

Project Description

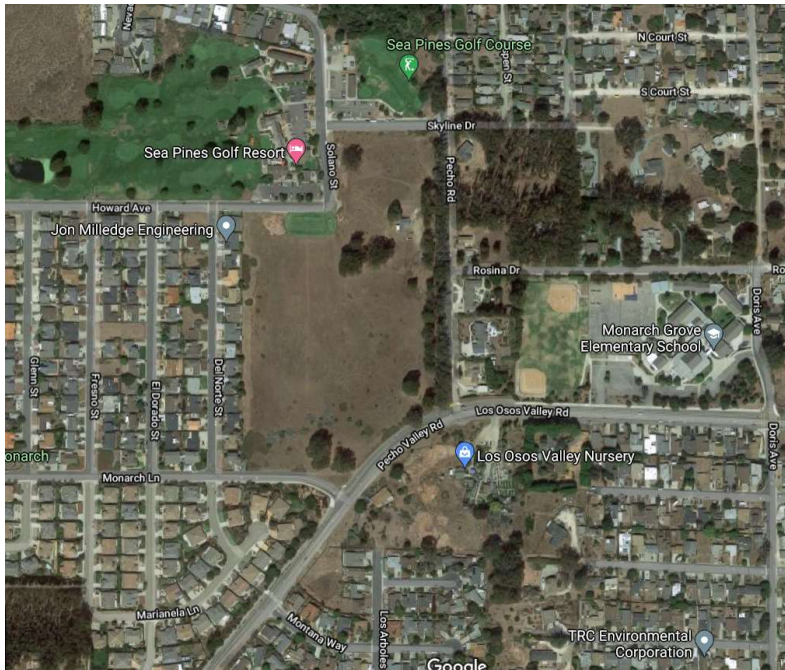
Project Description:

An applicant wants to develop an 18.5-acre property in Los Osos. The approximate latitude and longitude of the parcels are 35.313858, -120.853217. There is one existing structure on the property that will be demolished. The project is scheduled to start on January 3rd, 2023 and be operational in 2024. Over 5 acres will be graded. The property is adjacent to residential dwellings. The project will include the following land uses:

Office Building	3,250 SF
Day-Care Center	2,000 SF
Parking Lot	100 Spaces
Fast Food restaurant w/out drive through	2,500 SF
Fast Food restaurant w/out drive through	2,500 SF
Residential Townhouse	80 Dwelling units

Commented [JM1]: • Activity focus on explaining how to do the "math"

- Formulating the argument and concluding significance is not covered in this activity
- Hypothetical project – not meant to be entirely realistic
- Will go over portions of this activity, not the entire thing



Air Quality

(a) AEP Appendix G Checklist Question: Conflict with or obstruct implementation of the applicable air quality plan?

Website Drop-down Title: Consistency analysis with the SLO County APCD's Clean Air Plan (CAP) for program level environmental review

1. According to the APCD's Land Use and CEQA website, will this project need to be compared to the APCD's Clean Air Plan?
 - a. Yes, because it is a General Plan Update or Amendment, Specific Plan, Area Plan, large residential development or large commercial or industrial development.
 - b. No, because it is a relatively small project.

Commented [JM2]: • APCD is still developing better guidance on how to compare projects to our CAP and a better explanation of what "large development" means

(b) AEP Appendix G Checklist Question: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Website Drop-down Title: Calculating construction emissions for project level review

SLO County has a non-attainment status for Ozone (O₃) and Respirable Particulate Matter (PM₁₀) according to California ambient air quality standards and a non-attainment status for Ozone (O₃) in Eastern SLO County according to Federal ambient air quality standards.

CalEEMod is needed to answer questions 2-5 regarding ROG + NOx (precursors to ozone) and fugitive particulate matter (PM₁₀) construction emissions. Daily emission values can be found in the summer and winter reports, however, the APCD relies on winter emission values as this assumes worst case scenario. Quarter emission values can be found or calculated from the annual report.

2. The ROG + NOx daily emission value for this project is 152.3895 lbs/day.

Tip: The ROG value 138.0899 + NOx value 14.2996 = ROG + NOx total daily emissions 152.3895 lbs/day.

3. The highest quarter amount of ROG + NOx emissions for this project are 1.6553 tons/quarter.

Tip: CalEEMod tallies the maximum ROG + NOx quarterly values at the end of Section 2.1 in the Annual Report.

