond acknowledging receipt of this email.

Sincerely,

Lynn Wheat

March 27, 2017

Mr. Don Lockhart, Assistant Executive Director, AICP Sacramento Local Agency Formation Commission
1112 I St, Suite 100
Sacramento, Ca 95814-2836
Don.Lockhart@SacLAFCo.org

Dear Mr. Lockhart:

Thank you for the opportunity to submit comments on the DEIR for Kammerer Road/Highway 99 Sphere of Influence Amendment.
(LAFC#07-15).

Alternative 1: No-Project Alternative best addresses the concerns expressed by many commenters as identified in Section 4 Alternatives on page 4-2.

The DEIR relies upon the City of Elk Grove General Plan for traffic and circulation mitigation. The City of Elk Grove is in the process of updating their 2003 General Plan. As was done with the 2003 General Plan, the updated Traffic and Circulation proposes to mitigate traffic and circulation impacts with "Overriding Considerations". Overriding Considerations are not suitable mitigation for a Sphere of Influence expansion.

As reported in the 2015 National Citizen survey 65% of Elk Grove resident's main mode of transportation is the automobile. Elk Grove's General Plan allows for LOS D as acceptable through overriding considerations. Elk Grove's public transportation system (E-Tran) has found it necessary to cut back on services and eliminate some routes in an

effort to reduce the deficit and balance the budget. The commuter buses have demonstrated the highest ridership with less than half rating the system favorably. On numerous occasions, including a quote from the city's public works director on October 9, 2013 the city lacks the financial capacity to maintain its existing roadways and is experiencing an 8 million dollar deficit each year. According to the applicant's project description, as quoted in the July 31, 2015 Sacramento Business Journal, he intends to urbanize the proposed SOI area with homes and retail. The residential portion would have about 5,000 housing units, while the commercial would generate 20,000 jobs. Recognizing the mobility habits of the majority of Elk Grove residents and the budget constraints of the E-Tran service it is not realistic to assume that transit can serve as a mitigation.

The city of Elk Grove has long ignored the concerns expressed by residents, first responders, as well as Suburban Propane regarding increased density around the two 12 million gallon propane storage tanks.
The Suburban Propane Facility has been identified in many reports by the City of Elk Grove, Sacramento County, and Cosumnes Community Service District as a hazardous waste facility.
The City of Elk Grove, Cosumnes Community Service District (CSD), and Sacramento County collaborated on the updated Local Multi- Hazard Mitigation plan in September 2011. CSD does identify the propane tanks as local hazards in their section of the Plan. This document should be referenced in this DEIR.
In May of 2015, CSD hired the firm of City Gate Associates to complete an assessment of services entitled "Technical Report Standards of Cover and Headquarter Services". Volume 2 of the Technical Report Standards of Cover and Headquarter Services Assessment identified the propane tanks as a "high/special risk occupancy". This was defined in the report as: "Any facility, including without limitation, a structure, infrastructure, property, equipment or service, that if adversely affected during a hazard event may result in severe consequences to public health and safety or interrupt essential services and operations for the community at any time before, during and after the hazard". This report described the storage propane tanks as follows: "Finally the District, just off Highway 99, has the largest propane storage facility west of the Mississippi". This document should be referenced in this DEIS.
The Local Multi-Hazardous Mitigation Plan and the 2016 Elk Grove General Plan Safety Element do not address human caused risk such as terrorism.
Department of Homeland Security identified 64 of the highest risk urban areas in the country for possible terrorist attack. Sacramento/Elk Grove were identified in the second highest risk tier of 54 cities. As cited in the Elk Grove Citizen of December 2009 "The 2009-10 federal Homeland Security Appropriations Bill, signed in late October, included a $750,000 Federal Emergency Management Agency (FEMA) earmark for an emergency operations center in Elk Grove. The center would be a communications hub used by various agencies to coordinate the response to a large-scale disaster. The funding will also provide for video cameras that would provide views of traffic at major intersections and roadways leading into and out of the city to relieve traffic congestion as well as "locations determined to be 'sensitive' for the purposes of Homeland Security," according to a January Elk Grove staff report spelling out the city's request for the funding. "It will be a tremendous asset to have in the south Sacramento region in the case of a natural or man-made disaster," Hume said in the statement. In a statement issued by the city, Elk Grove Mayor Pat Hume said the center has been a priority for the Elk Grove City Council. The center will be the only one of its kind in south Sacramento County The city council discussed a desire for federal funding for an emergency operations center as early as 2005, city records show. Outside agencies such as the city and county of Sacramento, and the California and U.S. Departments of Homeland Security could also be called on to use the center, Frost said."
The DEIR does not reference any current research of propane storage tanks as it relates to risks associated with increased population density which have occurred since the city incorporated. The original County land use plan designated the surrounding area as agriculture and industrial The study does not address the cumulative effects of increased density and consequences of increased traffic congestion should an evacuation be necessary within the urban setting.
Elk Grove Zoning Code states: "the zoning code is adopted to protect and promote the public health, safety, convenience, prosperity and general welfare of residence and business in Elk Grove". In previous land use approvals and decisions the city council has ignored the voiced concerns of residents and Suburban Propane regarding increased densities surrounding the propane tanks and railroad. This is in direct conflict with the "safety" and general welfare of residents and businesses. (4 Maps Attached).

A February 2015 Report prepared by Northwest Citizen Science Initiative entitled "Portland Propane Terminal" discussed large propane storage facilities within urban areas. This report discussed and referenced the propane tanks located in Elk Grove. The report describes one credible scenario that if the 1999 terrorist plot not been stopped by the FBI, significant loss of life and property damage would have occurred in the immediate area. The report recommends an evacuation zone of at least 2.6 miles based on the collected data and ALOHA source point (page 18 of the attached report).

The DEIR fails to address the population risks associated with increased density within the recommended evacuation area of the propane tanks; fails to identify risk of unplanned terror events; and fails to describe an approved evacuation plan if one exists.

The DEIR in addressing the transport of Hazardous Material neglects to identify and address the nearby railroad tracks. The busy freight lines could be carrying potentially hazardous materials.
The DEIR is inadequate in addressing potential scenarios involving Suburban Propane and the railroad tracks and travel in Elk Grove.
The City of Roseville's 2016 Local Multi-Hazard Mitigation Plan broadly describes the risks associated with "human caused hazards" to include terrorism. The DEIR needs to take a proactive approach to risk assessment because Elk Grove's unique situation of having 24 million gallons of propane storage served by a rail line.

Sincerely,

Lynn Wheat
Wheat91@yahoo.com

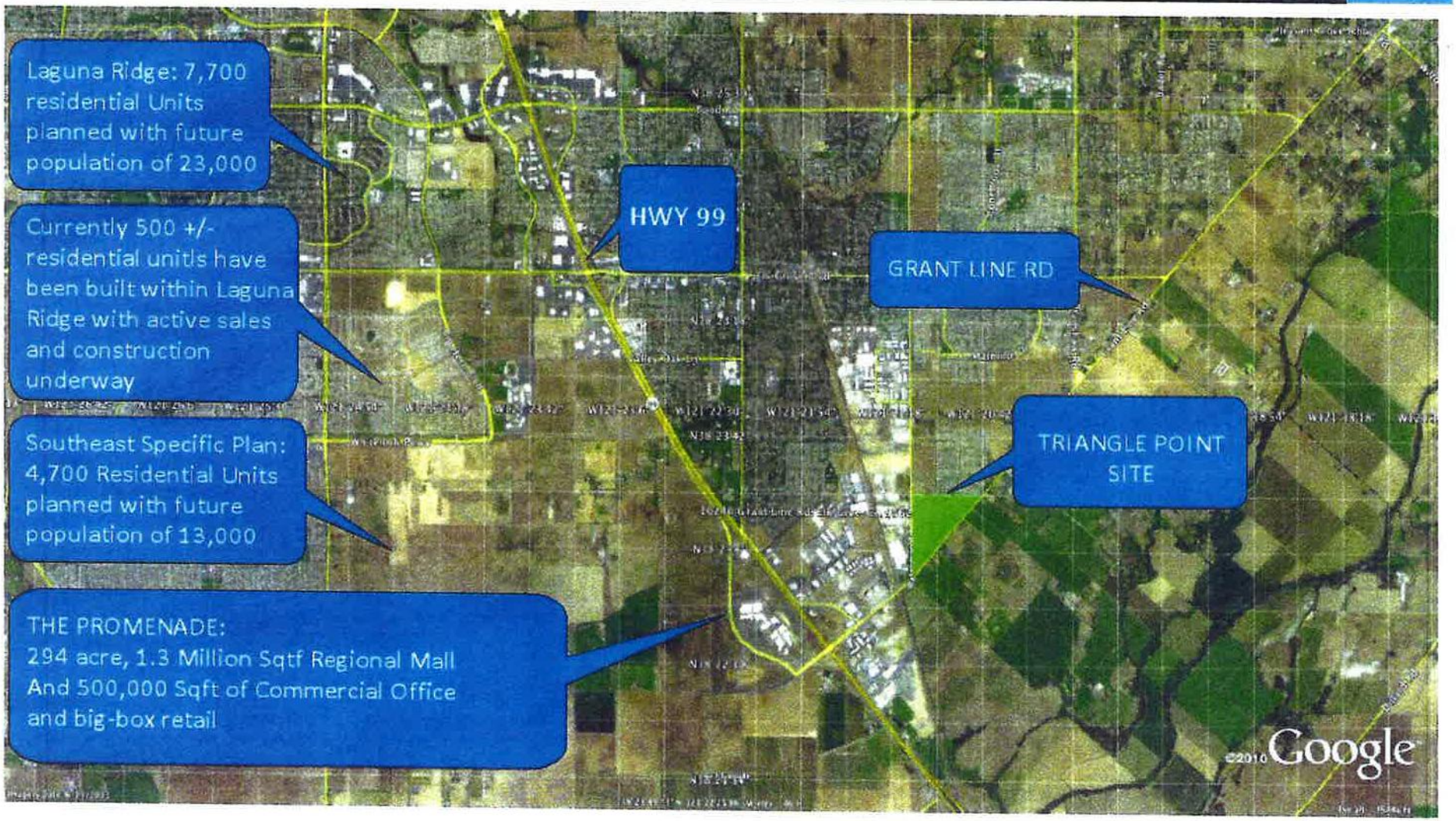
Google Maps

Imagery ©2016 Google, Map data ©2016 Google 500 ft

Health Net Federal Services

3/4 mile from tank to casino site

1/2 mile from soccer field to tank


Laguna Ridge: 7,700 residential Units planned with future population of 23,000
Currently 500 +/- residential units have been built within Laguna Ridge with active sales and construction underway
Southeast Specific Plan: 4,700 Residential Units planned with future population of 13,000
THE PROMENADE:
294 acre, 1.3 Million Sqtf Regional Mall
And 500,000 Sqft of Commercial Office and big-box retail
HWY 99
GRANT LINE RD
TRIANGLE POINT SITE
©2010 Google

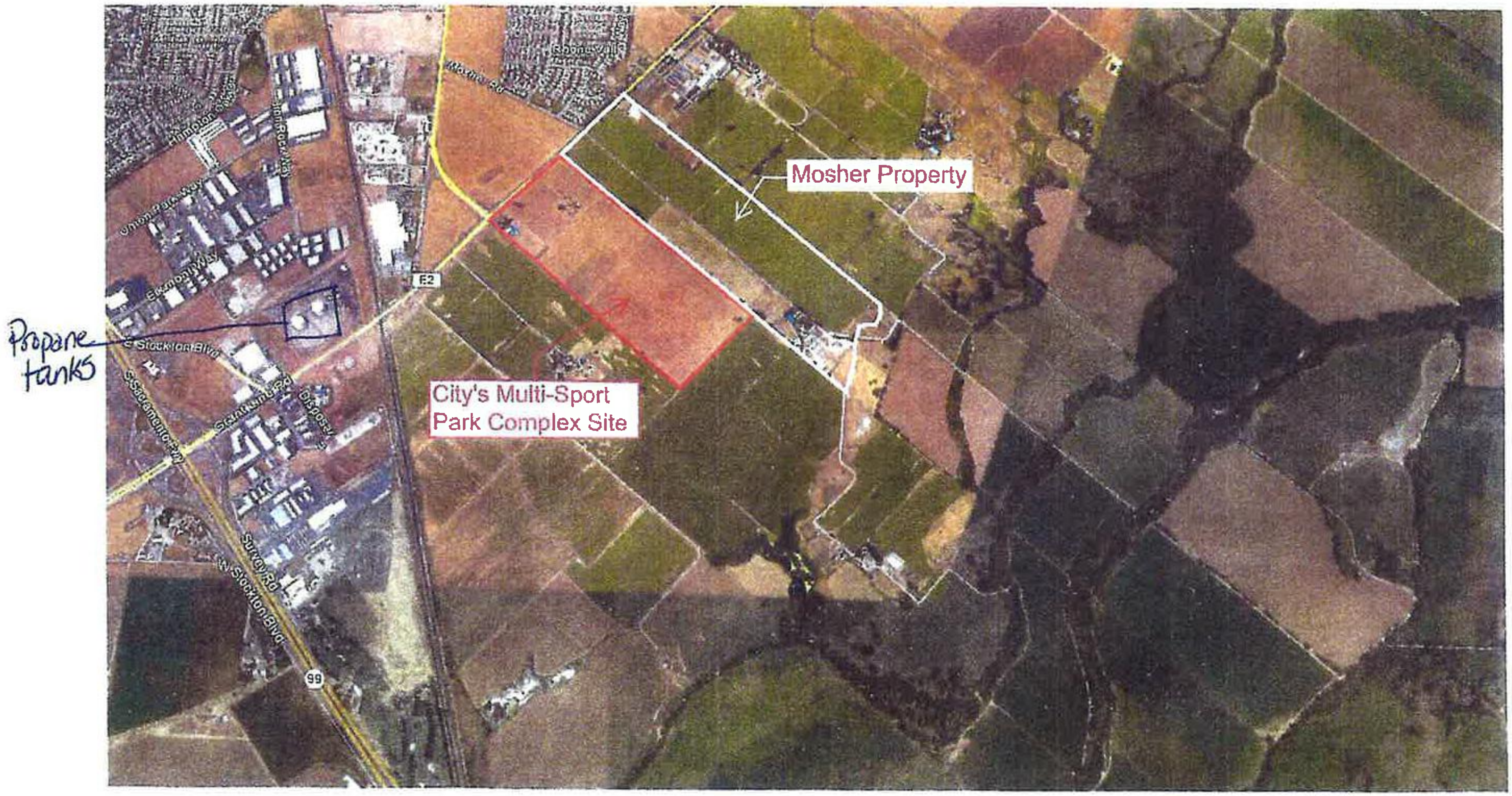
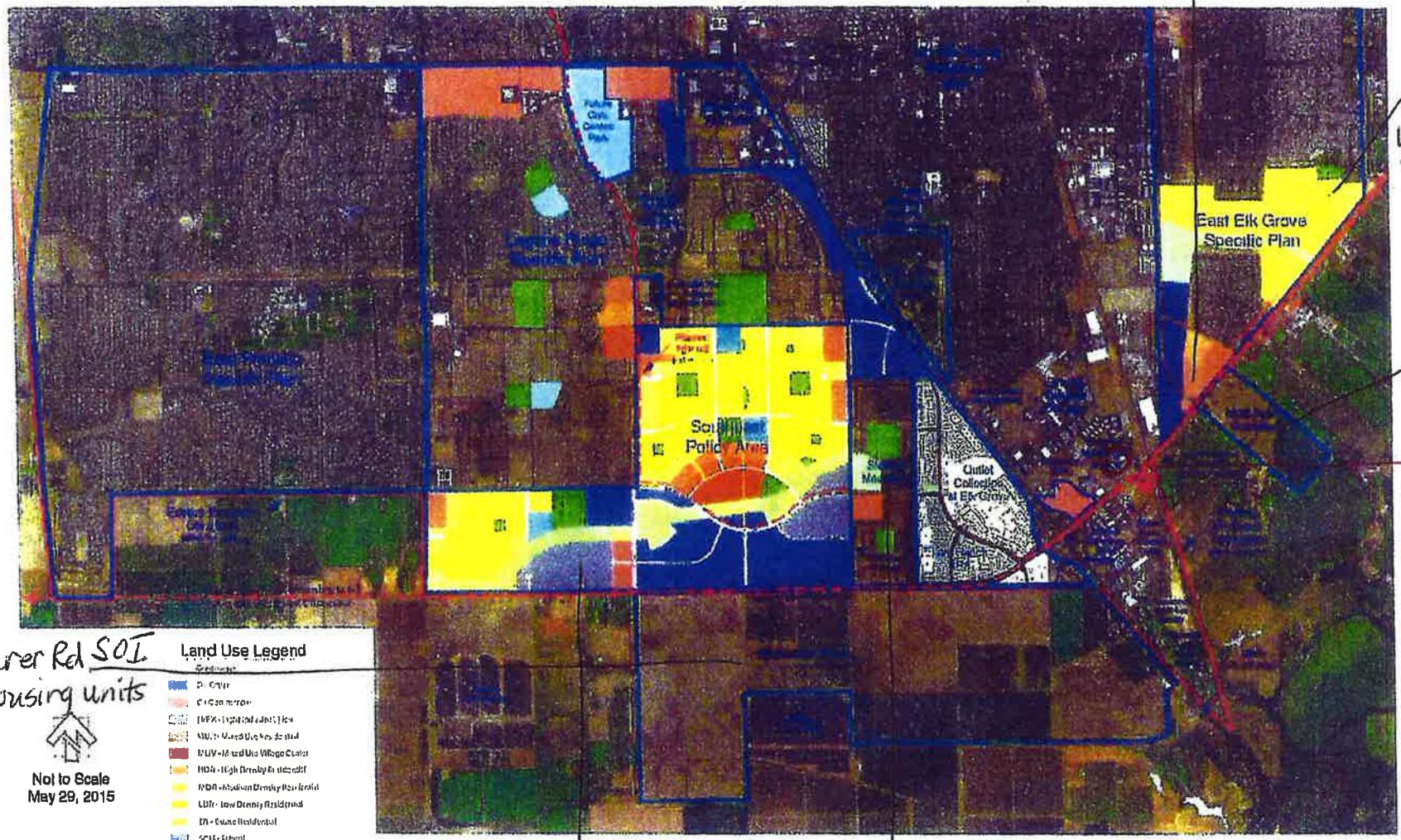

Mosher Property
City's Multi-Sport
Park Complex Site
Propane tanks
E2
99
Survey Rd
Stockton Blvd

Exhibit A

Triangle Area

Area-Wide Exhibit



8/22/14 In housing units from 4,300 - 4513

8/2014 City purchased

Propane Tanks

Kammerer Rd SOI
5,000 housing units

Land Use Legend

Not to Scale
May 29, 2015

PROJECT NAME: Kammerer/99 Sphere of Influence Amendment, City of Elk Grove

SEPA - 1200 Acres
4,790 residential

Sterling meadows 200 Acres
994 single family 200 multifamily

Portland Propane Terminal

Prepared By

Northwest Citizen Science Initiative*

(Hayden Island Group)

3rd Revised Edition, February 27, 2015

Abstract

In 2014, Pembina Pipeline Corporation (PPC) inked an agreement with the Port of Portland, Oregon, to build a West Coast shipping terminal to export Canadian propane. Why Portland? The simple answer: lower regulatory hurdles; if Canadian propane bound for overseas markets is transported by rail to US shipping terminals, it is largely free of export restrictions and Federal permits are not required. However, the project has already hit a snag due to the existence of a protected natural shoreline. The proposed terminal location is close to and equidistant from Portland's northern suburbs and downtown Vancouver, Washington.

Nationally, the planning and building of energy export terminals is happening at a rate that far-outstrips the ability of city councils and planning departments to keep up. Moreover, the PPC project is far from green... and according to the city, the terminal would increase Portland's CO_2 emissions by about 0.7%. The PPC terminal also offers few direct jobs, would close public waterways for days each month, and unnecessarily endanger the lives of a significant portion of the Portland and Vancouver populations.

In this paper we discuss ways in which propane transportation and storage on such a large scale is highly vulnerable and not inherently safe. Particularly in view of the expected 25+ year lifetime of the facility, we demonstrate that the PPC propane export terminal project presents an unacceptable risk, and high potential for serious impact on our entire Portland/Vancouver urban area. It also far exceeds any industrial factor originally envisioned for Portland's industrial zoning. We will comment on the environmental impact statement and environmental impact report (EIS/EIR) for a California LNG project that is similar in many ways to the PPC proposal, but which was canceled due to the improbability of mitigation of various environmental issues: everything from high density housing less than two miles away, to seismic liquefaction risk, and the pressurized storage of up to 6-million gallons of liquid propane on site. This EIS/EIR is representative of the level of planning detail that we believe should be required before large, high-impact projects get official go-ahead approval.

Simulation results obtained using well validated EPA/NOAA models for various accident and incident scenarios, whether manmade or due to natural causes, or whether due to deliberate acts of terrorism, are discussed. The results, which as presented in the form of easy-to-understand maps, demonstrate that Portland's industrial zoning is outdated, and that the thinking of our civic leaders who would support the construction of a large scale propane export terminal so close to where we Portlanders live our lives, is obsolete, and due to its role in expanding the use of fossil fuels, is at odds with Portland's widely promoted image as America's Greenest City.

We believe that our propane accident model results are of sufficient confidence to support a conclusion that a propane export terminal less than 10 miles beyond the Portland and Vancouver urban boundaries is contraindicated, and must be rejected if our cities are to live long and prosper.

We will also briefly consider some legal ramifications embedding a large propane export facility inside a busy urban area.

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*Northwest Citizen Science Initiative (NWCSI) is an association of civic leaders, scientists, engineers, legal scholars, and environmental researchers that promote thorough, valid, and reliable methods for the scientific study and enhancement of all of Nature's systems of livability and sustainability across the Pacific Northwest.

Table of Contents

Statement of Copyright:

Modeling Software Authority Statement

The ALOHA (Areal Locations of Hazardous Atmospheres) program used to produce the propane threat zone maps presented in this paper originated in the 1970s as a simple tool for modeling and estimating the dispersion of gas plumes in the atmosphere. Over the years since t hen, it has evolved into a tool used for a wide range of response, planning, and academic purposes. It is currently distributed to thousands of users in government and industry (in the USA it is distributed by the National Safety Council).

ALOHA, now at version 5.4.4, is maintained by the Hazardous Materials Division of National Oceanic and Atmospheric Administration (NOAA), and is widely used by Fire Departments and first responders for Emergency Chemical Release Modeling.[1] The following is a list of the credentials of the ALOHA project team members and external review team (as of February 2006) who added new features related to fire and explosions (pool fire, BLEVE —boiling liquid expanding vapor explosion—, flare or jet fire, flammable explosive vapor cloud):[2]

ALOHA Project Team Credentials:

Jerry Muhasky PhD (Mathematics). More than ten years' experience in design of large environmental software programs. Lead programmer for ALOHA version 5.

Bill Lehr PhD (Physics). Over twenty years' experience in software model development in the environmental field. Dr. Lehr was lead scientist for the source strength component of ALOHA, version 5.

Jon Reinsch. Experienced software developer and was lead programmer for the NOAA/EPA RMPCOMP project.

Gennady Kachook. Experienced programmer and has worked on several environmental modeling programs.

Debra Simecek-Beatty. Environmental modeling specialist and has worked on several large modeling projects.

Robert Jones PhD (Chemistry). Has been lead researcher on many ALOHA updates.

---

[1] Jones, Robert, et al. ALOHA (Areal Locations of Hazardous Atmospheres) 5.4.4 Technical Documentation. NOAA Technical Memorandum NOS OR&R 43. November 2013. http://response.restoration.noaa.gov/sites/default/files/ALOHA_Tech_Doc.pdf Retrieved Feb 20, 2015.

[2] "Technical documentation and software quality assurance for project-Eagle-ALOHA: A project to add fire and explosive capability to ALPHA." Feb 2006. Office of Repsponse and Restoration, Noational Oceanic and Atmospheric Administration (NOAA); Environmental Protection Agency (EPA); Pipelines and Hazardous Materials Safety Administration, Department of Transportation. http://www.deq.state.ok.us/LPDnew/saratitleiii/AlohaTrainingManuals/Final%20techdoc%20and%20QA.pdf Retrieved Feb 20, 2015.

ALOHA 5.0+ External Review Team:

James Belke	Environmental Protection Agency
Don Ermak	Lawrence Livermore National Laboratory
Martin Goodrich Baker	Engineering and Risk Consultants
Greg Jackson	University of Maryland
Tom Spicer	University of Arkansas
Doug Walton	National Institute of Science and Technology
Kin Wong	Department of Transportation

The following is a check list of relevant features of ALOHA (our emphasis): [3]

ALOHA 5.0+ Features:

- Quality Control. Significant effort has been put into checking user inputs for reasonableness and for providing guidance on how to select input correctly. Numerous warnings and help messages appear on the screen throughout the model.
- Useable accuracy. Even though approximations are necessary, every effort is made to ensure that the result is as accurate as possible. When compared to the results from sophisticated, specialized models or field measurements, ALOHA generally will deviate in a conservative direction, (i.e., predict higher concentrations and larger affected areas).
- Contingency planning. ALOHA 5.0 can be used for site characterization of industrial settings. Dimensions of permanent tanks, pipes, and other fixtures can be described and saved as text or ALOHA-runnable files. Different accident scenarios can then be played to derive worst-case possibilities.
- Neutral or heavy gas models. ALOHA 5.0 is able to model heavy gases and neutral gases.
- Pressurized and refrigerated tank releases. ALOHA 5.0 will model the emission of gas from pressurized tanks or refrigerated tanks with liquefied gases. Flashing (sudden change from liquid to gas inside the tank), choked flow (blocking of the gas in an exit nozzle), and pooling of the cryogenic liquid are considered.

ALOHA Special Training Requirements/Certification:

There are no special additional requirements or certification required to use the new fire and explosion option scenarios in ALOHA 5.0+. However, since some terminology peculiar to the new scenarios will be different from those involving the toxic gas modeling, it is recommended that anyone new to fire and explosives forecasting review the user documentation and become familiar with the example problems. In particular, the modeled hazards now include overpressure and thermal radiation risk, in addition to toxic chemical concentrations.

[3] Reynolds, R. Michael. "ALOHA (Areal Locations of Hazardous Atmospheres) 5.0 Theoretical Description." NOAA Technical Memorandum NOS ORCA-65 (August 1992). Pages 2-3. http://www.deq.state.ok.us/LPDnew/saratitleiii/AlohaTrainingManuals/ALOHA-Theoretical-Description.pdf Retrieved Feb 20, 2015.

Introduction

On Aug 28, 2014, Canadian fossil fuel company Pembina Pipeline Corporation (PPC) publicly announced that it had entered into an agreement with the Port of Portland, Oregon, for the building of a new West Coast propane export terminal.[4] The stated use of the terminal is to receive propane produced in the western provinces of Canada, and export it to international markets. The agreement includes the provision of a marine berth with rail access. The chosen location, adjacent to the Port of Portland's Terminal 6 facility, has already hit a snag due to the existence of a protected environmental zone along the river shoreline adjacent to the planned location of the propane terminal. This protection was created in 1989 to protect wildlife habitat, prevent erosion and preserve the Columbia's visual appeal.[5] The protection includes a ban on transporting hazardous materials through the zone except by rail or on designated roads; however PPC needs to use a pipeline to cross the zone.

PPC intends the export terminal project to "initially" develop a 37,000 barrel (1.16 million US gallons) per day capacity with an expected capital investment of US$500 million and with an anticipated in-service date of early 2018.[6] The site of the proposed terminal is just 2¾ miles equidistant from downtown Vancouver, WA; downtown St. Johns in Portland; and the Interstate 5 Bridge across the Columbia River. Within the 24 square miles defined by this perimeter, exist many other valuable assets including the Port of Portland's Rivergate Industrial District and marine terminals; the entire Port of Vancouver; the Smith and Bybee Wetlands Natural Area; the BNSF rail bridge across the Columbia River; West Hayden Island; the Hayden Island manufactured homes community and business center; the Portland suburbs of Cathedral Park, St Johns, and Portsmouth; several of Portland's floating home communities; the BNSF rail bridge across the Columbia River; and of particular mention, the under construction Columbia Waterfront project ("The Waterfront in Vancouver, Washington"), which is in the process of developing 32 acres of long neglected riverfront land to extend Vancouver's urban core back to its riverfront roots.

While the number of accidents and incidents involving propane and other volatile energy fuels being extracted, transported and stored has not increased generally, the *severity* of incidents and accidents seems to have increased. Part of the reason may be that oil companies are having trouble building additional pipelines, so they've taken to the road.[7] They've also taken to the rails, with trains that are longer (mile-long unit trains consisting of 100 tanker cars are now standard). Compared to two decades ago, storage tanks are larger, there are many more trains,

[4] http://www.pembina.com/media-centre/news-releases/news-details/?nid=135242. Retrieved Sep 02, 2014.
[5] House, Kelly. "Portland Propane Export Project Hits Environmental Snag." Retrieved from Oregon Live, Jan 05, 2015 http://www.oregonlive.com/environment/index.ssf/2014/12/portland_propane_export_projec.html
[6] PR Newswire. "Pembina Chooses Portland, Oregon for New West Coast Propane Export Terminal." http://www.prnewswire.com/news-releases/pembina-chooses-portland-oregon-for-new-west-coast-propane-export-terminal-273541321.html Retrieved Jan 05, 2015.
[7] Krauss, Clifford; Mouawad, Jad. The New York Times. "Accidents Surge as Oil Industry Takes the Train." http://www.nytimes.com/2014/01/26/business/energy-environment/accidents-surge-as-oil-industry-takes-the-train.html?_r=0 Retrieved Jan 07, 2015

and loads tend to be a lot more volatile (particularly with the propane-rich Bakken oil [8]). Other factors are profit pressure, many new (rookie) workers in an expanding workforce, and liability caps.

Therefore, if we factor in the humongous scale of the PPC proposal, together with PPC 's stated intention to expand the facility in the future to even larger volumes; it is difficult to see how, for Portland, a "bridge-fuel" like propane (much of which actually goes to manufacture propylene, rather than be burnt as a fuel) is a bridge to anywhere except perdition. This paper discusses ways in which energy transportation and storage on such a large scale in Portland is highly vulnerable in a number of ways. Particularly in view of the expected 25+ year lifetime of the facility, we will show that it presents an unacceptable risk, and that even a minor accidental fire in one part of a propane facility can escalate to larger fires, and explosions, in other parts of the facility (domino effect), with the potential for very dire consequences and impact on our entire Portland and Vancouver urban area. Indeed, the potential for harm to our area is great, and clearly exceeds any industrial factor originally envisioned for Portland's industrial zoning.

The propane threat zone estimates discussed in this paper have been computed with the best available information we currently have from the City of Portland, Port of Portland, and PPC, and in an ongoing absence of any meaningful analysis from any of those entities. We believe the analysis benchmark that PPC should be held to before any "overlay" of the beachfront environmental zone can be even considered by Portland's Bureau of Planning and Sustainability, is the 825-page "*Draft Environmental Impact Statement/Environmental Impact Report Volume 1-2*" dated Oct 2005, submitted by the Port of Long Beach, CA, in support of their (ultimately unsuccessful[9]) application for approval of *The Long Beach LNG Import Project*.[10] The Executive Summary and the contents pages from this monumental document are provided in Appendices C and D, respectively, as an example of what, in the US, is considered normal practice for energy terminal and pipeline projects. To give an idea of the depth of this document, the word "security" appears 335 times in its pages, yet, "mitigate" and "mitigation" only appear a total of 220 times. Some of the other words used frequently are: "terrorist" 217x; "terrorism" 13x; "threat" 73x; "quake" 184x; "seismic" 102x; "liquefaction" 37x. Interestingly, "propane" is mentioned 76 times, "explosion" 109x; "explod" 7x; a 20-foot high full-enclosure concrete wall is mentioned 16x; and boiling liquid vapor explosions are mentioned 19x (the site planned to use two 85-ft diameter pressurized spheres near the LNG tanks, to store "hot gas" impurity components

[8] Stern, Marcus; Jones, Sebastian. "Too Much Propane Could Be a Factor in Exploding Oil Trains." Bloomberg News, Mar 5, 2014. http://www.bloomberg.com/news/2014-03-05/too-much-propane-could-be-a-factor-in-exploding-oil-trains.html Retrieved Jan 03, 2015.

[9] Gary Polakovic "Long Beach energy project halted: The city cancels plans for a liquefied natural gas terminal. Many had voiced safety concerns." LA Times, Jan 23, 2007. http://articles.latimes.com/2007/jan/23/local/me-lng23 Retrieved Feb 24, 2015.

[10] http://www.energy.ca.gov/lng/documents/long_beach/LongBeachImport/Draft%20POLB%20EIR-EIS%20Vol.1-2%20Full%20Text%20document%20without%20figures.pdf Retrieved Feb 24, 2015.

propane and ethane from the LNG. "Sabotage" is mentioned 5x; "vapor cloud" 117x; and "vapor cloud explosion" 134x.

Propane, being a relatively new energy commodity (from the POV of high-volume terminal construction for export), whether for overseas energy production or chemical feed stock), largely had to follow the existing LNG safety regulations surrounding refrigerated storage tanks. [11] Indeed, as stated in the Long Beach document mentioned above, the hazards common to both propane and LNG refrigerated tanks are *torch fires* (gas and liquefied gas releases), *flash fires* (liquefied gas releases), *pool fires* (liquefied gas releases), *vapor cloud explosions* (gas and liquefied gas releases). The same document states that Propane is much more hazardous due to its propensity for *boiling liquid vapor explosions* (BLEVEs), when it is stored and/or transported in rail tankers, tanker trucks, bullet tanks, and other above-ground pressurized storage tanks.

The Need for Urban Resilience

For the cities of Portland and Vancouver to flourish and live long, we must make them as safe and as resilient as we know how. This means avoiding or eliminating the potential for serious disasters, especially man-made. Dr. Judith Rodin, in her major new book, *The Resilience Dividend*,[12] describes the concept of resiliency of cities, and not only how they can recover after a major catastrophic event, but also how to make decisions to avoid such events in the first place. Former investment banker Mark R. Tercek, now president and CEO of The Nature Conservancy, said of her work, "Judith Rodin details connections between human, environmental and economic systems, and offers a strategy to proactively address the threats they face." Tercek's book, co-authored with biologist Johnathan S. Adams, *Nature's Fortune*,[13] makes the case that investing in nature—the green infrastructure—makes for good business, and is the smartest investment we can make.