4. (Part 1) The average quarter amount of Fugitive Particulate Matter (PM₁₀) emissions for this project is 0.06485 tons/quarter.

Tip: Annual fugitive PM₁₀ value 0.2594 / 4 quarters in a year = average PM₁₀ per quarter 0.06485 tons/quarter.

(Part 2) How big is the grading area for this project? over 5 acres.

Website Drop-down Title: Comparing construction emissions to thresholds and applying mitigation

5. Use your answers from questions 2 – 4 to fill in the tables below to determine if this project exceeds APCD Construction Thresholds:

<i>Answer from Question 2</i>	Pollutant	Daily Emissions	Daily Threshold	Over Threshold?
	ROG + NOx (combined)	152.39	137 lbs	Yes

	Pollutant	Max or Average Quarter Emissions	Quarterly Tier 1 Threshold	Over Threshold?	Quarterly Tier 2 Threshold	Over Threshold?
<i>Answer from Question 3</i>	ROG + NOx (combined)	1.66	2.5 tons	No	6.3 tons	No
<i>Answer from Question 4</i>	Fugitive Particulate Matter (PM ₁₀)	0.065	2.5 tons	No		

6. Any project with a grading area greater than 4.0 acres of worked area can exceed the 2.5 ton PM₁₀ quarterly threshold, therefore this project _____.
- Exceeds the PM₁₀ quarterly threshold.
 - Does not exceed the PM₁₀ quarterly threshold.
7. Use the Construction Mitigation Measure Quick Guide and questions 2 through 6 to determine what mitigation measures are needed. List them below.
- Fugitive Dust - expanded list
 - Standard Mitigation Measures

Website Drop-down Title: Calculating operational emissions for project level review

CalEEMod is needed to answer questions 8-12 regarding ROG + NOx (precursors to ozone) and PM₁₀ operational emissions. Daily emission values can be found in the summer and winter reports, however, the APCD relies on winter emission values as this assumes worst case scenario. Annual emission values can be found in the annual report.

8. The ROG + NOx daily emission value for this project is 25.2596 lbs/day.
Tip: The ROG value 13.3029 + NOx value 11.9567 = ROG + NOx total daily emissions 25.2596 lbs/day.
9. The fugitive particulate matter (PM₁₀) daily emissions for this project are 12.1103 lbs/day.
10. The ROG + NOx annual emission value for this project is 3.2669 tons/yr.
Tip: The ROG value 1.7629 + NOx value 1.5040 = ROG + NOx total daily emissions 3.2669 tons/yr.
11. The fugitive particulate matter (PM₁₀) annual emissions for this project are 1.4815 tons/yr.

Website Drop-down Title: Comparing operational emissions to thresholds and applying mitigation

12. Use your answers from questions 8 through 11 to fill in the tables below to determine if this project exceeds APCD Operational Thresholds:

	Pollutant	Daily Emissions	Daily Threshold	Over Threshold?
<i>Answer from question 8</i>	ROG + NOx (combined)	25.26	25 lbs	Yes
<i>Answer from question 9</i>	Fugitive Particulate Matter (PM ₁₀)	12.11	25 lbs	No

	Pollutant	Annual Emissions	Annual Threshold	Over Threshold?
<i>Answer from question 10</i>	ROG + NOx (combined)	3.27	25 tons	No
<i>Answer from question 11</i>	Fugitive Particulate Matter (PM ₁₀)	1.48	25 tons	No

13. Use the Operational Mitigation Measure Quick Guide and questions 8 through 12 to determine what mitigation measures are needed. List them below.

- a. Daily and Annual ROG+NOx & PM10 Mitigation

(c) AEP Appendix G Checklist Question: Expose sensitive receptors to substantial pollutant concentrations?

Website Drop-down Title: Calculating construction emissions for project level review

CalEEMod is needed to answer questions 14-16 regarding DPM_{2.5} (toxic air containment) construction emissions. Daily emission values can be found in the summer and winter reports, however, the APCD relies on winter emission values as this assumes worst case scenario. Quarter emission values can be calculated from the annual report.

14. The diesel (DPM_{2.5}) daily emissions for this project are 1.655 lbs/day.

Tip: DPM_{2.5} is displayed in CalEEMod as "Exhaust PM2.5"

15. The average quarter amount of diesel (DPM_{2.5}) emissions for this project is 0.02295 tons/quarter.

Tip: Annual DPM_{2.5} value 0.0918 / 4 quarters in a year = average DPM_{2.5} per quarter 0.02295 tons/quarter.