Our civic regulatory process already eliminates or mitigates a lot of potential for disaster through our building and zoning codes. Unfortunately zoning alone cannot create resiliency because it does not balance all aspects of our communities. Moreover, due to globalization, we are seeing a scale and rate of industrialization, particularly in the fossil fuels energy space, that puts an unprecedented amount of pressure on our city administrators and planners to follow the dollar. Moreover, we are asked to believe that the recent energy boom —which has been advancing with little regard to our environment—will enhance our lives, solve all of our problems, and produce thousands of family wage jobs (the truth, at least as far as the PPC propane terminal is concerned, is much closer to half a job per acre, and no more than 30 –40 direct jobs total). We are also asked to accept that any consequent loss of wild habitat and

[11] Not all propane import/export terminals use refrigerated storage, For example, the Cosmo Oil propane and LPG terminal that blew up on March 11, 2011 in Tokyo Bay, at that time used only pressurized storage.
[12] Dr. Judith Rodin chair of the Rockefeller Foundation, and author of *The Resilience Dividend: Being Strong in a World Where Things Go Wrong*. Public Affairs, New York, 2014.
[13] Tercek, Mark R.; Adams Jonathan S. *Nature's Fortune: How Business and Society Thrive By Investing in Nature*. Basic Books, New York, 2013.

recreational areas, loss of air and water quality due to heavy industrialization within our city boundary is a worthwhile tradeoff. Moreover, given the potential for a credible large scale propane accident or incident at the planned terminal, and given the high probability of a long and protracted recovery from such a calamity (were a recovery even possible), it cannot be offset by a promise of good housekeeping. The handling of humongous quantities of an extremely dangerous chemical amidst our two cities, Portland and Vancouver must, therefore, be avoided at all costs. Only by saying no to large-scale propane facilities in Portland can we avoid the unthinkable. History records that despite best efforts, accidents and incidents happen. Only by making Portland as resilient as we know how, can we reap what Dr. Judith Rodin calls "the resilience dividend."

Why Portland?

Why did Canadian company Pembina Pipeline choose Portland? Put simply, the answer is lower regulatory hurdles. Due primarily to the North American Free Trade Agreement (NAFTA), and quirky US export laws that were crafted in the days of oil shortages, we have a situation where imported Canadian natural gas liquids are largely free of export restrictions, a status shared by propane imported from Canada by train (but not by pipeline). [14] Although PPC denies that this is the reason, a partial acknowledgement came from Port of Portland Executive Director Bill Wyatt, who told Oregon Live[15] that propane is not regulated in the same way as natural gas or domestic oil. He added that although PPC must obtain building permits from the City of Portland, an air quality permit for the Oregon DEQ, and maybe also a water quality permit from the state, Federal permits are not required. However, he did say that Portland also has the advantage of competing railroad companies, not to mention the port's experience with export terminals.

Nationally, these types of projects are happening at a rate that far-outstrips the ability of city councils and planning commissions to keep up. At the same time, a burgeoning population is putting an unprecedented pressure on our urban boundaries, and also on the industrial zoning which, once upon a time, was thought to be a safe distance from current (and future) residential areas. These populations would be much better served by new clean-tech industries (e.g., computer software and film animation) that are much cleaner, safer, and more easily integrated into our modern city environment than traditional heavy industries. The bottom line is that large energy facilities (such as the one that PPC wants to build in Portland) have no place within or close to our cities!

That the PPC proposal has progressed so far as to identify a site for a large propane export facility so close to where people live and play is a complete mystery. The first responsibility of

[14] Irwin, Conway (Nov 20, 2013) "The US's Absurd Oil & Gas Export Laws." http://breakingenergy.com/2013/11/20/the-uss-absurd-oil-gas-export-laws/ Retrieved Jan 05, 2015.
[15] Francis, Mike. Oregon Live (Sept 02, 2014) "Pembina Pipeline's Portland propane project faces lower hurdles than other terminals." http://www.oregonlive.com/business/index.ssf/2014/09/pembina_pipelines_portland_pro.html Retrieved Jan 05, 2015.

government is the protection, health, and welfare of the population, not participation in an industry that is not as green as some would lead us to believe; [16] that would use vast amounts of our resources (8,000 MWh of electricity per month; which would increase Portland's CO_2 emissions by about 0.7%,[17] and which would raise a large question about awards recently received by the city[18] in recognition of its Climate Action Plan to reduce greenhouse gas emissions by 80 percent from 1990 levels by 2050 [19]), by PPC's own admission would offer very few direct jobs (30–40), would close public waterways used by the gas carrier ships for days each month, and unnecessarily endanger the lives of a significant proportion of the Portland and Vancouver population. Therefore we need to ask: Where are our city officials? To whom are they answering?

When information about PPC's desire to build a propane export terminal became public, Portlanders were surprised to hear that the city and the port had already been in secret negotiations with PPC for six months. An agreement that the Port of Portland would provide a space at Terminal 6 for construction of a facility that would include refrigerated storage for 30 million gallons of liquid propane was already in place! Amid claims from port personnel to the contrary, neither Audubon Society nor Sierra Club, nor Columbia Riverkeeper had received any communication from the port, or the city, informing them of the proposal. There was no public disclosure until after the agreement with PPC was already inked. At that point, PPC met with Hayden Island residents and hinted that the project was being fast tracked, also mentioning that if Portland did not want the terminal, PPC would withdraw and move on. [20] Cleary the project was being pushed through without the protective umbrella of public discussion and public process; a process more important than usual, given Portland's lack of experience with large propane projects (and PPC too, since this is also PPC's very first propane export terminal). Pembina intends to build two steel, double-walled tank-within-a-tank insulated tanks, totaling 33.6 million gallons. The design is probably similar to two the 12.5 million gallon double steel wall tanks built for Suburban Propane, in Elk Grove, CA. (figure 1). Unlike Elk Grove, Pembina tanks would be of unequal size (see artist's rendering in figure 2), the largest of which would be some 130 feet tall. The propane in such tanks is stored as a refrigerated liquid, cooled to approximately -44 ºF to allow storage at close to atmospheric pressure.

[16] Warrick, Joby; Washington Post. "Methane plume over western US illustrates climate cost of gas leaks." http://www.theguardian.com/environment/2015/jan/04/leaking-methane-gas-plume-us Retrieved Jan 07, 2015

[17] Bureau of Planning and Sustainability, City of Portland, Oregon. "Terminal 6 Environmental Overlay Zone Code Amendment and Environmental Overlay Zone Map Amendment – Part 1: Environmental Overlay Zone Code Amendment." *Proposed Draft*, Dec 12, 2014. Page 29. http://www.portlandoregon.gov/bps/article/512520 Retrieved Jan 07, 2015.

[18] House, Kelly; Oregon Live. "Portland wins presidential award for climate change work." http://www.oregonlive.com/portland/index.ssf/2014/12/portland_wins_presidential_awa.html Retrieved Jan 02, 2015 .

[19] City of Portland and Multnomah County: Climate Action Plan 2009 https://www.portlandoregon.gov/bps/49989 Retrieved Jan 07, 2015.

[20] Hayden Island Neighborhood Network (HINooN) meeting, Oct 09, 2014.

Figure 1: Suburban Propane's two 12-million gallon double steel wall refrigerated propane tanks, separated from four 60,000 gallon pressurized tanks (LH picture, top right), by an earthen berm. Elk Grove, CA

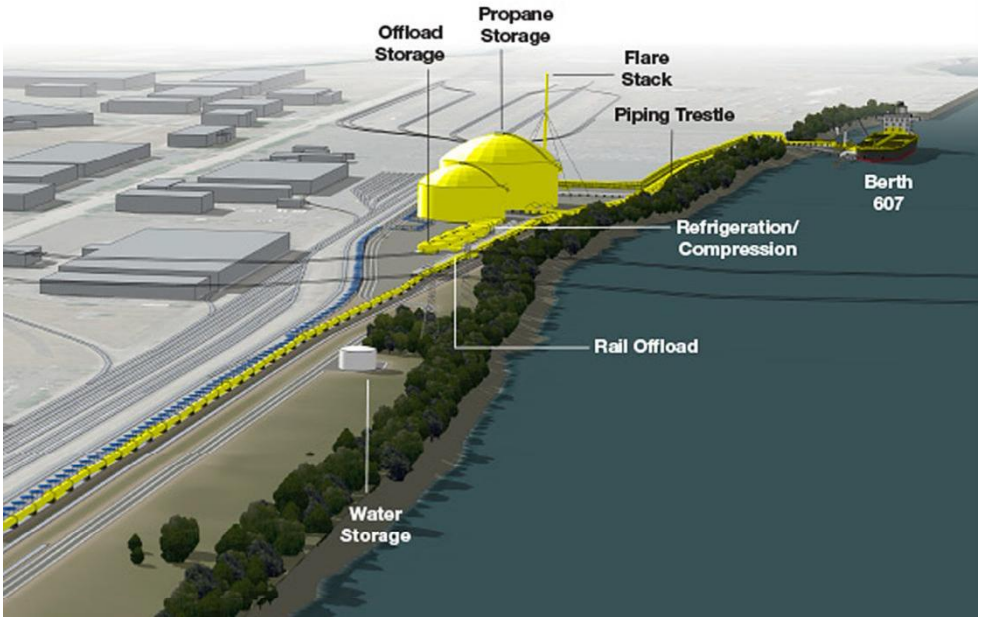

Figure 2: The two double-walled steel refrigerated storage tanks proposed by Pembina for Terminal 6, Portland, OR are of unequal size. The larger tank is 130 feet tall, dwarfing nearby trees. Shown, in front of the storage tanks, are eight 125,000 gallon pressurized bullet transfer tanks. Also shown, stretching diagonally across the picture is a 100 car unit propane train. Propane storage, plumbing, and transportation are shown with yellow high-lighting.

The Elk Grove tanks appear to be similar to a design that has been replicated many times already in the LNG industry, including the Everett LNG Terminal, the CMS Energy's Lake Charles Terminal; the El Paso Corporation's Elba Island LNG Terminal, near Savannah, GA (phase IIA tank 42 million US gallons, diameter 258 feet, height 123 feet; phase IIIB tank 48 million US gallons).[21]

[21] Quillen, Doug (ChevronTexaco Corp.) "LNG Safety Myths and Legends." Conference on Natural Gas Technology Investment in a Healthy U.S. Energy Future, May 14–15, 2002, Houston, TX. http://www.netl.doe.gov/publications/proceedings/02/ngt/quillen.pdf

To date there have been no accidents with very large refrigerated LNG or propane tanks, although there have been threats to their safety (see *A clear and Present Danger* section, below). Whether such tanks can remain accident free remains to be seen, especially since no large-scale accident tests have ever been conducted on them. Safety margins are therefore largely theoretical, relying on simulations, and accident data from much smaller tanks.

On the other hand, accidents involving *pressurized* liquid propane storage and transportation are in the news almost every week. One of the most cited propane transportation accidents occurred in Murdock, IL, Sep 02, 1983. However, even though it involved a much smaller quantity of propane than held by the large refrigerated tanks mentioned above, the magnitude of the event shocked those who witnessed it. All-told, this accident involved 60,000 gallons of propane, and 50,000 gallons of isobutane, in four tanker cars. Police evacuated a one-mile radius. Things became dangerous when a 30,000 gallon propane BLEVE (Boiling Liquid Expanding Vapor Explosion) was set off by a fire in a nearby 30,000 gallon ruptured propane tanker car. As a result of the BLEVE, a 6-ton tanker car fragment was rocketed ¾ mile (3,640 feet) from the explosion. Shocked at the power of the blast, a TV news crew retreated back 2½ miles. Later in the day, the flames triggered a second large BLEVE, this time in one of the isobutane tanks. [22]

Propane 101

Propane is considered by the energy industry to be a cost effective and statistically safe fuel. However, due to the large size of transportation units nowadays (a unit train consists of a hundred DOT tanker cars of 30,000 gallons each, for a total of three-million gallons), the increasingly large scale of storage facilities, and the business pressure on suppliers to get this material to market quickly at minimal cost, there have been many incidents and accidents.

Ambient-temperature storage of liquid propane at a propane terminal is typically achieved with a row of high-pressure bullet tanks. Formerly these were sized in the 30,000 to 60,000 gallon range, but nowadays 90,000 to 125,000 gallons is now becoming more common. Likewise, -44 ºF refrigerated bulk propane storage which several years ago was in the 12-million gallon ballpark, now ranges to 48-million US gallons per tank and more. As a result of these developments we cannot avoid the fact that propane storage and transfer facilities tend to house very significant amounts of chemical energy, some 4.6 quadrillion Joules (4.6 PJ), in the case of a 48-million gallons of refrigerated liquid propane.

When propane burns, its chemical energy is transformed into thermo-mechanical energy. A trade-off exists between the thermal and mechanical effects. How much we obtain of one or the other depends on factors such as the rapidity and degree of the conversion of the propane into a vapor, and the timing of the ignition event. The lower and upper explosive limits (known as LEL and UEL) define the flammability range, respectively 2.1% and 9.5% (by volume) for propane

[22] Brockhoff, Lars H. Institute for Systems Engineering and Informatics. EUR 14549 EN. "Collection of Transport Accidents. Involving Dangerous Goods." 1992

vapor. Before a fire or explosion can occur, three conditions must be met simultaneously: LEL < fuel < UEL (i.e., a fuel mixture that is not too lean or too rich); air (which supplies oxygen); and a source of ignition (such as a flame or a spark). When sufficient oxygen is present, propane burns completely to carbon dioxide and water. The chemical reaction is $C_3H_8 + 7O_2 = 3CO_2 + 4H_2O$ + heat. Unlike natural gas, propane is heavier than air (around 1.5 times as dense). A poorly mixed cloud of vapor in air may burn as a ***deflagration*****,** at a relatively slow speed governed by the speed of diffusion of propane molecules through the cloud; whereas in a finely mixed vapor cloud we may get a ***detonation***, which propagates through the cloud driven by a pressure wave that travels at the speed of sound. ***Vapor Cloud Explosions*** (VCE), whether due to deflagration, or to detonation, can generate ***overpressure waves*** that have sharp onsets as well as significant overpressures.

Depending on circumstances, other "classical" types of fires are possible, such as flash fires (a non-explosive combustion of a vapor cloud), and/or jet fires (with any remaining puddles of liquid propane burning as a relatively slow-moving pool fire). Depending on circumstances, there is the potential for the generation of fireballs that are intensely luminous in the infrared range, together with the ejection of showers of "missiles" consisting of sharp tank wall fragments and other debris. This is the Boiling Liquid Expanding Vapor Explosion, or BLEVE, which in the context of propane is applicable mainly to pressurized storage tanks. Introduced in the previous section, BLEVEs generally start when a fire heats the outer wall of the tank. If the heating occurs faster than the relief valve can vent, the pressure inside the tank rises until through the combined effects of pressure and heat-caused weakening of the metal tank wall, the tank ruptures, typically with great force. The heated contents flash-boils, instantly mixes with the air, and the resulting vapor cloud quickly ignites to create a fireball. The bursting of the tank typically ejects fragments at high velocity (10–200 m/s) in all directions; 99% of the fragments landing within a radius of 30x the fireball radius. Frequently, a major part of the tank will rocket to even larger distances, accelerated by the rapid burning of any remaining contents. Typically 100% of the propane is quickly consumed in the fireball, which due to its high luminosity at infrared wavelengths can cause significant radiant heat damage at surprisingly large distances. Another effect of the propane BLEVE is a transient spike in local atmospheric pressure, which spreads out radially from the source of ignition. The magnitude of such an overpressure wave depends on the ignition source and its strength (whether spark, flame, or detonation). If the wave is strong enough to cause injuries or property damage, it is known as a blast wave.

Before leaving this comparison of combustion scenarios, it is worth emphasizing that BLEVEs are generally not applicable to refrigerated propane storage, due to the amount of heat it would take to boil the frigid liquid, by which time it would likely all have vented. Having said that, we need to point out that there are mechanisms involving large-scale mechanical disruption of the walls of a refrigerated storage tank, which can relatively quickly atomize a significant fraction of the liquid into a vapor mixed with air, from whence various VCE scenarios can be considered.

It is useful as well as informative, to define threat zones as contours (often given a color) of decreasing severity with distance from a deflagration or explosion. We define a zone as an area over which a given type of accident or incident can produce some similar level of undesirable consequences. For example, an orange *thermal threat zone* is defined as the area between two radiant flux contours where second-degree burns occur in less than 60 seconds (such as may occur if the infrared radiant flux exceeds 5 kW/m^2). A red *blast threat zone* is defined likewise as the area between two overpressure contours, where there is significant risk of ear and lung damage or the collapse of unreinforced buildings (such as may be caused by an 8 psi overpressure blast wave). A *shrapnel threat zone* may be defined as the area that captures 50% or 99% of the fragments from a tank explosion, in other words the area over which there is significant risk of injuries caused by flying debris or rocketing tank fragments accelerated by the blast (such as often occur in a BLEVE). In the propane BLEVEs (with ignition) discussed in this paper, at a radial distance approximately equal to the orange thermal threat zone (5 kW/m^2), the overpressure may be as high as 8.0 psi. Proceeding outwards towards lower threat, 3.5 psi is enough to rupture lungs and cause serious injury. Further out still, 1.0 psi is enough to rupture eardrums; 0.7 psi is enough to cause glass to shatter. Even a relatively small sudden overpressure (0.1 psi) may be enough to cause the breakage of small windows under strain. [23]

Due to the high flammability of propane vapor (i.e., propane in the gaseous state mixed with air in a concentration range between the LEL and UEL), care must be exercised in its handling. Of the two different approaches to propane storage, pressurized storage at ambient temperature is the cheapest although the most dangerous. Refrigerated storage, which uses a temperature of -44 ºF at essentially atmospheric pressure, is the safest. However, all refrigerated propane facilities use high pressure bullet storage tanks for propane transfers to or from other high pressure storage or transportation tanks, and PPC's planned Portland propane terminal is no exception. PPC plans to have eight 125,000-gallon high-pressure bullet tanks, with a total storage capacity of one million gallons of propane. Inexplicably, such tanks are typically installed in close proximity to one-another. At Elk Grove they are spaced, broadside, about 10 feet apart). PPC's widely publicized site layout map does not significantly deviate from this practice. As will be discussed, these relatively small high pressure tanks are the Achilles' heel of propane facilities, especially wherever security is lax, representing in PPC's case a credible danger, not only to surrounding areas as far away as the major residential part of St Johns, the Port of Portland's Rivergate area, the Port of Vancouver, the 240 MW natural gas fired River Road Generating Plant owned by Clark Public Utilities, the Smith and Bybee Wetlands Natural Area, West Hayden Island, and the BNSF rail bridge across the Columbia River, but also to the big refrigerated tank (or tanks) that PPC plans to build little more than a stone's throw from the bullet tanks.

[23]Renjith, V. R., 2010, PhD thesis. "Consequence Modelling, Vulnerability Assessment, and Fuzzy Fault Tree Analysis of Hazardous Storages in an Industrial Area." Cochin University of Science and Technology, Kochi, Kerala, India. Chapter 3, Hazard Consequence Modeling. http://dspace.cusat.ac.in/jspui/bitstream/123456789/5059/1/Consequence%20modelling%20vulnerability%20assessment%20and%20fuzzy%20fault%20tree.pdf Retrieved Feb 09, 2015

A Clear and Present Danger

The safety score for large refrigerated propane tanks would still be in the "excellent," range, had it not been for one terrorist incident. If the terrorists had succeeded, the score would have been "fail." As a result of the FBI's success in neutralizing the plot, the score is "needs improvement." Besides terrorist plots (who according to several studies, have at their disposal high explosives and trucks to carry them, commercial aircraft, drones, and shoulder-launched rocket-propelled grenades), there are a lot of other potential dangers for such tanks, ranging from earthquake risks (shaking and/or liquefaction leading to wall and roof collapse), to design errors, to, to accidents in other parts of propane facilities that could spread and multiply domino-fashion, to the big tank. Large tanks are only as safe as the integrity of their walls. Everything on the above list is capable of creating a fast-acting high-impact kinetic energy event which, at worst, could collapse the tank expelling its entire contents as droplets that evaporate into vapor cloud that detonates, or at best only causes a tank wall breech and consequent slower loss of contents that results in a very large pool fire, or some combination of both scenarios. The heat energy required to vaporize the refrigerated propane is a negligible fraction of the heat released when the first gallon of propane vaporizes and catches fire, so the process is completely self-driving.

Whatever causes an initial BLEVE at a propane facility, whether it be in a pressurized bullet transfer tank, or an incoming DOT rail tanker car, there is every possibility that it could quickly spread, domino fashion, from one pressurized tank to another, especially if they are closely spaced (in PPC's plan it could spread over a total of eight 125,000 gallon pressurized transfer tanks, a number which expands hugely if all one hundred 30,000 gallon tanker cars of an incoming unit train became involved). The resulting boiling liquid expanding vapor explosions (BLEVEs) could soon release enough thermo-mechanical energy in the form of radiant heat and overpressure blast damage, also generating a shrapnel-field of high-velocity missile-like tank fragments. This could not only quickly disrupt and overwhelm any remaining bullet tanks, but do so with enough force to disrupt the walls of the nearby much larger refrigerated storage tanks, from whence it is likely that the propane liquid would partly spill, and partly disperse to mix with the air as a vapor cloud, which gives us the possibilities of a fire or a detonation. If a detonation, the result would be what is known as a vapor cloud explosion (VCE). Several very serious chain reaction incidents similar to this have been reported in the past few years (check YouTube). Since it is not possible to protect large propane storage facilities from every conceivable catastrophe, the PPC facility planned for the Port of Portland's Terminal-6, would effectively plant the potential for a hugely destructive explosion near the OR/WA state line, within the Portland/Vancouver urban area.

The tank sizes at smaller propane facilities (which typically store propane as a liquid at ambient temperature and a pressure of 250 psi) use pressurized bullet tanks in the range 30,000 to 125,000 gallons per tank. Larger propane facilities also include refrigerated tanks (typically 12-million to 48-million gallons) that store liquid propane at -44 ºF, essentially at atmospheric

pressure. As recently revealed by Portland's Bureau of Planning and Sustainability,[24] the propane facility that PPC is planning to build in Portland consists of two large storage tanks with a total capacity of 33.6-million gallons of liquid propane refrigerated to -44 ºF, together with eight 125,000 gallon pressurized transfer tanks. This facility has the ability to process one incoming unit train (100 tanker cars each holding 30,000 gallons) every two days. From when propane arrives by rail to when it leaves by ship, there are at least four risk-prone transfers of propane from one type of container to another:

30,000 gallon pressurized liquid propane rail tanker cars
↓
Eight 125,000 gallon pressurized liquid propane transfer tanks
↓
Refrigeration unit
↓
Refrigerated liquid propane storage, 33.6-million gallons at -44 ºF
↓
Refrigerated liquid propane storage at -44 ºF
onboard a gas carrier ship for overseas markets.

However, the risks extend well beyond these necessary transfers; the storage tanks themselves also pose a risk. Either way, most of the risk ultimately comes down to the flammability of propane as a vapor mixed with air (vapor cloud), and its high energy content. Whether due to accident, or deliberate criminal act, or through natural causes, the principal chemical mechanisms are the same. Moreover, while propane may be more difficult to ignite than other fuels, once it starts burning it is difficult to stop. Irrespective of whether a vapor cloud originates as the result of a BLEVE (typically from a fire-heated pressurized tank in which the relief valve is insufficient or faulty), or whether it is the result of a sudden mechanical disruption of a (typically larger) -44 ºF refrigerated tank, the end result is the same, a vapor cloud explosion or VCE.

The heat radiation and overpressure blast wave yield of propane VCEs depends a lot on details such as how much propane is available to feed it, how much pressure is built up before a tank rupture (BLEVE), or the hydrodynamic details of impacts and the high-explosive-driven shock waves (deliberate criminal acts), in other words on how fast the liquid disperses into droplets, and how much these droplets vaporize and mix with the air before ignition from flame or spark. Large refrigerated tanks are more difficult to explode, but propane facilities tend to also have large numbers of pressurized storage tanks and rail tanker cars in close proximity to the refrigerated tank, creating the potential for scenarios where an accident or incident with one of

[24] Bureau of Planning and Sustainability, City of Portland, Oregon. "Terminal 6 Environmental Overlay Zone Code Amendment and Environmental Overlay Zone Map Amendment – Part 1: Environmental Overlay Zone Code Amendment." *Proposed Draft*, December 12, 2014. http://www.portlandoregon.gov/bps/article/512520 Retrieved Jan 07, 2015.

these smaller tanks can spread domino fashion, multiplying the damage through heat, and showers of missile-like, razor sharp flying tank fragments. Compared to an overpressure BLEVE of a smaller pressurized tank, the consequences of disruption of the typically nearby typically much larger refrigerated tank is potentially much more dire, even if only part of the large tank contents is ejected. Reports of suitable methods to do this abound in news reports of terrorism, so it does not take much imagination to extrapolate to the use of an aircraft collision with the tank, or the use of a large quantity of high explosives (e.g., a car or truck bomb driven into the facility and parked close to a tank), or rocket-propelled munitions such as shoulder launched armor-piercing grenades. The terrorism threat is a clear and present danger, and cannot be overlooked, as exemplified by the plot, foiled by the FBI in December 1999, of two militiamen who conspired to blow up the two 12-million gallon refrigerated propane tanks at the Suburban Propane facility in Elk Grove, near Sacramento, California. One of the conspirators was knowledgeable in bomb making, and a large amount of explosives were found in his possession.

Company officials downplayed the matter, saying that the type of threat envisioned by the militiamen could not detonate the refrigerated propane tanks because they are non-pressurized. The company surmised that the liquid propane would pool within the protective dirt berms, where it could, they said, only ignite after it had considerable time to warm up, vaporize, and mix with the air. "You could have one hell of a fire, but it would all be contained right there within the berms," said John Fletcher, outside legal counsel for Suburban Propane.

The Suburban company view of the incident loses credibility when we factor in that the facility also has four 60,000 gallon pressurized propane tanks, which may well have been the primary target, and that the militiamen's intention may have been to focus on destroying these, thereby releasing enough blast energy, heat radiation and flying tank fragments to trigger the rapid destruction of the secondary target, the large refrigerated tanks located in clear line of sight just 220 feet away. In our measured opinion, the consequences of a truck bomb driven through the front gate and exploding next to the neat array of pressurized tanks (see figure 2), would have been to create an increasing cascade of BLEVE type explosions, domino style, which through the combined effects of blast, heat, and bullet tank fragmentation would have destroyed the earthen berm and have initiated the destruction of the large tanks, with a significant proportion of the propane mixing with the air to create a large vapor cloud explosion and/or fireball, potentially damaging a radius up to 4½ as large as that due to the smaller pressurized tanks alone. Figure 3 shows a map of the Elk Grove site overlaid with data from an ALOHA simulation (see appendix A) of a BLEVE of just one of the 60,000 gallon pressurized storage tanks. The resulting modeled fireball engulfs almost the entire facility. There are three radiant-heat threat zones, red, orange, and yellow, with red the most serious.

Figure 3: A Google Earth overlay showing one credible scenario had the terrorist plot that targeted the Suburban Propane facility in Elk Grove, California, not been neutralized by the FBI in 1999. It shows thermal threat zones modeled for a boiling liquid expanding vapor explosion in just one of four 60,000 gallon pressurized propane bullet tanks at the facility. The resulting fireball would have engulfed most of the facility, and the thermal radiation effects would have extended ¾ of a mile. If you look to the RH edge of the fireball, below the "e" in "Source," one of the facility's two 12-million gallon refrigerated propane storage tanks can be seen on the RH edge of the fireball which would have engulfed most of the site. In a scenario that caused all four bullet tanks to explode nearly simultaneously, the model predicts that the threat zones would extend up to 50% further. Not shown in this figure are the additional effects of overpressure blast wave, and the missile ejection of shrapnel (tank fragments and other debris), which could credibly puncture the large tanks, leading to potentially even larger consequences, which at the very least could cause a large pool fire and deflagration extending well beyond the boundary of the facility. Ironically, the Elk Grove fire station is within the yellow threat zone (the red dot toward the top RH corner of this map). (Fireball diameter 308 yards; Red zone radius: ⅜ mile [10 kW/m^2] potentially lethal in less than 60 seconds; Orange zone radius: ½ mile [5 kW/m^2] 2nd-degree burns in less than 60 seconds; Yellow zone radius: ⅞ mile [2 kW/m^2] pain in less than 60 seconds)

The other effects of this BLEVE, the potential destructive power of high-speed hazardous tank fragments, and the blast force from, are not modeled by ALOHA. However, there is plenty of data collected from many such accidents to justify our expectation that these effects would be considerable, especially the fragments, and especially at close range. Indeed, due to the danger of showers of these flying fragments, many authorities now recommend an evacuation zone of 30- to 40-times the radius of a BLEVE fireball, which is at least 2.6 miles in our Elk Grove example. In other words, at least three times the radius of the yellow threat zone shown in figure 3.

Not unexpectedly, the credible viewpoint concerning the foiled terrorist plot at the Elk Grove Suburban Propane facility came from the Elk Grove Fire Department and Lawrence Livermore Laboratory scientists, who in opposition to the official company position on the matter, said that destruction and fires could have occurred at considerable distances from the plant. Indeed, Fire Chief Mark Meaker of the Elk Grove Fire Department said, "Our experts have determined there would have been significant off-site consequences."[25] He added that a major explosion and fire likely would have blown the earthen berms out and led to a vapor cloud and/or pool fire that could affect nearby residents, schools and businesses, and depending on the size of the blast, residents could be endangered by heat from a large fireball, flying projectiles "like portions of tank shells flying through the air," and a pressure wave that would emanate from the blast. "In close, there would be a high level of destruction," said Meaker, adding that office buildings and warehouses stand within 200 yards (182 meters) of the plant, with the nearest residential neighborhood, just 0.6 of a mile (.96 km) from the plant. At any given time, Meaker estimated 2,000 people are within a mile of the plant.[26]

In particular, the director of the Chemical-Biological National Security Program at Lawrence Livermore Laboratory, one of the world's foremost experts on explosions, said that,

> … if the two accused men had been successful in the terrorist plot, a "gigantic fireball" would have been created, causing injuries and damage up to 1.2 miles away. This would, he said, have caused fatal injuries to roughly 50 percent of the people in the blast radius, while many others outside would be severely injured by debris. There would have been fatalities and injuries up to 0.8 miles from the explosion. Then, he said, the initial blast would likely have caused the two smaller on-site pressurized propane loading tanks to explode, rupturing the formaldehyde storage tank at another nearby industrial facility. This would have caused, he said, a toxic cloud that would travel for almost a mile with the prevailing wind, causing life-threatening symptoms to anyone encountering it.[27]

What makes the Elk Grove incident and the testimonies of the fire chief and scientists particularly credible is that after the arrests of the terrorists, company officials added numerous security devices to protect the facility, including a trench designed to stop a car bomb attack at the perimeter.

According to statistics released by the FBI, between 1991 and 2001, 74 terrorist incidents were recorded in the United States, while during this same time frame, an additional 62 terrorist acts being plotted in the United States were prevented by U.S. law enforcement.[28] Elk Grove was

[25] Industrial Fire World, "Targets of Opportunity." http://www.fireworld.com/Archives/tabid/93/articleType/ArticleView/articleId/86841/Targets-of-Opportunity.aspx Retrieved Jan 03, 2015.
[26] CNN Dec 04, 1999, "Police: California men planned to bomb propane tanks." http://www.cnn.com/1999/US/12/04/bomb.plot.02/index.html Retrieved Jan 03, 2015
[27] Jaffe, Doug, "Elk Grove project ignores nearby propane risk." Sacramento Business Journal, Dec 08, 2001. http://www.bizjournals.com/sacramento/stories/2001/12/10/editorial4.html?page=all Accessed Jan 02, 2015.
[28] http://www.fbi.gov/stats-services/publications/terror/terrorism-2000-2001 Accessed Jan 02, 2015.

one of those that were prevented, and the only one (so far) to target a propane energy storage facility. Elk Grove was not the only prevented terror plot that planned to use explosives. There was also the March 2000 plot to blow up the Federal building in Houston, TX, and in December 1999 law enforcement thwarted a plot to blow up power plants in Florida and Georgia. Of the 74 successful terrorist incidents listed for these years, 4 used hijacked U.S. commercial aircraft as missiles, a majority used arson, and there were several incendiary attacks. FBI data for all terrorism 1980–2001 (including incidents, suspected incidents and prevented incidents) shows 324 bombings (67%), 33 arson (7%), 19 sabotage/malicious destruction (4%), 6 WMD (1%), 6 hijackings/aircraft attacks (1%), 2 rocket attacks (0.4%). Further terrorist incidents have occurred in the United States since September 11, 2001, and although nothing before or since 9/11 compares in scale, lives lost, or scope, the thwarted terrorist plot at Elk Grove can remind us that as a result of the energy boom and the building of many large propane and LNG storage facilities around the country, such tanks pose a "clear and present danger" to public safety.

Potential Hazard 1: Bullet Tanks & Domino-Effect BLEVE Cascades

Pressurized, ambient-temperature liquid propane storage tanks are particularly susceptible to a process called a Boiling Liquid Expanding Vapor Explosion or BLEVE, one of the most severe accidents that can occur in the fuel process industry or in the transportation of hazardous materials.[29] Such tanks come in all sizes from fractions of a gallon to 125,000 gallons, with 30,000 gallons being the most common for transportation by rail and road. Although such tanks are quite robust against normal wear and tear, if a tank becomes engulfed by a fire, which typically over a few hours, raises the temperature of the tank and its contents to the point where the relief valve can no longer cope (earlier if the valve is faulty), the internal pressure in the tank will rise until the tank ruptures, causing instant boiling of the superheated liquid contents, which quickly and turbulently mix with outside air, forming a rapidly expanding vapor cloud. Indeed, since pressurized tanks store propane at temperatures well above its atmospheric boiling point of -43.7 ºF, any event that causes a serious breach of the tank wall, can trigger a BLEVE.

If a suitable source of ignition is present (the initial fire will do admirably), moments later the cloud of vapor will experience ignition, adding the thermo-mechanical chemical energy of a Vapor Cloud Explosion, or VCE, to the mechanical energy of the original BLEVE tank burst. This gives rise to the visually most striking feature of typical propane BLEVE, the fireball. A fireball will quickly expand in a roughly spherical shape until all of the propane that burst out of the tank is consumed by it. The point where the fireball stops expanding, its volume is proportional to the mass of propane burnt, and the radius is proportional to its cube root. Propane fireballs have extremely high peak luminosity at infrared wavelengths. These effects are

[29] Casal, J., et al. "Modeling and Understanding BLEVEs" Ch. 22 in Petrochemistry Handbook. http://aevnmont.free.fr/SACH-BOOKS/Petrochemistry/Handbook%20of%20Hazardous%20Materials%20Spills%20Technology/Part%20V.%20Spill%20Modeling/22.%20Modeling%20and%20Understanding%20BLEVEs.pdf Retrieved Jan 01,2015

amenable to mathematical modeling, allowing the quantification of thermal radiation threat zones:

Thermal Threat Zones[24]

Red	(> 10.0 kW/m^2)	=	Potentially lethal within 60 sec.
Orange	(> 5.0 kW/m^2,)	=	Second-degree burns within 60 sec.
Yellow	(> 2.0 kW/m^2)	=	Pain within 60 seconds.

Apart from heat damage due to heat radiation from the fireball, BLEVEs often produce an overpressure, which if it is strong enough to causes injury or damage to structures, is termed a blast wave or shock wave:

Overpressure and Blast Threat Zones[30]

Red	(> 8.0 psi)	=	Destruction of buildings. High risk of lethal injury. Eardrum rupture in 60% of subjects.
Orange	(>3.5 psi)	=	Damage to buildings. Serious injury likely. Rupture of lungs. Rupture of eardrums in 12% of subjects.
Yellow	(> 1.0 psi)	=	Eardrum rupture in 1% of subjects. Glass shatters.