Website Drop-down Title: Comparing Construction Emissions to Thresholds and Applying Mitigation

16. Use your answers from question 14 and 15 to fill in the tables below to determine if this project exceeds APCD Construction Thresholds:

	Pollutant	Daily Emissions	Daily Threshold	Over Threshold?
Answer from Question 14	Diesel Particulate Matter (DPM _{2.5})	1.66	7 lbs	No

Answer from Question 15	Pollutant	Average Quarter Emissions	Quarterly Tier 1 Threshold	Over Threshold?	Quarterly Tier 2 Threshold	Over Threshold?
	Diesel Particulate Matter (DPM _{2.5})	0.023	0.13 tons	No	0.32 tons	No

Tip: The Construction Mitigation Measure Quick Guide is required to answer questions 17-20.

17. Will this project be demolishing or remodeling?
- a. Yes, therefore this project needs the Proper Abatement of Asbestos-Containing Material (ACM) mitigation measure and the APCD Compliance Division will be contacted.
 - b. No, this project will not be demolishing or remodeling.
18. Will this project be demolishing, remodeling, sandblasting, or removing paint with a heat gun?
- a. Yes, therefore this project needs the Proper Abatement of Lead-Based Coated Structures mitigation measure and the APCD Compliance Division will be contacted.
 - b. No, this project will not be demolishing, remodeling, sandblasting, or removing paint with a heat gun.
19. Is this project site within 1 mile of a known serpentine deposit?
- a. Yes, therefore this project needs the Naturally Occurring Asbestos on Site mitigation measure.
 - b. No, this project is not within 1 mile of a known serpentine deposit.
20. Use the Construction Mitigation Measure Quick Guide and questions 14 through 19 to determine what mitigation measures are needed. List them below.
- a. Proper abatement of ACM
 - b. Proper abatement of Lead-based coated structures
 - c. _____

Website Drop-down Title: Calculating operational emissions for project level review

CalEEMod is needed to answer question 21 and 22 regarding $DPM_{2.5}$ (toxic air contaminant) operational emissions. Daily emission values can be found in the summer and winter reports, however, the APCD relies on winter emission values as this assumes worst case scenario. Annual emission values can be found in the annual report.

21. The diesel ($DPM_{2.5}$) daily emissions for this project are 0.2017 lbs/day.

Tip: $DPM_{2.5}$ is displayed in CalEEMod as "Exhaust $PM_{2.5}$ "

Website Drop-down Title: Comparing Operational Emissions to Thresholds and Applying Mitigation

22. Fill in the table below to determine if this project exceeds APCD Operational Thresholds:

	Pollutant	Daily Emissions	Daily Threshold	Over Threshold?
<i>Answer from question 21</i>	Diesel Particulate Matter ($DPM_{2.5}$)	0.20	1.25 lbs	No

Tip: The Operational Mitigation Measure Quick Guide is required to answer questions 23-25.

23. Will diesel-powered equipment be used during the operational phase of this project and are there sensitive receptors within 1,000 feet of this project?
- a. Yes, therefore this project needs the limits of idling during operational phase mitigation measure.
 - b. **No, this project will not be using diesel-powered equipment during the operational phase and is not within 1,000 feet of sensitive receptors.**
24. Will this project emit toxic or hazardous air pollutants during its operational phase? Projects that may emit toxic or hazardous air pollutants include loading docks, gasoline stations, distribution facilities or asphalt batch plants.
- a. Yes, therefore this project may need a health risk assessment. The APCD should be contacted.
 - b. **No, this project will not emit toxic or hazardous air pollutants.**
25. Use the Operational Mitigation Measure Quick Guide and questions 21 through 24 to determine what mitigation measures are needed. List them below.
- a. **No mitigation needed** _____
 - b. _____

(d) AEP Appendix G Checklist Question: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Website Drop-Down Title: Determining Odor Significance

26. Does the project include any of the proposed operations as detailed in Table 3-3 and is within the screening level distances to sensitive receptors or other areas where people may congregate?