BLEVEs typically also project flying tank fragments at high velocity in all directions. There are many propane industry studies which show that a fireball resulting from tank failure worries fire officials less than the projectiles which are sent out at high velocity in all directions from such a blast.[31] One study by the National Propane Gas Association found in 13 induced BLEVEs, that "rocket-type projectiles" or "shrapnel" from tanks as small as 80 to 100 gallons "can reach distances of up to 30 times the fireball radius."[32] These fragments are generally not evenly distributed, and due to various factors, can be launched in any direction, with severe fragment risk up to 15 times the fireball radius, and almost all fragments inside 30 times the fireball radius.[33] Many authorities suggest, therefore, that the evacuation radius should be 30 times the fireball radius. Indeed, it is the typical shower of sharp-edged tank fragments projected at high velocity (up to 200 m/s or 450 mph) in all directions from propane BLEVEs that makes them particularly dangerous to other propane storage tanks, often resulting in a kind of "power amplifier" domino effect.

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[30] Roberts, Michael W., EQE International, Inc. "Analysis of Boiling Liquid Expanding Vapor Explosion (BLEVE) Events at DOE Sites." Pages 5, 7, 10, 14, 18. mroberts@abs-group.com http://www.efcog.org/wg/sa/docs/minutes/archive/2000%20Conference/papers_pdf/roberts.pdf

[31] Industrial Fire World, "Targets of Opportunity." http://www.fireworld.com/Archives/tabid/93/articleType/ArticleView/articleId/86841/Targets-of-Opportunity.aspx Retrieved Jan 03, 2015.

[32] Hilderbrand, Michael S.; Noll, Gregory S., National Propane Gas Association (U.S.) "Propane Emergencies" 2nd. Ed., 2007, p. 136.

[33] Roberts, Michael W., EQE International, Inc. "Analysis of Boiling Liquid Expanding Vapor Explosion (BLEVE) Events at DOE Sites." Pages 10, 18. mroberts@abs-group.com http://www.efcog.org/wg/sa/docs/minutes/archive/2000%20Conference/papers_pdf/roberts.pdf

It was recently reported on the SmartNews section of the Smithsonian website that with just 29 dominoes, you could knock down the Empire State Building.[34] In a video on the website, Toronto professor Stephen Morris, demonstrate that a toppling domino can knock down another domino that is 1.5-times larger. Therefore, starting with a domino 5 mm tall, the 29 th domino would be $1.5^{(29-1)}$ = 85,222-times taller, or about 1398 feet, toppling with enough kinetic energy to knock down The Empire State.

What this demonstrates is the potential for BLEVEs to propagate like a row of toppling dominoes, successively releasing increasing amounts of energy. When one pressurized propane tank (say, a typical bullet tank), is heated by a fire (either accidentally or deliberately set), to the point, as previously described, where the tank bursts, losing its contents as a boiling liquid that immediately flashes to a rapidly expanding vapor, that through contact with the fire, will instantly detonate, liberating a lot more energy than expended in the trigger event. A similar sequence of events can also be triggered by an amount of high-explosives. The result is that any propane tank BLEVE can threaten an adjacent tank with the "triple aggression" of fragment, blast, and fireball, causing it to immediately BLEVE too, and this can cascade, domino-fashion down a row of tanks.[35] The closer the bullet tanks are together, the faster this chain reaction occurs, potentially causing all of the bullet tanks to explode in a short space of time. How quickly this happens determines the degree to which the power of the original BLEVE is multiplied, in a trade-off of intensity and duration of the number and velocity of shrapnel and missile-like tank fragments, the intensity of the blast wave, and the size and thermal power of the ensuing fireball. Due to their important role in spreading the effects of an incident or accident from one tank to others, the three quantities, fragments, overpressure (blast), and heat flux (fireball), are known as escalation vectors.[36]

The major risk from a pressurized propane tank BLEVE explosion to nearby refrigerated propane storage is fragment impact. The important parameters are velocity, shape and mass of the fragments, and the trajectory distance and time. BLEVE fragment ejection velocities are in the range of 10–100 m/s. When such a fragment (particularly at the higher end of the velocity range) impacts on and penetrates an (assumed large) refrigerated storage tank, *a hydrodynamic ram is generated in the liquid which may cause the tank to burst* . This produces a sequence of events[37] in which liquid propane is ejected as jet at a velocity high enough that with the arrival of a strong overpressure blast wave vector may experience primary break-up (atomizing into a mist

[34] Schultz, Colin. Smithsonian. "Just Twenty-Nine Dominoes Could Knock Down the Empire State Building." http://www.smithsonianmag.com/smart-news/just-twenty-nine-dominoes-could-knock-down-the-empire-state-building-2232941/?no-ist Original idea by Lorne Whitehead, who called it the domino amplifier effect. American Journal of Physics, vol. 51, p. 182 (1983).
[35] Heymes, Frederic, et al. "On the Effects of a Triple Aggression (Fragment, Blast, Fireball) on an LPG Storage." Chemical Engineering Transactions, vol. 36, 2014, pp. 355-360. http://www.aidic.it/cet/14/36/060.pdf Retrieved Jan 11, 2015.
[36] Heymes, Frederic, et al. "On the Effects of a Triple Aggression (Fragment, Blast, Fireball) on an LPG Storage." Chemical Engineering Transactions, vol. 36, 2014, pp. 355-360. http://www.aidic.it/cet/14/36/060.pdf Retrieved Jan 11, 2015. p. 356.
[37] Ibid. Section 2.1, p. 356.

of micron-sized droplets) and partial evaporation. If the onslaught from outside the tank is sufficiently aggressive, the tank contents may flash boil and/or result in a two phase flow and vapor cloud. The Depending on circumstances and timing, in addition to the possibility of total loss of containment, there may be a vapor cloud explosion (VCE), jet fires, pool fires, and structure fires, in any combination.[38]

Relating this to the published configuration of PPC's proposed propane export terminal at Terminal 6 in Portland,[39] eight 125,000 gallon high pressure transfer tanks, stationed close to one another, totaling 1-million gallons could be set off by a BLEVE in several derailed and burning DOT-112 tanker cars[40] (for example), which once started, could start quickly exploding, domino-fashion, causing enough damage to the much larger refrigerated tank(s) (33.6-million gallons) to cause an even more destructive event. Figure 4 shows simulated thermal radiation threat zones (fireball, red 10 kW/m^2, orange 5.0 kW/m^2, and yellow 2.0 kW/m^2), corresponding overpressure blast wave threat zones (light blue 8.0 psi, blue 3.5 psi, and purple 1.0 psi) and a 6.7 miles radius tank fragment missile threat zone[41] (turquoise blue) due to a 1-million gallon worst-case near simultaneous BLEVE of all eight of PPC's planned pressurized transfer tanks (see appendix A for the model data). The missile fragment threat covers 149 square miles. Figure 5 shows the blast zones for a BLEVE in just one of the 125,000 gallon bullet transfer tanks, something that could be initiated by a fire in an adjacent bullet tank, itself punctured by shrapnel from a fire and BLEVEs in a nearby fully loaded DOT-112 unit train. The threat zone radii in the 125,000 case are half as big as those for the 1-million gallon case, giving a 3.3 miles radius tank fragment missile threat zone.

In light of these results, it is the measured opinion of the authors of this white paper that a massive BLEVE in the transfer tanks could cause massive mechanical-, thermal-, and overpressure-driven disruption a nearby unit train and of one or both of the refrigerated storage tanks. The net result would be a complex deflagration involving one or both of the large

[38] Ibid. Section 3.1, p. 357.
[39] Bureau of Planning and Sustainability, City of Portland, Oregon. "Terminal 6 Environmental Overlay Zone Code Amendment and Environmental Overlay Zone Map Amendment – Part 1: Environmental Overlay Zone Code Amendment." *Proposed Draft*, Dec 12, 2014. http://www.portlandoregon.gov/bps/article/512520
[40] A new, "safe" DOT-112 tank car derailed and exploded on Oct, 19, 2013 in Gainford, Alberta, leaving several "unsafe" DOT-111 tanker cars, still coupled together, lying safely on their sides. Following a siding derailment of 13 cars, including four DOT-111 tank cars containing crude oil, nine DOT-112 tank cars containing LPG, two LPG cars were punctured and caught fire. A third LPG car released product from its safety relief valve, which ignited. About 600 feet of track was destroyed, and a house located nearby was damaged by the fire. This was a relatively slow-speed derailment (between15 and 25 mph), caused by rail defects. One DOT-112 car was punctured in the underbelly by the coupler from another car. This caused it to release its load (of LPG) and explode. Despite double shelf couplers designed to keep the cars coupled during derailments, the DOT-112 cars uncoupled during the derailment and apparently jackknifed across the track, making them vulnerable to secondary impacts from following cars. http://www.tsb.gc.ca/eng/medias-media/communiques/rail/2015/r13e0142-20150224.asp Retieved Feb 25, 2015.
[41] Roberts, Michael W., EQE International, Inc. "Analysis of Boiling Liquid Expanding Vapor Explosion (BLEVE) Events at DOE Sites." Page 10. mroberts@abs-group.com http://www.efcog.org/wg/sa/docs/minutes/archive/2000%20Conference/papers_pdf/Roberts%20abstract.pdf

refrigerated tanks, combining the worst effects of BLEVEs, and most of the other effects already mentioned.

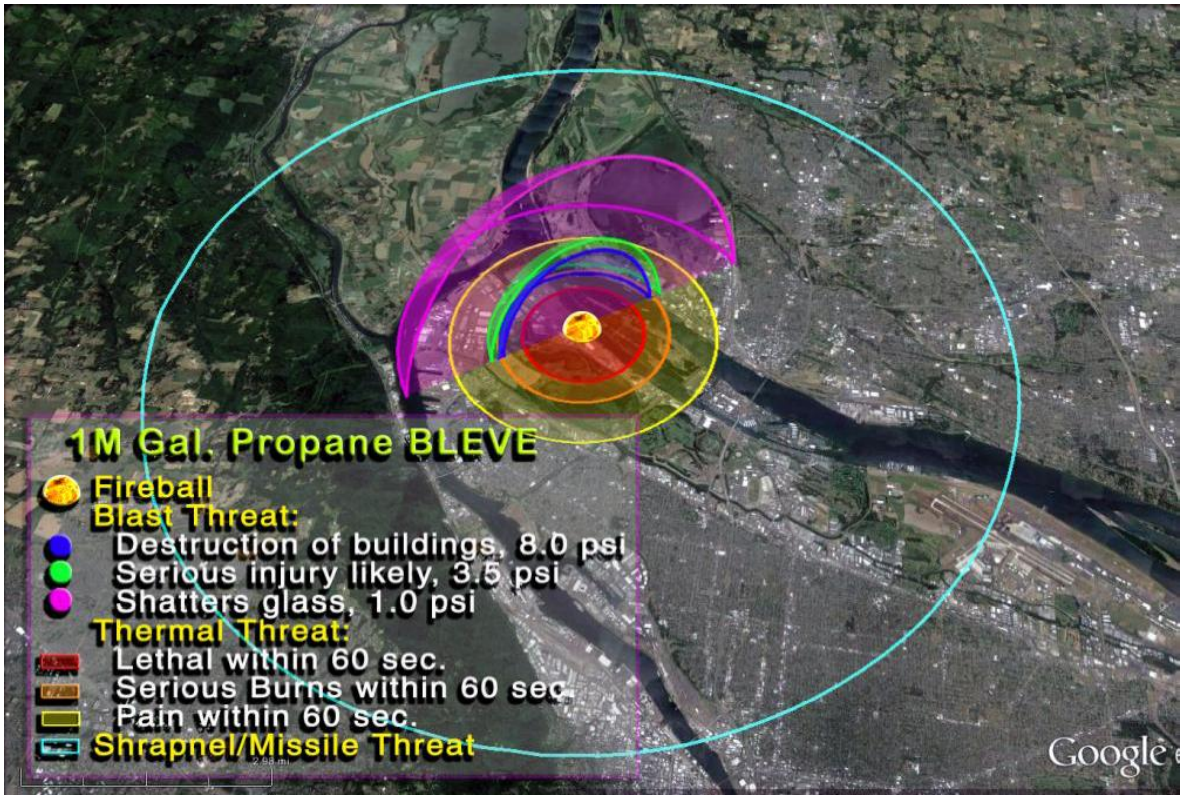

Figure 4: A Google Earth overlay showing thermal radiation and missile fragment threat zones modeled for a worst case boiling liquid expanding vapor explosion of one-million gallons of propane stored in pressurized tanks at Terminal 6 in North Portland. The black lines on the map represent the rail network.

Thermal Threat Zones: Fireball diameter 787 yards, Red zone: 1682 yards radius [10 kW/m ^{2}] potentially lethal in less than 60 seconds; Orange zone: 1.3 miles radius [5 kW/m ^{2}] 2nd-degree burns in less than 60 seconds; Yellow zone: 2.1 miles radius [2 kW/m ^{2}] pain in less than 60 seconds.

Overpressure Blast Zones (shown in cut-away view): Blue zone: 1.3 miles radius [8.0 psi] destruction of buildings; Green zone: 1.5 miles radius [3.5 psi] serious injury likely; Magenta zone: 2.9 miles radius [1.0 psi] shatters glass.

Shrapnel Zone: Turquoise zone: Tank fragment missile threat zone: 30 x fireball radius = 6.7 miles radius, which is also the recommended evacuation radius to avoid tank fragment missiles. Areas included within the missile threat zone are all of downtown Portland, all of North Portland, PDX airport, the eastern half of Sauvie Island, all of Hayden Island, most of Vancouver, and all of the marine terminals of the ports of Portland and Vancouver.

Potential Hazard 2: Terrorist Attack Scenarios

Typical actions by terrorists include the commandeering of commercial aircraft, but also drive-up vehicle-borne improvised explosive devices (truck bombs), the use of explosive projectiles such as shoulder-launched armor piercing rocket-propelled grenades, or the hand-placing of satchel or

shaped charges. Shaped charges are specifically designed to leverage previously-mentioned hydrodynamic effects for best focus and maximum destructive power with the least amount of explosive material. Any or all of these can lead to the scenarios described in the *Potential Hazards 1* section, above.

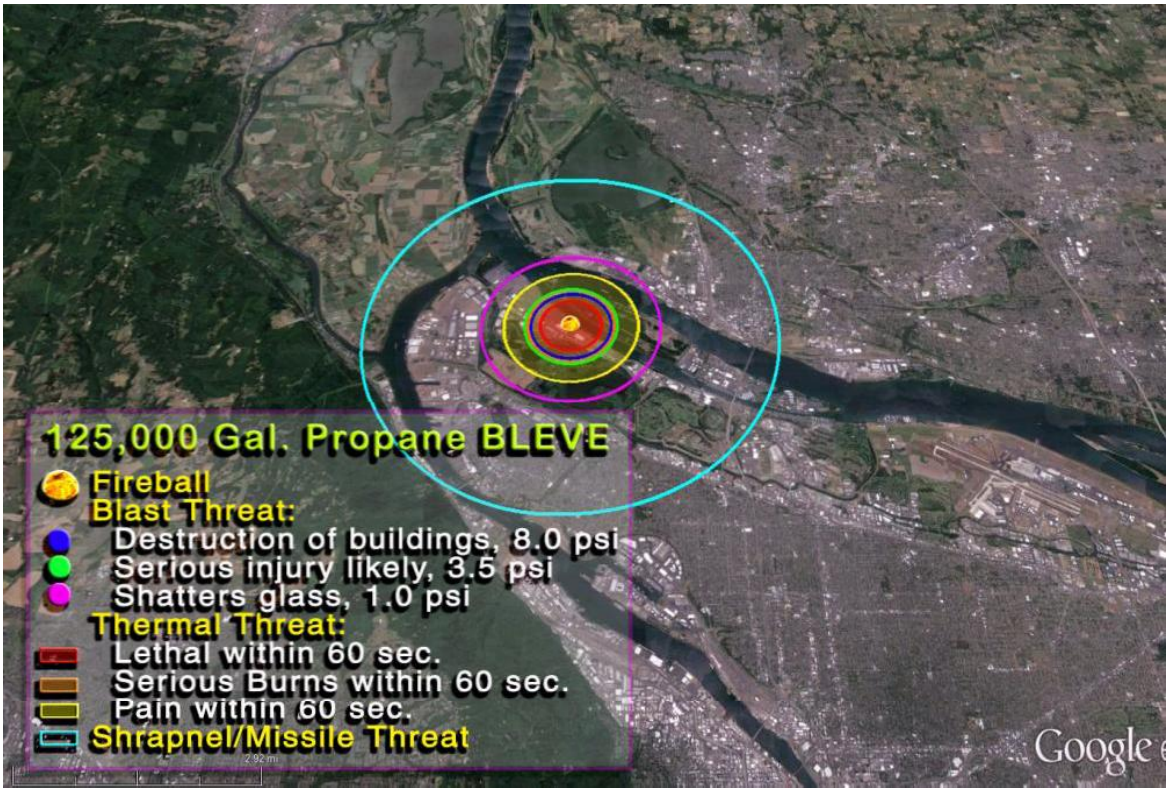

Figure 5: A Google Earth overlay showing thermal radiation and missile fragment threat zones modeled for a worst case boiling liquid expanding vapor explosion of 125,000 gallons of propane stored in pressurized tanks at Terminal 6 in North Portland. Shown at the same scale as figure 4.
Thermal Threat Zones: Fireball diameter 393 yards, Red zone: 841 yards radius [10 kW/m^2] potentially lethal in less than 60 seconds; Orange zone: 0.65 miles radius [5 kW/m^2] 2nd-degree burns in less than 60 seconds; Yellow zone: 1.05 miles radius [2 kW/m^2] pain in less than 60 seconds.
Overpressure Blast Zones: Blue zone: 0.65 miles radius [8.0 psi] destruction of buildings; Green zone: 0.75 miles radius [3.5 psi] serious injury likely; Magenta zone: 1.45 miles radius [1.0 psi] shatters glass.
Shrapnel Zone: Turquoise zone: Tank fragment missile threat zone: 30 x fireball radius = 3.35 miles radius, which is also the recommended evacuation radius to avoid tank fragment missiles. Areas included within the missile threat zone are all of downtown Vancouver, all of the Portland St Johns neighborhood, part of the Portland Portsmouth neighborhood, the eastern edge of Sauvie Island, most of Hayden Island, and all of the marine terminals of the ports of Portland and Vancouver.

Potential Hazard 3: The Big One—A Magnitude 9 "Megathrust" Quake

The proposed site of PPC's propane export terminal, adjacent to The Port of Portland's Terminal 6, lies in the Portland basin, a well-documented area of seismic activity. Three seismic sources

have been determined:

1) Interplate earthquakes along the Cascadian Subduction Zone located near the Pacific coast.
2) Relatively deep intraplate subduction zone earthquakes located as far inland as Portland.
3) Relatively shallow crustal earthquakes in the Portland metropolitan area.

The maximum credible events associated with these sources are postulated to be in the range of Magnitude 8.5-9.0, 7.0-7.5, and 6.5-7.0, respectively.[42] Indeed, the City of Portland's Bureau of Planning and Sustainability (BPS), with input from the Port of Portland, has already authored a statement that "an earthquake [at the proposed PPC propane export facility] is one of the biggest risks to create a spill or explosion."[43] Oddly enough, this statement was offered by the Port of Portland in *support* of a proposed zoning change to the protected riverfront at Terminal 6, without which PPC's terminal cannot go ahead. It is then revealed in the same document that the port has established a risk level target of a 1% in 50 years probability of earthquake-induced collapse. In other words, approximately 0.5% risk of a collapse over the expected 25 year service life of the facility, even after all required mitigations have been incorporated into the structural design of the refrigerated storage tanks, such as the "ground improvement and/or deep foundations…. a combination of stone columns and jet grouting ground improvements …." that were completed within the last five years for another marine facility just downstream. Deep foundations such as driven pipe piles are currently being considered as an alternative to support the tank. "[44] To our knowledge, there has been insufficient investigatory work by engineering geologists and geotechnical engineers to map and understand the geological limitations of the planned terminal location just east of Terminal 6, a site at which the basalt bedrock may be unusually deep. [45] At a recent public meeting on Hayden Island, a Pembina representative said that their geotechnical exploration of the site reached to 165 ft, and that they had no intention of going deeper, did not need to know the bedrock depth, and intended to run several concrete-filled caisson pilings to 160 ft. On the face of it, this seems inadequate, because industry sources I have consulted recommend drilling at least 20 ft deeper than your intended pilling depth. The proposed tank design uses two large aboveground double-wall insulated steel storage tanks that together store 33.6-million gallons of refrigerated propane at -44 ºF. Also in the BPS document is a statement that the geology of the site and the potential for a megathrust quake (Magnitude 9) from the Cascadia Subduction Zone (which would originate near the Oregon coast), and a Magnitude 7 Portland Hills Fault quake (which would originate less than 5 km away) appear to agree with current geological knowledge of the region, and may in fact overstate the Portland Hills Fault potential

[42] Dickenson Stephen E., et al. Assessment and Mitigation of Liquefaction Hazards to Bridge Approach Embankments in Oregon. Final Report, SPR 371. Oregon DOT Research Group, and Federal Highway Administration. Nov 2002. p. 139.
[43] Bureau of Planning and Sustainability, City of Portland, Oregon. "Terminal 6 Environmental Overlay Zone Code Amendment and Environmental Overlay Zone Map Amendment – Part 1: Environmental Overlay Zone Code Amendment." *Proposed Draft*, Dec 12, 2014. http://www.portlandoregon.gov/bps/article/512520 p.18, Seismic Risks
[44] Ibid. p. 18.
[45] Professor Scott Burns, Oregon State University, private communication.

by 0.5.[46] The BPS document also briefly mentions that the major seismic hazards for a large storage tank at Terminal 6 include soil liquefaction, lateral spreading and seiches.

A more detailed review of the seismic risks in the Portland basin and related areas [47] describes the high likelihood of prolonged ground shaking (the geological estimate is five minutes), causing the destructive effects of *primary* seismic effects: soil liquefaction (loss of strength of the soil), lateral spreading (surface soil moves permanently laterally, damaging structures such as buildings, tanks, and tank supports; an effect that could be exacerbated by slope failure of the Terminal 6 dredged shipping channel), co-seismic settlement (the ground surface is permanently lowered, and potentially becomes uneven), and bearing capacity failures (foundation soil cannot support structures it was intended to support). The alluvial soils in the Portland Basin, and in particular those surrounding the Portland peninsular, and associated with the wetlands at the confluence of the Willamette and Columbia rivers, are particularly at risk to this sequence of events. Portland's rivers, sloughs, lakes and wetlands makes for a high water table, which when coupled with an unusually large distance to bedrock, makes these water-saturated soils very vulnerable to the previously mentioned effects of ground shaking. Possible *secondary* seismic hazards relevant to the Portland basin area include: seiches (earthquake-induced standing waves in narrow bodies of water), fire, and hazardous material releases, such as liquid fuel overtopping tanks by ground-shaking-induced sloshing.

Due to the particular dangers of liquefaction to large tank structures, and as discussed above, the BPS zoning change proposal document rightly pays special attention to its mitigation in the design of the tank and its foundations. However, given that a Magnitude 9 earthquake in the Cascadia Subduction Zone could bump Portland into 6th place in the USGS list of the most powerful earthquakes ever recorded worldwide,[48] such mitigation may be woefully inadequate. With 100 times the ground movement and 1,000 times the energy of a much more common Magnitude 7 earthquake, a Magnitude 9 quake is a very powerful event. Strengthening a 30-million gallon tank against this seems hardly feasible. Scientists agree that such a large quake is overdue. Earthquake-induced failure of such a tank would only add insult to Portland and Vancouver's already massive earthquake injury.

Until proven otherwise, we must assume that the intensity of earthquake-driven liquefaction of the ground around Terminal 6 is likely to result in collapse and loss of contents of the planned large refrigerated tank structures. Given a nearby source of ignition, a massive pool fire is only one possible outcome. Another (and the one we've chosen to use here) is a very large, toxic, wind-driven heavy vapor cloud (12,600 ppm = 60% LEL) containing many flame pockets ignited

[46] Professor Scott Burns, Oregon State University, private communication.
[47] Wang, Yumei, et al. "Earthquake Risk Study for Oregon's Critical Energy Infrastructure Hub." Final Report to Oregon Department of Energy & Oregon Public Utility Commission. Oregon Department of Geology and Mineral Industries. Aug 2012. p. 39.
[48] Largest Earthquakes in the World Since 1900. The current list is: 9.5, 9.2, 9.1, 9.0, 9.0, 8.8, 8.8, 8.7, 8.6, 8.6, 8.6, 8.6, 8.5, 8.5, 8.5, 8.5, 8.5. http://earthquake.usgs.gov/earthquakes/world/10_largest_world.php Retrieved Jan 12, 2015.

by various sources of ignition across miles of the Portland or Vancouver metropolitan areas. The potential for the compounding effects of water inundation of Terminal 6 due to dam loss caused by the earthquake-induced movement of recently discovered fault lines along the Columbia River, have yet to be determined. As Ian Madin, chief scientist with the Oregon Department of Geology and Mineral Industries (DOGAMI) told the Oregonian, "None of the dams were designed with this kind of fault in the analysis." He added that the Bonneville Power Administration is spending millions to secure transformers and other links in their power system, which speaks for itself.[49]

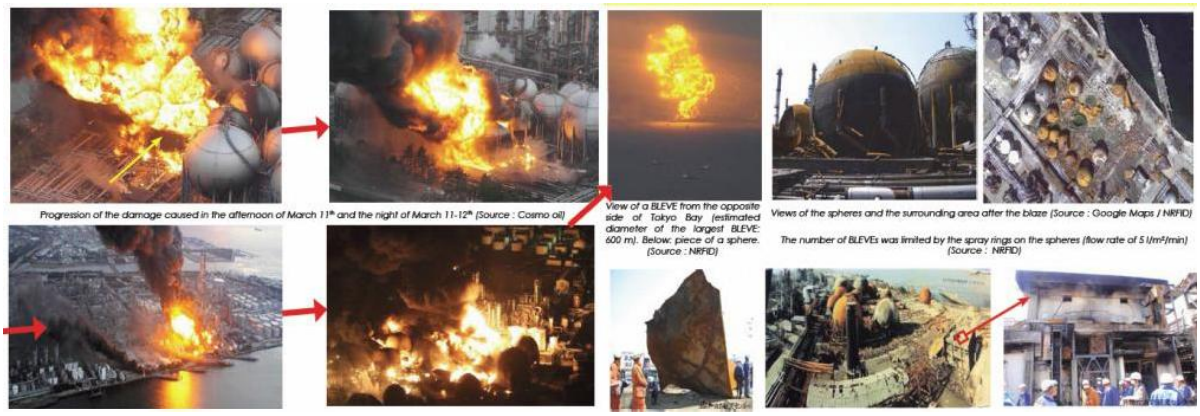

Figure 6: Cosmo Oil's LPG terminal in Tokyo Bay is built on harbor fill consisting mainly of water-saturated sandy alluvial soils (LPG is a mixture of gases, including propane). This high seismic risk location and facility has many similarities to the site of Portland's proposed propane export terminal. On March 11, 2011, an earthquake similar in magnitude to Portland's expected "big one" caused structural failure and tank collapse due to soil liquefaction. A lethal domino cascade ensued, which over a period of three hours, included a large vapor cloud explosion, and five BLEVEs the largest of which had a fireball diameter of almost 2,000 feet. All told, seventeen LPG tanks were destroyed. Damage included thermal radiation, overpressure blast, and rocketing tank fragments and other debris. Cleanup took two years.

A seismic scenario, very similar to the one being discussed for Portland, developed at the Cosmo Oil LPG terminal in Tokyo Bay as a result of the Great Tohoku earthquake March 11, 2011.[50] This quake registered as Magnitude 9 (Shindo 5-), with Magnitude 7 aftershocks. Built on sandy soil reclaimed from Tokyo harbor, the Cosmo facility was placed in jeopardy by earthquake-induced soil-liquefaction. Over a period of about three hours, this led to a series of propane or LPG tank collapses, a large vapor cloud explosion (VCE), a sustained fire, and a string of BLEVEs (see figure 6). The lethal domino cascade included five BLEVEs. The largest of these produced a 600 m diameter (1968 feet) fireball, from which we may infer an LPG volume of around 500,000 gallons! All told, a total of seventeen high-pressure storage tanks were destroyed. Fortunately there was no very large (tens of millions of gallons) refrigerated storage

[49] Rojas-Burke, Joe, The Oregonian. (Aug 29, 2011) "Hidden Earthquake Faults Revealed at Mount Hood, Oregon." http://www.oregonlive.com/pacific-northwest-news/index.ssf/2011/08/hidden_earthquake_faults_revealed_at_mount_hood_oregon.html Retrieved Jan 05, 2015.
[50] This was the same earthquake that preceded the tsunami inundation and meltdown of three of the four cores at the Fukushima Daiichi nuclear reactor complex.

tank on site. In total, the incident consumed 5,272 tonnes of propane/LPG, equivalent to around 2.8 million US gallons. Nearby pipes and buildings were destroyed. Heat radiation caused leaks in several nearby bitumen storage tanks; roads and buildings at the site were also damaged by soil liquefaction. Shock waves and rocketing debris from the explosions ignited fires in nearby petrochemical facilities. Vehicles and boats were destroyed, homes were damaged (windows and roofs), and nearby vehicles and homes were covered in fire debris. The damage cost was € 100 millions (multiples of US$ 113 million), and repairs to the facility took two years. The technical lessons learned from this disaster include reinforcing the tank bases, wider tank spacing, and improvements in safety equipment to limit domino effects.[51] *See* appendix A for a complete chronology.

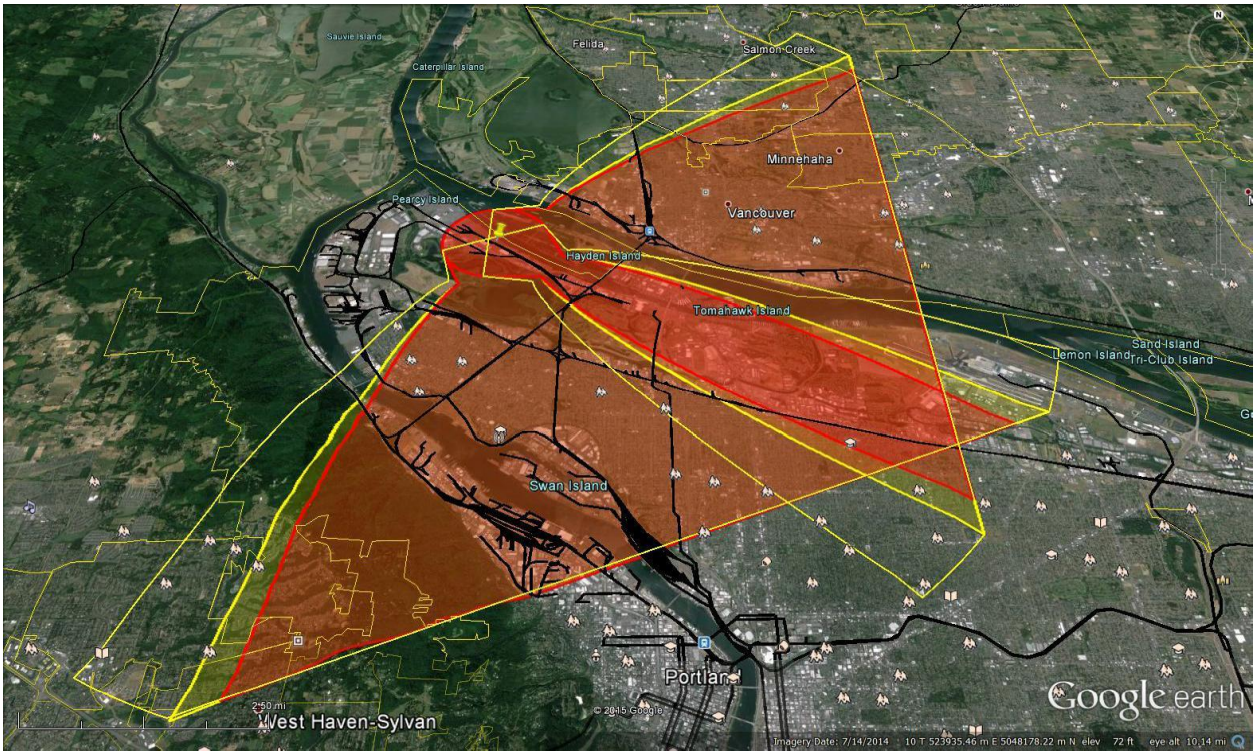

Figure 6: The Impact on Portland and Vancouver of an earthquake scenario in which a large refrigerated propane storage tank collapses at Terminal 6. We assume that cold liquid propane is ejected and/or flows at the rate of 560,000 gallons per second for one minute. The escaping liquid may flash boil and/or result in two-phase (liquid/vapor) flow. The simulation assumes that 100% of the propane evaporates into a large vapor cloud, which is blown by the wind, assumed to be 10 mph from the NW, and covers much of Portland. Overlaid on the same map is the result of a 10 mph wind from W, which covers much of Vancouver. The straight edges do not mark the edge of the vapor cloud, but simply the extent of the simulation; the cloud will therefore extend much further, with a roughly oval outline. The red threat zone extends further than 5.8 miles (12,600 ppm = 60% LEL = Flame Pockets), and the yellow threat zone extends even further (2,100 ppm = 10% LEL).

[51] Overview of the Industrial Accidents Caused by the Great Tohoku Earthquake and Tsunami. Japan, March 11, 2011. ARIA. French Ministry of Ecology, Sustainable Development and Energy. Retrieved Feb 11, 2015. http://www.aria.developpement-durable.gouv.fr/wp-content/files_mf/Overview_japan_mars_2013_GB.pdf

Figure 6 shows an earthquake scenario in which large refrigerated propane storage tank(s) collapse at Terminal 6. For the purposes of the simulation, we created a 120 ft. diameter hole in a single 33.6-million gallon tank, through which the cold liquid propane is ejected and/or flows at the rate of 560,000 gallons per second for one minute. The ALOHA software reports that the escaping liquid may flash boil and/or result in two-phase (liquid/vapor) flow. In any case we assume that 100% of the propane evaporates into a large vapor cloud, which is blown by the wind, assumed to be 10 mph from the NW, and covers much of Portland. Overlaid on the same map is the result of a 10 mph wind from W, which covers much of Vancouver. The straight edges do not mark the edge of the vapor cloud, but simply the extent of the simulation; the cloud will therefore extend much further, with a roughly oval outline. The red threat zone extends further than 5.8 miles (12,600 ppm = 60% LEL = Flame Pockets), and the yellow threat zone extends even further (2,100 ppm = 10% LEL).

Legal Ramifications

Finally, we will place the proposed PPC propane export terminal under the legal microscope by using a Rest.2d Torts approach to examine the legal ramifications of siting any such large energy storage and handling facility in the center of the extended Portland/Vancouver urban area, in a geological zone subject to Magnitude 9 "megathrust" earthquakes, and earthquake-induced ground liquefaction and dam bursts, with such an earthquake in fact overdue. Specifically, Restatement (Second) of Torts, § 520 (commonly referred to as Rest.2d Torts § 520), which has been adopted by California and some other states, provides a framework for examining an activity or process to determine if it presents an unavoidable risk of serious harm to others, or their property, despite reasonable care exercised by the actor to prevent that harm. Section 520, Restatement Second of Torts enumerates the factors to be considered in determining if the risk is so unusual, either because of its magnitude or because of the circumstances surrounding it, that such an activity is "abnormally dangerous" or "ultrahazardous,"52and therefore subject to strict liability.

Given the huge potential for devastation in Portland or Vancouver (depending on wind direction) out to at least seven miles from the facility, a 1-in-200 risk is much too high. Indeed, simulation tests we have run demonstrate a credible potential for an event so destructive that the establishment of any large energy storage facility within the urban boundary of Portland, that endangers all of Portland and Vancouver qualifies as ultrahazardous, defined in Wex [53] as, "An activity or process that presents an unavoidable risk of serious harm to the other people or others' property, for which the actor may be held strictly liable for the harm, even if the actor has exercised reasonable care to prevent that harm." Oregon may well need to follow California in adopting a Rest.2d Torts approach for determining whether such ultrahazardous activities are

[52] Ultrahazardous activity. http://www.law.cornell.edu/wex/ultrahazardous_activity
[53] Wex is the Cornell University Legal Information Institute's community-built, freely available legal dictionary and encyclopedia. http://www.law.cornell.edu/wex

"abnormally dangerous," setting forth six factors which are to be considered in determining liability. These are:

> "(a) existence of a high degree of risk of some harm to the person, land or chattels of others;
> "(b) likelihood that the harm that results from it will be great;
> "(c) inability to eliminate the risk by the exercise of reasonable care;
> "(d) extent to which the activity is not a matter of common usage;
> "(e) inappropriateness of the activity to the place where it is carried on; and
> "(f) extent to which its value to the community is outweighed by its dangerous attributes."

We comment on these factors, as follows:

(a) Portland's adoption of a 1% risk of tank collapse in 50 years is a high degree of risk.
(b) The potential harm from credible tank collapse and transfer tank BLEVE scenarios is great, and worst-case Portland and/or Vancouver would likely never fully recover.
(c) Residents cannot avoid the risk by any reasonable exercise of care, other than leaving.
(d) Large propane facilities are not commonly embedded in cities.
(e) Large propane facilities are inappropriate inside or close to urban boundaries.
(f) Recognizing that Portland is considered to be well overdue for a big earthquake, and considering that propane tanks have been terrorist targets, the credible magnitude of loss for such incidents pales in comparison to the 50 direct jobs and several million dollars of taxes that Portland would receive from such a facility.

Some Rejected Energy Storage Proposals

- The Long Beach LNG Import Terminal Project, CA (onshore)
  Withdrawn after 4 years of scrutiny of project (LA Times Jan 23, 2007).
  Population density (< 2 miles from houses, >60/sq. mi; 3,033 households within a 2 mi radius). Seismic concerns. Flaws in the draft environmental study.

- Calpine LNG Project, Humbolt Bay, CA (onshore)
  Withdrawn (LA Times Mar 18, 2004)
  Population density (1 mile to pop. density >60/sq. mi).

- Shell/Betchel LNG Project, Vallejo, CA (onshore)
  Withdrawn Jan 30, 2003.
  Population density (1 mile to pop. density >60/sq. mi).

- Conoco LNG Project, El Paso, TX
  Permit denied.
  Population density (< 1 mile to pop. density >60/sq. mi).

- Broadwater Energy LNG Export Terminal, Long Island Sound, NJ
  Permit denied.
  Environmental issues.

Conclusion

The scale of potential disasters due to a large propane facility inside the combined Portland/Vancouver urban area more than outweighs any theoretical estimate of its improbability. We believe that our region would not properly recover from such events for decades, if ever.

To avoid this present danger, the solution is clear: We must not make the requested zoning change. We must not allow the thin end of an industrial wedge through our environmental protections, because it will set a bad precedent.

Accident data shows that the largest propane risk areas are pressurized storage, pressurized transport, and transfer. This includes any units trains incoming to the site (derailments), the movement of the tanker cars at the site (shunting derailments), and the transfer of liquid propane from one container to another (accidents with pipes, valves, hoses, and other equipment). Such dangers at the proposed site are exacerbated by the relatively close proximity of the pressurized tanks to each other, and also due to the high probability of domino amplification effects. Moreover, the proposed large refrigerated tanks, no more than a stone's throw from the pressurized transfer tanks, are likely to become involved due to the secondary effect of rocketing high-speed sharp tank fragments, generated from one or more BLEVEs in the pressurized tanks. These fragments, also known as shrapnel, travel at speeds up to 400 mph, and are capable of slicing through both walls of the refrigerated tanks, and any remaining intact pressurized tanks, which aided by hydrodynamic forces, are likely to cause loss of contents. The ballistic range of such fragments is typically many miles, which would place large parts of suburban Portland and Vancouver in jeopardy. The magnitude of credible incident and accident scenarios (similar to many of the events which seem to be ever present in our news feeds, including the finding, just days ago, that a recent multiple BLEVE in derailed DOT-112 tanker cars was primarily caused by a design oversight that is present in all DOT-112s) is sufficiently high that we conclude that planners must remotely locate such large energy storage facilities. The need to be far away from our cities and towns, and also fragile natural areas such as West Hayden Island, and the Smith and Bybee lakes; beyond the threat zones of any credible disaster (at least ten or twenty miles).

Federal and state regulators must also require that these facilities are themselves better protected from human error and any malicious intention, by the best means available. If necessary we must enact laws to ban the siting of large energy facilities inside or close to our urban areas.

Portlanders are heavily invested in Portland. Committed to finding sustainable solutions, and supporting a burgeoning artisan economy, Portlanders enjoy a unique lifestyle. Yet, while dreaming of award-winning green and self-sufficient sustainability, they achieve home ownership, and safe bicycle lanes and bridges. They also dream of one day having a functional light rail system, and of transforming Portland's major employers, the large semiconductor, electronics, sports equipment, and film companies into clean-tech success stories.

Therefore, for the city to take our "savings" and risk them on a bet that there will never be a serious propane train or tank incident or accident at Portland's Terminal 6, in the next 25 to 50 years, is like a financial services bank taking our "investment" and reinvesting it on the tables in Las Vegas.

Banks are not allowed to do this.
City councils should not be allowed to do this either!

Sure it's true that some desperate companies have done this with investor funds, but Portland is not that desperate! Propane accidents are rarely small, so why situate a propane terminal smack in the middle of our Portland/Vancouver urban area? Why do this when it would be easy to use the same railway that would bring the propane to Portland, to take it somewhere else, at least 20 miles from where people live, work, and play? Why dash the dreams of Portlanders with a short-sighted project that will only produce 30-40 direct jobs (less than half a job per acre), that will trash Portland's greenest city status, and that will increase US unemployment by creating stronger overseas competitors who will increase their share of the global market.

Moreover, when we consider the results of EPA/NOAA/FEMA modeling, that heat threat, blast waves, and shrapnel from even a modest propane deflagration could wipe out and/or injure all of North Portland and downtown Vancouver, Terminal 6, and all of the Rivergate facility, up to a six mile radius, Portland needs to say, "No thank you, we wish to be green!" and promote green trade and industries. Only through means such as these will our cities more surely live to ripe, resilient old age.

Appendix A: Models and Data Used in Estimating Threat Zones

1) Elk Grove Propane Facility Data

I) Pressurized liquid propane transfer bullet tanks:

Number of tanks: 4
Storage capacity (each tank): 60,000 gallons
Tank size: Diameter 12 ft.; Length 91 ft.,
Tank Mounting: Horizontally, 5 ft. off ground. Spacing 10 ft. broadside

ALOHA Model Data (Bullet tank BLEVE):

Location (Lat., Long.): 38.3824314392 N, 121.356808023 W
Surroundings: Unsheltered
Chemical: Liquid Propane
Chemical stored at: 65 degrees F
Ground Roughness: Urban or Forest
Cloud Cover: Partly Cloudy
Tank Size & Orientation: Hor. Cylinder, 12 ft. dia., 91 ft. length, 76,988 gallons
Tank filled: 60,000 gallons (77.9%)
Propane mass: 114,998 kg
Scenario: Tank containing a pressurized flammable liquid.
Type of Tank Failure: BLEVE, tank explodes and propane burns in a fireball.
Potential Hazards from BLEVE: Thermal radiation from fireball and pool fire.
Not modeled by ALHOA: Hazardous fragments.
Downwind toxic effects of fire byproducts.

Threat Modeled: **Thermal radiation from fireball**
Fireball Diameter: 308 yards diameter
% propane mass in fireball: 100%

Red:	691 yards radius	(10.0 kW/(sq m) = potentially lethal within 60 sec.
Orange:	976 yards radius	(5.0 kW/(sq m) = 2nd degree burns within 60 sec.
Yellow:	1520 yards radius	(2.0 kW/(sq m) = pain within 60 sec.

II) Refrigerated liquid propane storage tanks:

Number of tanks: 2
Storage capacity (each tank): 12-million gallons
Tank size: Diameter 146 ft.; Height 122 ft.
Tank construction: Double steel wall
Storage temperature: -44 ºF

2) Proposed Portland Propane Terminal Data

Ia) Pressurized liquid propane transfer bullet tanks:

Number of tanks: 1
Storage capacity (each tank): 125,000 gallons
Tank size: Diameter 20 ft. (est.); Length 62 ft. (est.),
Tank Mounting: Horizontally, 5 ft. off ground (est.),
Separated broadside by 10 ft. (est.),
and in pairs by 30 ft. (est.).

ALOHA Model Data (Bullet tank BLEVE):

Location (Lat., Long.) 45.6276169997 N, 122.733791252 W
Surroundings: Unsheltered
Chemical: Liquid Propane
Chemical stored at: 65 degrees F
Ground Roughness: Urban or Forest
Cloud Cover: Partly Cloudy
Tank Size & Orientation: Hor. Cylinder, 20 ft. dia., 62 ft. length
Tank filled: 125,000 gallons (86%)
Propane mass: 238,638 kg
Scenario: Tank containing a pressurized flammable liquid.
Type of Tank Failure: BLEVE, tank explodes and propane burns in a fireball.
Potential Hazards from BLEVE: Thermal radiation from fireball and pool fire.
Not modeled by ALHOA: Hazardous fragments.
Downwind toxic effects of fire byproducts.

Threat Modeled: **Thermal radiation from fireball**
Fireball Diameter: 393 yards diameter
% propane mass in fireball: 100%

Red:	0.48 miles radius	(10.0 kW/(sq m) = potentially lethal within 60 sec.
Orange:	0.65 miles radius	(5.0 kW/(sq m) = 2nd degree burns within 60 sec.
Yellow:	1.05 miles radius	(2.0 kW/(sq m) = pain within 60 sec.

Threat Modeled: **Overpressure (Blast Force) Threat Zone**
Type of Ignition of Vapor Cloud: Detonation
Model: Heavy Gas

Red:	0.65 miles radius	(8.0 psi = destruction of buildings)
Orange:	0.76 miles radius	(3.5 psi = serious injury likely)
Yellow:	1.4 miles radius	(1.0 psi = shatters glass)

Ib) Pressurized liquid propane transfer bullet tanks:

Number of tanks: 8
Storage capacity (each tank): 125,000 gallons
Tank size: Diameter 20 ft. (est.); Length 62 ft. (est.),
Tank Mounting: Horizontally, 5 ft. off ground (est.),
Separated broadside by 10 ft. (est.),
and in pairs by 30 ft. (est.).

ALOHA Model Data (Bullet tank BLEVE):

Location (Lat., Long.) 45.6276169997 N, 122.733791252 W
Surroundings: Unsheltered
Chemical: Liquid Propane
Chemical stored at: 65 degrees F
Ground Roughness: Urban or Forest
Cloud Cover: Partly Cloudy
Tank Size & Orientation: Hor. Cylinder, 20 ft. dia., 496 ft. length
Tank filled: 1,000,000 gallons (86%) (simulating 8 tanks as one)
Propane mass: 1,909,103 kg
Scenario: Tank containing a pressurized flammable liquid.
Type of Tank Failure: BLEVE, tank explodes and propane burns in a fireball.
Potential Hazards from BLEVE: Thermal radiation from fireball and pool fire.
Not modeled by ALHOA: Hazardous fragments.
Downwind toxic effects of fire byproducts.

Threat Modeled: **Thermal radiation from fireball**
Fireball Diameter: 787 yards diameter
% propane mass in fireball: 100%

Red:	1682 yards radius	(10.0 kW/(sq m) = potentially lethal within 60 sec.
Orange:	1.3 miles radius	(5.0 kW/(sq m) = 2nd degree burns within 60 sec.
Yellow:	2.1 miles radius	(2.0 kW/(sq m) = pain within 60 sec.

Threat Modeled: **Overpressure (Blast Force) Threat Zone**
Type of Ignition of Vapor Cloud: Detonation
Model: Heavy Gas

Red:	1.3 miles radius	(8.0 psi = destruction of buildings)
Orange:	1.5 miles radius	(3.5 psi = serious injury likely)
Yellow:	2.9 miles radius	(1.0 psi = shatters glass)

II) Refrigerated liquid propane storage tanks:

Number of tanks: 2
Storage capacity (combined) 33.6-million gallons
Individual tank sizes: Diameter (1) 190 ft., (2) 140 ft. (est.); Height 120 ft. (est.)
Tank construction: Unknown.
Storage temperature: -44 ºF

ALOHA Model Data (Refrigerated tank loses contents):

Ambient Boiling Point: -43.7° F
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%
Wind: 10 miles/hour from W (or NW) at 3 meters
Ground Roughness: urban or forest
Cloud Cover: 5 tenths
Air Temperature: 65° F Stability Class: D
No Inversion Height Relative Humidity: 50%
Direct Source: 560,000 gallons/sec Source Height: 0
Source State: Liquid
Source Temperature: -44 ° F
Release Duration: 60 minutes
Release Rate: 163,000,000 pounds/min
Total Amount Released: 9.80e+009 pounds
Note: This chemical may flash boil and/or result in two phase flow.

Threat Modeled: **Flammable BLEVE-generated Vapor Cloud**
Model Run: Heavy Gas
Red: greater than 6 miles (12600 ppm = 60% LEL = Flame Pockets)
Yellow: greater than 6 miles (2100 ppm = 10% LEL)

3) Cosmo Oil Refinery, Port of Chiba, Tokyo Bay, March 11, 2011

Site Overview

- Refinery within an integrated petrochemical complex (area: 1.17 km²)
- Built in 1963. Capacity: 220,000 bpd
- 382 employees (2,500 for the petrochemical complex)

Earthquake Data

- Magnitude 9 (Shindo 5-), max. 7.2 magnitude aftershock

Seismic Protection

- Equipment and storage facilities built to seismic standards (liquefaction-resistant foundations). Automatic shutdown of facilities (acceleration > 0.2 m/s²)

Accident chronology

14.46: Foreshocks (acceleration: 0.11 m/s²).

14.52: Aftershocks off coast of Tokyo (0.4 m/s²). Automatic shutdown of facilities. The legs on propane tank No. 364 (still filled with water from a hydraulic proof test 12 days earlier) crack but do not break. Emergency response unit deployed.

15.15: A new aftershock (0.99 m/s²) causes the cross-bracings of the legs of tank No. 364 to break. One minute later, the tank collapses, crushing nearby pipes.

15.45: LPG begins leaking from the pipelines leading to the tank farm. The automatic safety valve is unresponsive (bypassed in open position following a malfunction on the pneumatic system a few days earlier). Fire brigade alerted.

15.48: A hot spot (nearby steam cracking unit?) ignites the LPG cloud. Fire breaks out among the LPG tanks despite the cooling rings being turned on.

17.04: First tank BLEVE. Utilities (electricity, air) downed throughout the area.

17.54: Second BLEVE. The pipes throughout the farm do not automatically shut down due to the lack of power and the considerable thermal flows render manual shutoff impossible. The decision is taken to let the fire in the tank farm burn itself out and protect the nearby facilities from the flames. A series of three other BLEVEs occurs during the night (2,000 m³ and five LPG spheres explode). One thousand local residents are evacuated for 8 hours. The fire is brought under control at 10.10 on March 21st, 2011

Casualties

- Six employees injured, one with serious burns (three Cosmo employees, three from neighbouring sites)

Damage caused by the earthquake

- [All] seventeen [LPG] tanks destroyed, of which five exploded (BLEVE, including a 600 m fireball). Nearby pipes and buildings destroyed: 5,227 tonnes of LPG burnt.

- Leaks on several bitumen storage tanks due to the heat waves [and debris impact] [54]
- Roads and buildings on the site damaged by soil liquefaction
- The shock waves and debris from the explosions ignited fires in the petrochemical facilities (steam cracking unit) operated by Maruzen and JMC
- Vehicles and boats destroyed. Homes damaged (windows, roofs).
- Surrounding vehicles and homes covered with fire debris

Damage Cost

- € 100 millions

Chronology of Resumption of Operations

18-31 March 2011: Existing stocks of diesel, kerosene and petrol are shipped

Early May 2011: Bitumen around damaged storage tank cleaned up. Refined petroleum products arrive via tanker. Diesel, kerosene and petrol shipped out in tanker trucks

17 December 2011: Authorization to restart the LPG facilities at pressures > 10 bar granted following compliance inspection (operations suspended by the government since 06/2011).

12 January 2012: Refining facilities partially brought back into operation

30 March-20 April 2012: The 2 crude-oil distillation units are brought back into operation

Spring 2013: End of LPG tank farm repairs. Operation at full capacity

Technical Lessons

- Redesign of the LPG tank farm (reinforced base, wider spacing, doubled coolant flow rate). Improvement in pipe flexibility and change in pipework to limit domino effects
- Reinforcement of zone-based automatic network cutoff system

Organizational Lessons

- Overhaul of tank hydraulic proof testing procedure (fast draining). Better communication between engineering and operations teams
- Safety-awareness training for employees. Heightened inspections

[54] Krausmann, Elizabeth; Cruz, Anaa Maria. "Impact of the 11 March 2011, Great East Japan earthquake and tsunami on the chemical industry." Nat Hazards (2013) 67:811-828. Page 820.

Appendix B: ALOHA Threat-Modeling Software and Disclaimer

The propane threat zone estimates discussed in this paper have been computed with the best available information we currently have from the City of Portland, Port of Portland, and PPC, and in an ongoing absence of any meaningful analysis from any of those entities. The primary authorities for this analysis are:
a) the ALOHA (Arial Locations of Hazardous Atmospheres), atmospheric dispersion modeling software maintained by the Hazardous Materials Division of National Oceanic and Atmospheric Administration (NOAA), widely used by Fire Departments and first responders for Emergency Chemical Release Modeling.
b) The many published industry and scientific references cited in the paper.

ALOHA models the dispersion of a gas in the atmosphere and displays a map view of the area (footprint) in which it predicts gas concentrations typically representative of hazardous levels (Levels of Concern, or LOC). The footprint represents the area within which the concentration of a gas is predicted to exceed a LOC at some time during the release. ALOHA uses simplified heavy gas dispersion calculations that are based on the DEGADIS model, and are therefore unreliable under very low wind speeds, very stable atmospheric conditions, wind shifts and terrain steering effects, or concentration patchiness, particularly near the spill source.

ALOHA models source strength and type (direct, puddle, tank release), uses air dispersion models to calculate concentration threat zones, models and calculates overpressure blast effects from vapor cloud explosions. It also uses thermal (infrared) radiation and flammable area models to calculate the emissivity, view factor, transmissivity and duration of BLEVE fireballs; the emissivity and view factor of jet fires; the emissivity, view factor, and pool dynamics of pool fires; and the flammable area of flash fires.

ALOHA does not model hazardous missile fragments, does not model the downwind toxic effects of fire byproducts, and does not account for the effects of fires or chemical reactions, particulates, chemical mixtures, and terrain.[55] The missile fragment threat zones were modeled using the lower limit of the industry's widely accepted range of 30- to 40-times the fireball radius.[56]

Google Earth was used to display ALOHA thermal and overpressure KML data on 3-D location maps. KML uses a tag-based structure with nested elements and attributes and is based on the XML standard. A big advantage of KML for the current purpose is that the threat data are automatically scaled and merged with Google Earth's maps, allowing seamless and accurate

[55] Jones, Robert, et al. ALOHA (Areal Locations of Hazardous Atmospheres) 5.4.4 Technical Documentation. NOAA Technical Memorandum NOS OR&R 43. November 2013.
[56] Roberts, Michael W., EQE International, Inc. "Analysis of Boiling Liquid Expanding Vapor Explosion (BLEVE) Events at DOE Sites." Page 10. mroberts@abs-group.com
http://www.efcog.org/wg/sa/docs/minutes/archive/2000%20Conference/papers_pdf/Roberts%20abstract.pdf

viewing from any perspective. Shrapnel threat zones, computed as 30x the ALOHA fireball radius, were generated using a KML circle generator,[57] and the XML tags were manually edited to adjust circle line-width and color.

The latest version of ALOHA (V5.4) released in February 2006 added the ability to model the hazards associated with fires and explosions. With this major update, users can now estimate the hazards associated with jet fires (flares), pool fires, vapor cloud explosions (VCE), BLEVEs (Boiling Liquid Expanding Vapor Explosions), and flammable regions (flash fires) as well as toxic threats. The ALOHA user manuals were completely updated to include extensive material associated with fires and explosion.[58,59]

WARNING

The data computed here are for general reference and educational purposes only and *must not* be relied upon as a sole source to determine worst case or typical results of damage to propane storage vessels and loss and possible ignition of contents, or where matters of life and health and safety are concerned. This paper's authors have taken all care to ensure the accuracy of the results, but do not warrant or guarantee the accuracy or the sufficiency of the information provided and do not assume any responsibility for its use. Sufficient data has been provided for anyone to use the same software to reproduce the same general results.

[57] KML circle generator: http://www.thesamestory.com/kmlcircle/
[58] "Technical documentation and software quality assurance for project-Eagle-ALOHA: A project to add fire and explosive capability to ALPHA." Feb 2006. Office of Repsponse and Restoration, Noational Oceanic and Atmospheric Administration (NOAA); Environmental Protection Agency (EPA); Pipelines and Hazardous Materials Safety Administration, Department of Transportation.
http://www.deq.state.ok.us/LPDnew/saratitleiii/AlohaTrainingManuals/Final%20techdoc%20and%20QA.pdf
Retrieved Feb 20, 2015.
[59] Reynolds, R. Michael. "ALOHA (Areal Locations of Hazardous Atmospheres) 5.0 Theoretical Description." NOAA Technical Memorandum NOS ORCA-65 (August 1992).
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Appendix C: ES for the Long Beach LNG Terminal Draft EIS/EIR

[footnotes and tables removed]

On January 26, 2004, Sound Energy Solutions (SES) filed an application with the Federal Energy Regulatory Commission (Commission or FERC) under section 3 of the Natural Gas Act (NGA) and Part 153 of the Commission's regulations. SES seeks authorization from the FERC to site, construct, and operate a liquefied natural gas (LNG) receiving terminal and associated facilities in the Port of Long Beach (POLB or Port) in Long Beach, California as a place of entry for the importation of LNG. The FERC is the federal agency responsible for authorizing sites for onshore LNG import facilities. As such, the FERC is the lead federal agency for the preparation of the environmental impact statement (EIS). The FERC will use the document to consider the environmental impact that could result if it issues SES an Order Granting Authorization under section 3 of the NGA.

The Board of Harbor Commissioners (BHC) has authority over the City's Harbor District, commonly known as the POLB or Port. The City of Long Beach owns the land within the Harbor District in trust for the people of the State of California. SES would have to obtain a lease from the City of Long Beach to build and operate its proposed Long Beach LNG Import Project. SES submitted an application to the POLB for a Harbor Development Permit on July 25, 2003, seeking approval for a development project within the Port. The application was designated POLB Application No. HDP 03-079. The POLB is the lead agency in California for preparing the environmental impact report (EIR). The BHC will use the document to determine the project's consistency with the certified Port Master Plan (PMP) and the California Coastal Act of 1976 as well as to consider the environmental impact that could result if it issues Harbor Development Permits for the project.

The environmental staffs of the FERC and the POLB (Agency Staffs) have jointly prepared this draft EIS/EIR to assess the environmental impacts associated with the construction and operation of the Long Beach LNG Import Project. The document was prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA [Title 40 Code of Federal Regulations (CFR) Parts 1500-1508], the FERC's regulations implementing NEPA (Title 18 CFR Part 380), the California Environmental Quality Act (CEQA), and the guidelines for the implementation of the CEQA (California Code of Regulations Title 14, section 15000 et seq.). The purpose of this document is to inform the public and the permitting agencies about the potential adverse and beneficial environmental impacts of the proposed project and its alternatives, and to recommend all feasible mitigation measures.

The U.S. Army Corps of Engineers (ACOE) has jurisdictional authority pursuant to section 404 of the Clean Water Act [33 United States Code (USC) 1344], which governs the discharge of dredged or fill material into waters of the United States, and section 10 of the Rivers and Harbors Act (33 USC 403), which regulates any work or structures that potentially affect the navigable capacity of a waterbody. Because the ACOE must comply with the requirements of NEPA before issuing permits under sections 404 and 10, it has elected to act as a cooperating agency with the FERC and the POLB in preparing this EIS/EIR. The ACOE would adopt the EIS/EIR per Title 40 CFR Part 1506.3 if, after an independent review of the document, it concludes that its comments and suggestions have been satisfied.

The U.S. Coast Guard (Coast Guard) within the U.S. Department of Homeland Security exercises regulatory authority over LNG facilities that affect the safety and security of port areas and navigable waterways under Executive Order 10173; the Magnuson Act (50 USC section 191); the Ports and Waterways Safety Act of 1972, as amended (33 USC section 1221, et seq.); and the Maritime Transportation Security Act of 2002 (46 USC section 701). The Coast Guard is responsible for matters related to navigation safety, vessel engineering and safety standards, and all matters pertaining to the safety of facilities or equipment located in or adjacent to navigable waters up to the last valve immediately before the receiving tanks. The Coast Guard also has authority for LNG facility security plan review, approval and compliance verification as provided in Title 33 CFR Part 105, and siting as it pertains to the management of vessel traffic in and around the LNG facility. As required by its regulations, the Coast

Guard is responsible for issuing a Letter of Recommendation (LOR) as to the suitability of the waterway for LNG marine traffic. The Coast Guard has elected to act as a cooperating agency in the preparation of this EIS/EIR and plans to adopt the document if it adequately covers the impacts associated with issuance of the LOR.

The Pipeline and Hazardous Materials Safety Administration (PHMSA) within the U.S. Department of Transportation has authority to promulgate and enforce safety regulations and standards for the transportation and storage of LNG in or affecting interstate or foreign commerce under the pipeline safety laws (49 USC Chapter 601). This authority extends to the siting, design, installation, construction, initial inspection, initial testing, and operation and maintenance of LNG facilities. The PHMSA's operation and maintenance responsibilities include fire prevention and security planning for LNG facilities under Title 49 CFR Part 193. The PHMSA is participating in the NEPA analysis under the terms of an interagency agreement between the PHMSA, the FERC, and the Coast Guard.

PROPOSED ACTION

LNG is natural gas that has been cooled to a temperature of about -260 degrees Fahrenheit so that it becomes a liquid. Because LNG is more compact than the gaseous equivalent, it can be transported long distances across oceans using specially designed ships. SES proposes to ship LNG from a variety of Asian and other foreign sources to provide a new, stable source of natural gas to serve the needs of southern California, particularly the Los Angeles Basin (LA Basin). The LNG would be unloaded from the ships, stored in tanks at the terminal, and then re-gasified (vaporized) and transported via a new 2.3- mile-long, 36-inch-diameter natural gas pipeline to Southern California Gas Company's (SoCal Gas) existing Line 765. A portion of the LNG would be distributed via trailer trucks to LNG vehicle fueling stations throughout southern California to fuel LNG-powered vehicles.

Natural gas is a mixture of hydrocarbon compounds, principally methane. It also contains small amounts of heavier hydrocarbons, such as propane, ethane (C_2), and butane, which have a higher heating value than methane. A portion of these components may need to be removed from the LNG that would be stored on the terminal site in order for the natural gas to meet the British thermal units (Btu) and gas quality specifications of SoCal Gas as well as the specifications for LNG vehicle fuel established by the California Air Resources Board (CARB). The components that are removed are called natural gas liquids (NGL). SES has stated that it would accept only lean LNG [i.e., LNG containing fewer heavy (non-methane) hydrocarbons than regular LNG] from its suppliers. However, up to 10,000 million Btu per day of C_2 recovered from the LNG would be vaporized and distributed to ConocoPhillips' existing Los Angeles Refinery Carson Plant (LARC) via a new 4.6-mile-long, 10-inch-diameter pipeline.

Specifically, SES' proposal would involve construction and operation of LNG terminal and pipeline facilities as described below.

The LNG terminal facilities would include:

- An LNG ship berth and unloading facility with unloading arms, mooring and breasting dolphins, and a fendering system;
- Two LNG storage tanks, each with a gross volume of 160,000 cubic meters (1,006,000 barrels) surrounded by a security barrier wall;
- 20 electric-powered booster pumps;
- Four shell and tube vaporizers using a primary, closed-loop water system;
- Three boil-off gas compressors, a condensing system, an NGL recovery system, and an export C2 heater;
- An LNG trailer truck loading facility with a small LNG storage tank;
- A natural gas meter station and odorization system;
- Utilities, buildings, and service facilities; and
- Associated hazard detection, control, and prevention systems; site security facilities; cryogenic piping; and insulation, electrical, and instrumentation systems.

The pipeline facilities would include:

- A 2.3-mile-long, 36-inch-diameter pipeline and associated aboveground facilities to transport natural gas from the LNG terminal to the existing SoCal Gas system; and
- A 4.6-mile-long, 10-inch-diameter pipeline and associated aboveground facilities to transport vaporized C2 from the LNG terminal to the existing ConocoPhillips LARC.

PUBLIC INVOLVEMENT AND AREAS OF CONCERN

On June 30, 2003, SES filed a request with the FERC to implement the Commission's Pre-Filing Process for the Long Beach LNG Import Project. At that time, SES was in the preliminary design stage of the project and no formal application had been filed with the FERC. On July 11, 2003, the FERC granted SES' request and established a pre-filing docket number (PF03-6-000) to place information filed by SES and related documents issued by the FERC into the public record. The purpose of the Pre-Filing Process is to encourage the early involvement of interested stakeholders, facilitate interagency cooperation, and identify and resolve issues before an application is filed with the FERC. After receipt of SES' Harbor Development Permit application on July 25, 2003, the POLB agreed to conduct its CEQA review of the project in conjunction with the Commission's Pre-Filing Process.

As part of the Pre-Filing Process, the FERC and the POLB worked with SES to develop a public outreach plan for issue identification and stakeholder participation. As part of the outreach plan, SES met with local associations, neighborhood groups, and other non-governmental organizations to inform them about the project and address issues and concerns. In coordination with the FERC and the POLB, SES also consulted with key federal and state agencies to identify their issues and concerns.

On September 4, 2003, SES sponsored two public workshops in the Long Beach area. The purpose of the workshops was to inform agencies and the general public about LNG and the proposed project and to provide them an opportunity to ask questions and express their concerns. The FERC and the POLB participated in these workshops and provided information on the joint environmental review process. Invitations to the public workshops were sent to federal, state, and local agencies; elected officials; environmental groups; affected landowners; and tenants of the POLB. Notices of the public workshops were published in the local newspapers.

Between September 22, 2003 and November 3, 2004, the FERC and/or the POLB issued three separate notices that described the proposed project and invited written comments on the environmental issues to be addressed in the EIS/EIR. The September 22, 2003 notice also announced a joint NEPA/CEQA public scoping meeting that was held in Long Beach on October 9, 2003. All three notices were mailed to federal, state, and local agencies; elected officials; environmental and public interest groups; Native American tribes; affected landowners; POLB tenants; and local libraries and newspapers. Announcements of the public scoping meeting were published in the local newspapers. Each notice opened a formal scoping period for the project.

A transcript of the public scoping meeting and all written comments are part of the public record for the Long Beach LNG Import Project and are available for viewing on the FERC Internet website (http://www.ferc.gov).[2] The environmental scoping comments received during the public scoping periods raised issues related to the alternatives analysis, geologic hazards, contaminated soils and sediments, land use, socioeconomics, traffic, air quality, cumulative impacts, and reliability and safety.

This draft EIS/EIR was filed with the U.S. Environmental Protection Agency (EPA), submitted to the California State Clearinghouse, and mailed to federal, state, and local agencies; elected officials; environmental and public interest groups; Native American tribes; affected landowners; POLB tenants; intervenors[3] in the FERC's proceeding; local libraries and newspapers; and other interested parties (i.e., miscellaneous individuals who provided scoping comments or asked to be on the mailing list). A formal notice indicating that the draft EIS/EIR is available for review and comment was published in the Federal Register, posted in the Los Angeles County Clerk's office in California, and sent to the remaining individuals on the mailing list. The public has at least 45 days after the date of publication in the Federal

Register to review and comment on the draft EIS/EIR both in the form of written comments and at public meetings to be held in Long Beach. All comments received on the draft EIS/EIR related to environmental issues will be addressed in the final EIS/EIR.

ENVIRONMENTAL ISSUES

The environmental issues associated with construction and operation of the Long Beach LNG Import Project are analyzed in this EIS/EIR using information provided by SES and further developed from data requests; field investigations; scoping; literature research; alternatives analysis; contacts with federal, state, and local agencies; and input from public groups and organizations. The Agency Staffs' analysis indicates that the project would result in certain adverse environmental impacts. As part of the environmental analysis, specific mitigation measures were identified that are feasible and that, when implemented, would reduce potential adverse impacts of project construction and operation. Table ES-1 at the end of this Executive Summary summarizes the significant impacts of the project and the mitigation measures recommended by the Agency Staffs to reduce the impacts. These impacts are described in detail in section 4.0. A brief summary by resource is provided below.

Geology

The project area is underlain by fill materials, alluvial and marine sediments, sedimentary rocks, and metamorphic basement rocks. Construction of the LNG terminal, electric distribution facilities, and pipelines would occur primarily within near-surface non-native fill deposits and unconsolidated soils and sediments. Therefore, construction and operation of the Long Beach LNG Import Project would not materially alter the geologic conditions of the area or worsen existing unfavorable geologic conditions. All active and abandoned petroleum production wells would be identified in the field just prior to the commencement of construction.

The potential for tsunamis or surface rupture to affect the project facilities is very low and, therefore, no specific mitigation is proposed. Geologic hazards present in the project area are related to seismic activity and historical subsidence associated with petroleum production in the area. Seismic activity could potentially damage the LNG terminal site facilities, shoreline structures, and pipeline and electric distribution facilities through strong shaking or secondary ground deformation such as liquefaction, shaking-induced settlement, or lateral spreading.

SES conducted a detailed analysis that resulted in seismic design criteria that meet the POLB requirements and exceed the Office of Pipeline Safety and the FERC requirements as specified in National Fire Protection Association 59A (2001). This analysis indicates that an earthquake of Richter magnitude M9.0 on the Palos Verde fault or M7.5 on the THUMS-Huntington Beach fault would be necessary to generate ground motions strong enough to rupture the LNG storage tanks and release their contents. These events have estimated return intervals of approximately 15,000 years and, therefore, are extremely unlikely to occur during the 50-year life of the project.

The Agency Staffs reviewed the current engineering designs for the LNG storage tanks and other critical terminal structures. These designs are of sufficient detail to demonstrate that the project facilities would withstand the seismic hazards that could affect the site when they are constructed to the specifications of the plans. SES would ensure that final engineering designs also meet or exceed applicable seismic standards, and would provide the final plans to the FERC and the POLB for review and approval before construction. The POLB would construct the shoreline structures to meet the stringent seismic design criteria developed for the site, and stone columns would be installed between the shoreline structures and the LNG storage tanks, thereby providing the required lateral support to limit displacement and minimize stress and strain levels well within the design limits of the LNG storage tanks and other heavy load structures in the event of an earthquake.