- a. Yes, and therefore the SLO County Compliance Division should be contacted for information regarding potential odor problems and possible mitigation.
- b. No, this project is not within the screening level distances to sensitive receptors or other areas where people may congregate. |

Greenhouse Gases

Commented [JM3]: • The GHG section is less straight forward when compared to the AQ section
 • Calculating GHG is rather straight forward, however, mitigating the impacts – APCD is working to provide better guidance

(a) AEP Appendix G Checklist Question: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Website Drop-down Title: Calculating Greenhouse Gas Emissions for Project Level Review

CalEEMod is needed to answer the following questions regarding annual GHG emissions. Emission values can be found in the annual report.

27. The total construction CO₂e value for this project is 470.4783 MT.

Tip:

2023	412.2796
2024	58.1987
Total	470.4783

28. The construction annual CO₂e value amortized over the life of the project is 15.6826 MT/yr.

Tip: Total construction GHG emissions should be amortized over the life of the plan/project. Residential and mixed-use projects have a lifetime of 30 years.

Total construction CO₂e 470.4783 MT / 30 years = 15.6826 MT/yr of project life.

29. The total construction and operational annual CO₂e value is 1,685.23 MT/yr.

Tip: Amortized construction CO₂e value should be added to annual operational GHG emissions

<i>Amortized Construction CO₂e per year</i>	15.6826
<i>Total operational CO₂e per year (area, energy, mobile, waste, and water combined)</i>	1,669.5518
<i>Total construction and operational CO₂e per year*</i>	1,685.23

**Total project emissions should be mitigated over the life of the project.*

Website Drop-down title: Comparing Greenhouse Gas Emissions to Thresholds and Applying Mitigation and Analyzing Project Consistency with GHG Reducing Plans, Policies, or Regulations

The SLO County APCD's 2021 Interim CEQA GHG Guidance document should be used to answer the following questions. Note, the SLO County APCD's bright-line threshold of 1,150 MT CO₂e /yr and the efficiency threshold of 4.9 MT CO₂e /yr per service population are AB 32 based and project horizons are now beyond 2020, the SLO County APCD does not recommend the use of these thresholds in CEQA evaluations.

30. Which of the following GHG threshold is applicable to this project?
- Consistency with a qualified climate action plan
 - No-net increase**
 - Lead Agency adopted defensible CEQA GHG thresholds
31. Arrange the following mitigation hierarchy options into the recommended order of use according to the APCD.
- International Generated Offsets
 - California Generated Offsets
 - On-site GHG Mitigation Measures
 - SLO County on-site, off-site, and offset GHG mitigation measures within SLO County
 - North American Generated Offsets
- On-site GHG mitigation measures
 - SLO County on-site, off-site, and offsets
 - CA offsets
 - North American Offsets
 - International Offsets
32. What resources are available for on-site mitigation measures?
- Table 3-5: Mitigation Measures in the 2017 SLO County APCD Handbook Clarification Memo.
 - 2010 CAPCOA Quantifying Greenhouse Gas Mitigation Measures document and the future update to this document that is currently being managed by Sacramento Air Quality Management District under a SB1 Adaptation Planning Grant.
 - 2017 Scoping Plan Appendix B includes examples of on-site project design features, mitigation measures, and direct regional investments that may be feasible to minimize GHG impacts from projects.
 - VMT measures found in the 2018 Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA.
 - All of the above**

(b) AEP Appendix G Checklist Question: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Website Drop-down Title: Comparing Greenhouse Gas Emissions to Thresholds and Applying Mitigation and Analyzing Project Consistency with GHG Reducing Plans, Policies, or Regulations

33. Does this project conflict with any locally adopted Climate Action Plans, Sustainability Plans, Adaptation Plans, General Plans, or other plans, policies and regulations designed to reduce GHG emissions?
- a. Yes, therefore mitigation should be incorporated.
 - b. No, therefore no mitigation is needed.
34. Does this project conflict with the land use and transportation policies, goals, action strategies, and preferred growth scenario identified in the San Luis Obispo Council of Governments Regional Transportation Plan/Sustainable Community Strategies (RTP/SCS)?
- Tip: In the fall, SLOCOG will be updating the action strategies for the 2023 RTP and a consistency check list will be created. Until then, it is best to work with SLOCOG early in the project development process to understand if projects are consistent with the information in the 2019 RTP.*
- a. Yes, therefore mitigation should be incorporated.
 - b. No, therefore no mitigation is needed.
35. Does this project conflict with any components within California's 2017 Climate Change Scoping Plan?
- a. Yes, therefore mitigation should be incorporated.
 - b. No, therefore no mitigation is needed.

Commented [JM4]: • Qualitative rather than quantitative
• No answers for the next 3 questions