Regional subsidence due to ongoing hydrocarbon production is effectively monitored and controlled and, therefore, would not affect construction or operation of the project.

Soils and Sediments

Because of the highly developed, industrial nature of the area and the presence of mostly fill materials under the majority of the project facilities, the project would not reduce soil productivity by compaction or soil mixing. However, construction of the project facilities would temporarily expose the fill materials on the affected portion of Terminal Island and the native soils at the end of the pipeline routes to the effects of wind, rain, and runoff, which could cause erosion and sedimentation in the area. Erosion control measures proposed for the Long Beach LNG Import Project are detailed in SES' Sediment Control Plan that is included in its Storm Water Pollution Prevention Plan (SWPPP).

Existing soils at the LNG terminal site are not capable of adequately supporting the LNG storage tanks or other heavy load structures. As a result, SES proposes to install deep-driven pile foundations beneath the LNG storage tanks and other heavy load structures to meet the stringent static-settlement criteria for the structures at the LNG terminal. Other soil improvements at the site would include the installation of approximately 3,380 stone columns to depths of 60 to 80 feet below ground surface between the shoreline structures and the security barrier wall and an additional approximately 2,000 stone columns to a depth of 60 feet below ground surface between the security barrier wall and the LNG storage tanks. In addition to excavation for the soil improvements, construction of the project would involve excavation for the LNG spill impoundment systems and other utilities and foundations at the LNG terminal site, and trenching for the pipeline and electric distribution facilities. Contaminated soil and other hazardous materials could be encountered during any of these activities. If hazardous substances are encountered during construction, SES would notify the POLB. SES, in consultation with the POLB, would comply with all applicable environmental regulations. Before construction, SES and the pipeline contractor(s) would submit work plans that outline appropriate environmental site investigation and remediation activities to the appropriate agencies for approval. The work plans would include a site specific Health and Safety Plan, Sampling and Analysis Plan, Project Contractor Quality Control Plan, and an Environmental Protection Plan that would also include a Waste Management Plan.

Spills or leaks of fuels, lubricants, or other hazardous substances during construction and/or operation of the project could also have an impact on soils. This potential impact is expected to be minor, however, because of the typically low frequency, volume, and extent of spills or leaks, and because of the hazard detection system and other safety controls designed to prevent or contain spills and leaks at the LNG terminal site. Implementation of SES' Spill Procedure included in its SWPPP would further reduce the likelihood of a significant spill or leak occurring during construction or operation of the project, and would reduce the impact of any spill or leak that may occur.

Disturbance of the West Basin sediments during in-water activities would temporarily resuspend sediments in the water column, which could cause turbidity. An increase in sediment and turbidity levels could adversely affect water quality and aquatic organisms. Resuspension of contaminated sediments could also impact marine organisms in the area. The POLB has recently negotiated a consent agreement with the California Department of Toxic Substances Control (DTSC) for its concurrence with the Installation Restoration Site 7 (West Basin) sediment remediation. Accordingly, the dredging associated with the project would be done only with the concurrence of the DTSC. Turbidity levels would return to baseline conditions after dredging operations were completed. Disposal suitability issues would be addressed in compliance with the EPA/ACOE *Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual*. Disturbance of the West Basin sediments could also encounter ordnance. Any ordnance found during dredging for the proposed project would be handled in accordance with federal regulations and the POLB's procedures.

Water Resources

Activities associated with construction of the proposed project facilities, including hydrostatic test water appropriation, the installation of deep-driven pile foundations and stone columns at the LNG terminal site, the horizontal directional drills (HDDs) of the Cerritos Channel, site excavation and dewatering, and accidental spills or leaks of hazardous materials could adversely affect groundwater quality within the project area. SES would minimize the potential for these impacts by negotiating project

water requirements with the City of Long Beach for appropriate fees and mitigation measures; driving, rather than excavating, the foundation piles at the LNG terminal site and installing a cement plug at the base of each stone column in order to prevent the creation of an opening where potential cross-contamination could occur; implementing its HDD Plan; identifying and protecting all underground piping in the construction area; evaluating all dewatered material for contamination prior to removal in accordance with the Health and Safety Plan and Sampling and Analysis Plan; and implementing its Spill Procedure to address preventive and mitigative measures that would be used to minimize the potential impact of a hazardous spill during construction of the project facilities.

Potential operational impacts on groundwater include an accidental spill or leak of hazardous materials during operation of the project facilities and water requirements for the LNG terminal vaporization process, firewater system, and miscellaneous potable water needs. The measures in SES' Spill Procedure would reduce the potential impacts on groundwater associated with a hazardous spill or leak during project operation. All of the operational water required for the LNG terminal would be obtained from the POLB and the City of Long Beach municipal water system. SES would negotiate with the City of Long Beach or a local supplier to determine appropriate fees and to ensure that the project would have no impact on water availability in the area.

Activities associated with construction of the project facilities, including reinforcement of the shoreline structures, construction of the LNG ship berth and unloading facility and associated dredging, the HDDs of the Cerritos Channel, installation of the C_2 pipeline over the Dominguez Channel, hydrostatic test water discharge, storm water runoff, and accidental spills or leaks of hazardous materials could adversely affect surface water quality and/or water circulation within Long Beach Harbor. Adherence to the measures of all applicable permits, implementation of the POLB's Dredge and Disposal Plan and SES' HDD Plan and Spill Procedure, as well as disposal of all sediments at approved sites would minimize impacts on water quality. In addition, the Agency Staffs will recommend to their respective Commissions that SES revise its HDD Plan to describe the procedures that would be followed if an existing submerged pipeline is encountered during the HDD operations.

Operational impacts on water quality include the potential to contribute additional pollutants to the waterbody via accidental spills or leaks of hazardous materials, storm water runoff, or an LNG spill. There would be no intake or discharge of sea water during operation of the project facilities. Implementation of SES' Spill Procedure included in its SWPPP would reduce the likelihood of a significant spill or leak occurring during operation of the project, and would reduce the impact of any spill or leak that may occur. In accordance with its SWPPP, best management practices (BMPs) consisting of permanent features and operational practices designed or implemented to minimize the discharge of pollutants in storm water or non-storm water flows from the LNG terminal site would be implemented to reduce the potential operation-related impacts on surface water resources.

Biological Resources

Due to the highly developed nature of the POLB and the lack of vegetative habitats, the terrestrial environment in the project area supports few wildlife species. Individuals in the area are acclimated to the industrial nature of the POLB, routinely experience disturbance associated with Port activities, and would likely relocate into adjacent habitats. The project would not have a measurable impact on the local population of any species.

Activities associated with dredging could potentially affect marine organisms by destroying the benthic infauna of the dredged sediments and temporarily displacing mobile organisms, such as fish. In addition to the direct disturbances to the bottom substrates, dredging activities would temporarily increase turbidity and the presence of suspended sediments in the water column, which could indirectly affect marine organisms. However, monitoring of larger dredging projects within San Pedro Bay has shown that turbidity associated with dredging is short term and localized and that compliance with the requirements of the Regional Water Quality Control Board's Waste Discharge Requirements and the ACOE's section 404 permit results in minimal turbidity. The short-term loss of benthic organisms in a small portion of the

harbor is generally recognized as an insignificant impact on aquatic resources and benthic communities would be expected to repopulate following the completion of construction activities.

Activities associated with the reinforcement of the shoreline structures and construction of the LNG ship berth and unloading facility could directly affect benthic and fish species during the removal or installation of any in-water structures (e.g., pilings, underwater rock buttress). Individuals of non-mobile species attached to hard substrates that are removed or covered would suffer mortality. However, these species are relatively widespread throughout the harbor and would recolonize new hard substrates within 2 to 3 years.

Noise could impact marine organisms that occur in the project area within Long Beach Harbor. Project vessels operating within Long Beach Harbor could create sounds that lead to responses in fish. Additionally, specific construction activities (e.g., driving steel piles) could also generate underwater sound pressure waves that potentially kill, injure, or cause a behavioral change in fish in the immediate vicinity of the construction activities. Given the abundance of fish in the harbor despite continuous maritime activity, marine organisms found in the project area have generally adapted to these conditions.

There is also the potential for spills, leaks, or accidental releases of potentially hazardous materials to occur during construction of the proposed project. SES' Spill Procedure specifies BMPs that would minimize the chances of a spill and, if a spill were to occur, minimize the chances of the spill reaching a waterbody and affecting marine organisms.

Dredging and construction activities associated with the Long Beach LNG Import Project would affect water-associated birds through disruptive noise and/or temporary loss or degradation of foraging habitats in the marine waters of the West Basin. Birds found in the area are acclimated to these types of activities and would use similar habitats in adjacent areas.

Consultation with the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) identified the proposed project area as designated essential fish habitat (EFH) for the Coastal Pelagics and Pacific Groundfish Management Plans. Fourteen of the 86 species managed under these two plans are known to occur in Long Beach Harbor and could be affected by the proposed project. Although disturbance of an estimated 11.9 acres of sea floor and the temporary resuspension of sediments into the water column during dredging activities could potentially adversely affect EFH (resulting in avoidance by adults and some loss of larval northern anchovy in the immediate vicinity of the dredging activity), implementation of the control measures and management practices proposed by SES or required by the regulatory agencies would serve to avoid or minimize impacts on EFH. Additionally, construction impacts would be temporary and turbidity levels would return to baseline conditions following construction.

Seven species listed as federally threatened or endangered potentially occur in the project area. The California brown pelican, California least tern, and leatherback sea turtle are federally listed endangered species and the western snowy plover, green sea turtle, olive Ridley sea turtle, and loggerhead sea turtle are federally listed threatened species. Both the U.S. Fish and Wildlife Service and NOAA Fisheries provided comments indicating that federally listed threatened or endangered species would not likely be adversely affected by the proposed project and the FERC staff concurs with these determinations. Three state-listed endangered species, the American peregrine falcon, the California brown pelican, and the California least tern, have been identified as potentially occurring in the proposed project area. The California brown pelican and the California least tern are also federally listed species and, as discussed above, would not likely be adversely affected by the project. Construction and operation of the Long Beach LNG Import Project could disturb the American peregrine falcon through temporary loss or degradation of foraging habitat and disruptive noise from construction and operation of the project facilities. However, peregrine falcons in the project area have become acclimated to POLB operations, including construction and dredging activities as evidenced by their continued use of the local bridges for nesting. In addition, the proposed project would not result in the permanent loss or degradation of existing foraging habitat or significantly increase existing noise levels during construction and operation.

Land Use, Hazardous Waste, Recreation, and Visual Resources

A total of 88.0 acres of land would be affected during construction of the Long Beach LNG Import Project (56.9 acres for the LNG terminal facilities, 30.1 acres for the pipeline facilities, and 1.0 acre for the electric distribution facilities). Of the 88.0 acres of land affected by construction of the project, 37.0 acres would be permanently affected during operation of the project facilities (32.1 acres associated with the LNG terminal, 3.9 acres associated with the pipelines, and 1.0 acre associated with the electric distribution facilities). The LNG terminal would be an industrial use that generally conforms to the overall goals of the current PMP, local zoning ordinances, and relevant regional plans and would be consistent with existing surrounding uses. However, an amendment to the PMP would be necessary to accommodate the LNG facility because LNG is not an expressly identified "hazardous cargo" as permitted within Terminal Island Planning District 4. The pipeline and electric distribution facilities would be an industrial/utility use that is consistent with existing surrounding uses and conforms to the overall goals of the current PMP, local zoning ordinances, and relevant regional plans.

All of the land and marine uses immediately adjacent to and within 1 mile of the proposed project facilities are associated with the industrial activities of the ports of Long Beach and Los Angeles or the Cities of Long Beach, Los Angeles, and Carson. No permanent residences are located within the POLB or the Port of Los Angeles. The closest potential residences are in a recreational vehicle park about 1.3 miles east-northeast of the LNG terminal site and possibly live-aboard boats at two marinas in the East Basin of the Cerritos Channel between 1.2 and 1.6 miles northwest of the LNG terminal.

The Long Beach Naval Shipyard and Station are listed as hazardous waste sites. The Navy also documented soil contamination in the area during closure of its Long Beach Complex. Several other hazardous waste sites were identified within 0.25 mile of the pipeline routes and electric distribution facilities. Because none of these sites would be crossed by the proposed facilities, Phase I Environmental Assessments were not conducted.

Although the Long Beach area provides several opportunities for recreational activities, the immediate area surrounding the LNG terminal site, pipelines, and electric distribution facilities does not provide for recreational activities due to the industrial nature of the Port and the adjacent area to the north. Construction and operation of the Long Beach LNG Import Project would not threaten the viability of a recreational resource, prohibit access to recreational resources, or cause termination of a recreational use.

Construction and operation of the LNG terminal facilities would have a permanent but not significant impact on visual resources. Although there are a substantial number of potential mobile and stationary viewers and visibility is high in some locations, the LNG facilities would be seen in the context of the existing industrial facilities at the POLB and would not adversely affect the viewshed from sensitive locations or change the character of the landscape in terms of either physical characteristics or land uses. Construction and operation of the pipeline and electric distribution facilities would not result in significant impacts on visual resources.

Socioeconomics

Construction of the project would result in a temporary increase in population and the demands on temporary housing, public services, and utilities and service systems. Due to the temporary and limited nature of these impacts they are not considered significant. Of the 60 full-time workers SES would hire to operate the project facilities, about 54 workers are expected to be from the local area. Therefore, operation of the project would not have a significant impact on population or the demand for housing. Because LNG would be a new product to the POLB, it would also be new to the local fire and emergency response services. SES is working with local emergency providers to develop procedures to handle potential fire emergencies and is working with the Long Beach City Fire Department (LBFD) to provide hazard control and firefighting training that is specific to LNG and LNG vessels. SES has also committed to funding all necessary security/emergency management equipment and personnel costs that would be imposed on state and local agencies as a result of the project and would prepare a comprehensive plan that identifies the mechanisms for funding these costs. These measures should adequately equip the LBFD to handle any

type of emergency at the proposed LNG terminal. Construction and operation of the project would have a beneficial impact on local tax revenues.

Transportation

The duration of construction for the LNG terminal is estimated to be 48 months. During this time, traffic would be generated by trucks transporting materials and equipment to and from the laydown area and project site as well as trucks transporting materials directly to the project site. Driveway access to the laydown area is located along Pier S Avenue. Also, construction worker trips would occur during the construction period. These worker trips would total approximately 808 trips (404 in and 404 out) into the area. All construction workers would park adjacent to the laydown area. The construction workers would then be transported via buses to the project site. The transporting of these workers would generate a total of 46 daily bus trips (23 in and 23 out). The transporting of construction equipment and materials would generate approximately 676 daily truck trips (338 in and 338 out) during the most active construction period. These project construction worker and truck and material haul trips would result in a temporary, short-term significant impact at the intersections of Navy Way and Seaside Avenue (evening only) and Henry Ford Avenue and Anaheim Street (evening only). The Agency Staffs will recommend to their respective Commissions that SES require the construction workforce to work 6 a.m. to 2:30 p.m. instead of 7 a.m. to 3:30 p.m. Improvements at the Henry Ford Avenue/Anaheim Street intersection would be implemented if required by the Los Angeles Department of Transportation. Operation of the project would not result in a significant impact on traffic.

The Long Beach LNG Import Project would generate a maximum of 120 ship calls and 240 ship movements within the POLB each year. This would typically mean the addition of one ship movement per day on up to 240 days of the year or possibly two ship movements in the event of a rapid discharge call with arrival, discharge, and departure occurring during one calendar day. The increase in ship traffic associated with the LNG terminal could cause vessel traffic congestion within the harbor and/or conflicts with other commercial interests if an LNG ship arrival or departure delays the movement of another vessel, either due to scheduling or traffic management resulting in slow speed or waiting time. Delays experienced by other ships are expected to be temporary and of short duration. In addition, SES would participate with the Coast Guard in the development of procedures to reduce impacts on marine transportation, including implementation of an LNG Vessel Operation and Emergency Contingency Plan that would provide the basis for operation of LNG ships within the POLB.

Cultural Resources

The FERC and the POLB, in consultation with the State Historic Preservation Office, have determined that there would be no impact on any properties listed, or eligible for listing, on the National Register of Historic Places or the California Register of Historical Resources or on any unique archaeological resources for the proposed project; therefore, no mitigation would be required. SES prepared an Unanticipated Discovery Plan to be used during construction. The plan describes the procedures that would be employed in the event previously unidentified cultural resources or human remains are encountered during construction. SES' continued cooperation with Native American tribes who were identified by the California Native American Heritage Commission as potentially having knowledge of cultural resources in the project area should address any tribal issues associated with the proposed project.

Air Quality

Construction emissions associated with the Long Beach LNG Import Project would be caused by tailpipe emissions from worker vehicles and supply trucks, as well as construction equipment and fugitive dust. The South Coast Air Quality Management District (SCAQMD) significance thresholds would be exceeded for all criteria pollutants except sulfur oxides (SO_x) on a peak daily and quarterly basis. The exceedances are considered a significant impact. To reduce project construction emissions from onsite diesel-fueled combustion equipment, SES' contract specifications would require that all off-road diesel fueled equipment powered by compression ignition engines meet or exceed the various emission

standards in accordance with table 1 of Title 40 CFR Part 89.112. For all other equipment, contract specifications would require that the newest equipment in the construction contractors' fleets be used to take advantage of the general reduction in emission factors that occurs with each model year. SES would also adhere to the POLB's air quality requirements and construction standards some of which include the use of electric-powered dredges for all hydraulic dredges and ultra-low sulfur or emulsified diesel in all other types of dredges, construction phasing to minimize concurrent use of construction equipment, turning equipment off when not in use, watering specifications, restrictions on soil excavation and hauling in windy conditions, suspension of construction activities during Stage II smog alerts, and speed limit restrictions. In addition to SES' proposed control measures, the Agency Staffs will recommend to their respective Commissions that SES require all contractors to use ultra-low sulfur or CARB-approved alternative diesel fuel in all diesel-powered equipment used onsite during construction.

The construction workforce would be relatively small (peak of about 404 workers) and would primarily consist of workers from within the Los Angeles and Orange County labor pool. The workers would commute to the temporary laydown and worker parking area on Ocean Boulevard and would then be transported to the site via buses. Materials and equipment would be shipped to the site by road, rail, or barge or to the temporary laydown area on Ocean Boulevard. The Agency Staffs will recommend to their respective Commissions that SES use alternative-fuel buses to transport workers to and from the temporary laydown and worker parking area.

Although implementation of SES' control measures and the mitigation measures recommended by the Agency Staffs would reduce emissions during the construction phase, the impacts of the project on air quality during construction are still expected to remain significant. Construction impacts would, however, be temporary and intermittent and cease at the end of the construction phase.

Operational emission sources associated with the project would include marine vessels, vaporization equipment, fugitive process emissions, on-road vehicles, and emergency generator and firewater pumps. The project's operational emissions would exceed the SCAQMD daily emission thresholds for nitrogen oxides (NO_x), reactive organic compounds (ROC), particulate matter having an aerodynamic diameter of 10 microns or less (PM_{10}), and SO_x. Therefore, the project would be significant for ozone, PM_{10}, and SO_x. The project would not be significant for carbon monoxide. SES proposes to minimize criteria pollutant emissions associated with operation of the Long Beach LNG Import Project through the following control measures: Lowest Achievable Emission Rate/Best Available Control Technology would be applied as needed to the stationary sources; LNG trailer trucks would be LNG fueled and their engines would be turned off during onsite loading; LNG ships would generate power from combustion of boil-off LNG rather than fuel oil if they are equipped to do so; fugitive ROC emissions from various points in the terminal would be minimized by design elements and through the implementation of a comprehensive leak detection and repair program; and operational personnel would be encouraged to rideshare and use mass transit.

SES would also ensure that all diesel-powered, non-road mobile terminal equipment would meet the emissions standards set forth in the EPA's Control of Emissions of Air Pollution From Non-Road Diesel Engines and Fuel and require ships calling at the terminal that do not use LNG boil-off gas in the main engines for power during unloading to use fuels such as the CARB's #2 diesel, gas-to-liquid diesel, biofuels, or a marine distillate fuel, in the ship's auxiliary power generator motors, or use exhaust treatment technology. Because the SCAQMD significance thresholds would be exceeded for NO_x, ROC, PM_{10}, and SO_x even after implementation of SES' control measures, the project's operational impact on air quality would be considered significant. Given the nature of the project operations, especially vessel operations, the Agency Staffs have determined that there are no additional feasible measures that would further reduce air emissions.

The proposed project would comply with all applicable regulations in the 2003 Air Quality Management Plan (AQMP). The AQMP includes control measures that are intended to be implemented

by federal and state governments to reduce emissions from ships and on-road trucks in order to bring the South Coast Air Basin (SCAB) into conformity with federal ambient air quality standards.

The FERC is required to conduct a conformity analysis for the Long Beach LNG Import Project to determine if the emissions associated with the project would conform to the State Implementation Plan (SIP) and would not reduce air quality in the SCAB. This draft EIS/EIR includes a draft conformity analysis; however, documentation supporting conformity with the applicable SIP and AQMP in accordance with Title 40 CFR Part 93.158 has not been filed with the FERC. Until this information is provided by SES, the Long Beach LNG Import Project is deemed to not conform to the applicable SIP and AQMP. The FERC staff recommends that SES completes a full air quality analysis and identify any mitigation requirements necessary for a finding of conformity and file this information with the FERC before the end of the draft EIS/EIR comment period for review and analysis in the final EIS/EIR.

In accordance with SCAQMD Rule 1401, a Health Risk Assessment of toxic air contaminant emissions on humans was conducted for the water heaters associated with the vaporization equipment, the unloading of the LNG ships at berth (vessel activities during that period are referred to as hotelling), movement of the LNG ships within the SCAQMD's boundary, tugboats, pilot boats, Coast Guard escort boats, and idling emissions from the LNG trailer trucks that would load at the terminal. Although the proposed project would not exceed cancer risk level significance thresholds established by the SCAQMD for toxic air pollutant health impacts, the SCAB and Port areas in particular are assumed, on the basis of the SCAQMD's Multiple Air Toxics Exposure Study in the SCAB, to suffer significant impacts related to toxic air pollutants and associated cancer risk levels. Therefore, toxic air pollutants resulting from the project would likely contribute to an existing cumulatively significant air quality impact in the SCAB.

Noise

The noise associated with construction activities would be intermittent because equipment would be operated on an as-needed basis. Construction activities at the LNG terminal and along the routes of the pipelines and electric distribution facilities would generate short-term increases in sound levels during daylight hours when construction activities would occur. The strongest source of sound during construction would be noise associated with installing deep-driven pile foundations beneath the LNG storage tanks and other heavy load structures to meet the stringent static-settlement criteria for the LNG storage tanks and other heavy load structures at the LNG terminal. Although the noise levels at the property boundary during this activity would be higher than existing noise levels, the impacts would be short term and would be contained within the industrial area immediately surrounding the LNG terminal site within the POLB.

The major noise-producing equipment associated with operation of the LNG terminal would be the boil-off gas compressors, primary and secondary booster pumps, water pumps and heaters, instrument air compressors, and fans for the heaters. Noise control measures included in the design of the LNG terminal facilities consist of buildings, barrier walls, and tanks to provide the appropriate level of noise screening. The predicted operational noise level is below the FERC limit of 55 decibels of the A-weighted scale (dBA) day-night sound level (L_{dn}) at the nearest noise-sensitive area (NSA). The predicted property boundary noise level is below the City of Long Beach noise limit of 70 dBA. To ensure that the actual noise resulting from the operation of the LNG terminal is below the FERC limit of 55 dBA L_{dn} at any nearby NSAs and the City of Long Beach property boundary noise limit of 70 dBA, the Agency Staffs will recommend to their respective Commissions that SES conduct a noise survey to verify that the noise from the LNG terminal when operating at full capacity does not exceed these limits.

Reliability and Safety

The safety of both the proposed LNG import terminal facility and the related LNG vessel transit was evaluated. With respect to the onshore facility, the FERC staff completed a cryogenic design and technical review of the proposed terminal design and safety systems. As a result of the technical review of the information provided by SES in its application materials, a number of concerns were identified by the FERC staff relating to the reliability, operability, and safety of the facility. In response to staff's

questions, SES provided written answers prior to a site visit and cryogenic design and technical review conference for the proposed project that was held in Long Beach in July 2004. Specific recommendations have been identified for outstanding issues that require resolution. Follow up on those items requiring additional action would need to be documented in reports to be filed with the FERC.

The FERC staff calculated thermal radiation distances for incident flux levels ranging from 1,600 to 10,000 Btu per square foot per hour (Btu/ft$_2$-hr) for LNG storage tank and trailer truck loading LNG storage tank fires. An incident flux level of 1,600 Btu/ft$_2$-hr is considered hazardous for persons located outdoors and unprotected, a level of 3,000 Btu/ft$_2$-hr is considered an acceptable level for wooden structures, and a level of 10,000 Btu/ft$_2$-hr would cause clothing and wood to ignite and is considered sufficient to damage process equipment. It was determined that the exclusion zone distance for the 10,000 Btu/ft$_2$-hr incident flux would not extend beyond the property line. The LNG storage tank thermal radiation exclusion zone distance for the 1,600 and 3,000 Btu/ft$_2$-hr incident flux would extend outside the terminal site to the east onto Pier T property. For the trailer truck loading storage tank, the thermal radiation exclusion zone distance for the 1,600 and 3,000 Btu/ft$_2$-hr incident flux also would extend outside the terminal site to the east onto Pier T property. Although no prohibited activities or buildings currently exist within these exclusion zones, according to Title 49 CFR Part 193, either a government agency or SES must be able to exercise legal control over activities in these areas for as long as the facility is in operation. The POLB owns the land surrounding the LNG terminal site but leases parcels to other tenants. In its application, SES stated that it is currently negotiating with the POLB and adjacent tenants for restrictive covenants to limit the use of the areas impacted. The FERC staff recommends that SES provide in its comments on the draft EIS/EIR, or in a separate document submitted at the same time, evidence of its ability to exercise legal control over the activities that occur within the portions of the thermal radiation exclusion zones that fall outside the terminal property line that can be built upon.

The FERC staff also conducted flammable vapor dispersion analyses and determined that design spills for the storage tanks, process area, and trailer truck loading area would not extend beyond the terminal property line.

Thermal radiation and flammable vapor hazard distances were also calculated for an accident or an attack on an LNG vessel. For 2.5-meter and 3-meter diameter holes in an LNG cargo tank, the FERC staff estimated distances to range from 4,372 to 4,867 feet for a thermal radiation level of 1,600 Btu/ft$_2$-hr.

In addition to the analysis conducted by the FERC staff, the POLB commissioned a study by Quest Consultants, Inc. (Quest) to identify the worst-case hazards that would result from a release of LNG or other hydrocarbons in or near SES' proposed LNG import terminal. Using a detailed methodology, Quest identified potential accidental and intentional release events involving the LNG terminal and LNG ships. Quest's final report is titled *Hazards Analysis of a Proposed LNG Import Terminal in the Port of Long Beach, California* (POLB Quest Study) and is included in its entirety in appendix F.

The POLB staff reviewed each of the release events identified by Quest using probability definitions developed by the Los Angeles County Fire Department (LACFD). Using the LACFD criteria, an event is considered possible if it could occur once every 100 to 10,000 years. Based on the chances of their occurrence, the release events that are considered possible per the LACFD criteria are a release from process equipment within the LNG terminal and a release from an LNG ship following a collision with the breakwater or with another ship outside the breakwater.

There are no residential, visitor-serving, or recreation populations and essentially no exposed Port workers within the thermal radiation exclusion zone for the 1,600 Btu/ft$_2$-hr incident flux for a release from a rupture of process equipment at any location. Furthermore, the thermal radiation exclusion zone for the 10,000 Btu/ft$_2$-hr incident flux for a release from a process equipment rupture would not impact the adjacent industrial facilities.

The analyses in the draft EIS/EIR and the POLB Quest Study have shown that based on the extensive operational experience of LNG shipping, the structural design of an LNG vessel, and the operational

controls imposed by the ship's master, the Coast Guard, and local pilots, the likelihood of a cargo containment failure and subsequent LNG spill from a vessel casualty – collision, grounding, or allision – is very small.

Unlike accidental causes, historical experience provides little guidance in estimating the probability of a terrorist attack on an LNG vessel or onshore storage facility. For a new LNG import terminal proposal that would store a large volume of flammable fluid near populated areas, the perceived threat of a terrorist attack is a primary concern of the local population. However, the POLB Quest Study reported that the historical probability of a successful terrorist event would be less than seven chances in a million per year. In addition, the multi-tiered security system that would be in place for an LNG import facility in the POLB would reduce the probability of a successful terrorist event.

Some commenters have expressed concern that the local community would have to bear some of the cost of ensuring the security of the LNG facility and the LNG vessels while in transit and unloading at the dock. The potential costs will not be known until the specific security needs have been identified, and the responsibilities of federal, state, and local agencies have been established in the Coast Guard's Waterway Suitability Assessment (WSA). SES has committed to funding all necessary security/ emergency management equipment and personnel costs that would be imposed on state and local agencies as a result of the project and would prepare a comprehensive plan that identifies the mechanisms for funding these costs. In addition, section 311 of the Energy Policy Act of 2005 stipulates that the FERC must require the LNG operator to develop an Emergency Response Plan that includes a Cost-Sharing Plan before any final approval to begin construction. The Cost-Sharing Plan shall include a description of any direct cost reimbursements to any state and local agencies with responsibility for security and safety at the LNG terminal and near vessels that serve the facility. To allow the FERC and the POLB the opportunity to review the plan, the Agency Staffs will recommend to their respective Commissions that SES submit the plan concurrent with the submission of the Follow-on WSA.

Cumulative Impacts

When the impacts of the Long Beach LNG Import Project are considered additively with the impacts of other past, present, or reasonably foreseeable future actions, there is some potential for cumulative effect on water resources, socioeconomics, land transportation, air quality, and noise. For the Long Beach LNG Import Project, control measures have been developed and additional mitigation measures have been recommended by the Agency Staffs to minimize or avoid adverse impacts on these resources. However, the cumulative projects represent additions of potentially significant and unavoidable emissions to the SCAB. In addition, even though project-specific toxic air pollutant health impacts would not be significant, it is likely that the incremental increase in the cancer risk level for toxic air pollutants as a result of the proposed project would contribute to an existing cumulatively significant health impact in the SCAB.

Growth-inducing Impacts

The potential growth-inducing impacts of the Long Beach LNG Import Project would be an increase in development and population in the area associated with a new source of natural gas. Most of the natural gas that would be supplied by the LNG terminal would be transported into the SoCal Gas system and would be used to meet existing and future natural gas demand in the LA Basin. The demand for energy is a result of, rather than a precursor to, development in the region. Currently, imports from out of state represent approximately 87 percent of supply and are anticipated to rise to 88 percent by 2013, meaning that additional external supplies will be needed to keep up with demand. Given the shortand mid-term demand for natural gas and the need to reduce potential supply interruptions, the California Energy Commission has identified the need for California to develop new natural gas infrastructure to access a diversity of fuel supply sources and to remove constraints on the delivery of natural gas. The LNG that would be made available for vehicle fuel would be used to meet existing and projected future demand and provide a new source of fuel to facilitate conversion of diesel or gasoline-fueled vehicles to LNG, which could reduce air emissions in the area. Given the large local labor pool in Los Angeles and Orange

Counties, no substantive influx of workers would occur during construction and operation of the Long Beach LNG Import Project.

ALTERNATIVES CONSIDERED

The No Action or No Project Alternative was considered. While the No Action or No Project Alternative would eliminate the environmental impacts identified in this EIS/EIR, none of the objectives of the proposed project would be met. Specifically, SES would not be able to provide a new and stable supply of natural gas and LNG vehicle fuel to southern California. It is purely speculative to predict the actions that could be taken by other suppliers or users of natural gas and LNG in the region as well as the resulting effects of those actions. Because the demand for energy in southern California is predicted to increase, customers would likely have fewer and potentially more expensive options for obtaining natural gas and LNG supplies in the near future. This might lead to alternative proposals to develop natural gas delivery or storage infrastructure, increased conservation or reduced use of natural gas, and/or the use of other sources of energy.

It is possible that the infrastructure currently supplying natural gas and LNG to the proposed market area could be developed in other ways unforeseen at this point. This might include constructing or expanding regional pipelines as well as LNG import and storage systems. Any construction or expansion work would result in specific environmental impacts that could be less than, similar to, or greater than those associated with the Long Beach LNG Import Project. Increased costs could potentially result in customers conserving or reducing use of natural gas. Although it is possible that additional conservation may have some effect on the demand for natural gas, conservation efforts are not expected to significantly reduce the long-term requirements for natural gas or effectively exert downward pressures on gas prices.

Denying SES' applications could force potential natural gas customers to seek regulatory approval to use other forms of energy. California regulators are promoting renewable energy programs to help reduce the demand for fossil fuels. While renewable energy programs can contribute as an energy source for electricity, they cannot at this time reliably replace the need for natural gas or provide sufficient energy to keep pace with demand.

Alternatives involving the use of other existing or proposed LNG or natural gas facilities to meet the stated objectives of the proposed project were evaluated. None of the pipeline system alternatives could provide a stable source of LNG for vehicle fuel or the storage of up to 320,000 cubic meters of LNG to address fluctuating energy supply and demand (two of the three stated objectives of the Long Beach LNG Import Project). Several of the proposed LNG import systems (either offshore California or in Mexico) could provide a new source of natural gas to southern California markets; however, none of these system alternatives could meet the proposed project's stated objective of providing a stable source of LNG for vehicle fuel. Furthermore, each of the system alternatives could result in its own set of significant environmental impacts that could be greater than those associated with the proposed project.

Alternative sites for an LNG import terminal were evaluated. The examination of alternative sites for an LNG import terminal involved a comprehensive, step-wise process that considered environmental, engineering, economic, safety, and regulatory factors. The alternative sites evaluated for an LNG terminal were not found to avoid or substantially lessen any significant environmental effects of the proposed project and/or could not meet all or most of the project objectives.

An evaluation of alternative routes for the natural gas and C_2 pipelines was also conducted. The alternatives were not found to avoid or substantially lessen impacts associated with the corresponding segment of the proposed routes and/or were infeasible due to the number of existing utilities already in place along the alignments and the lack of adequate space to install the facilities.

Reduced dredge/fill alternatives and alternative ship berth configurations, dredge disposal alternatives, and alternative dredging methods were evaluated to avoid or minimize impacts on water quality or biological resources associated with the in-water work needed for construction of the LNG ship berth and unloading facility and strengthening the shoreline structures. None of these alternatives were

found to be feasible or would avoid or substantially lessen any significant environmental effects of the proposed project.

Vaporizer alternatives were also evaluated. The shell and tube vaporizer, which is the proposed vaporizer for the Long Beach LNG Import Project, was found to be efficient, readily able to be integrated with the NGL extraction system, and to utilize proven vaporizer technology. Shell and tube vaporizers are also the most compact LNG vaporizers available, an important consideration given the size of the LNG terminal site. New vaporization processes that primarily utilize air exchangers as a heat source were also evaluated because they would have lower fuel gas requirements than conventional combustion vaporizers. Reduced fuel use would lead to a corresponding reduction in air emissions and operating costs. The space requirements of these new vaporization processes, however, appear to make this approach technically infeasible at the proposed site.

ENVIRONMENTALLY PREFERABLE/SUPERIOR ALTERNATIVE

The Agency Staffs will recommend to their respective Commissions that SES' proposed project is the environmentally preferable/superior alternative that can meet the project objectives.

<tables snipped>

Appendix D: TOC Long Beach LNG Import Terminal Project Draft EIS/EIR

TABLE OF CONTENTS
Long Beach LNG Import Project

Draft Environmental Impact Statement/
Environmental Impact Report

TABLES

FIGURES

01

Friends of the Swainson's Hawk

www.swainsonshawk.org

March 31, 2017

Sacramento LAFCo
1112 I Street, Suite 100
Sacramento, Ca. 95814
Attention: Don Lockhart
Don.Lockhart@SacLafco.org

Please send all notices & correspondence to:
Friends of the Swainson's Hawk
8867 Bluff Lane
Fair Oaks, CA 95628
email: swainsonshawk@sbcglobal.net
916-769-2857

Comments of the Friends of the Swainson's Hawk. on the Draft Environmental Impact Report for the Kammerer Road/Highway 99 Proposed Sphere of Influence Amendment [LAFC # 07-15]

Dear Mr. Lockhart:

The Application to LAFCo proposes to expand Elk Grove's Sphere of Influence ("SOI") by approximately 1,156 acres onto land presently zoned and used for agriculture and also used by wildlife for habitat. It conflicts with on-going state and local planning for conservation and mitigation programs to offset the impacts of already-approved urban development and major infrastructure to serve existing urban areas.

There is enough vacant land within the region's existing Cities, including Elk Grove, the County Urban Policy Area and the County Urban Service Boundary ("USB") to meet the region's urban land use demands for decades. The proposed SOI expansion is not justified by any credible planning or economic analysis. The DEIR points out that the proposed SOI expansion is not consistent with twenty year regional growth planning by SACOG. SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy covers the period 2012 through 2036 and federal expenditures and actions are required to be consistent with this Plan. The DEIR fails to point out this nexus and the difficulties with obtaining federal permits for development inconsistent with the MTP/SCS.

Friends of the Swainson's Hawk (FOSH) and others have identified significant, large gaps and misrepresentations in the DEIR that require correction and recirculation under CEQA. FOSH asks that notices of availability of documents and hearings pertaining to this proposal be sent to Friends of the Swainson's Hawk at its postal and email addresses shown above.

The NOA for the DEIR stated that the last day for submitting comments on the DEIR is March 31, 2017, which is the Cesar Chavez Holiday on which LAFCo offices are closed. Pursuant to Code of Civil Procedure 12(a) and 13, the last day for submitting comments is extended to the first business day after the March 31 holiday, which is Monday April 3.

DEIR Lacks Adequate Relevant Information and Contains Misleading and Factually Incorrect Information

The DEIR fails as an information document; it does not provide LAFCo commissioners, staff, and the public with an accurate baseline and assessment of the impacts of the SOI approval on open space and agricultural preservation and orderly growth and development as required by the Cortese Knox Hertzberger statute that defines LAFCo's role and responsibility under state law.

During Elk Grove's previous application to LAFCo for an expanded SOI (2011-2013), we submitted or commissioned to be submitted, comment letters that addressed the environmental impacts of an SOI for City of Elk Grove south of the current City boundary. This boundary is the County's Urban Services Boundary and many of our previous comments and data are relevant to the current SOIA. We are resubmitting letters by Shawn Smallwood, Consulting Biologist, and Don Mooney, Attorney, that are relevant to review of the current DEIR. The DEIR for reasons explained below, does not meet the legal standards identified in the Mooney letter of November 21, 2011. We also incorporate and support the comments by ECOS/Habitat 2020.

No demonstration of need for an SOI expansion; there are thousands of acres of undeveloped vacant land within the City limits available for new development.

The City of Elk Grove previously submitted an application for a 7,819-acre SOI expansion which included the area of the current proposal. The City withdrew its application in 2013 after hearings at which a majority of LAFCo Commissioners indicated their intent to disapprove the SOI. A major concern was Elk Grove's failure to show a need for an SOI expansion because there were then thousands of acres of undeveloped vacant land within the City limits available for new development.

Little has changed since then. There remain apparently at least 3000 acres of vacant grassland within the City that is zoned for development but remains undeveloped despite record low interest rates, landowners eager for development, and a City government actively seeking new development. These areas include the 1200-acre Southeast Policy Area, the majority of 1900-acre Laguna Ridge Specific Plan, 200-acre Sterling Meadows, East Elk Grove Specific Plan, Elk Grove Triangle Special Plan, vacant industrial-zoned land east of Highway 99 along Grantline, and other vacant lands. Lent Ranch consists of the half-completed shell of a failed mall where construction ceased years ago, acres of grassland, and the Kaiser Permanente Medical Offices alongside Highway 99. There is a casino proposal for part of the Lent Ranch site which has drawn considerable opposition from community residents and competing gambling interests, and its future is very uncertain. New development actually constructed in Elk Grove since 2013 has been minimal relative to the amount of vacant land within the City limits available for new development.

Government Code § 56377(b) clearly directs LAFCo to prefer development of existing vacant or nonprime agricultural land within the existing jurisdiction of local agency before any proposal is approved which would allow or lead to development of open space lands for non-open space uses which is outside of existing SOI or existing jurisdiction of local land use agency. The DEIR

fails to establish the factual basis necessary for LAFCo to approve the SOI expansion by its failure to show that there is insufficient vacant land within the City to accommodate Elk Grove's reasonably foreseeable development needs. Government Code §56377(a) charges LAFCo with guiding development away from open space and prime agricultural land uses unless such action would not promote planned orderly, and efficient development. Section 56377(b) charges LAFCo with encouraging development of existing vacant or nonprime agricultural lands with the existing jurisdiction of a local agency before any proposal is approved which would allow for or lead to the development of existing open space lands for non-agricultural uses which are outside of the existing jurisdiction.

A Recirculated DEIR for the proposed SOI must disclose all vacant undeveloped land within the City limits so that LAFCo can make an informed decision about the City's probable need for annexation and development within the proposed SOI expansion. Please disclose all presently vacant undeveloped land within the City limits, the acreage, location and land use designations of all vacant lands, and construction starts that have stalled or been abandoned. A Recirculated DEIR should also include a map of Elk Grove showing all undeveloped and vacant lands.

The DEIR must disclose (1) the environmental impacts of LAFCo approval of the proposed SOI and new development that would be the reasonably foreseeable consequence of an SOI approval while substantial areas of developable land within Elk Grove remain undeveloped, and (2) the consistency or inconsistency with Government Code §§ 56001, 56300(a) and 56377(a) and (b) and LAFCo policies, of the proposed approval of the proposed SOI while large areas of Elk Grove remain undeveloped and vacant. See list of vacant areas, *supra.*

The DEIR fails to disclose the areas of vacant land within the City. ATTACHED are readily available Google Earth graphics showing large undeveloped areas within the City of Elk Grove and elsewhere in south and east Sacramento County within areas already designated for urbanization.

There has been no change of circumstance that would call for LAFCo to approve part of a proposed SOI expansion that LAFCo Commissioners rejected in 2013.

Inaccurate presentation of existing law governing the decision.

Definition of Sphere of Influence

California Government Code Section 56076 defines "Sphere of influence" which "means a plan for the probable physical boundaries and service area of a local agency, as determined by the commission." As a practical matter, the Sphere of Influence of a City would be a plan for the probable location, approved by LAFCo, of future annexation and development by the City.

The assertion of DEIR Section 2.5 that the purpose of an SOI is "holding capacity" to consider future opportunities for development is inaccurate and contrary to Government Code Section 56076, *supra,* which defines "Sphere of Influence". The DEIR errs in considering vacant land that is zoned for urban use to be equivalent to developed land, and thereby fails to provide an accurate baseline for the assessment of impacts of the project. A mere project approval or zoning of vacant land within the City for future development is not "development" unless the

project is physically constructed – a number of projects and urban entitlements in this region have been approved, sometimes years ago, that have not been and may never be constructed. The DEIR, pg. 3-11-26, misleads in equating paper zoning of vacant land for future development as actual development.

LAFCo Lacks Statutorily Required Policies to Review SOI Applications

California Government Code Section 56300 states that "(a) It is the intent of the Legislature that each commission, not later than January 1, 2002, shall establish written policies and procedures and exercise its powers pursuant to this part in a manner consistent with those policies and procedures and that encourages and provides planned, well-ordered, efficient urban development patterns with appropriate consideration of preserving open-space and agricultural lands within those patterns." The Sacramento LAFCo has never adopted policies and procedures to address how it will consider Sphere of Influence applications consistent with the statutory charges described above (Government Code §§56301 and §56377). In November, 2006, after a sustained effort to develop such policies, the staff withdrew its proposal and in March 2007, dropped all future consideration of new policies.

The DEIR on pages 1-2 acknowledges that LAFCo has the statutorily required polices and procedures for annexations but fails to acknowledge that the Sphere of Influence application is being considered in the absence of statutorily required policies to implement the statute re standards and policies for SOI approvals.

The DEIR fails to consider that absent the statutorily required policies and procedures for SOI consideration (Government Code Sections 56301, 56377), the Sacramento LAFCo is in violation of the Cortese-Knox-Hertzburg and should not be considering any SOIA that would involve planning a city's future boundary to encompass what is now unincorporated open space and agricultural land.

The DEIR Misrepresents the Scope of LAFCo's Responsibility Under Government Code §56001.

The DEIR, p. 1-2, incompletely states LAFCo's statutory responsibilities under Section 56001 as follows:

> "• Encourage orderly growth and development patterns (Section 56001)."

In fact Government Code §56001 goes on to state that:

> "The Legislature recognizes that the logical formation and determination of local agency boundaries is an important factor in promoting orderly development and in balancing that development with sometimes competing state interests in discouraging urban sprawl, preserving open-space and prime agricultural lands . . . ." (*Emp. added.*)

The DEIR Misrepresents the Scope of LAFCo's Responsibility and Authority Conferred by Government Code §56377.

The DEIR, p. 1-3, states that LAFCo's statutory responsibilities under Section 56377 are as follows:

"• Guide development away from open space and prime agricultural land uses unless such action would not promote planned, orderly, and efficient development (Section 56377)."

This is a correct paraphrase of §56377(a), but fails to disclose LAFCo's stronger charge under §56377(b), as follows:

> "Development of existing vacant or nonprime agricultural lands for urban uses within the existing jurisdiction of a local agency or within the sphere of influence of a local agency should be encouraged before any proposal is approved which would allow for or lead to the development of existing open-space lands for non-open-space uses which are outside of the existing jurisdiction of the local agency or outside the existing sphere of influence of the local agency." (Government Code §56377(b).) (*emphasis added*)

Approval by LAFCo of an SOI, without first identifying and considering the vacant developable acres within the Elk Grove City limit that remain undeveloped, would be the opposite of LAFCo's responsibility under §56377(b). Yet the DEIR fails to identify the vacant lands within the City.

As a County-wide agency, LAFCo must also consider the thousands of acres of undeveloped but developable acres within other Cities in the County, (City of Sacramento, Rancho Cordova, Folsom, Galt), including projects that have been partially or fully permitted but remain uncompleted due to lack of market or financial viability. The DEIR does not provide this information.

The DEIR does disclose that SACOG's projected need for future development during SACOG's 2016 MTP/SCS planning period does not include the SOI area. (DEIR 3.11-2, referencing SACOG'S 2016 MTP/SCS.)

Inconsistencies with Government Code §§ 56001, 56300(a), 56377(a) and (b)

The Legislature has charged LAFCos with encouraging orderly growth and development, discouraging urban sprawl, and preserving open space and prime agricultural lands. (Government Code §§ 56001). LAFCos shall adopt policies that encourage and provide well-ordered and efficient urban development patterns with appropriate consideration for preserving open space and agricultural lands. (Government Code §56300(a)). See LAFCo Policy Manual, pg. 3.

The DEIR violates CEQA by failing to even acknowledge the existence of Section 56377(b), which is directly applicable to the present situation, and fails to address the environmental impacts of the obvious inconsistencies between Section 56377 and the proposed SOI expansion.

There is further discussion of the inconsistency analysis in this letter in the section addressing the Agricultural Resources portion of the DEIR.

The proposed SOI expansion would be inconsistent with LAFCo General Policy H-1

LAFCO General Policy H-1 states that there is a need for service if the growth rate and density pattern indicate that the area will be developed for urban use within five years. There is no evidence that there will be urban development within the proposed SOI expansion within five years or at any other time.

The DEIR's claim that the proposed SOI expansion would be consistent with LAFCo Policy V (Specific Standards) I-5 is false (DEIR 3.11-26)

"

LAFCo Policy V(Specific Standards) I-5 requires that "an applicant for an amendment to an SOI must demonstrate a projected need or lack of service." The DEIR's assertion that the proposed SOI amendment would be consistent because all land within Elk Grove has been entitled is false. Land use designations and entitlement are no more than pieces of paper that do not create a need for service. Need for services exists where development exists or is reasonably anticipated in the near term. There are apparently at least 3000 acres or more of undeveloped vacant land entitled for new development within the City, but no evidence that these lands will be developed in the near future despite record low interest rates and landowners and City government eager for new development that has failed to materialize. It is not known when, if ever, the undeveloped land entitled for development within Elk Grove will be developed. There is no need for services or new development within the proposed SOI expansion area in the foreseeable future.

The DEIR's claim that the proposed SOI expansion would be consistent with LAFCo Policy V (Specific Standards) I-9 is false (DEIR 3.11-26)

LAFCo Policy V (Specific Standards) I-9 states that LAFCo will deny proposals that would result in significant unmitigated adverse impacts upon other service recipients or agencies serving the affected area unless approval is conditioned to avoid such impacts.

Sacramento County has sought to preserve viable commercial agriculture and to avoid leapfrog development, by imposing an Urban Service Boundary beyond which County will not approve new urban development. The proposed SOI expansion area is entirely outside of the County Urban Service Boundary. It would take agricultural land out of production by (1) eventual urban development and (2) discourage commercial agriculture within the SOI area even while the land remained undeveloped. Farmers of land within an SOI area have no incentive to maintain or improve agricultural infrastructure on land which they hope will be developed or sold to a developer. Declaring an SOI usually leads to land speculation within the SOI area that often results in new ownership by investors (speculators) having no interest in farming. The expectation of eventual development incentivizes landowners within an SOI to remove trees and other wildlife habitat features in an effort to avoid wildlife and endangered species mitigation when (if) the land develops and to make it more attractive to developers.

Approval of the SOI expansion would adversely impact the implementation of the pending South Sacramento County Habitat Conservation Plan by removing the area from consideration for habitat land acquisition needed to mitigate for the environmental impacts of new development by other jurisdictions, while creating competing demand for habitat land to mitigate for Elk Grove's prospective development in the proposed SOI expansion area. (Elk Grove withdrew as a participant.) The agencies serviced by the pending South Sacramento County HCP include

Sacramento County, the Connector JPA, and the Cities of Rancho Cordova and Galt. This impact is discussed in more detail elsewhere in this letter, and in comment letters submitted by Habitat 2020 and Environmental Council of Sacramento.

The DEIR's claim that the proposed SOI expansion is consistent with LAFCo Policy III (General Standards) 7 is speculative and unsupported (DEIR 3.11-24)

LAFCo Policy III. 7 states that LAFCo will favorably consider applications which improve the balance between jobs and housing.

However the DEIR's assertion that the proposed SOI would be consistent with LAFCo Policy III.7 because it would improve the jobs-housing balance, is unsupported and speculative.

LAFCo has no authority to determine land use of the SOI area once it is annexed to the City of Elk Grove, and it is too speculative to predict what Elk Grove and the landowners will do with the land once it is annexed into the City. Elk Grove's history of allowing developers to determine land use has created the existing jobs-housing imbalance and provides no assurance that Elk Grove would actually zone for employment centers if landowners instead wanted more lucrative residential development.

The DEIR repeatedly states that the SOI is needed to produce better jobs-housing balance. In fact virtually all of the undeveloped land within the Elk Grove City limits is suitable for employment centers and housing. The Elk Grove City Council can easily facilitate the desired jobs-housing balance by designating or redesignating sufficient presently-vacant lands within the City for employment centers. Unfortunately, the City has allowed its development designations to be driven by landowners who wanted their lands to be designated for housing, which has prove to be more profitable than reserving land for future employment centers. There is no evidence that expanding the urban footprint of City of Elk Grove will result in greater attraction to employers to locate in the city.

The 1200-acre vacant Southeast Policy Area is in an ideal location for employment centers, next to Highway 99 and Grantline Road, and potentially accessible to I-5 by a planned extension of Kammerer Road to I-5. Unfortunately the City Council chose to designate only 400 acres for employment centers, out of 1200 acres. An SOI expansion cannot be justified as a make-up for poor land-use planning by City government. There is substantial vacant land east of Highway 99 on Grantline that is zoned for industrial use, but there appears to be no demand.

Conflict with County General Plan and Policies Not Disclosed.

The DEIR is ambivalent or incorrect in discussing the conflict between the project and County policies. It states that the SOIA may be inconsistent with County policies ("may" since no zoning changes will be made) (Impact 3.11-2), but continues throughout the document to state that since zoning changes do not occur until after annexation, there will be no conflict. This is sophistry and a sham analysis, because an SOI is by law a precursor to possible annexation and extension of urban services (zoning for new development) and has no other purpose

In particular the SOIA proposal directly conflicts with and contradicts the Sacramento County General Plan Agricultural Element (November, 2011) policies to "Protect important farmlands

from conversion and encroachment and conserve agricultural resources." (Sacramento County General Plan, p. 5-12).

The DEIR is misleading and lacks clarity on the profound conflict between the SOIA and County General Plan and policies. The DEIR discussion of consistency with local policies fails to make clear that since 1993, the County of Sacramento has had General Policies (Urban Service Boundary) to retain the SOIA area in agriculture and has planned urban services and biological resource conservation accordingly. Approval of the SOIA would render the County's General Plan policies for this area ineffective, because planning for development could then proceed.

Biological Resources Analysis Faulty

Wildlife Nursery Sites, Movement Corridors, Migratory Routes.
On page 3.4-27, the DEIR claims that no wildlife nursery sites or wildlife movement corridors or migratory routes have been identified in the SOIA area. The EIR did not assess impacts on "stop-over" habitat for migrating birds. The removal of "stop-over" habitat for migrating birds can "interfere substantially with the movement of resident or migratory wildlife species." It is the duty of the DEIR preparers to assess whether these resources are found. The DEIR made no attempt to identify or characterize wildlife movement corridors or wildlife nursery sites in the study area.

It is quite obvious that the intense nesting of Swainson's Hawks in the area itself qualifies it as a nursery site. It is also an area used by migrating Swainson's Hawks for foraging during both nesting and migration seasons. The SOIA area is intensely used by wintering raptors and other migrating wildlife. The DEIR is deficient in not describing and understanding the biological value of the area to resident and seasonal wildlife populations.

Moreover, the area has been protected by the County General Plan since 1993 as a biological conservation area linked to wildlife preserves to the west and south. The present urban services boundary was drawn for reasons stated in the General Plan. This DEIR fails to examine the reasons why the present urban boundary exists.

Assessment of Impacts on Swainson's Hawk

We agree with the DEIR finding (pp. 3.4-34-35) that the SOI approval would have significant and unavoidable impacts on the Swainson's Hawk (SWH) population in Sacramento County. We are particularly concerned about Elk Grove's proposed urban expansion because Elk Grove is located within a dense and significant nesting area for the SWH, listed as threatened under the California Endangered Species Act. Nesting sites both within the City and the proposed SOI area are dependent upon the foraging habitat in the proposed SOIA. The loss of foraging and nesting habitat will be significant.

The EIR analysis should recognize that the density of nesting in the Elk Grove area is among the highest densities recorded for the species. Reducing the range of a state listed species by allowing development in an area of dense successful reproduction is in direct conflict with the California Endangered Species Act.

The SOI will lead to "take" of Swainson's Hawks. The success of SWH reproductive activity

and survival of SWH young is directly dependent upon availability of food supply (small rodents) which is reasonably available to nesting SWH during the breeding and nesting season. Destruction of foraging habitat (low-growing vegetation which harbors small rodents) by development eliminates this food supply and forces SWH to travel greater distances to find prey, resulting in less food for the nest and a greater likelihood of nest failure and nestling mortality."

Potential direct and cumulative impacts on the species range and reproductive activity should be identified, including but not limited to the following:

a) potential impacts on reproductive activity in nesting sites within the City of Elk Grove, including loss of current nesting sites in vacant areas with entitlements;

b) potential impacts on reproductive activity in nesting sites within the SOI area;

c) potential impacts on reproductive activity of other nesting sites within 2 - 5 miles;

d) potential impacts on survivability of fledged juveniles from these nesting sites;

e) potential impacts on the adequacy of nourishment of SWH needed to provide the strength and energy required to survive the annual SWH Fall migration. Undernourished SWH, especially undernourished first-year birds, are unlikely to survive the rigors of long-distance migration to central Mexico and southward.

f) cumulative impacts of SOIA and other reasonably foreseeable projects that would eliminate SWH foraging and nesting habitat, as part of the EIR discussion of cumulative impacts. These would include but are not limited to the proposed California Water Fix/Eco Restore, which proposes to convert large areas of agricultural land in Yolo County and the Yolo Bypass, which is SWH foraging habitat, with managed marshes for fish habitat, eventual build-out of Rancho Cordova and of the Florin-Vineyard area, all of which are SWH foraging habitat, and predicted sea-level rise which will inundate low-lying area west of Elk Grove which are currently agricultural land that serve as SWH foraging habitat. "

Failure to Identify the Project and Adjacent Area Populations of Nesting Swainson's Hawks and to Make Adequate Assessment of the Impacts of the Project on this Population

California Department of Fish and Wildlife published in 1994 what has become the primary guide to how to assess impacts on Swainson's Hawks (*Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California.*) Environmental assessment of impacts on Swainson's hawks typically begins with identifying all the active nesting sites within 10 miles of the project site. This DEIR (p. 3.4-30) looks within a five mile radius and quotes an expert as saying there are approximately 75 nesting pairs present. The references to the document lack key studies such as Estep, James, *Distribution, Abundance, and Habitat Associations of Swainson's Hawk,* Results of 2006 census level surveys in South Sacramento County; Estep, J., *Monitoring Swainson's Hawk (Buteo swainsoni) Nesting Activity in South Sacramento County Results of 2008 Surveys.* (2009)

The DEIR cannot properly assess the impact of the project and its significance if it has not identified the size and characteristics of the nesting populations of Swainson's Hawk in and within ten miles of the project site. The City of Elk Grove has commissioned several relevant recent studies of Swainson's Hawk nesting. The South Sacramento County Habitat Conservation Planning team has also assembled and analyzed all available data. We have submitted to LAFCo on two occasions a copy of the South Sacramento Habitat Conservation Plan map entitled "Range of Swainson's Hawk in the SSHCP Plan Area," a copy of Estep's 2006 South County nesting sites map, and a map showing nesting sites identified by Department of Fish and Game and labeled 2005 and 2009 survey nesting sites

The DEIR shows no evidence that preparers requested all available data from CDFW on the SOI area or consulted CDFW about the activities of Swainson's Hawk in and within ten miles of the project area.

Our consultant Melinda Dorin Bradbury has identified the following from the existing data, (See two reports submitted by her, accompanying this letter):

- "There are approximately 12 nest territories reported in the section of the County south of the City limit, east of I-5 and west of 99 to Eschinger Road, in the proposed SOI;
- There are approximately 18 nest territories reported in the section of the County east of 99 and north of the Cosumnes River.
- There are approximately ten active nesting territories in the City between State Route 99 on the east and Bruceville Road on the west, immediately north (within one mile) of the SOI area.
- There are two active nesting territories on Grant Line Road east of State Route 99.
- There were many nesting territories along the Cosumnes River and just south that would have the potential to forage north or south of the river depending on available habitat. Those birds would be impacted by loss of foraging habitat north of the Cosumnes River.
- There are several nesting territories in and near the Franklin area part of the SOI.
- Seventy-four percent of the nesting sites in South County (south of Elk Grove City boundary) were concentrated within the interior portion of the study area between approximately I-5 and Clay Station Road on the east side. (Estep, 2007)
- In this area the "territory density is lower than in Yolo County, but is high compared with other portions of the species' range and indicates the value of the agricultural habitats within this region to Swainson's hawks and the importance of the 'core' Central Valley population." (Estep, 2007)
- The SOI area is primarily the best forage type for Swainson's Hawks – Irrigated cropland/irrigated pasture."

Vineyards should be considered potential foraging habitat in assessing impacts of loss. Loss of vineyard to urbanization is a loss of potential higher quality habitat as well. Even vineyards have limited use for foraging small rodents. ("We hypothesize that the relatively high frequency of foraging in vineyards by Swainson's Hawks may be a reflection of the high local nesting density of Swainson's Hawks in a study area where dominant land use is viticulture. Being an opportunistic species [England et al. 1997], Swainson's Hawks may be expected to utilize sub-optimal foraging habitats based on availability and proximity to established nest sites [Newton 1979, Manly et al. 2002]." *Foraging by Swainson's Hawks in a Vineyard-Dominated Landscape*

Author(s): Craig A. Swolgaard, Kent A. Reeves, Douglas A. Bell Source: Journal of Raptor Research, 42(3):188-196. 2008. Published By: The Raptor Research Foundation)

Numerous studies indicate that the availability of thousands of acres of contiguous high quality foraging habitat consisting largely of irrigated crop land and irrigated pasture, underlies the remarkable number of nesting territories and the density of nesting territories in and near the SOI area.

Given the close proximity of many of the nesting sites inside the City limits to the SOI area, there is reason to believe that the loss of the SOI foraging habitat will impact the viability of nesting and the degree of nesting success for nest sites within at least two miles of the SOI as well as those within the proposed SOI area.

The DEIR fails to analyze the impact on the species of removal of this high quality foraging habitat and nesting habitat. It recommends a one to one mitigation ratio be required without addressing the issue of the impact of this mitigation ratio on available foraging for the pairs using this area and those migrating through, of removal of key foraging habitat remaining.

The DEIR erroneously assumes that suitable mitigation land will be available for mitigation. It fails to acknowledge that the availability of privately-owned land containing foraging habitat for mitigation is not assured.

Foraging Habitat Identification and Quantification.

The DFW staff report (1994) recommends assessment of the amount and quality of foraging habitat based on agricultural crop patterns in the project area. This DEIR apparently uses a county formula based on zoning that we assert is improperly applied here. Moreover, the DEIR errs in saying that the entire area is zoned AG-80. The Agricultural Element of the DEIR says it is zoned AG- 20. We reject zoning as an appropriate way to assess amount and quality of foraging habitat since it has nothing to do with actual use and cannot be used to establish a baseline.

At page 3.4-30, the DEIR says the loss of foraging habitat will be 750 acres. At p. 3.4-29 the DEIR says there are 1150 acres of foraging habitat and on p. 3.4-30, the DEIR says there are 750 acres of foraging habitat. The DEIR must clearly and consistently identify and quantify the impacts and the mitigation.

Mitigation Alternative. The DEIR fails to consider an alternative that would guarantee mitigation land by requiring any land developed in the SOIA to be mitigated in the SOIA next to existing nesting sites, thus assuring that no more than one half of the SOIA area is developed and that mitigation lands are located in proximity to nesting sites in the SOIA area. Obviously a mitigation plan like this would require planning and buffers that would ensure low risk of edge effects.

Nesting Habitat Mitigation. The DEIR identified little loss of nesting habitat (though we know nesting territories have been documented on site and adjacent properties) and how it can be mitigated. We suggest that the tree mitigation be amended to include all documented

Swainson's Hawk nesting trees to be defined as heritage trees, to be protected, and to be mitigated when loss occurs. This DEIR identifies no mitigation for loss of nesting sites.

Likelihood of Take of Swainson's Hawks as a Result of SOI Approval; EIR provides no assessment or mitigation for take of listed species; no requirement for Incidental Take Permit take permit per Fish and Game Code § 2081.

As noted above, but largely ignored in the DEIR, the SOI area is nesting and foraging habitat for approximately 12 Swainson's Hawk pairs. The urbanization of over 1,100 acres of foraging habitat in very close proximity to this many nesting sites will inevitably lead to loss of chicks (inadequate forage to sustain nesting success) and the abandonment of traditional nesting sites. Projects within the SOI area will also have direct impacts on nesting sites inside the City which will lead to abandonment of nesting, mortality to young and greater risk to fledglings.

Initially, there will be impacts due to landowner anticipation of selling property for urban use. There may be destruction of known nesting site trees to "enhance" marketability of properties for urban use. While there is no incentive to destroy nesting sites when land is used for farming or grazing (and some incentive to retain nesting trees because raptors prey on agricultural pests), once the landowner expects to urbanize the land, a Swainson's Hawk nesting site simply poses more potential economic costs to development because of additional mitigation responsibilities. Foraging values on the farm and range lands in the SOI may also become depressed due to landowner changes in agricultural practices, such as reduced grazing and reduced irrigation, or simply no longer farming.

In addition, due to the agricultural mitigation measures proposed in this DEIR, landowners will be at an economic advantage to cease irrigation of lands so that they are not required to mitigate for farmland loss upon development. The SOI DEIR does not identify, analyze or mitigate for these and other impacts of designating 1,156 acres of farmland for future urbanization that currently serves as mostly high quality Swainson's Hawk foraging habitat.

The SOI is a significant step in the urbanization process, without which annexation cannot be done. The impact on the Swainson's hawk species in Sacramento County and in the City of Elk Grove from urbanization in the SOI will be significant since the loss of foraging habitat and impacts on nesting sites will reduce the number of nesting pairs in the County, result in direct mortality of chicks during the urbanization process, and have cumulative and indirect impacts. The EIR should require that an incidental take permit under Fish and Game Code Section 2081 prior to approval of any annexation following an SOI approval.

The likelihood of "incidental take" of Swainson's Hawks due to the SOI is very high; in addition, an indirect effect of development will be the extirpation of nesting in the area and a reduction in the range of the Swainson's Hawk in California. Yet the DEIR does not acknowledge the potential for "take", and the reduction in range, result in the necessity for a "take" permit from California Department of Fish and Wildlife under Section 2081 of the Fish and Wildlife Code. It is quite important that LAFCo conduct a public review of the environmental consequences of "take" and that it require a "take" permit be issued before any SOI is approved. Otherwise the impact of this important consequence of SOI approval will not be known and evaluated by decision makers prior to approval of the expanded urban area.

Likelihood that Mitigation Program Will Fail: Availability of Suitable Habitat at affordable price to Mitigate for Loss of Foraging Habitat in the SOI Area – Impacts Not Identified in the DEIR

Among others, the California Department of Fish and Wildlife (CDFW) has questioned whether there is suitable land available to render feasible the mitigation for the impacts of urbanizing south of the present Elk Grove city boundary. The impacts to the statewide population of Swainson's Hawks could be significant. On March 25, 2010, CDFW wrote to the liaison for the South Sacramento Habitat Conservation Plan (c: Peter Brundage, LAFCo) about ensuring "adequate cropland and irrigated pasture-grassland reserve lands to accommodate the Swainson's hawks adequate persistence over time in the Plan Area." A copy of this CDFW letter was submitted to LAFCo by FOSH at a November 2011 hearing. The letter said in part:

> "Within the Plan Area, the highest densities of nesting Swaisnon's hawks occur within and adjacent to cover types identified in the Draft Plan as cropland and irrigated pasture-grassland in the western portion of the Plan Area (Zones 4, 5, 8, 9, 11, 12). **The DFG believes that these cover types are essential to the continued persistence of the hawk within their California breeding range and any conservation strategy for this species should place high value on these cover types."** (*emp. added*)

The DEIR completely ignores this critical issue affecting a key biological resource of the SOI area and adjacent lands in the City and the County. The impact of proceeding with the SOI is that there will not be adequate mitigation land to mitigate for impacts on Swainson's Hawk for the already approved development in the City and County, as well as for the SOI area.

LAFCo should consider the suitability of available mitigation lands before assuming that mitigation land will be readily available to offset impacts of urbanizing the SOI area. Recent research reviewed below indicates that much of the land west of I-5 is not suitable mitigation land for Swainson's Hawks and the analysis necessary to quantify the amount of available land that is suitable is not publicly available. A study commissioned by the City of Elk Grove included analysis of the habitat and nesting patterns within the Delta Zone of the South Sacramento County study area as compared with a representative area in the interior (between I-5 and 99, South of Elk Grove and north of Galt) and the area east of 99 (within the Eastern Foothill Zone of the South Sacramento County Study Area). Each area contained 36 square miles. A comparison of the SOI project area with these survey areas will demonstrate that the project area is within the foraging habitat to a significantly higher number of pairs, and has a larger expanse of good quality foraging habitat, with better reproductive results. The impacts to the species by approving the SOI cannot be adequately mitigated in the Delta Zone where nesting is less dense, nesting habitat is less abundant, and unsuitable habitat (orchards and vineyards) is common. [Estep Environmental Consulting, Monitoring Swainson's Hawk (Buteo swainsoni) Nesting Activity in South Sacramento County, Results of 2008 Surveys (February, 2009) pp. 10- 14, 20.]

In addition, lands west of I-5 are more likely to be below sea level and lack the necessary guarantee that they will be available in perpetuity for foraging habitat for Swainson's Hawks and other raptors.

One indirect impact is that once the SOIA is approved, suitable mitigation lands for Swainson's hawk impacts will become higher priced, and less available. Approval of the SOIA will increase demand for mitigation land. In time, properties inside the current urban limit that are approved for development but require Swainson's Hawk mitigation, will not be able to find suitable foraging habitat mitigation at an affordable price.

The Natomas Joint Vision area is a classic example, where land prices skyrocketed to ridiculous heights after the adoption of the 2002 MOU for the Joint Vision for Natomas. The owners of much of the land in the Sacramento County area of Natomas Basin, outside of the City ceased farming after the City adopted the Joint Vision for Natomas MOU, which is not even an SOI, but merely a non-binding statement of intent to urbanize some of that area at some unknown future date.

Questionable Foraging Habitat Mitigation Program and Ratio

The DEIR says that the City's Swainson's Hawk mitigation program requires protection of existing habitat, but fails to provide even a minimal description of that program, which calls for one acre of habitat preserved for each acre of SWH habitat removed. A mitigation program for loss of foraging habitat in the SOIA must be assessed based on the baseline and the direct and cumulative impact, not on a formula developed 20 years ago with the assumption that land south of the present City of Elk Grove would remain in agriculture, protected by the County General Plan policies, including the Urban Services Boundary. The existing City program did not undergo any CEQA review of its effectiveness to mitigate for impacts to Swainson's Hawk in the SOI area.

Moreover, City programs are subject to change by a majority vote of the City Council. LAFCo has no assurance that programs will not change. Therefore the assumption that continuing existing City programs (which are not described) is not supported by substantial evidence.

The impact analysis says that the future development in the SOI area "would comply with the City's conditions," but fails to describe those conditions, thereby violating CEQA. Please describe the City's "conditions." We note that some of the City's requirements at present are not reflected in the DEIR mitigation measure. Attached is Elk Grove Code Chapter 16.130 SWAINSON'S HAWK IMPACT MITIGATION FEES which describes Elk Grove's current program. The existing requirements include that CDFW approve the location of the mitigation land and the conservation easement. There are additional requirements not reflected in the mitigation measures in the DEIR.

Likelihood that Mitigation Program Will Fail – City of Elk Grove Record.

Attached is an evaluation of the City and County Swainson's Hawk Mitigation programs under CEQA prepared by Melinda Bradbury, Environmental Consultant to Friends of the Swainson's Hawk. This report demonstrates that past performance by the City in meeting the requirements of its own mitigation program has been marred by lack of compliance with its own standards and highlights the need for oversight by state and federal wildlife regulatory agencies. The Council has and can approve alternate mitigation measures that do not meet the standard set in their ordinance. The City went considerably in arrears on its mitigation obligations and though corrections have been made, by 2010 the City of Elk Grove had developed 102 projects covering

4,190.43 acres with 1,310 acres of mitigation land permanently preserved. Most of the deficit in mitigation was caused by the collection of fees that were inadequate to purchase mitigation land promised in project approval.

What enforcement authority does LAFCo have to ensure that the City carries out mitigation as required by the DEIR after annexation occurs?

Giant Garter Snake 3.4.6 Impacts and Mitigation
LAFCo should specifically consult with USFWS and CDFW on the suitability of this mitigation measure and receive their concurrence before adopting it. It allows the impact analysis and mitigation for projects to be segmented from the impact analysis and mitigation for the drainage plan that serves the projects. This strikes us as inconsistent with CEQA's prohibitions against project segmentation and failure to consider cumulative impacts. Given the regional habitat conservation planning underway, ESA consultation should be required prior to annexation application.

Unlawful Deferral of Mitigation Violates CEQA

CEQA Guideline 15126.4(a)(1)(B) states that "Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specific way."

Notably, the DEIR contains NO performance standard for mitigation of impacts on wildlife. A key performance standard would be to require the approval of wildlife regulatory agencies including incidental take permits for all listed species as a condition of annexation. Please explain why the DEIR fails to require state and federal incidental take permits as a performance standard. Other similar lands in South County are subject to US Endangered Species Act compliance and are included in a regional habitat conservation plan. Why should this SOI not be subject to these compliance standards?

Cumulative Impacts. There will be significant direct and indirect cumulative impacts on Swainson's Hawks from the adoption by LAFCo of the SOI proposed by Elk Grove. The cumulative biological impacts are virtually ignored in this DEIR. This project in combination with other known projects in the range of key wildlife species such as the Swainson's Hawk and Sandhill Crane will have cumulatively significant impacts in reducing the populations and the range of the populations in California. Please describe this impact and discuss whether there could be feasible mitigation.

Issue of Impact of the SOI Approval on the South County Habitat Conservation Plan and the Feasibility of Mitigation for Other Projects, Already Approved, within the Urban Area, and the Take Permit for Freeport Regional Water Project.

Among the cumulative impacts is the impact on availability of suitable mitigation land for already approved land conversion in South County. The EIR should identify available suitable habitat in close proximity to the project area, over and above the amount of such habitat needed to mitigate for already approved development in Elk Grove and the County of Sacramento. It should address the issue of willing sellers, land inventory and price of mitigation land. It should

consider the impacts on the species of the scenario in which available mitigation land is captured by development at the edge, leaving already approved development sites further inside the urban area with no suitable mitigation land available. It should address the issue of SOI approval creating mitigation land scarcity and consequently driving mitigation land prices up for all development in the South Sacramento County area.

In addition, the DEIR, by creating an alternative mitigation path for the SOIA area that does not require state and federal wildlife regulatory agency approval and permitting for Elk Grove, significantly undermines the development and adoption of a SSCHCP regional conservation plan on which millions of dollars have already been spent to ensure quality and compliance with state and federal guidance.

LAFCo needs to evaluate the impact of an SOIA approval on the Freeport Regional Water Project Section 7 Take Permit. That permit required a regional habitat conservation plan or equivalent compliance with US ESA for all development served by the Freeport Regional Water Project and related infrastructure. Elk Grove is a beneficiary of this project. Will the approval of the SOIA which changes the expected footprints of development and conservation, respectively, trigger a reconsultation on the Section 7 permit for development in Zone 40? Will approval of future development threaten the bond repayment schedule —dependent on development fees — for Zone 40 infrastructure in Elk Grove and/or elsewhere in Zone 40? How will the SOIA comply with the terms of that agreement (attached)? The EIR should address impacts on the FRWD take permit. These issues should be disclosed and resolved before an SOIA can be approved.

Conflict with County General Plan and Policies protecting special status species. On November 2, 2011, FOSH submitted to LAFCo pages of the County General Plan stating County policies that were in the General Plan to protect special status species in the Sacramento County, including the SOI area (attached). This SOI approval would conflict with those policies. This issue was not addressed in the DEIR. These policies indicate that the County's environmental analysis in 1993 anticipated significant impacts on wildlife, including the Swainson's hawk species in Sacramento County, if development were to extend beyond the current urban line into the proposed SOI area. The same conclusion is in the current County General Plan Update. The urban limit line remains unchanged in the current General Plan update. The DEIR should address this conflict.

Hydrology and Water Quality

The DEIR at page 3.10-23 notes that the SOI area will likely be served by the Sacramento County Water Agency:

> Future development within the SOIA Area would increase demands for water supply. The SOIA area is adjacent to the southwestern boundary of Sacramento County Water Agency's (SCWA) Zone 40. Therefore, it is most likely that water service would be provided by SCWA (Exhibit 3.10-1). SCWA would need to annex the SOIA Area into its service area. The SOIA Area is not within SCWA's Zone 40 2030 Study Area and water supply demands to the SOIA Area were not accounted for in the Zone 41 UWMP or Zone 40 Water Supply Master Plan. The SCWA Zone 40 Water Supply Master Plan has developed water supply demand factors for the 2030 Study Area based on acreages of land uses. Based on California crop information and estimated amount of water applied to each crop type, the SOIA Area is estimate to use over 597 million gallons of water a year under current conditions (Table 3.10-1).

This impact does seem to merit discussion under standards discussed on pp.3-10.12 and 3-10.13 regarding SB 221 and the *Vineyard* decision. The DEIR correctly identifies a significant and unavoidable impact on depletion of groundwater supply (and lack of feasible mitigation measures) but doesn't spell out the harm to the environment that can occur through approval of the SOIA and deferral of mitigation to the annexation stage.

The DEIR does not discuss (pp. 3.15-1 to 3.15-5) how the surface water allocations are conditioned by the US Fish and Wildlife Service Section 7 consultation on the Freeport Regional Water Project. Elk Grove is a beneficiary of this permit and must comply with its provisions.

Agricultural Resources Section

The DEIRs baseline description of the agricultural resource is confusing and contradictory. DEIR Graphic 3.2.1 and text at 3.2.2 don't seem to support each other. The text at 3.2.3, "Important Farmland", states that the SOI area includes 105 acres of Prime Agricultural Land, 405 acres of Farmland of Statewide Importance and 627 acres of Farmland of Local Importance. This is a total of 1,137 acres of farmland to be permitted for urban uses in the 1,156 acre SOI. The graphic however seems to show a mix of Prime, Unique and Local Farmland. (DEIR 3.2-19, Impact 3.2.1 confirms that the impact of the SOI is on 510 acres of farmland that is Prime, Unique or of Statewide Importance.) However, the DEIR statement of farmland classifications appears to be in conflict with the County of Sacramento General Plan (Agricultural Element, p. 11) map of Agricultural Lands, which does not show 627 acres of Farmland of Local Importance in the SOIA area. Please explain the discrepancy between the EIR and County General Plan designations of farmland in the SOIA area.

As stated below, we dispute that loss of Farmland of Local Importance is not significant. The SOI would also affect neighboring Prime Agricultural farmland of unspecified acreage.

On page 3.2-20, the DEIR proposes mitigation of Prime, Unique and Statewide Importance Farmland at 1:1. The DEIR does not state how many acres of farmland will be mitigated at 1:1. It appears that the intent is to mitigate for less than half of the loss of farmland. No explanation is provided why this conclusion is reached. The EIR should quantify clearly how many acres of mitigation are required and what lands must be mitigated.

On page 3.2-18, the DEIR states that the SOI approval will not create a conflict with current zoning for agricultural use because it would not change zoning designations. We dispute this finding. The SOIA if adopted presents a direct conflict with existing zoning for agricultural use because it designates the area to be planned for urban use and annexation into the City of Elk

Grove. Directly and indirectly, as stated earlier, it will undermine the continued use of the area as farmland.

No analysis is presented in the DEIR to demonstrate that adequate suitable agricultural land exists in the County to allow purchase of mitigation land at 1:1, at an affordable price, for the conversion of Prime, Unique and Statewide Significant farmland that could occur as a result of the SOIA approval. The mitigation measure is speculative. Moreover we believe that Elk Grove is obligated to mitigate for any loss farmland of local importance due to Sacramento County policy to protect it.

How will LAFCo ensure that suitable agricultural mitigation will be acquired?

Failure to Mitigate for Loss of Farmland of Local Importance. Impact 3.2.1 fails to recognize loss of locally important farmland as an impact. The DEIR does not acknowledge that the County of Sacramento General Plan AG-1 though AG-6 policies adopted November, 2011 aimed at agricultural preservation in the county. The County would not accept an application to develop the SOIA area due to these policies. It also requires locally important farmlands located outside the USB (Urban Services Boundary), (i.e. in the SOIA) to be mitigated at a ratio of 1:1 for projects converting more than 50 acres of farmland. **The DEIR impact assessment and mitigation measures are inconsistent with the County General Plan and agricultural preservation policies.**

LAFCo's statutory responsibility requires a careful analysis of agricultural resources impacts and a quantitative description of the mitigation. The DEIR fails to perform these tasks. It also fails to address the temporal impacts on agricultural uses of patchwork urbanization over an extended and unknown period of time. It does not address the impacts of land speculation following an SOI approval on farming costs and viability.

Other Agricultural Resource Impacts Issues
Permitting an SOI with unknown timing, location and phasing of development can hardly be consistent with LAFCo's statutory charge of "encouraging orderly growth and development." It will destabilize a stable agricultural economy by introducing uncertainty about future land use and it will discourage future investment in agriculture in the SOI area and likely in adjacent areas. The infrastructure supporting the agricultural economy will be diminished as economies of scale are lost. Approval of the SOI must consider impacts of the SOI on farmland and the farm economy and not simply wave these away with requiring vague mitigation measures down the line (deferred mitigation).

The DEIR acknowledges significant and unavoidable indirect impacts in Impact 3.2.2 and proposes Mitigation Measure 3.2.2 to reduce potential conflicts. Mitigation Measure 3.2.2 would require City of Elk Grove at the time of annexation to prepare an Agricultural Land Use Compatibility Plan. The proposed mitigation is speculative, deferred and fails to address the impacts that will occur between the adoption of the SOIA and the application for annexation. It lacks performance criteria.

The DEIR fails to adequately assess the flooding impacts of stormwater drainage on neighboring agricultural lands south of the SOIA from the intended urbanization of the SOIA area. Farmers deserve to know now what will be done to buffer and prevent flooding of their farmlands if the

SOIA area is to be urbanized. Again the County General Plan Agricultural Element policies prohibit increase in the level or intensity of flooding of intensively farmed land.

Mitigation Measure 3.10-3 (Prepare a Drainage Master Plan) in no way demonstrates impacts can be reduced to less than significant. It defers until annexation an analysis of the costs and impacts of the drainage system. These key elements of an urbanization plan should be disclosed before the decision to urbanize. The costs of drainage infrastructure could make the urbanization infeasible, and this potential should be explored before LAFCo allows an SOIA.

Cumulative Impacts.
The EIR fails to address the cumulative impacts over time of permanent loss of agricultural resources in the region if the SOIA and similar proposals are implemented despite the California Cortese Knox Hertzberg statutory charge to LAFCo's to preserve agricultural land.

The DEIR lacks a cumulative assessment of the impact on agricultural land resources of the approval of the SOI and the implementation of the California Water Fix and Eco Restore. The Eco Restore project seeks to restore 30,000 acres (12,000 ha) over a five years at a cost of $300 million, funded with state bond money and other sources. While both the SOI and the California Water Fix/Eco Restore are broad brush planning documents, there are clear land use changes consequent to their approval that would diminish agricultural resources and impact the agricultural economy.

Elk Grove's Objection to Mitigation for Loss of Farmland.
Note that Elk Grove's policy that agricultural land cannot be mitigated without creating new farmland was litigated in *South County Citizens for Responsible Growth et al. v. City of Elk Grove et.al* (2001); the Appeals court upheld the trial court finding that this Elk Grove policy is inconsistent with CEQA. CEQA requires mitigation of loss of farmland to less than significant or if that is not possible, to the extent feasible. In February, 2006, Elk Grove received an easement to farmland to mitigate 1:1 for loss of farmland from the development of Lent Ranch Mall. The easement (p. 2) refers to Resolution No. 2004-200, approved on August 4, 2004, which imposes on the Lent Ranch Marketplace project the requirement to mitigate the loss of agricultural land through the conservation in perpetuity of an equal amount of land. Nonetheless, as regards future annexation in the SOI area, the Elk Grove General Plan policy stating that it will not mitigate for loss of farmland is troubling. How will LAFCo enforce mitigation measures if Elk Grove reverts to its existing policy after annexation.

Mitigation 3.2.1 is unenforceable because LAFCo has no authority or mechanism to enforce this mitigation measure once Elk Grove has annexed the SOI area. LAFCo has no authority to prevent Elk Grove from amending its policy to greatly reduce the agricultural protection requirement. No evidence is presented to show that mitigation lands would be available at an affordable price.

Alternative Feasible Mitigation. Mitigation Measure 3.2.2 as stated above is inadequate. It would make more sense for LAFCo to require, prior to SOIA approval, a farmland mitigation program and plan be prepared and submitted to LAFCo for approval, after public review and comment, which demonstrates that the future annexation can mitigate for all loss of farmland, and includes mechanisms for LAFCo or public enforcement, and guarantees that the mitigation measure will be implemented.

Other Issues: Mitigation 3.2.1 allows mitigation on inappropriate sites.

> "The total acres of land conserved will be based on the total on-site agriculture acreage converted to urban uses. Conserved agriculture areas may include areas on the project site, lands secured for permanent habitat enhancement (e.g., giant garter snake habitat, Swainson's hawk habitat), or additional land identified by the City."

There are a number of reasons why on-site agricultural land uses are not compatible with urban uses and should not be included as agricultural land mitigation for loss of large landscape agricultural uses in place today unless specific findings are required to be made that the preserved on site agricultural lands will not be bounded on more than 2 sides by urbanization and that buffers between urban and farm uses will not be counted as preserved agricultural lands in calculating mitigation for agricultural land loss. We do not think it is consistent with LAFCo's charge or the County of Sacramento policy to allow on-site agricultural uses to be subtracted from farmland loss before mitigation and/or to be counted as farmland loss mitigation. This should be struck from the mitigation measure if it is adopted. Agricultural land preservation may also be incompatible with habitat preservation unless carefully planned to complement each other. Specific conservation easements must be required for layering of mitigation lands in this way.

LAFCo decision-makers cannot fairly evaluate the environmental impact of the SOI on agriculture and on its statutory charge to conserve agricultural land given the incomplete and misleading analysis in this DEIR. Measures requiring mitigation at the project stage do not adequately address the direct and indirect consequences of approving an SOI.

A Recirculated EIR must discuss and disclose potential detrimental effects of prematurely committing more land to urbanization than can be absorbed.

Given SACOG's 2016 MTP/SCS and for the reasons stated above, there is a reasonable likelihood that approval of the SOI expansion, in combination with the existence of thousands of acres of undeveloped but developable land within the City, as well as thousands of acres of undeveloped land presently designated for urban development in nearby cities, notably nearby Rancho Cordova and the County Urban Policy Area, would result in the premature commitment of more land to urbanization than can be possibly be absorbed in the foreseeable or distant future. The EIR fails to address the reasonably foreseeable environmental consequences of such a scenario, which is not unlikely.

A Recirculated DEIR must analyze and disclose the environmental impacts of such a scenario, including cumulative impacts.

Sacramento County staff, in response to proposals to greatly expand the County Urban Policy Area in its General Plan Update, addressed that issue in a staff report, 10/13/10, submitted with our comments on the DEIR for Elk Grove's previous attempt at a SOI expansion, which recommended against the oversized expansion of the County Urban Policy Area. The County staff listed potential undesirable outcomes as follows, which are fully applicable to the present Elk Grove situation:

1. Leapfrog development pressure;

2. Imbalance in focus between revitalizing the existing mature communities creating and serving new neighborhoods;

3. Unintended consequences to the partially built-out planned communities and if newer areas out-compete for buyers;

4. Inefficient extension of infrastructure and public services resulting in higher operating costs.

5. Pressure to approve uses that provide near term economic benefits to the developer over a long-term economically sustainable mix of land uses;

6. Impacts to the proposed SSCHCP and to the Connector expressway;

7. Difficulty in meeting State mandates related to climate change initiatives.

A copy of the Sacramento County County's staff report (Agenda for 10/13/10, 2030 General Plan Update - Adoption Hearings) with relevant pages 6 - 11, was submitted as part of our DEIR comments on the previous Elk Grove SOI proposal, and is in LAFCo's files.

A Recirculated DEIR must consider the likelihood of occurrence of each of these potential scenarios and the potential environmental consequences, including the physical effects of potential urban decay that may result from prematurely committing more land to urbanization than can be absorbed. Such analysis should take into consideration that once approved, the SOI allows multiple patchwork of annexation proposals driven by individual landowner development agendas.

Reliance on 2003 Elk Grove General Plan and EIR Inappropriate.

Any reliance by LAFCo on the 2003 Elk Grove General Plan and EIR adoption to address the environmental impacts of the SOI would be inappropriate. The 2003 EIR on the General Plan is now out of date and was not prepared with the purpose of advising LAFCo regarding its important statutory responsibilities regarding open space and agricultural land preservation. Moreover, California Department of Fish ad Wildlife did not agree with the biological assessment in that document (see California Department of Fish and Game letter to City of Elk Grove on review of Elk Grove General Plan, September 17, 2003.

Please keep us informed regarding future public review of the proposed application, and public hearings. We prefer to receive email notification of public review documents and hearings at swainsonshawk@sbcglobal.net.
Thank you for this opportunity to comment.

Judith Lamare, Ph.D. Co-Chair,

James P. Pachl, Co-Chair

REFERENCES Submitted Separately

Google Earth images of Elk Grove and regional context
Map of Swainson's Hawk range, South Sacramento County Habitat Conservation Plan Draft
Not submitted for habitat protection reasons: Map of Swainson's Hawk nesting sites, *Distribution, Abundance, and Habitat Associations of Swainson's Hawk.* Results of 2006 census level surveys in South Sacramento County; Estep, James, *The Distribution, Abundance, and Habitat Associations of the Swainson's Hawk (Buteo swainsoni) in the City of Elk Grove, California.* Census level surveys within City limits in 2008; Estep, J., *Monitoring Swainson's Hawk (Buteo swainsoni) Nesting Activity in South Sacramento County Results of 2008 Surveys.* (2009)

California Department of Fish and Game, Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California (Nov. 8, 1994)
California Department of Fish and Game letter of March 25, 2010, to Michele McCormick, copy to Eric Tattersall, and Peter Brundage

California Department of Fish and Game letter to City of Elk Grove review of Elk Grove General Plan, September 17, 2003.

County of Sacramento General Plan Policies re Conservation of Wildlife Species

City of Elk Grove, Ordinance SWAINSON'S HAWK IMPACT MITIGATION

Sacramento County County's staff report (Agenda for 10/13/10, 2030 General Plan Update Adoption Hearings) with relevant pages 6 – 11

Melinda Bradbury, Memo to Jude Lamare, Jim Pachl, 3/15/2010, "Assessing Elk Grove SOI expansion on historical Swainson's Hawk locations and comparing to the information provided in the Gibson and Skordal letters developed for the City of Elk Grove" and Resume submitted to support memorandum.
Melinda Bradbury, A Review of the City of Elk Grove and South Sacramento County Swainson's Hawk Mitigation Programs, January 25, 2011
Resumes of Melinda Bradbury and Shawn Smallwood
K. Shawn Smallwood, Ph.D., Comment on City of Elk Grove Sphere of Influence EIR", November 21, 2011, resume submitted to support comment letter.
Don Mooney, Comment letter on the Elk Grove SOI DEIR, November 21, 2011

U. S. Department of the Interior, Fish and Wildlife Service, Memorandum December 10, 2004, "Formal and Early Section 7 Endangered Species Consultation on the Freeport Regional Water Project, California" (especially pp. 77, 78, 82, 83.)
County of Sacramento, Memorandum of Agreement with the United States Fish and Wildlife Service, June 23, 2004

FOSH References
Comment Kammer Rd/
99 SOIA DEIR

Flash Drive

ECOS
ENVIRONMENTAL
COUNCIL
OF SACRAMENTO

HABITAT 2020

California Heartland Project

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March 31, 2017

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Re: DRAFT ENVIRONMENTAL IMPACT REPORT for the PROPOSED KAMMERER/99 SPHERE OF INFLUENCE AMENDMENT APPLICATION for the CITY OF ELK GROVE

Dear Mr. Lockhart,

This letter provides comment from the Environmental Council of Sacramento (ECOS) and Habitat 2020 regarding the Draft Environmental Impact Report (DEIR) for the Kammerer/99 Sphere of Influence Amendment Application (SOIA) for the City of Elk Grove. We also include and incorporate by reference the comments on this DEIR made by of Friends of the Swainson's Hawk (FOSH).

The Environmental Council of Sacramento (ECOS), a 501c3 organization, and Habitat 2020, the Conservation Committee of ECOS, are partner coalitions dedicated to protecting the natural resources of the greater Sacramento region. ECOS-Habitat 2020 member organizations include: 350 Sacramento, Breathe California of Sacramento-Emigrant Trails, International Dark-Sky Association, Los Rios College Federation of Teachers, Mutual Housing California, Physicians for Social Responsibility Sacramento Chapter, Preservation Sacramento, Resources for Independent Living, Sacramento Housing Alliance, Sacramento Natural Foods Co-op, Sacramento Vegetarian Society, SEIU Local 1000, Sierra Club Sacramento Group, The Green Democratic Club of Sacramento, and the Wellstone Progressive Democrats of Sacramento, Sacramento Audubon Society, California Native Plant Society, Friends of the Swainson's Hawk, Save the American River Association, Save Our Sandhill Cranes, Sierra Club Sacramento Group, Friends of Stone Lakes National Wildlife Refuge, and the Sacramento Area Creeks Council.

Summary

ECOS strongly opposes the proposed Elk Grove SOI expansion. Elk Grove's anticipated growth can be accommodated within the existing City limits, and we find no justification for expansion beyond the Sacramento County Urban Services Boundary (USB) established in1993 to be the ultimate growth boundary within the County. The proposal is inconsistent with the Sacramento Area Council of Governments' (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for meeting State mandated greenhouse gas (GHG) reductions, Federal mandates for Air Quality Attainment under the State Improvement Plan

(SIP), as well as myriad regional goals for social equity, public health and natural resource conservation. There is an extreme lack of certainty that municipal water can be provided to this area without severe regional impacts, and the impacts to invaluable agricultural and biological resources by the proposal are potentially impossible to mitigate.

In the comments that follow, we offer a number of suggested mitigation measures that could greatly reduce eventual impacts of urbanization in this area, but this cannot be misunderstood as acceptance of the proposed expansion, we emphasize that we strongly recommend that LAFCo decline the proposed Kammerer/99 SOIA.

As to mitigation measures, we also would to reiterate a general concern for LAFCo authority, as we did in our 2013 comments for the previously declined Elk Grove SOIA proposal. Mitigation measures and conditions applied to future annexation of an SOI are not enforceable by LAFCo after annexation. To correct this ongoing anomaly for LAFCo, we would propose following language be added to any such mitigation measure or annexation condition:

> At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall enter into a binding agreement with LAFCo, or otherwise provide legally enforceable assurances to LAFCo that will ensure the implementation of [the substance of the mitigation measure].

Land Use, Transportation, Air Quality, and Climate Change

ECOS finds that the DEIR does not adequately illustrate the impacts of the proposal on GHG emissions and air quality, or adopted land use and transportation plans in a regional context.

This project is inconsistent with SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy, and in direct opposition to the intent of the State, Federal and regional goals that are represented in that collaboratively designed regional plan. The MTP/SCS represents the best regionally-cumulative analysis available in providing the most viable strategy for allocating urban growth and transportation infrastructure needs across our 28 jurisdictions while meeting State mandated greenhouse gas (GHG) reductions, and Federal mandates for Air Quality Attainment under the State Improvement Plan (SIP).

The joint MTP/SCS is the mandated product of the Sustainable Communities and Climate Protection Act of 2008 (CA SB 375), which mandates that a land use strategy be developed in tandem with the federally required regional transportation plan in an effort to reduce GHG emission from the light vehicle sector. These GHG reductions found through the nexus of land use and transportation are largely represented by reductions in Vehicle Miles Travelled (VMT), by reducing travel distance between jobs, housing and services through more compact development and increased investment and access to non-automobile modes of travel. More compact land use and increased options for traveling (through transit, walking and biking) simultaneously offer significant benefits to public health and social equitable housing, and preserves our natural and working lands, as well as associated biodiversity and ecosystem services such as carbon sequestration, flood abatement, and groundwater recharge.

Considering all of the benefits the MTP/SCS strategy provides, deviation from the plan cannot be

taken lightly. Both the State mandated GHG reduction targets and the federal air quality attainment requirements were extremely difficult for SACOG to achieve in the recent 2016 MTP/SCS update. Any deviation from the plan, particularly in urban expansion outside of the SCS footprint, would pose a significant challenge for any future ability of the region to achieve these requirements (the consequences of which would include loss/withdrawal of substantial Federal and State infrastructure funding).

Considering that there is no wiggle room in the current strategy, the only way the MTP/SCS could accommodate expansion of Elk Grove (or any jurisdiction) beyond the SCS footprint and still meet State and Federal requirements would be to take growth away from all the other jurisdictions in the region. ECOS would claim this is not good (or neighborly) planning.

Further, State mandates to reduce GHG and VMT are getting stronger. California recently passed SB 32 (extending AB 32 and previous executive orders) to reduce GHG emissions from 1990 levels by 40% by 2030 and 80% by 2050. The California Air Resources Board (CARB) is in the process of finalizing the GHG Scoping Plan to meet these goals across sectors including the revision of the regional GHG targets of SB 375. CARB has found that GHG reductions from other sectors including energy production, energy efficiency, clean fuels, and clean vehicles will not achieve these goals alone, that much more VMT reduction through improved land use and transportation strategies are absolutely needed as well.

While it is not possible for LAFCo to account for State action that has not yet been finalized, the reality is that SACOG's GHG reduction target is likely going to be increased to some degree, and that additional State measures are likely to be taken to reduce VMT beyond what is required from SB 375--the primary mechanism by which to do this is to reduce outward urban expansion, and increase densities with existing urbanized areas.

The region needs to reduce VMT significantly, and there is no way that expansion into this area can reduce VMT—and no amount of GHG reductions from other strategies taken in the SOIA area will be able to offset the GHG emissions from increased VMT that would be inherent in urbanization of this area. We need all those strategies, and VMT reduction.

Impact 3.11-6 in the SOIA DEIR, projects that future development could facilitate population growth of 4,000 to 5,000 dwelling units and creation of 18,000 to 20,000 jobs. Future development could generate the addition of 13,000 to 16,250 people to this new area. SACOG growth projections for Elk Grove (in total) for the next 20 years is 13, 909 houses, and 19, 863 jobs (SACOG growth forecast, MTP/SCS Preferred Scenario staff report, Attachment C, March 26 2015). All of SACOG's anticipated housing growth can easily be accommodated within vacant land of existing communities and new developments already being planned in new development areas of the existing City, including Laguna Ridge, Lent Ranch, and the Southeast Planning Area (SEPA).

Elk Grove has repeatedly made the claim that it must expand to focus on job centers that will correct its greatly imbalanced jobs-housing ratio. This is a worthy goal, but again, this can be done within the existing City limits. The Southeast planning area alone, by Elk Grove's projection, will accommodate more than 20,000 jobs. Add SEPA projections to the projection for the Kammerer-99 SOIA, and these two projects alone are well more than double what SACOG anticipates as feasible in a regional analysis.

We feel that the job growth projections of the SOIA proposal are unrealistic, and that, as has been observed time and again in Elk Grove, this land will end up being low-density housing with little nearby job opportunity. But if we were to presume that Elk Grove did attract this extreme number of jobs, a significant amount of them would almost necessarily be drawn from other jurisdictions in the region—What would be the cumulative economic effect of that potentiality?

Looking at this SIOA through a regional lens should be the foremost priority for LAFCo, a lens that we feel has not been adequately provided by the DEIR. New expansion proposals aside, there are already extreme disparities between the existing growth plans of the individual jurisdictions of the region and the MTP/SCS. As illustrated in the table below, the region's cumulative General Plans anticipate over 660,000 housing units beyond 2012 stock -- well more than twice the MTP/SCS estimate of 285,000.

Jurisdiction/Community Type	Existing Conditions		MTP/SCS		Cumulative General Plans		Difference	
	Total in Year 2012		Total in Year 2036		Total at Build Out		Build Out minus Projected Year 2036	
	Jobs	Housing Units	Jobs	Housing Units	Jobs	Housing Units	Jobs	Housing Units
Region Total	887,965	903,451	1,327,323	1,188,347	2,234,929	1,564,662	907,606	376,315
Center and Corridor Communities	307,652	107,718	459,750	193,885	633,282	236,212	173,532	42,327
Established Communities	527,095	686,075	742,211	764,825	1,018,936	805,215	276,725	40,390
Developing Communities	20,037	31,422	88,922	146,258	365,796	281,782	276,874	135,524
Rural Residential Communities	33,181	78,237	36,441	83,380	64,341	117,802	27,900	34,422
Areas Not Identified for Growth in the MTP/SCS by 2036					152,574	123,650	152,574	123,650

*(Data drawn from SACOG housing forecast: April 9th, 2015 staff report, pg56)

More than half of these new units would be located in previously undeveloped "greenfields," with more than 2 times the growth in SACOG's "Developing Community" areas, and 8 times more growth in "Rural Residential" areas.

More than 120,000 planned units are completely outside of the SCS footprint, and this figure does not even include major potential expansion areas that are currently being pursued, including Cordova Hills, Natomas "North Precinct," Folsom's "studies" to expand further south of Whiterock Rd., and the three the current applications to expand the City of Elk Grove.

These expansion areas alone could add up to more than 100, 000 additional housing units outside of the SCS. With the very important natural resource considerations in these areas aside, these expansions would be a severe blow to any possibility of successful implementation of the SACOG transportation plan as it is conceived.

ECOS anticipates that regional population and housing numbers in twenty years will probably be closer to SACOG's projections than that of the jurisdictions' general plans; the question is where will the growth be? If peripheral growth is allowed to proceed at the rate it is being planned for now, there will not be enough demand later for the infill required in the MTP/SCS to achieve the densities necessary to meet our State VMT/ GHG reductions and Federal air quality mandates.

Elk Grove's complaints that they have run out of space for job growth is a (correctable) problem of their own making, and they need to work to correct it within their existing footprint (and within the regional plan) before they are given more land at the expense of the region and the Public Trust.

Further, it is not acceptable to ECOS to approve the SOIA with a condition that any future annexation of the area will be contingent on SCS compliance. **An SOI approval must be contingent on SCS compliance** at the time of approval: one, because the 20-year horizon of the MTP/SCS is the same time horizon that LAFCo considers as timely (referenced multiple times in LAFCo's Municipal Services Review of this SOIA), and two, because the prospects of agricultural and biological resource conservation are already greatly damaged by approval of the SOI due to the inevitable sky-rocketing of speculative land values in the SOIA—this is of particular concern in this case because of the limited land area available for successful implementation of the SSHCP.

Water

These comments pertain to Section 3.10 Hydrology & Water Quality and Section 3.15 Utilities and Service Systems

Cumulative Growth and Ability to Supply Water Consistent with Sustained Yield Mandates Is Threshold Issue

Water is an essential service for prospective urban development and an important factor in the LAFCo approval process. The availability of water to meet the competing needs of habitat, agriculture and urban uses is an ongoing and increasingly acute issue in the Sacramento region and elsewhere in the state. This is one of the threshold issues facing LAFCo and it is vitally important that careful consideration be given to the environmental impacts of delivering urban water to the project within the context of regional efforts to maintain a sustainable groundwater yield for the American and Cosumnes groundwater Basins.

The importance of the proposed SOIA Area expansion is magnified because the expansion area is outside of the Sacramento County General Plan Urban Service Boundary (USB). Established in 1993, this boundary demarcated the long-term limit of urban growth in Sacramento County. The USB provides a basis for growth assumptions in preparing long range plans for essential urban infrastructure. The analysis underlying the development of the Water Forum Agreement was based on growth only inside the USB.

The Water Forum Agreement established a long term annual sustainable yield from the South American Subbasin (sometimes referred to as the Central Subbasin) of 273,000 acre-feet/year (AFY). The Sacramento Central Groundwater Authority (SCGA) is charged with managing groundwater resources in almost the entirety of the South American Subbasin. The SCGA has applied to the California Department of Water Resources (DWR) to be the responsible agency (officially the Groundwater Sustainability Agency or GSA) to plan and implement measures to ensure long-term sustainable use of he South American Subbasin under the requirements of the Sustainable Groundwater Management Act (SGMA) adopted by the California Legislature in 2014. They have also submitted to DWR an Alternative to the requirement that they adopt a Groundwater Sustainability Plan as required by the law. If accepted, the 273,000 AFY sustainable

yield will be incorporated into the state required plan, and 2006 will be established as the base year for measuring the long-term sustainability of groundwater in the subbasin.

Page 3.10-12 of the DEIR notes that SB610 legislation "strengthened the process by which local agencies determine whether current and future water supplies are adequate & sufficient to meet current and future demand." The intent of this legislation was to make sure that any project requiring CEQA review thoroughly evaluates the water supply requirements of the project.

This background sets the framework for what we think is a key issue facing LAFCo: **Does approval of this project initiate development, the water demands of which could jeopardize the ability of local jurisdictions to meet their commitment to, and state law requiring, maintenance of long-term groundwater sustainability?**

Description of Regulatory Framework Should Better Address SCGA Role in SGMA Implementation

The discussion of the Sustainable Groundwater Management Act on page 3.10-14 incorrectly states that two Resource Conservation Districts have submitted notices to be the groundwater sustainability agency for the South American Subbasin. Actually three different organizations have filed. SCGA's application applies to almost the entire subbasin. Omochumnes Hartnell Water District and Sloughhouse RCD applications involve that portion of the subbasin on both sides of the Cosumnes River east of Highway 99. The description should add the following:

SCGA has petitioned DWR to approve an alternative to the required GSA under SGMA that recognizes their sustainable management of the groundwater basin for the past ten years. The California Department of Fish and Wildlife and others are opposing this determination. DWR will be making a decision on a timetable not yet known.

Incomplete Analysis of Impacts Pertaining to Groundwater Supply

The Analysis of Environmental Impacts pertaining to depletion of groundwater supply beginning on page 3.10-22 is incomplete. The discussion of the Water Forum Agreement on pages 3.10-23 and 24 should:

- Note that the analysis supporting the determination of a sustainable yield for the subbasin assumed no urban growth outside the USB.
- Include the graph on page ES-4 of the SCGA's Alternative Submittal to DWR (December 2016) showing 10-year Extraction Operations within Sustainable Yield. This graph shows that total groundwater extractions were under the Sustainable Yield of 273,000 AFY, but not significantly. The average extraction during the first six years amounted to 250,000 AFY. During the next five years, the drought years 2011-15, the total groundwater extraction averaged about 215,000 AFY.

Water Supply and Demand Analysis Must Examine Cumulative Growth Water Demand with Regard to Sustainable Groundwater Yield Commitments

The discussion of water supply and demand in Section 3.15 is limited to SCWA, the likely purveyor of water to the project area. This is inadequate given the threshold expansion of this project beyond the USB, the basis of all prior growth assumptions for regional water planning. The discussion must also present data regarding the cumulative impact of this and other urban development water demands on the ability to supply surface water to meet projected ultimate

M&I demand in a manner compliant with the Water Forum Sustainable Yield. Toward that end, note that the EIR for the Sacramento County General Plan Update (draft released May, 2009) concluded on page 6-47:

> "As described in the Setting section, the current Zone 40 yield is 131,727 AFA. The water demand from the cities plus from the 1993 General Plan (equivalent to the Zone 40 Water Supply Master Plan) is 103,712 AFA, and the water demand from the cities plus the No Project is 109,922. Both of these amounts can be accommodated by current projected water yields. However, with the [General Plan Update] the demand increases to 136,640 AFA, which is approximately 4,913 AFA beyond projected supply and well beyond the amount planned for 2030 distribution in the Zone 40 Water Supply Master Plan. (2006 Sacramento County General Plan Update (2011), pg 6-47)"

This analysis suggests that there is a real potential that the additional water requirements of this project will worsen a predicted shortfall in supply vs demand.

Biological Resources

Synopsis of deficiencies in analysis of biological resources:

1.) Inaccurately presents environmental setting of SOIA area.
   a. Ignores significance of nearby preserved landscapes and the fact that many species residing in those preserved landscapes forage or otherwise utilize the SOIA area.
2.) Ignores significance of SOIA lands in the context of cyclical flooding in the lower Cosumnes River basin.
3.) Ignores significance of SOIA lands in the context of the climate change and the impact of sea level rise on the north Delta, the lower Cosumnes River Basin, and the Stone Lakes National Wildlife Refuge.
4.) Does not fully assess the impact of the SOI expansion on the conservation strategy of the South Sacramento Habitat Conservation Plan.
5.) Presents incomplete list and analysis of potential covered species occurring in the SOIA area.
6.) Presents incomplete analysis of impacts to covered species in the SOIA area in the context of cyclical flooding in the lower Cosumnes River Basin and Stone Lakes National Wildlife Refuge.
7.) Ignores significance of the SOIA area for the long term survival of Sandhill cranes in the context of cyclical flooding and sea level rise due to climate change.
8.) Does not include analysis of the SOIA area in either the context of a wildlife movement area or as an important stopover area for wintering migratory birds.
9.) Mitigations do not address issues of cyclical flooding and sea level rise due to climate change.

Environmental Setting

The proximity of the Cosumnes River as well as the Stone Lakes National Wildlife Refuge are mentioned, but not that of the Cosumnes River Preserve. The proximity of the Cosumnes River Preserve to the south and Stone Lakes National Wildlife refuge to the west confers to this property added biological significance as a foraging area for many species that roost or nest in

those preserved landscapes. What the DEIR lacks is a description that attempts to encompass the significant geographical and biological relationship between the SOIA area and the lands of the Stone Lakes National Wildlife Refuge (SLNWR) and the Cosumnes River Preserve (CRP). In this context, the SOIA area represents an extremely important foraging area and wildlife movement corridor for species from both SLNWR and CRP. As well, the SOIA area acts as a very important buffer to absorb direct and indirect impacts from urban activities. The removal of any part of this important foraging, wildlife movement, and buffering area will have demonstrable impacts on both SLNWR and CRP. These are not analyzed or considered. The important species survey data collected in both of these important protected areas does not even seem to have been utilized to determine the presence of listed species in the SOIA area either.

Add to this the fact that the Cosumnes River is the last remaining free flowing river out of the West side of the Sierra Nevada Mountains and that CRP and SLNWR are active floodplains that inundate cyclically every seven to ten years. Since much of the conservation in this area is within an active floodplain, upland foraging lands become critical. The SOIA area is such an upland foraging area and as such is extremely important during the cyclical inundations mentioned. This was not analyzed or even mentioned.

And further, given the relative elevations of the Cosumnes River Preserve, Stone Lakes National Wildlife Refuge, and the SOIA area, even further significance is conferred because beyond the cyclical flooding that is inherent in the Cosumnes River Preserve, there is the prospect of habitat loss to the entire of the north Delta due to global climate change and sea level rise – both topics covered in more detail elsewhere in this comment letter.

Cyclical Flooding and Sea Level Rise Are Major Gap in the Biological Resource Analysis
The biological resource analysis fails to consider cyclical flooding of the lower Cosumnes River Basin, the impact of sea level rise on the north Delta, and the effect of both on the greater sandhill crane and the lesser sandhill crane, as well as all other species who share same habitats. Together they comprise a major gap in the analysis.

The SOIA area lies just north of the Cosumnes River flood plain which is active and is inundated periodically, as it did this year. The Cosumnes River is the only undammed river flowing out of the west side of the Sierra Nevada Mountains, and due to past levee breaches, intentional and unintentional, the river actively floods the lower Cosumnes River basin on a cyclical basis. Severe flooding has occurred on average every seven to ten years. Recent significant flood events have occurred in 1997, 2005-2006, and this winter season. Similarly, Stone Lakes National Wildlife Refuge, both in the actual Refuge and within the legislative boundaries of the Refuge, has many low elevation areas that are also subject to flooding.

Historically, the SOIA area has provided critical upland foraging habitat for the greater sandhill crane during the frequent flood events in the lower Cosumnes basin. Dr. John Trochet worked for the Nature Conservancy and Gary Ivey in 2005 between January and March and documented greater Sandhill crane usage of agricultural lands either in the immediate vicinity of the SOIA area during a flood event (Ivey, "Mitigating Loss of Sandhill Crane Habitat in South Sacramento County, March 25, 2005). Though it has been acknowledged that significant portions of the lands in and around the Stone Lakes National Wildlife Refuge that were added to the "inventory" of the SSHCP are at or below sea level, no investigation or scientific determination has been made as to the impact of the removal of upland foraging habitat for the greater

sandhill crane, given its importance during flood episodes. Most of the preservation of sandhill crane habitat has been within the floodplain, and significant areas that are not technically within the floodplain, such as Staten Island, are at risk of catastrophic failure during significant flood events if their antiquated levees fail – this nearly happened to the Staten Island levees during the 2005-6 flood event and it was only emergency repairs that kept it from becoming a lake. A significant flood episode with inadequate upland foraging habitat remaining could have catastrophic consequences for the greater sandhill crane. Similarly, other listed and species of concern would also be impacted. This was not discussed or analyzed in the DEIR.

Beyond the cyclical flooding, global climate change and the resultant rise in sea level poses additional risks to low lying areas in the lower Cosumnes basin, Stone Lakes National Wildlife Refuge, and the entirety of the Delta. Dr. Rod Kelsey at the Nature Conservancy has done some preliminary modeling in the north Delta as part of TNC's participation in the Crane Technical Advisory Committee (a committee, formed in 2015 which includes representatives from CDFW, USFWS, DWR and the Nature Conservancy, as well as preserve managers, scientists and environmentalists, that is working on a sandhill crane conservation strategy for California) and as an exercise to refine TNC's own land acquisition priorities for sandhill crane conservation. The modeling exercise looked at conservative sea level rise predictions for between now and 2100 for the Delta and surrounding landscapes. The initial draft maps that resulted from this exercise are attached. The maps are undergoing refinement to also consider relative crane abundance, but these draft maps are still useful in demonstrating the concerns about sea level rise and the potential threats to sandhill cranes, as well as all of the other terrestrial wildlife that reside in or near the north Delta.

The first map (figure 1) depicts current high value crane habitat based on suitable ground covert-type and distance from established roost sites (within a 2 mile diameter of established site). This draft map has yet to be adjusted for relative abundance of cranes, which would increase the priority of available habitat close to roost sites with greater numbers of cranes. The second map (figure 2) depicts the areas that are at risk of permanent inundation based on conservative sea level rise predictions, relative existing elevations, and potential for levee failure. Virtually all of the lands currently conserved for greater sandhill cranes are at risk of being lost. This realization has resulted in the need to rethink long term conservation strategies for sandhill cranes in the Delta and its surrounding landscapes, not to mention all of the other listed and special concern species that share the same landscapes. The third map (figure 3) attempts to depict how conservation priorities need to shift to address the threat of sea level rise. It attempts to balance the importance of habitat near historic roost sites with the need to shift populations to the east where there is higher elevation and thus more sustainable long term habitats.

The SOIA area falls squarely within the highest priority long term areas for conservation due to its proximity to existing roost sites, its relative higher elevation, and its critical position as a bridge to the east for both Stone Lakes National Wildlife Refuge and Consumnes River basin crane populations. The loss of the SOIA area was not analyzed looking at the effects of climate change on sea level rise and the resultant loss of lower elevation habitat. Because of both the increased importance for foraging during cyclical flood events and the long-term importance for conservation for the greater sandhill, and other listed and species of concern, because of impacts of climate change, the loss of the SOIA area would result in potentially significant and unavoidable impacts to greater sandhill cranes and lesser sandhill cranes. Even doing all of the

land acquisition part of the proposed mitigations within the SOIA area footprint, and not within lower elevation areas subject to cyclical flooding and sea level rise, would not necessarily fully mitigate for the loss of even a portion of the SOIA area because though the importance of the upland forage areas south of Elk Grove has been established, the threshold for how much of that land needs to remain available for the long term conservation of the sandhill crane, and other listed species and species of concern, has not been determined.

Impact on the South Sacramento Habitat Conservation Plan

The SSHCP has to be able to assure that it can successfully implement the conservation strategy which is the heart of the Plan. One of the issues with this SOIA application and the SSHCP is that in the western portion of the SSHCP plan area it undermines the "feasibility of acquisition," which reflects the likelihood of being able to successfully acquire the necessary amount of mitigation land. The "feasibility of acquisition" is expressed as a percentage of the available "inventory" that must be purchased to meet mitigation needs – the higher the percentage the harder it is to meet the acquisition needs. A "feasibility" of 50% means that half of all suitable land in the "inventory" side of the Plan area would need to be purchased to comply with the conservation strategy. Since lands will only be purchased from willing sellers, the likelihood for success would be extraordinarily small. The current "feasibility for acquisition" in the western portion of the plan area is close to the 15% that the California Department of Fish and Wildlife feels will ensure that enough willing sellers can be found to complete the land acquisitions required in the Plan. The mitigation needs of the SOIA area would drive that number upward above that which the CDFW feels is acceptable.

The fact that Elk Grove is no longer a participant in the SSHCP does not change the fact that they would need to be doing land acquisition mitigations in the same footprint as the SSHCP. The impact to the SSHCP is doubled by the fact that any SOIA approval would remove needed acreage from the "inventory" side of the plan (the side where land is acquired) reducing the available footprint that the SSHCP has to do its own mitigations, and then it would remove another equal amount of land from the "inventory' side of the Plan because it would have its own land acquisition mitigation requirements to fulfill. So as an example, if LAFCo approved an expansion in the SOI of 1000 acres, the hit to the SSHCP's inventory of available lands for acquisition would be 2000 acres. If LAFCo required that land acquisition requirements needed to be fulfilled within the footprint of the SOIA area, the impact to the SSHCP's inventory would be halved.

Mitigation should also require that federal and state take permits for all species covered by the SSHCP be obtained prior to annexation to ensure consistency with the SSHCP.

Wildlife

This section is misleading in that it portrays the agricultural nature of the SOIA area as providing "low value habitat for most wildlife species because of an overall lack of native vegetation and natural communities, and a high level of disturbance from agricultural activities and vineyard operations." It further lists common species like: "mourning dove (Zenaida macroura), American crow (Corvus branchyrhychos), mockingbird (Mimus polyglottos), house sparrow (Passer domesticus), and raccoon (Procyon lotor)" as the species most likely to use the SOIA area. This characterization completely ignores the acknowledged significance of agriculture in the habitat mosaic in the south county, a significance prominently evident in the SSHCP as well as the land acquisition strategies of both the Cosumnes River Preserve and the Stone Lakes National

Wildlife Refuge, not to mention the Migratory Bird Conservation Partnership with the Audubon Society in collaboration with Point Blue Conservation and the Nature Conservancy. Numerous species (up to 238 according to K. Shawn Smallwood's attached comment letter from the 2011 Elk Grove SOIA expansion DEIR), including many covered species, rely upon the south Sacramento agricultural landscape for their survival.

This section, and the DEIR in general, also ignores the significance of the SOIA area as an important area for wintering migratory waterfowl. It is not unusual to see sizable flocks of waterfowl foraging in agricultural fields in the south county during the winter. A far more accurate and appropriate representation would have been: The agricultural cover-types evident on the SOIA lands provide important foraging opportunities for many wildlife in the south county and are considered an important part of the habitat mosaic that those species rely upon.

And further, this section, and the DEIR in general ignores the importance of the SOIA area as a wildlife movement corridor. The geographic position of the SOIA area makes it an available thoroughfare for movement of species from the lower Cosumnes River basin to Stone Lakes National Wildlife Refuge, and it serves as an important foraging area that coheres those two preserved landscapes.

Field Survey

It is important to note that the field survey was conducted in March which is after most of the wintering waterfowl, and some of the raptors, would have left. It is also important to note that the survey was conducted after a long period of drought which resulted in many wintering species being more constrained to managed habitats that had available water. It is also important to note that the field survey was not done at a time when cyclical flooding was occurring along the lower Cosumnes River. The survey as a result was far from either comprehensive or representative of the wildlife species that utilize the SOIA area.

There was other pertinent field survey information that was available in the administrative record of the 2011 Elk Grove SOIA application and associated environmental documents and comment letters. We have attached a letter from that record prepared by Shawn Smallwood PhD for Friends of the Swanson's Hawk in November 2011 commenting on the 2011 Elk Grove SOIA LAFCo application and associated environmental documents. The letter remains pertinent to this DEIR with the possible exception of vernal pool resources noted elsewhere in the footprint of the larger SOIA application. Dr. Smallwood brought up very important concerns regarding the lack of analysis of wildlife movement corridors as well migratory bird stopover habitat which are equally relevant problems in the current DEIR. As well, his list of possible species present is far more accurate and comprehensive than that used in this DEIR and in some cases is substantiated and verified for presence by his own observations in the field (such as the presence of Copper's hawk and long billed curlew). It is useful to refer to his list of possible species for occurrence when considering what Special Status wildlife should be considered for analysis.

Special Status Wildlife and the reliance on the CNDDB

It is fairly clear that the CNDDB (California Natural Diversity Database) was the main source of information that was used in determining what special species should be considered for analysis. The CNDDB states that "(i)t is a positive detection database. Records in the database exist only where species were detected." The CNDDB states as a disclaimer to use of its

databases: "We work very hard to keep the CNDDB and the Spotted Owl Database as current and up-to-date as possible given our capabilities and resources. However, we cannot and do not portray the CNDDB as an exhaustive and comprehensive inventory of all rare species and natural communities statewide. Field verification for the presence or absence of sensitive species will always be an important obligation of our customers." This means that the absence of a record does not mean that a species is not present. It is also important to realize that for avian species there is a bias towards nesting data over occurrence data. There were and are many other available sources of occurrence data available for the vicinity of the SOIA area including information from the Cosumnes River Preserve, Stone Lakes National Wildlife Refuge, Christmas bird counts (the Rio Cosumnes count includes the SOI area), and EBird to list a few – not to mention Dr. Smallwood's attached letter.

Reviewing some of this other available data, and a literature search of specific species, indicates species that should have been included in the analysis that weren't, species that were dismissed as occurring that shouldn't have been, as well as at least one factual mistake.

Some of the additional special status avian species that should have been considered based on occurrence information from Christmas bird counts for the Rio Cosumnes Area, as well as species occurrence data from the Bufferlands and the Cosumnes River Preserve, and Dr. Smallwood's letter, are: double crested cormorant, white faced ibis, whimbrel, long billed curlew, California gull, golden eagle, bald eagle, golden eagle, cooper's hawk, sharp shinned hawk, ferruginous hawk, prairie falcon, merlin, short eared owl and Lewis' woodpecker. For some of these ignored avian species, the SOIA area is an important habitat, like the long billed curlew. We again caution on relying solely on the CNDDB for analysis of these species and suggest a deeper literature review as well. As an example, long billed curlew habitat is commonly listed as grassland, but a more in depth review also indicates that in the Central Valley of California it commonly uses agricultural fields as well, and has a marked preference for irrigated alfalfa and irrigated pasture (Shuford et al, "The importance of Agriculture to the Long Billed Curlew in California's Central Valley in Fall"), both of which are present in the SOIA area (also refer to Dr. Smallwood comment letter for further evidence of long billed curlew presence).

Some additional mammalian species that should have been considered are: ornate shrew, pallid bat, spotted bat, Townsend's big eared bat, western mastiff bat, and California kangaroo rat. For reptiles, the coast horned lizard should have been considered and analyzed.

Species that were dismissed but shouldn't have been are:

1.) Tri colored blackbird – similarly to the CNDDB, the potential for occurrence seems to be based solely on nesting occurrence. As stated in the potential for occurrence there is/was a nesting colony within a mile of the SOIA area. As such the SOIA lands provide excellent foraging opportunities for this species and should be considered to occur.
2.) Mountain Plover – Christmas bird counts for the Rio Cosumnes area (which includes the SOIA area) have regularly included this bird. As well, given that the "known range" is to the west of I-5 it would be extremely likely that this bird would frequent appropriate habitat just to the east, and if it were on private land it would not likely have been recorded in the CNDDB.
3.) Western red bats can utilize orchards for roosts and then forage in surrounding croplands. It should not have been dismissed as unlikely to occur.

Factual errors:

1.) The greater sandhill crane does breed in California, but not in the Cental Valley. Well known breeding locales include the Modoc National Wildlife Refuge and surrounding private lands, areas around Tule Lake, and Sierra Valley in the Sierra Nevada Mountains, to list a few.

Mitigation Measures

The proposed mitigations do not reduce the impacts to less than significant for any of the biological species discussed because they do not take into consideration the cyclical flooding in the lower Cosumnes River basin or the effect of sea level rise in the north Delta and surrounding landscapes. Even the plant species will need corridors to higher ground, as well as nearby higher ground alternatives for habitat for survival.

For many of the species considered, and for ones that should have been considered, it is not known if it will be possible to mitigate the impacts to less than significant because of the importance of nearby upland areas in the context of sea level rise.

Growth Inducement

Impact 3.11-6 indicates that future development could facilitate population growth of 4,000 to 5,000 dwelling units and creation of 18,000 to 20,000 jobs. Future development could generate the addition of 13,000 to 16,250 people to this new area. Therefore the DEIR concludes that growth inducing impacts are considered significant.

The mitigation measure for this impact concludes that there is no feasible mitigation to reduce the growth inducing impacts and therefore the impact is significant and unavoidable. While we would agree that the impact on growth inducement is significant, we strongly disagree that it is unavoidable.

Mitigation for other impacts concerning habitat loss and loss of agricultural lands are recognized in other portions of the DEIR. Locating these habitat and agricultural mitigation land acreages at the south periphery of the proposed project would also serve as mitigation for growth inducement.

This is not a new concept. ECOS's settlement agreement with the Southeast Connector JPA included exactly such provisions. Mitigation for habitat and agricultural land loss was to be located to the southeast of the Connector, thereby limiting the growth inducing impacts of the expanded roadway. Section 2(e) of Exhibit A indicates, "The expenditure of funds for implementing mitigation measures in the FPEIR (including but not limited to open space, habitat, preservation of agricultural land, and mitigation for growth inducing impacts), including Measure A funds ($15 Million) and any additional mitigation funds secured by the JPA for the project, will be preferentially utilized to reduce growth inducing impacts of the Project while maintaining consistency with the SSHCP and at the same time also fulfilling the required mitigations of direct and indirect impacts of the project."

By not locating habitat and agricultural land mitigation acreage at the south periphery of the project, it is highly likely that the City of Elk Grove will expand even further to the south further increasing growth inducing impacts and destroying valuable habitat and agricultural lands. We

therefore submit that this is a viable and legally defensible mitigation measure for the growth inducing impacts of the current project.

Mitigation Measure for Impact 3.11-6: At the time of submittal of any application to annex territory within the SOIA Area, the city of Elk Grove shall submit a growth inducement mitigation plan with binding commitments to protect habitat and agricultural lands required by Mitigation Measures 3.2-1, 3.4-2c, and 3.4-4 in the area north of Eschinger Road.

Conclusion

For all of the reasons incorporated in these comments, we restate that ECOS is opposed to the proposed Kammerer-99 SOIA, and respectfully urge LAFCo to decline the proposal. We feel that this expansion proposal represents exactly the kind of irresponsible, untimely planning for growth that the Local Agency Formation Commission was established to guard against.

Thank you for your consideration and the opportunity to comment.
Sincerely,

Brandon Rose

Rob Burness

Sean Wirth

Brandon Rose
ECOS Board President

Rob Burness
Co-Chair, Habitat 2020

Sean Wirth
Co-Chair, Habitat 2020

ATTACHMENT A:

Figure 1. Current Crane Habitat Value (Not Accounting for current abundance patterns)

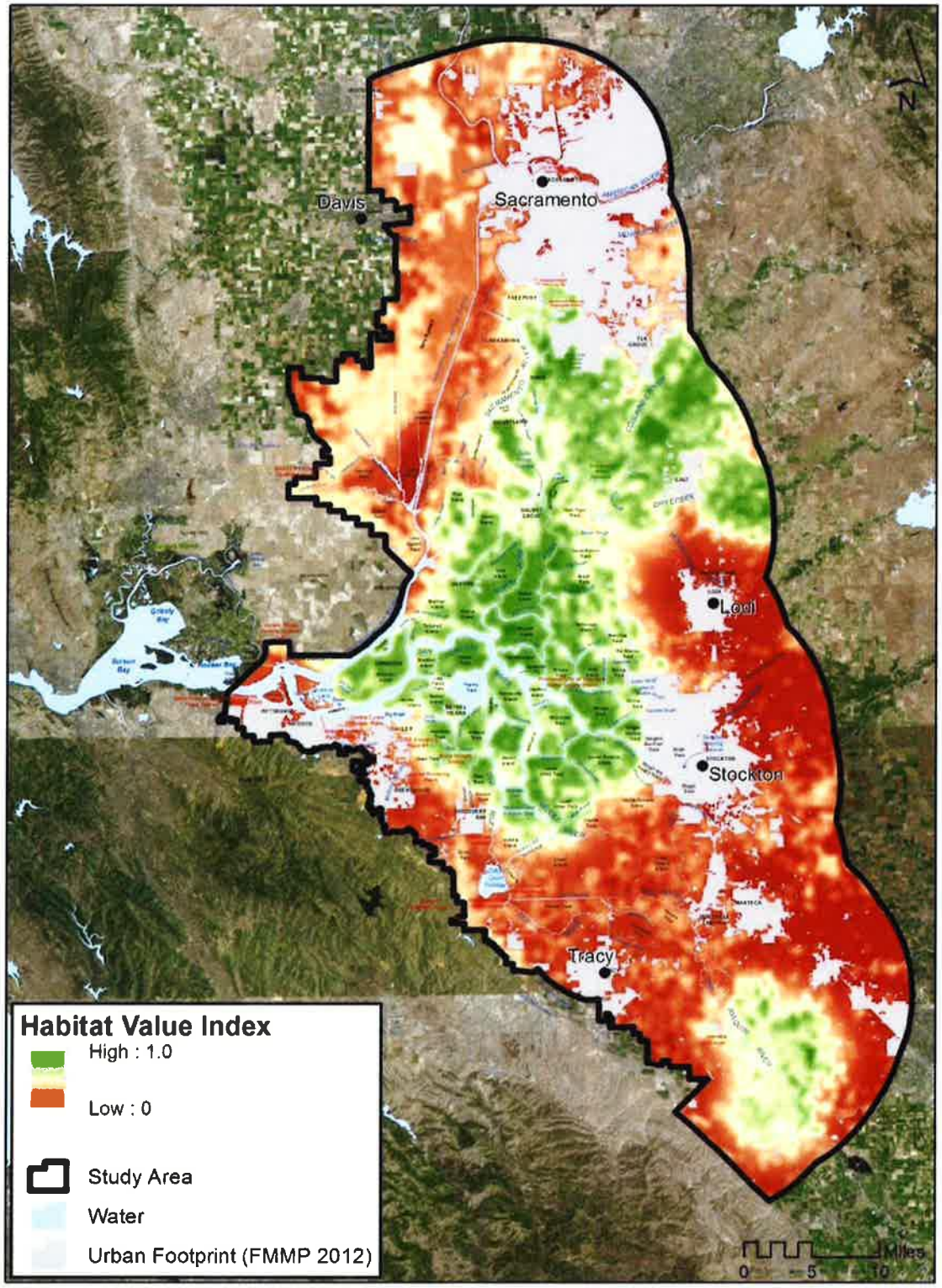


Figure 2. Risk Landscape based on current elevations, sea level rise in 2100, and potential for levee failure

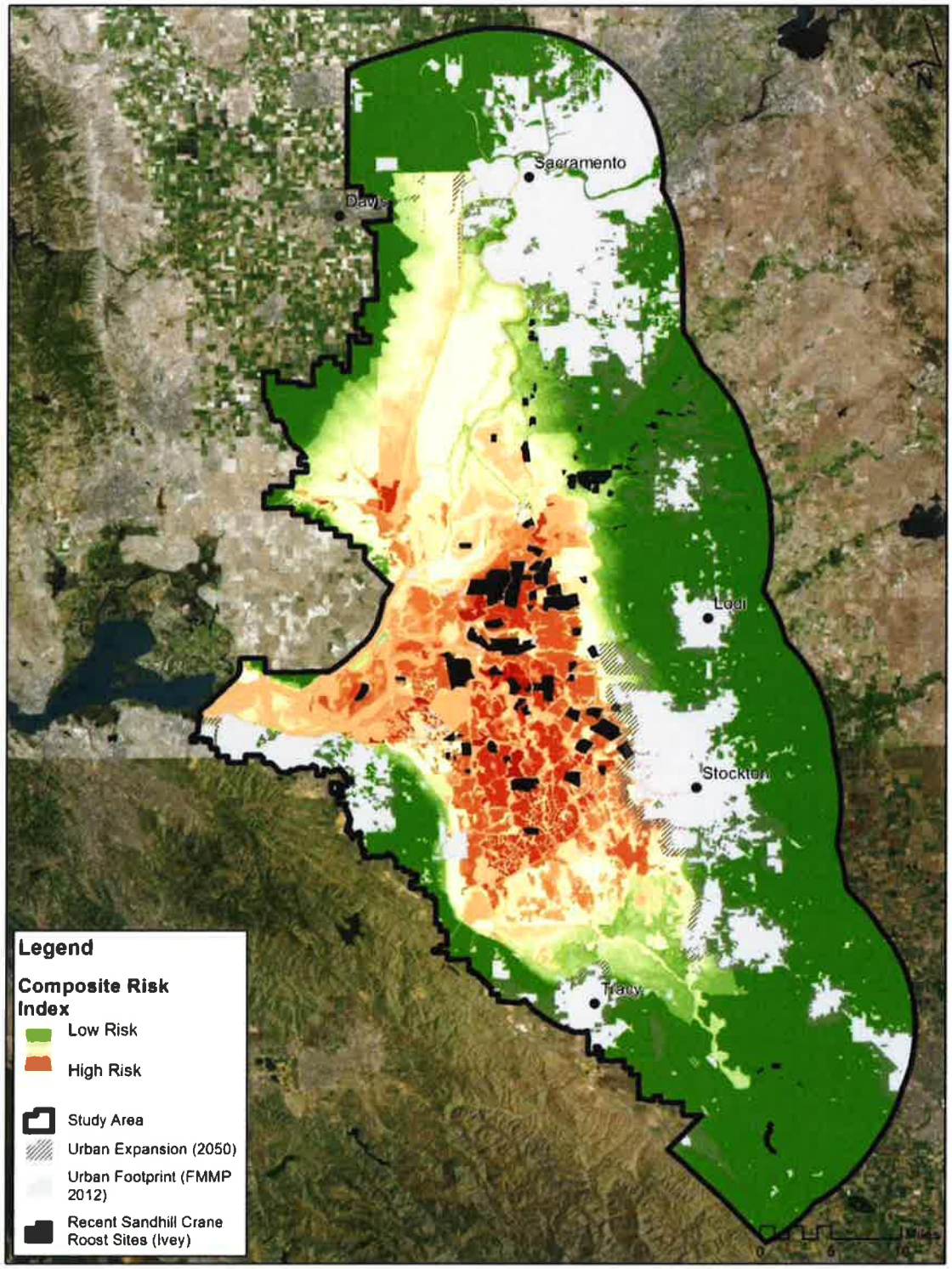
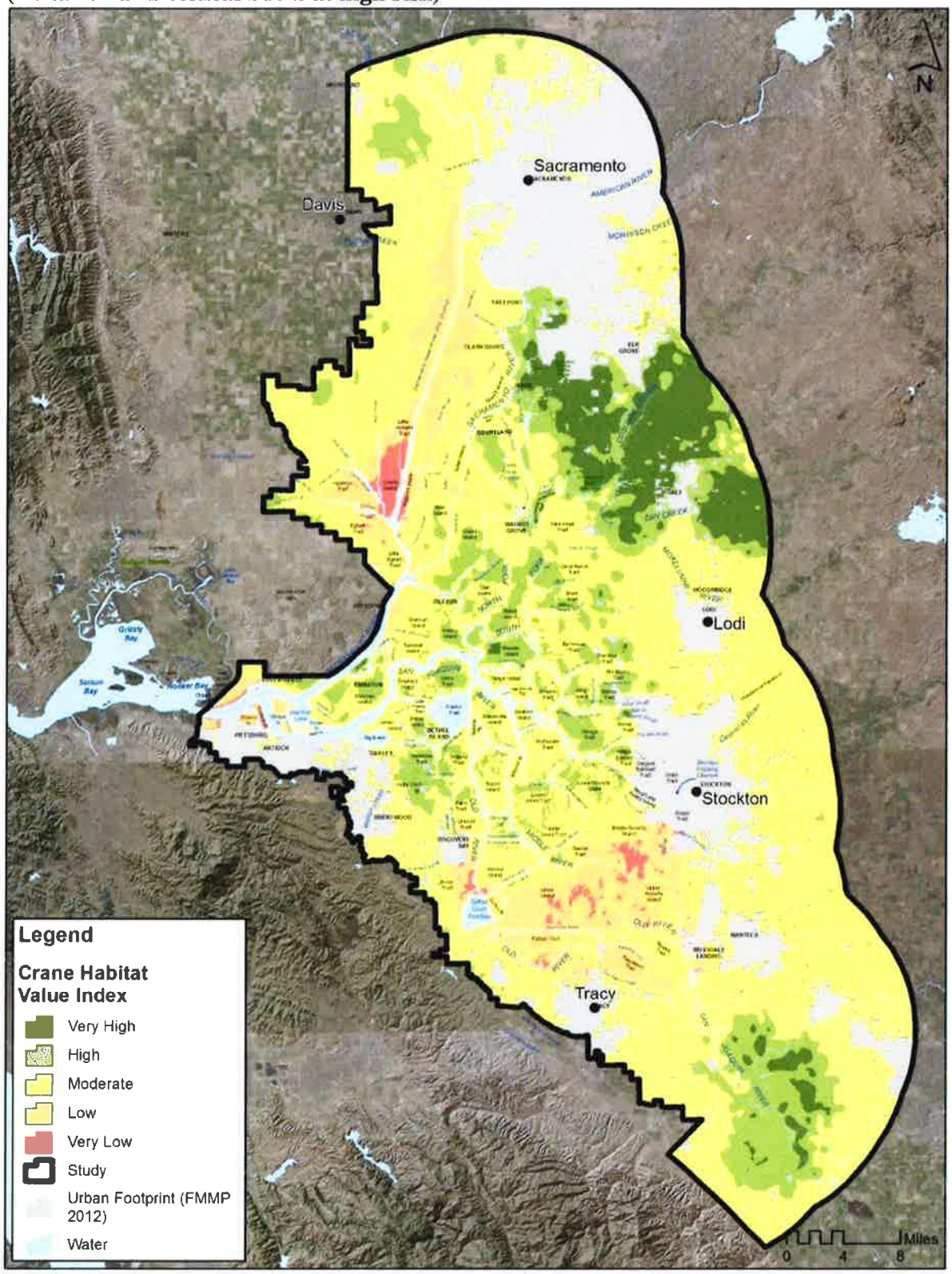


Figure 3. Relative Priority Areas for Long-term Conservation
(Delta remains critical but is at high risk)



March 31, 2017
Friends of Stone Lakes NWR
1624 Hood Franklin Road
Elk Grove, CA, 95737

Sacramento Local Agency Formation Commission
1112 I Street, #100
Sacramento, CA 95814
Attn: Don Lockhart, Assistant Executive Officer
Email: don.lockhart@sacLAFCo.org

Re: Comments on Kammerer/Hwy 99 Sphere of Influence Amendment (LAFC #07-15) Draft Environmental Impact Report (DEIR)

Dear Mr. Lockhart:

This letter provides the comments of the Friends of Stone Lakes National Wildlife Refuge Association (Friends) on the Kammerer/Hwy99 Sphere of Influence Amendment Draft Environmental Impact Report (DEIR). The Friends is a nonprofit organization dedicated to preserving and protecting the Stone Lakes National Wildlife Refuge (Stone Lakes NWR). Among other activities, the Friends has worked to ensure that Stone Lakes NWR is protected from adverse impacts relating to changes in flows and water quality due to surrounding development in coordination with local, state and federal agencies.

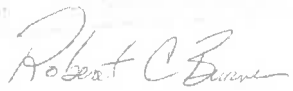
The Refuge is the single largest complex of natural wetlands, lakes and riparian areas remaining in the Sacramento-San Joaquin Delta, and provides critical habitat for waterfowl and other migratory birds of international concern, as well as a number of endangered plant and animal species. Stone Lakes NWR and its surrounding agricultural areas are home to several special status species, including the tri-colored blackbird, greater sandhill crane, white-face ibis, long-billed curlew, Swainson's hawk, burrowing owl, giant garter snake and valley elderberry longhorn beetle.

The land both within and around the proposed SOIA area provides foraging habitat for migratory waterfowl, including greater sandhill cranes, that roost at the Refuge. Sufficient upland foraging habitat in proximity to the Refuge is vital to its long term success as an important refugia along the Pacific flyway.

Accordingly we have major concerns that this project, together with similar expansion requests to the south and west which are likely to follow its approval, will significantly reduce upland foraging habitat and the viability of the Refuge.

We wish to include and incorporate by reference the comments on this DEIR by the Environmental Council of Sacramento (ECOS), in particular those relating to biological resources. We also wish to include and incorporate by reference the comments of Friends of the Swainson's Hawk (FOSH). Both comment letters are thorough and address our concerns with regard to the DEIR on the project.

Sincerely



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